



Brazil Conversational Interfaces

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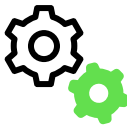
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Conversational Interfaces

Enable users to engage with live agents, virtual agents, or both using ServiceNow® Conversational Interfaces. You can also use generative AI skills in your conversational experiences. These interfaces provide tools for creating and managing optimal conversational experiences for users in the chat channels that they prefer.

Get started with Conversational Interfaces

Select a tile to get started with one of Conversational Interfaces products.

Conversational Interfaces Admin console  Explore, implement, and maintain your Conversational Interfaces using a home-page or console experience.	Virtual Agent and ServiceNow Otto for Virtual Agent  Use large language models (LLMs) to create a natural-language conversational experience that can improve the success of your self-service workflows.	Conversational integrations  Bring ServiceNow Otto for Virtual Agent conversations to popular messaging applications.
Agent Chat  Streamline the agent and requester chat experience and enable managers to monitor and assist agents.	Sidebar  Enable agents to collaborate with others on Workspace records.	Advanced Work Assignment  Automatically assign work items to your agents, based on their availability, capacity, and optionally, skills.

	Additional Resources  Manage and enhance your Conversational Interfaces experience	
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Conversational Interfaces Console

Explore, implement, and maintain your Conversational Interfaces using a home-page or console experience. All the settings and configurations you need to set up and launch your interfaces, such as Virtual Agent and Agent Chat, are consolidated in the ServiceNow® Conversational Interfaces console.

Get started

Explore  Learn about the Conversational Interfaces Console concepts and features.	Install  Install Virtual Agent and pre-built conversations.
Configure  Select conversation settings for Virtual Agent, Agent Chat, and Sidebar	Reference  Get technical information about records in the Interactions table and data management in Conversational Interfaces.

Exploring Conversational Interfaces Console

The Conversational Interfaces applications enable your users to engage with live agents, virtual agents, or both. These interfaces provide tools for creating and managing optimal conversational experiences for your users, in the chat channels that they prefer.

If you are new to Conversational Interfaces and haven't implemented or used Virtual Agent yet, you can access the Conversational Interfaces Console application to explore all available features.

For existing users, you can access the Conversational Interfaces console application to discover added enhancements or advanced-level features.

Conversational Interfaces console advantages

Implement Conversational Interfaces to support your users with virtual and live agents through the chat channels they prefer. Increase the productivity of your IT organization by deflecting the more common, easier to resolve user issues, to a 24/7-available Virtual Agent bot. The Conversational Interfaces console makes it easy for you to quickly get started and work towards achieving positive outcomes with your implementation.

Navigate through an intelligent experience that is uniquely tailored to where you are as a Conversational Interfaces user. The Conversational Interfaces console is ideal for first-time users who have never installed or configured Conversational Interfaces, to the most experienced user looking to expand full capabilities and maintain existing implementations.

Conversational Interfaces console provides the following features:

- Guided experience modules that walk you through essential tasks, such as adding your bot to a portal, branding and customizing your bot, setting up bot greetings, collecting metrics, and more.
- Access to helpful resources and videos to help you plan your virtual or human agent conversational experience.
- General settings for both Virtual Agent and Agent Chat, as well as settings specific to each application.
- Bot performance metrics for recent conversations.
- Progress panel that shows you what has been configured on your instance.

Navigate to **All > Conversational Interfaces > Home** to start exploring its features.

Note: The Conversational Interfaces console is also available in the Omni-Experience Standard Feature Set app from the ServiceNow Store. Existing customers don't need to install it from the store. However, subsequent updates will be available there. Visit the [ServiceNow Store](#) website for more information. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

Channels in Conversational Interfaces

The various ways in which your end users engage with virtual and live agents are called channels. In Conversational Interfaces, users and agents converse through channels that have specific communication modes: chat mode for real-time conversations and messaging mode for long-running conversations.

Conversation channels provide your end users and agents with different options for interacting. These options are based on when your users and agents are available to connect, and the chat applications used in your business environment. There are two types of channels: chat channels and messaging channels.

Chat channels

Chat channels support two-way conversations in real time. These conversations may involve a user and a live agent or a user and a virtual agent. This mode of conversation is synchronous,

and the user is guaranteed a response. Supported chat channels let your end users and agents interact based on the chat applications (clients) that they're using and when they're available to connect.

The following channels are supported for synchronous chat:

- Service Portal (mweb) chat widget
- Mobile web (mweb) client
- [\(Legacy\) Conversational Integration with Alexa](#)
- [Conversational Integration with Apple Messages for Business](#)
- [Conversational Integration with Google Chat](#)
- [Conversational Integration with LINE](#)
- [Conversational Integration with Microsoft Teams](#)
- [Conversational Integration with Slack](#)
- [Conversational SMS Integration with AWS End User Messaging](#)
- [Conversational Integration with WhatsApp \(powered by Twilio\)](#)
- [Conversational Integration with WhatsApp \(WhatsApp Cloud API\)](#)

Messaging channels

Messaging channels let end users and agents communicate over longer periods of time, especially when one party isn't online. This mode of chat is asynchronous and happens at the parties' convenience.

When your end users and agents must communicate over longer periods without being online concurrently, pre-built messaging channels let them chat asynchronously, at their convenience.

The following channels are available for asynchronous chat:

- Mobile web (mweb) client: Configure this channel for iOS, Android, and desktop devices for [asynchronous chat](#)
- [ServiceNow Otto panel](#) : Used by [ServiceNow Otto panel](#) .
- SMS channel: Used by [Conversational SMS Integration with Twilio](#)

Messaging Channels table

Messaging channels are defined in the Messaging Channels table [sys_cs_channel]. If you're using the [custom chat integration framework](#) to create custom chat integrations, you can specify the channel mode for those integrations—either chat or messaging. For channels such as the mweb channel, you can choose either chat or messaging as well.

Configured channels for an instance

Messaging Channels				
	Name		Search	Actions on selec
<i>i</i> You can use the channels that are preconfigured in your instance or add a new one				
All				
☐	<i>q</i> Name ▲	Type	Opted in all topics by default	Secure
	AI Agent	Chat	true	false
	AI Agent A2A Channel	Chat	true	false
	AI Agent Background	Chat	true	false
	AI Voice Agent	Phone	false	false
	Alexa	Chat	false	false
	Amazon Connect	Phone	false	false
	Bot to Bot	Chat	true	false
	CC Voice	Phone	false	false
	Contact Center	Phone	false	false
	Facebook Messenger	Messaging	true	false
	Google Assistant	Chat	false	false
	mweb	Chat	true	true
	NASS	Chat	true	true
	Now Assist Panel	Chat	true	false
	Slack	Chat	true	false
	SMS	Messaging	false	false
	Teams	Chat	true	false
	Teams Copilot	Chat	true	false
	Workplace	Chat	true	false

Live agent support by channel

Not all channels may be suitable for live agent support. For example, you may want to disable support for the Bot-to-Bot and voice channels. Live agent support is enabled by default, but admins can change this setting in the Messaging Channels [sys_cs_channel] table. For details, see [Disable live agent support for a channel](#).

Agent Chat messaging features

The Conversational Interfaces channels offer basic features that make it easy for your users and agents to stay connected:

- Message indicators that inform your users of new and unread messages received when they're away from chat or when they've been offline.
- Typing indicators that show a chat participant is responding.
- System messages, displayed to users and agents that provide information about the conversation state.
- Secure handling of sensitive data, such as passwords or account numbers. This data is masked when users enter the information, and it cannot be viewed by others.
- Automatic closing of [idle chat or messaging conversations](#).

New and unread message indicators for Agent Chat

End users receive new message indicators on chat and messaging channels when they're offline. Users can be anonymous (guests) or known (authenticated). The unread message count is displayed on the chat widget.

In asynchronous chat, the unread message count reflects the number of any offline messages sent by a live agent and any simple notifications received.

Message indicators are displayed as follows:

- There is no limit on the number of unread messages. Up to 50 unread messages can be viewed at a given time. Messages can span multiple conversations, either open (current) or closed (past) conversations.
- When users open the chat client, they're shown the last message received. They can scroll up or down to read the unread messages, as directed by the **New messages above** button or **New messages below** button.
- A new messages separator line is displayed between the read and unread messages.
- When a user closes and reopens the chat window, the messages displayed are considered as "read" even though the user might not have reviewed them.

Agent Chat system messages

During active conversations with live agents, certain system messages inform users and agents about the conversation state. For example, if a user is engaged in live chat, but doesn't respond within a certain amount of time, a conversation timeout message is displayed: `The conversation is timing out, are you still there?`

You can change base system messages by editing their related system properties in Chat Settings in the Conversational Interfaces console.

Using Asynchronous Chat in messaging channels

Enable your organization or brand to maintain constant engagement with end users. With Asynchronous Chat, your agents and end users can participate in long-running conversations without being online concurrently. Agents can also proactively contact users whenever there is useful information to share, such as important alerts or updates.

With Asynchronous Chat, end users and agents can engage in conversations that might span several hours or even days. These conversations run on messaging channels that allow your users and agents to communicate at different times and to resume conversations where they left off. Users can respond at their convenience and are no longer limited to working with agents only during customer support hours.

Long-running conversations are supported on channels that are designated as messaging channels in the Messaging Channel [sys_cs_channel] table. Messaging channels provided with your base system include the SMS channel, which is used by the ServiceNow Conversational SMS Integration with Twilio app and the ServiceNow Conversational SMS service channel app.

Starting with the Rome release, you can also configure the web (mweb) channel, which includes the iOS, Android, and desktop devices, as a messaging channel instead of a chat channel. For configuration details, see [Configure asynchronous chat for the web channel](#).

Note: The web chat and mweb channels are the only channels that support both chat and messaging mode, depending on your need. Web chat can only be set up in one mode on any given instance. The Asynchronous Chat feature specifically refers to the mweb channel in messaging mode.

Requirements

Asynchronous chat requires certain plugins and ServiceNow applications from the ServiceNow Store.

Plugins and ServiceNow apps required for asynchronous chat

Plugin or ServiceNow app	Description
Glide Conversation Server [com.glide.cs]	Enables Virtual Agent functionality handled by the Conversation Server, including conversation settings and the Virtual Agent chat widget plugin (com.glide.cs.sn-va-web-client-app). The Conversation Server is included with Virtual Agent Lite, which is provided with your base system. For full Virtual Agent functionality, see Activate Glide Virtual Agent, which is available by subscription.
Conversational Messaging [com.glide.messaging.awa]	Enables features for conversational messaging, such as messaging actions in Workspace. For details, see Activate Conversational Messaging.
Now Mobile app (Version 12.2)	Enables users to submit incidents and requests, manage tasks, and request help from Agent Chat (and Virtual Agent if using Virtual Agent). End users install the Now Mobile app for iOS or Android systems from the Apple App Store or the Google Play store, respectively.
Agent-initiated Messaging Interface (Version 3.0)	Supports agent-initiated conversations in messaging channels. This ServiceNow app, available from the ServiceNow Store, also installs the Conversational Messaging plugin (com.glide.messaging.awa).

How Asynchronous Chat works

Asynchronous Chat provides various features to help you improve the conversational experience for your users and agents, such as:

- Message indicators that inform users of new and unread messages received when they're away from the chat window or when they've been offline.
- System messages, displayed to users and agents, that are tailored to either messaging or chat channels.
- Idle conversation timeout period that admins can adjust for messaging channels, as needed.
- Proactive messaging capability that enables agents to initiate communication with users

The following sections explain how these features work for Asynchronous Chat.

New and unread message indicators

End users can receive messages on a messaging channel, even when they're offline. Users can be anonymous (guests) or known (authenticated). The unread message count is displayed on the chat widget. The unread message count reflects the number of any offline messages that were sent by a live agent and any simple notifications received.

Unread message count and new message indicators



- There is no limit on the number of unread messages. Up to 50 unread messages can be viewed at a given time. Messages can span multiple conversations, either open (current) or closed (past) conversations.
- When users open the chat client, they land on the very last message received. They can scroll up or down to read the unread messages, as directed by a **New messages above** button or **New messages below** button.
- A new messages separator line displays between the read and unread messages.
- When users close and re-open the chat window, the messages displayed are considered as "read" even though users might not have reviewed them.

System messages

Certain system messages that are displayed to users and agents in chat mode are not applicable in messaging mode, and are suppressed as needed. The following table identifies system messages that are displayed or suppressed, depending on the mode.

System messages displayed in messaging and chat modes

System message	Messaging mode (web and mobile)	Chat mode
X has closed the support session. [Displayed when either the agent or user closes the chat session]	Displayed	Displayed
The support session was closed. [Displayed when the chat session was not closed by the agent or user]	Suppressed	Displayed
X has entered the chat.	Suppressed	Displayed
Thank you for contacting support. I am looking into your question and will be with you shortly.	Displayed	Displayed
The conversation is timing out, are you still there? [Controlling idle live chat sessions controlled by the <code>com.glide.cs.idle_chat_reminder_message</code> system property]	Suppressed	Displayed

Idle conversations and messaging actions in messaging channels

In chat channels, the default idle conversation timeout period for Virtual Agent and Live Agent conversations is two hours (7200 seconds). However, for Live Agent conversations in messaging channels, certain messaging actions are automatically applied, which affects how idle conversations are handled. In messaging channels, when a requester hasn't responded to an agent message within two days, the conversation state changes to Closed Abandoned and the message is closed. For more information on messaging actions, see [Configure messaging actions](#).

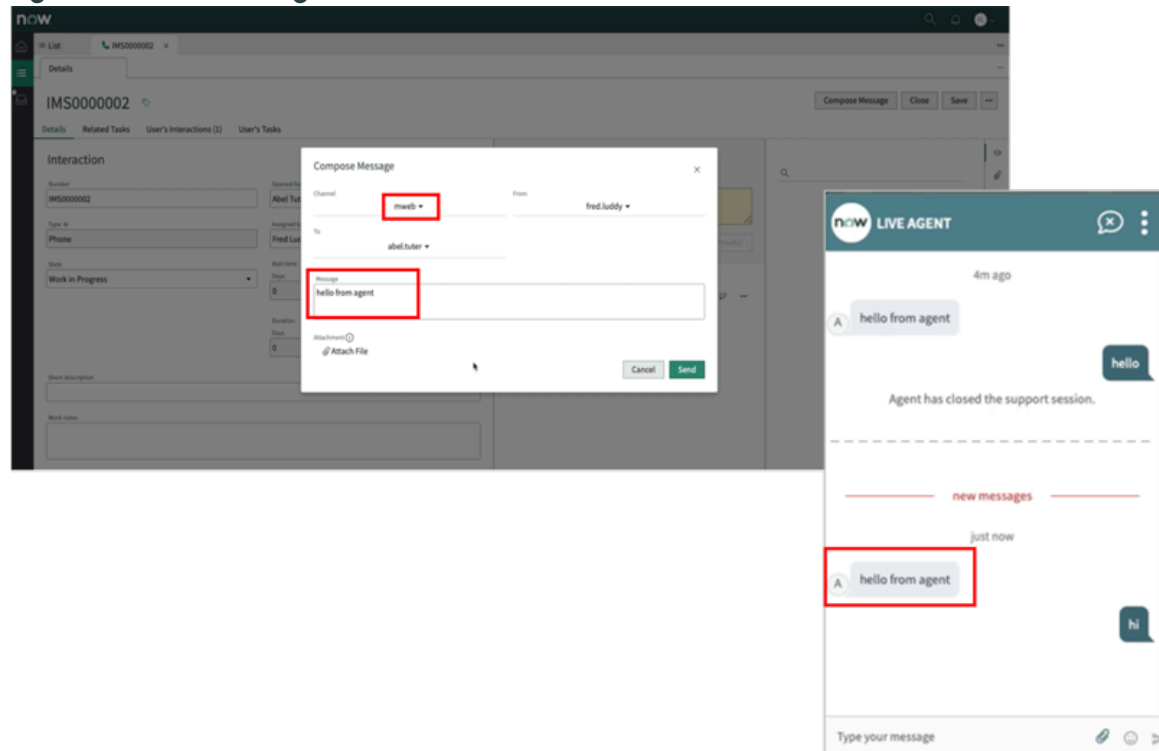
As admins, you can override the conversation idle timeout period per channel by setting the value in the **Conversation Idle Timeout** field in the Messaging Channels [sys_cs_channel] table. For details, see [Override the conversation timeout period by channel](#).

Proactive messaging

Using the [Agent-initiated messaging interface](#), agents can proactively communicate with end users to share relevant or helpful information. When agents initiate messaging from the mweb channel in Asynchronous Chat, your users have the option to respond immediately and engage in a two-way conversational experience. Proactive messaging with the mweb channel has the following capabilities:

- **Compose Message** feature that agents use to create and send messages to selected users. Messages can contain links and file attachments.
- When a user replies to a message, the ongoing interaction context is retained, providing the agent with the information needed to maintain the conversation.

Agent-initiated message on mweb channel



For more information on agent-initiated messages, see [Install agent-initiated messaging interface](#).

End user experience in live agent conversations

When a user starts the chat widget after having received offline messages from a specific agent, for example Agent A, the conversation is in Live Agent mode:

- If Agent A is available, the user can resume the conversation with Agent A.
- If Agent A is not available, but Agent B is, depending on the agent reassignment settings, the chat window displays Agent B's name and avatar and the conversation resumes.
- If no agents are available, the conversation is routed to an agent based on the Queue Max Wait Time. If there isn't a wait time, the conversation waits until an agent becomes available.

Configure asynchronous chat for the web channel

Set the chat widget as a messaging channel for asynchronous chat.

Before you begin

Role required: virtual_agent_admin or admin

About this task

The base system web channel, mweb, is automatically configured as a chat channel for web and mobile clients. To use the web channel as a messaging channel, change the channel **Type** in the Messaging Channel [sys_cs_channel] table.

Procedure

1. Navigate to **All** and in the Navigation filter, enter `sys_cs_channel.list`.
2. In the Messaging Channel form, select the mweb record and double click the **Type** field.
3. Change the Type to Messaging.
4. Save the value.

Result

The mweb channel is set to messaging mode. To help manage long-running conversations, the system automatically performs certain messaging actions in messaging mode:

- Requester message without agent response (agent experience): If an agent hasn't responded to a requester within 30 minutes, the agent receives a reminder that a message from an end user needs a response.
- Agent message without requester response: If a requester hasn't responded to an agent message after two days, the conversation state in the Interaction record is automatically set to closed abandoned.

For more information on messaging actions, see [Configure messaging actions](#). For details on Virtual Agent and Live Agent idle conversation timeouts and conversation states, see [Closing Virtual Agent and Agent Chat conversations](#) and [Virtual Agent interaction records](#).

Configuring Conversational Interfaces

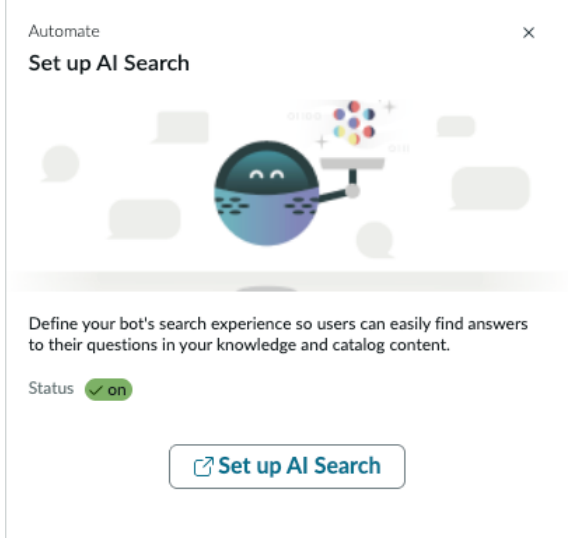
You can use the Conversational Interfaces console and the **Chat Settings** option in the **Home** page to explore and configure general chat functionality and set up Virtual Agent and Agent Chat features.

Configuring Conversational Interfaces

Use the cards on the Conversational Interfaces console to set up features for Virtual Agent and Agent Chat. The cards automatically sort each time you visit and unaddressed features appear first.

For more information, select the question mark at the top right. This opens a contextual help panel.

Chat configuration cards

Card	Feature	Description
Create a Virtual Agent with Now Assist, using an LLM model and generative AI skills. 	To create a virtual agent using Now Assist, select Get started to display the Assistants screen. For more information, see Assistants overview.	
Monitor your Now Assist in Virtual Agent 	To view Virtual Agent analytics for existing LLM virtual agents, select View performance. For more information, see (Legacy) Conversational Analytics dashboard in Platform Analytics experience. To manage existing LLM virtual agents, select Manage assistants to display the Assistants screen. For more information, see Assistants overview.	
	Set up AI Search	Give your users the power to search for answers to their questions or solutions to their requests by adding AI Search to your Virtual Agent bot.

Chat configuration cards (continued)

Card	Feature	Description
Customize Brand your Virtual Agent  Make your Virtual Agent (VA) your own by editing the chat window logo, VA avatar, company colors, and more. View brand settings	Brand your Virtual Agent	Customize your Virtual Agent bot by selecting the colors and icons, and add a logo that reflects your company's portal.
Integrate Add your VA to other channels  Connect your Virtual Agent (VA) to other channels - Microsoft Teams, Slack, Workplace, and more-to give your users even more ways to chat. View channel settings	Integrating Virtual Agent with messaging apps	Add your Virtual Agent bot to other channels, such as a Conversational Integration with Slack or Microsoft Teams.
Escalate Set up Agent Chat  You can configure the Agent Chat settings to connect users to live chat support in the chat client. View Agent Chat settings < ● ○ >	Set up Agent Chat	Connect users to live chat support in the chat client they are using.

Chat configuration cards (continued)

Card	Feature	Description
Collaborate Boost agent productivity with Sidebar  With Sidebar, your agents can collaborate in real-time to resolve user's issues faster and more thoroughly than ever before. View Sidebar Settings	Setting up Sidebar	Provide live agents with a way to collaborate with others while they work on a Workspace record.
Customize SetUp Dynamic Translation for VA  Dynamic Translation boosts Virtual Agent (VA) support by translating chats using the machine translation service provider of your choice. View Settings	Language detection and dynamic machine translation in Virtual Agent in enhanced chat	Enable a combination of language detection and machine translation for Virtual Agent to improve the chat experience for diverse users.

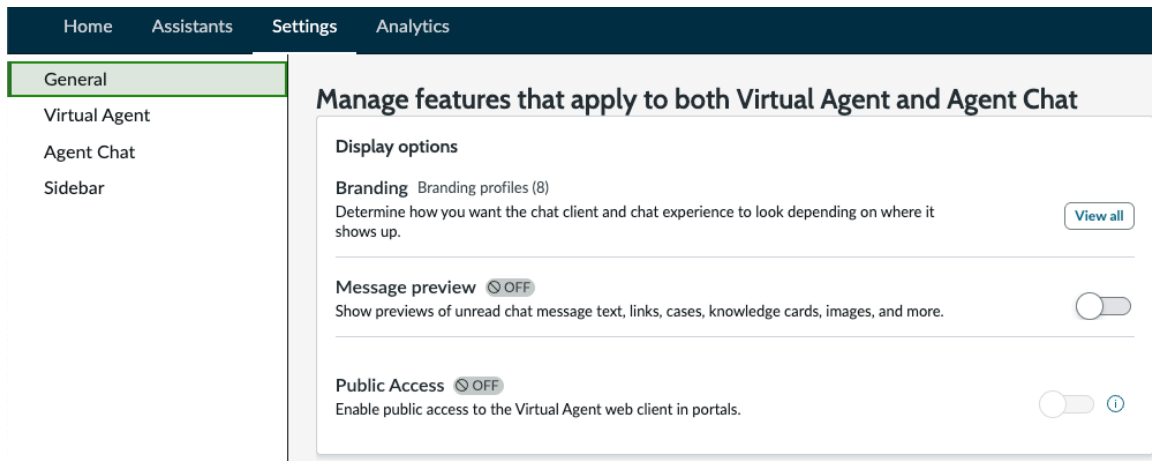
Assistants

The Assistants screen appears when you select the **Assistants** tab on the Conversational Interfaces home screen.

Chat settings

The **Chat Settings** tab opens with the **General** tab selected. This tab contains general settings that apply to all Conversational Interfaces applications. The currently installed plugins and available plugins that you can activate are listed as links. Select a link for more information or to start an activation process.

The **Virtual Agent**, **Agent Chat**, and **Sidebar** tabs in the left navigation pane open configuration settings pages for each application.



For more information about these settings, see the following topics:

- [General settings](#)
- [Virtual Agent settings](#)
- [Agent Chat settings](#)
- [Sidebar settings](#)

General chat settings

Use the Conversational Interfaces Console to set up the basic chat features shared by Virtual Agent and Agent Chat.

General chat settings

I want to...	See these topics
Display options	
Branding	Branding your chat client
Message preview	Enable message preview on the chat widget
Public access	Enable public access to the chat widget
Channels and routing	
Channels	Integrating Virtual Agent with messaging apps.
Context variables	Configure context variables for storing chat-related information
System actions	
System messages	Change Virtual Agent and Agent Chat system messages

Branding your chat client

Customize your chat interface with your own brand, including company logo and bot avatar, UI color schemes, fonts, and the chat support menu displayed to your users.

Note: The chat widget is only accessible to authenticated users by default. To enable unauthenticated users to access the chat widget, enable **Public access** in **Conversational Interfaces > Settings > General**. For more information, see [Enable public access to the chat widget](#).

Multiple branding configurations

You can create any number of branding configurations for an instance. These branding configurations apply to the web chat and mobile clients and don't apply to the Conversational Integrations for Slack, Microsoft Teams, Workplace by Facebook, and Facebook Messenger.

Note: Branding for bots in the Conversational Integration with Microsoft Teams is available through the Microsoft Teams app customization feature. For details, see [MS Teams branding for the conversational integration](#) in Now Community. For information about branding bots in Slack, see [Configure branding for your Virtual Agent bot in Slack](#).

The default branding configuration includes the Virtual Agent bot, which has a ServiceNow avatar. If you want additional branded bots, create a user profile for each bot in the User [sys_user] table. Give your bot a unique user ID, name (for example, Acme), upload the photo (image) for your bot avatar, and make your bot active. For details on adding users to your instance, see [Create a user](#).

Once created, you then select the bot to be used in a configuration. A branded bot can be used in a single configuration or in multiple branding configurations.

Supported branding items

Conversational Interfaces provides a default branding configuration that you can customize. To change the default configuration, create other branding configurations, or modify the chat (support) menu, gather and prepare the following files and information:

Organization images

Images of company logos to be used in your chat windows. If you're using Virtual Agent, the images of avatars to be used for branded bots.

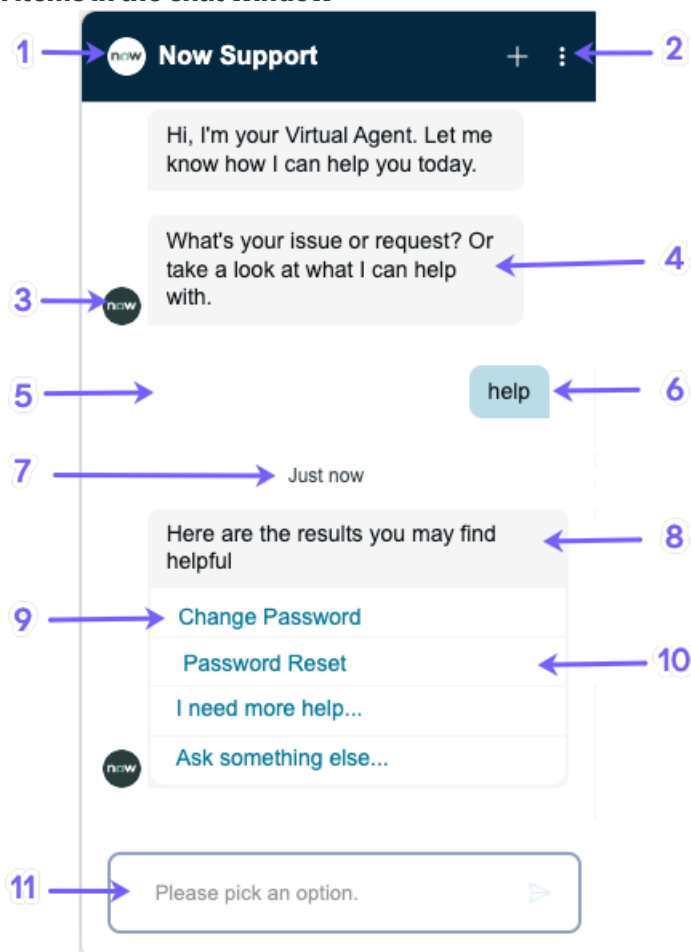
Images must be in .jpg, .png, .bmp, .gif, .jpeg, .ico, or .svg file format. The images can be high resolution, but the image display is scaled based on the aspect ratio. Keep in mind that if chat is run in its own browser window, a thumbnail of the branding logo displays automatically in the browser tab.

Colors and fonts

Colors and fonts used for the various user interface items, such as chat bubbles, buttons, and notifications displayed.

If you want to change the color of interface items, determine the Hex number or RGBA color for those items. When you specify the Hex or RGBA colors during configuration, you can immediately see your changes in the example chat window. To learn more about Hex numbers and RGB color specifications, see [HTML Color Names \(W3CSchools\)](#).

UI items in the chat window

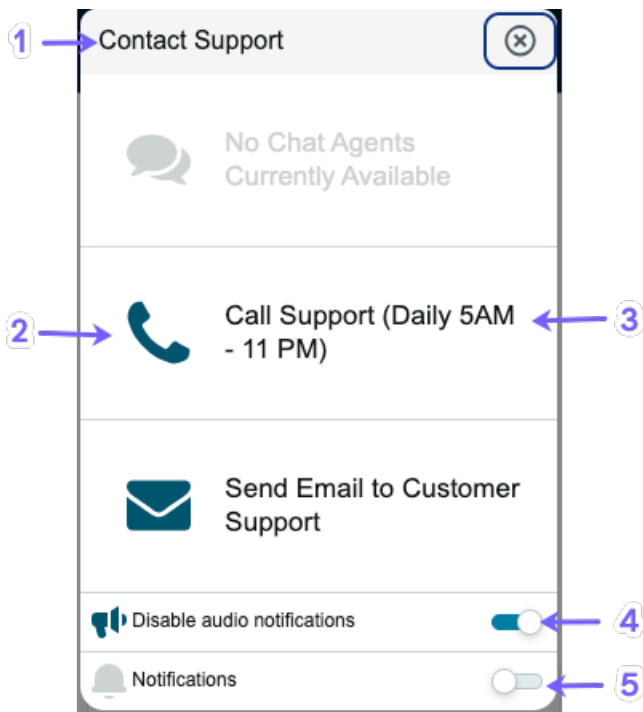


1. Logo and chat header
2. Menu icon
3. Avatar
4. Bot bubble
5. Chat background
6. User bubble
7. Timestamp
8. Category background
9. Link text
10. Button background
11. Input background

Chat menu items

Contact information for your support organization, such as support call hours, call center support phone number, and support email address. You can customize information in the support menu by adding or changing menu items, including the text and icons displayed. You can also control the visibility of the menu items (show or hide menu options).

You can also change the default menu icons or add icons for new menu items. The icons must be in .svg file format. For better resolution, use a single-color icon.



1. Menu title
2. Menu icon
3. Menu label
4. Audible alert enabled for Virtual Agent chats
5. Notifications turned off for chats
6. (not shown) Wait time display if a live agent is available

Related topics

[Customizing a Virtual Agent chat experience](#)

Create a user for a branded bot

The default branding configuration includes the Virtual Agent bot, which has a ServiceNow avatar. To create a new bot with your own branding, create an active user profile for the bot and link it to a Live Profile.

Before you begin

Role required: admin

About this task

If you want to create branded bot, create an active user profile for each bot in the User [sys_user] table. Then create a bot profile record by adding this user to the Live Profile [live_profile] table.

Procedure

1. [Create a user](#)  for the bot.
Include an image (avatar) for your bot when you create the user. Also ensure that the user is active.
2. Navigate to **All**, and then enter `live_profile.list` in the filter.
3. Select **New**.
4. On the form, fill in the fields.

Field	Description
Name	Unique name for the bot profile.
Type	Type of live profile. Select User .
Document	Table associated with the profile. a. Select the Search icon  . b. In the Select the document dialog box, specify the following information: ▪ Table name: Select User [sys_user]. ▪ Document: Select the name of the user you created for the bot. c. Select OK .
Photo	Image (avatar) for the bot profile.
Description	Text that describes the live profile.

5. Select **Submit**.

Result

You can associate the bot profile with a new branding configuration. For details, see [Set up your Virtual Agent bot's branding](#).

Set up your Virtual Agent bot's branding

Create different Virtual Agent branding configurations for the various organizations that use your instance. These configurations apply to the web-based chat and mobile clients only.

Before you begin

Check for updates and improvements to the Omni-Experience Standard Feature Set application on the ServiceNow Store.

Note: Branding for bots in the Conversational Integration with Microsoft Teams is available through the Microsoft Teams app customization feature. For details, see [MS Teams branding for the conversational integration](#) in Now Community. Branding for bots in Slack is available as well. For details, see [Configure branding for your Virtual Agent bot in Slack](#).

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Under the **Display Options** section, select **View All** next to **Branding**.
3. Select **New** to create a branding configuration or select the branding configuration record to be updated.
4. On the form, fill in the fields.

Label	Description
Branding name	Name of the branding configuration.

Label	Description
	Create a new branding configuration or select one of the available choices. For the Brazil release, the choices include: ○ Coral Light ○ Polaris-Dark ○ Polaris-Light
Chat Header	Text string that identifies your company or organization in the chat window header. For example: Acme Support.
Minimum delay between bot messages (ms)	Minimum delay, in milliseconds (ms), that occurs between bot responses. The default delay is 500 ms.
Minimum delay before displaying typing animation (ms)	Minimum delay, in milliseconds (ms), that occurs before showing the animation ellipsis indicating the bot is processing user input.
Menu Title	Name of the support menu. The default title is Contact Support.
Branding key	Read-only sys_id of the configuration, which reflects the Branding name you entered. The key is in lower case letters with spaces replaced by underscore characters.
Button Selection Text	Font color of the New messages above or New messages below buttons.
Bot Profile	List that opens the Live Profile form to select or create a new bot user profile, which includes the bot picture (avatar). This bot picture appears in the chat messages. ○ To review and edit the Virtual Agent or ServiceNow Otto bot profile, select the information icon. ▪ To change the bot picture or description, select Edit record in the message at the top of the page. ▪ In the Live Profile form, modify the fields and select Update. ○ To choose or change the bot for the configuration, select the search icon and select the Bot Profile field. Choose the bot profile that you created in a previous step.
Chat Header Logo	Logo image that displays in the chat header. If live chat is run in a browser window, the logo also displays in the browser tab. The chat header logo is set to 42x42 pixels, and the chat message logo is set to 24x24 pixels. An uploaded image that is smaller than these dimensions will appear stretched. A larger image will be scaled down. ○ To add a logo, select Attach Image and use the file finder to choose the image. ○ To change the logo, select View image. From the file finder, select the new logo file and select OK. The updated logo displays below this field. ○ To remove the logo, select the trash icon. The file is immediately deleted.

Label	Description
Enable showing the 'New Messages Below' or 'New Messages Above' notification	Select this option to display notifications for new messages below or above your current view of the chat.

General > Branding Settings > Default Branding

Default Branding

Edit the chat client color and logo so that it reflects a branded experience that is customized to your company.

Branding name
Default Branding

Branding key
default_branding

Chat Header *
Now Support

Bot Profile
Virtual Agent

Minimum delay between bot messages (ms)
500

Minimum delay before displaying typing animation (ms)
1,000

Chat Header Logo
[View image](#)

Menu Title *
Contact Support

You can adjust the color, icons, and fonts of the chat client to create an experience that matches your brand.

Colors Icons Fonts

Item	Color (hex)
Chat Window	
Chat Header Background	#032D42
Chat Background	FFFFFF
Menu Icon	FFFFFF
Chat Header Font	FFFFFF
Input Background	FFFFFF
Chat messages	
User Bubble Background	BDDEE7
Agent Bubble Background	F5F6F7
Bot Bubble Background	F5F6F7
Link	113A82
Button Background	FFFFFF
Notification Background	efeff4

Menu Items

Icon	Label	Type	Value
	Send Email to Customer Support	Email	support@example.com
	Contact Live Agent	Chat	
	Call Support (Daily 5AM - 11 PM)	Phone	1-800-555-5555

Preview: Now Support chat window showing a Virtual Agent message and a help button.

5. Select **Save**.

From here, you can adjust the color, icons, and font type and size of the chat client to match your brand. For example, you can:

- [Change the color of items](#)
- [Customize the icons](#)
- [Customize the fonts used in the chat](#)

6. To change the color of items in the chat window, select the **Colors** tab.

Colors		Icons	Fonts
Item	Color (hex)		
Chat Window			
Chat Header Background		#032D42	
Chat Background		#FFFFFF	
Menu Icon		#FFFFFF	
Chat Header Font		#FFFFFF	
Input Background		#FFFFFF	
Chat messages			
User Bubble Background		#BDDEE7	
Agent Bubble Background		#F5F6F7	
Bot Bubble Background		#F5F6F7	
Link		#113A82	
Button Background		#FFFFFF	
Notification Background		#E5F2F6	
User Bubble Font		#113A82	

Select an item and specify the Hex or red blue green alpha (RGBA) colors you want to use for that item. When you do so, the example chat window shows a preview of your changes.

Customize color for each item

Label	Description
Chat window	
Chat Header Background	Background color of the chat header.
Chat Background	Background color of the chat window.
Menu Icon	Color of the menu icon, which provides user options to end a conversation or contact customer support.
Chat Header Font	Font color of text in the chat header.
Input Background	Background color of the user input bar.
Chat messages	
User Bubble Background	Background color of the user chat bubble.
Agent Bubble Background	Background color of the live agent chat bubble.
Bot Bubble Background	Background color of the bot chat bubble.
Link	Color of links presented in the conversation.
Button Background	Background color of buttons used in the conversation.
Notification Background	Background color of Virtual Agent notifications delivered in the web chat client.
User Bubble Font	Font color of text in the user chat bubble.

Label	Description
Agent Bubble Font	Font color of text in the live agent chat bubble.
Bot Bubble Font	Font color of text in the bot chat bubble.
Link disabled	Color of links turned off in the conversation.
Notification Text	Font color of Virtual Agent notifications delivered in the web chat client.
Others	
System message	Color of general system messages displayed in the conversation.
Category background	Background color of the heading above a list of topics.
Separator	Color of the dashed line that separates each conversation in the Preview window.
Time Stamp	Color of the timestamp displayed when significant activity occurs during a conversation, such as a record being created.
Category font	Font color of text in the category heading.
Loading Animation	Color of the animated dots that indicate the system is processing information.

7. To customize the chat icons in the chat window, select the **Icons** tab.

Colors	Icons	Fonts
Item	Default	Custom
Main chat window		
Start conversation		— Add
End conversation		— Add
Support options		— Add
Emoji icon		— Add
Send icon		— Add
Attachment icon		— Add
Masked Input Icon		— Add
Unmasked Input Icon		— Add
All topics window		
Back arrow icon		— Add
Search icon		— Add
Support menu		

You can customize the icons on four different chat screens: the main chat screen, the all topics screen, the support menu, and the end conversation screen. Use this tab to do the following:

- Add a custom icon: Select **Add** for the icon, and then select **Attach image**. After choosing the image file, select **Apply**.
- Replace a custom icon: Select **Replace** for the icon. Select the trash can icon to delete the current image, and then upload a new one.
- Revert to the system default icon: Select **Remove** for the icon.

Note: You can't remove system default icons.

When you specify the icons during configuration, the example chat window shows a preview of your changes.

Note: Unlike other settings on the branding page, icon changes take effect on the chat widget as soon as you select **Apply**. Other changes don't take effect until you select **Save** at the top of the page.

Valid file formats are .jpg, .png, .bmp, .gif, .jpeg, .ico, and .svg.

8. Optional: Customize the font type and font size.

(Optional) The available branding configurations (for example, Coral Light) are located [here](#).

Note: This feature is only available after you've installed and updated the Omni-Experience Standard Feature Set to the latest version through the ServiceNow® Store.

To customize the fonts shown in the chat, select the **Fonts** tab.

To change the font type, choose one of the following methods:

- Select the fonts you want to use.
From the **chat header text** drop-down list, select the font you want to use for the header.

Do the same for the **chat body text**.
You will see an example of the new font.
- Download the fonts from a URL.
From the **Add custom font** drop-down list, select **From URL**, specify the URL, and apply the changes.
- Upload the fonts you want to add from an attached file.
From the **Add custom font** drop-down list, select **Upload font**, specify the path to the file you want to attach, and apply the changes.

(Optional) To change the font size for the chat header and the chat body, do the following:

- From the **Font body size** dropdown, choose the Regular, Large, or Extra Large font size.
- From the **Font header size** dropdown, choose the Regular, Large, or Extra Large font size.

Note: These changes do not apply to custom controls you have added to the chat widget. Custom controls must be updated separately.

- Preview the changes in your chat window on your portal or website.

9. To update the Contact support menu, scroll down to the **Menu Items** section.

Menu Items				New
Icon	Label	Type	Value	
	Contact Live Agent	Chat		
	Send Email to Customer Support	Email	support@example.com	
	Call Support (Daily 5AM - 11 PM)	Phone	1-800-555-5555	

You can change the icons, labels, visibility, and display order of the Email, Chat, and Phone menu items. You can also add custom options to the menu.

a. In the **Menu Items** section, do any of the following:

- To edit a menu item, select the record icon.
- To add a new menu item, select **New**.
- To delete a menu item, select the record icon. In the record, select the More Actions icon , and then select **Delete**.

For each menu entry, fill in the fields.

Field	Description
Label	Text string that describes the menu type. The labels for the default menu types in the Global application scope are: ▪ Email - Option that opens the default email. Default label: Send Email to Customer Support ▪ Chat – Option for chatting with a live agent. Default label: Contact Live Agent for Chat type ▪ Phone - Option that indicates when phone support is available. Default label: Call Support—(Daily 5AM - 11PM) The label text can be up to 75 characters in length.
Type	Type of menu item. For example, if you're adding a menu item that is a link to specific information such as a help page, select the Link Type. The menu item types are: ▪ Email: Option for contacting support through email. ▪ Link: Option for a link to a web page ▪ Chat: Option for contacting a live agent through chat. ▪ Text: Option for setting a text string ▪ Phone: Option for contacting support by phone
Value	The menu type value. For example, the Value for Email is the email address of the support group. The values for the default menu types are:

Field	Description
	- Email: Email address of the support group. For example: support@example.com. - Phone: Phone number of your call support organization. - Email: Email address of your support organization. Note: The chat menu type doesn't have a value.
Visible	Option that makes the item visible in the Contact support menu. Clear this option to hide the menu item.
Display default icon	Option that indicates the default icon for the item is visible in the menu. Clear this option to add, change, or delete a menu icon. - To add an icon for a new menu item, select View image. From the file finder, choose your icon file and select OK. The uploaded icon displays below the Icon field. - To change an icon, in the Icon field select Update. From the file finder, select the new logo file and select OK. The updated icon displays below this field. - To remove the icon, select trash icon. The file is immediately deleted.
Order	Number that identifies the sequence in which the item appears in the Contact support menu. The number 1 indicates that the item is the first option listed in the menu.
Application	Global.

b. When you complete the **Menu Item** section for a menu type, select **Save**.

10. Optional: Navigate to the Branding table [sys_cs_branding_setup.list], and select the Branding Name you created.

Note: This step is only applicable if you're configuring an assistant using ServiceNow Otto for Virtual Agent enhanced chat or enhanced chat's full-page experience.

a. Select **Configure > Form Layout** from the Additional Actions icon (☰).

b. Move the following Available fields to the Selected fields, and then **Save**:

- Search Toggle Button Label
- Enable Unread Conversation Count Display
- Left Panel Header Label

c. Configure the newly added fields.

Field	Description
Search Toggle Button Label	Option to relabel enhanced chat's full-page experience from the defaulted Search tab label to this label.
Enable Unread Conversation Count Display	Option to show the unread number of conversations on the Chats icon.
Left Panel Header Label	Option to relabel enhanced chat and enhanced chat's full-page experience from the defaulted Chats header to this label.

11. Do one of the following to apply the branding configuration:

- Apply the branding configuration to a Service Portal Agent Chat Configuration. In the server script that passes page and widget data to an Agent Chat (Virtual Agent or Live Agent) conversation, specify the branding key to be used. Items passed in this script are available to all pages in the portal. For details on setting up Service Portal Agent Chat, see [Add your bot to a portal](#).

For example, the following Service Portal Agent Chat Configuration for the Knowledge Portal uses the chat branding key `custom_1`.

The screenshot shows the 'Service Portal Agent Chat Configuration' form. The 'Name' field is 'KB chat'. The 'Portal(s)' field has a lock icon. The 'Application' dropdown is set to 'Global'. The 'Public' checkbox is checked. The 'Order' field is empty. The 'Server script' field contains the following code:

```

(function($sp) {
    return {
        live_agent_queue: $sp.getDisplayValue('sp_chat_queue'),
        branding_key: 'custom_1'
    };
})($sp);

```

A 'Submit' button is located at the bottom left of the form.

Note: There are other Service Portal Agent Chat features that you can configure, such as [customizing the Agent Chat button](#) in your portal. For more information on customizing the Agent Chat widget in Service Portal, see [Configure Agent Chat in Service Portal](#).

- Apply the branding configuration to a destination page. Enter the system parameter `sysparm_branding_key` with the branding key in the chat widget URL. For example:

```

https://<your-instance-name>service-now.com/$sn-va-web-client-app.do?sysparm_branding_key=acme

```

In this example, `acme` is the key of the branding configuration to be used.

- Apply the branding configuration to an embedded chat widget. Enter the system parameter `sysparm_branding_key` with the branding key in the URL for the embedded chat widget. For example:

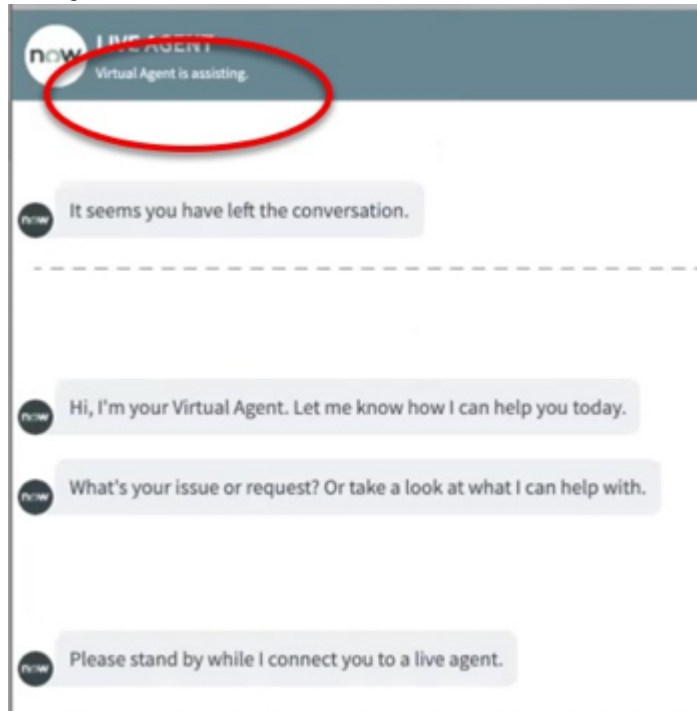
```
https://<your-instance-name>service-now.com/$sn-va-web-client-app_embed.do?sysparm_branding_key=acme
```

In this example, `acme` is the key of the branding configuration to be used.

12. Optional: If you're using [Conversation Autopilot](#) with your branded bot, specify the branded bot name displayed in the chat window during Autopilot sessions by changing system properties as follows.

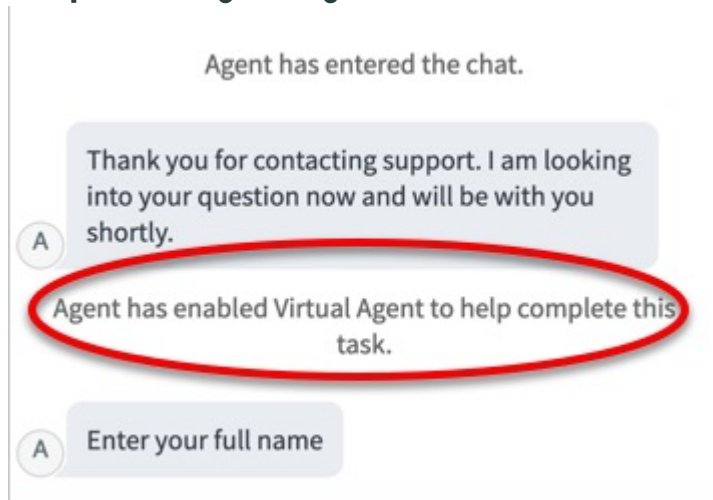
- a. Navigate to **All > Conversational Interfaces > Settings**.
- b. Under the **System actions** section, select **View All** next to **System messages**.
- c. Change the **Value** field of the `com.glide.cs.autopilot.client_initiated_headers` system property to specify the branded bot name instead of the Virtual Agent bot name displayed in the header of the chat window.

Autopilot header in chat window



- d. Update the `com.glide.cs.autopilot.client_initiated_message` system property to specify the branded bot name displayed to the requester during the conversation.

Autopilot message during the conversation



Enable message preview on the chat widget

Admins can allow their end users to see a preview of any new or unread messages waiting for them when the chat window is minimized.

Before you begin

This feature is only available after you've installed and updated the Omni-Experience Standard Feature Set to the latest version through the [ServiceNow Store](#).

Set the `com.glide.cs.advanced-chat-popover` system property to True. This system property activates the smart chat component on the Service Portal. By default, the property is set to False. This system property is only applicable to the requester persona.

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings > General**.

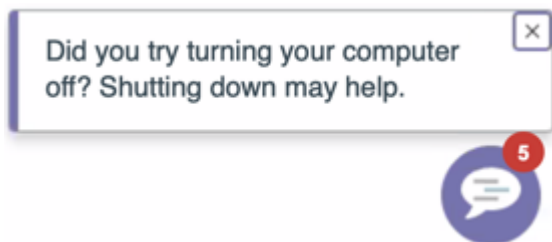
2. Under **Display options**, activate **Message preview**.

A message displays confirming that the setting has been saved.

Result

When message preview is activated, and the chat window is minimized, the end user sees a message preview badge icon  in the minimized chat window. The message preview badge icon lets the user know that there are new or unread messages, and how many. In this example, the end user has one new or unread message.

A message preview pane shows the first new or unread message next to the badge icon. The message is based on the conversation. For example, if the user needed help with using the laptop, the message preview pane could be similar to the following image.



The end user can either:

- Click the message preview pane to continue the conversation in the chat, or
- Close the message preview pane.

The badge icon appears only when there are new or unread messages. The badge icon is updated every 10 seconds, and displays the first new or unread message.

Enable public access to the chat widget

Enable public access to the standard chat Virtual Agent chat widget for portals.

Before you begin

Role required: admin

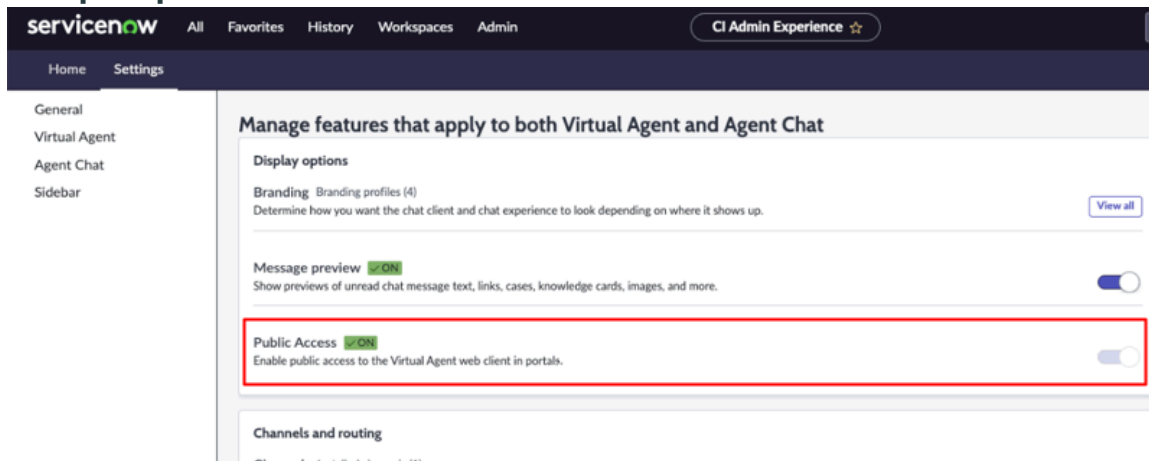
About this task

Public access to the standard chat Virtual Agent chat widget defaults to off. Use the following steps to allow public access to the chat widget for only portals.

Procedure

1. In the unified navigation bar, select the globe icon (🌐).
 2. Select **Application Scope**, then choose the *Virtual Agent Web Client* scope.
- 💡 **Tip:** You must be in the *Virtual Agent Web Client* scope to enable public access.
3. Navigate to **All > Conversational Interfaces > Settings > General**.
 4. Under **Display options**, enable **Public access**.

Example of public access



A message displays confirming that the setting has been saved.

Configure context variables for storing chat-related information

Specify chat context variables, also called Live Agent chat variables, for storing chat-related information, such as pre-chat survey responses. These variables contain contextual information that can be used to determine topic intent or control how chats are routed to live agents. You can also define variables to capture contextual information passed in Virtual Agent topic scripts to share with live agents.

Before you begin

Virtual Agent provides pre-built context variables. Before you add a variable, review the list of [available Live Agent context variables](#).

Role required: virtual_agent_admin or admin

About this task

You can use context variables in scripts or with the condition builder. For example, you can reference context variables in the **Live agent** area in the topic **Properties** tab when creating a topic. When a condition is applied to a topic, it must return as true to display to the user.

For details about using context variables in topic scripts, see [Virtual Agent scripts](#). For information about learning to use context variables, see [Tutorial: Route interactions by context](#). For descriptions of Live Agent context variables, see [Live agent chat context variables](#).

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Under **Context variables**, select **View All**.
3. On the Context Variables page, select **New** to add a variable.
4. On the form, fill in the fields.

Field	Description
Name	Name of the context variable to be created.
Script Variable Name	Live Agent variable name, which is automatically created from the Name . The variable name begins with LiveAgent.
Table	Name of the ServiceNow table associated with the context variable. Select a table from the list.
Record	Option to associate the context variable to a record in the specified table. If you selected a table, this option is automatically selected.
Value	Script that determines the information stored in the context variable.

5. Select **Save**.

The context variable is now available for use.

Live agent chat context variables

Use chat context variables to pass certain information from the topic to share with a live agent or to control how bot conversations are routed to live agents. Virtual Agent includes some default variables, and you can define new ones.

Note: The Interaction table is part of the interaction management framework, which is activated through the Interactions Management plugin (com.glide.interaction). This plugin is included with the Agent Chat (com.glide.interaction.awa) and Connect Support (com.glide.connect.support) plugins.

Live Agent variables included with Virtual Agent

Variable	Description
<i>application</i>	Application scope of the chat. For example, <i>Global</i> , <i>HR</i> , <i>CSM</i> , or <i>ITSM</i> .
<i>case</i>	Case ID (from the [sn_customerservice_case] table) that is used with the Customer Service Management application when a case is related to the chat.
<i>csp_category</i>	Category defined in the Consumer Service portal in the CSM application (requires the com.glide.service-portal.consumer-portal plugin). For more information, see Using the Consumer Service Portal .
<i>devicetype</i>	Type of device being used for the chat. For example, <i>mweb</i> (chat widget), <i>android</i> , or <i>ios</i> .
<i>hr_topic_id</i>	ID of the current topic. Used in Advanced Work Assignment to determine which HR queue to transfer the user for live agent chat.
<i>interaction_account</i>	Used with CSM chats that are initiated by B2B users who are tracked as contacts for a particular account. Corresponds with the <i>Account</i> field on the Interaction [interaction] table, which references the Accounts [customer_account] table.
<i>interaction_consumer</i>	Used with CSM chats that are initiated by B2C users who are tracked as consumers. Matches the interaction.consumer field referencing the csm_consumer table. Corresponds with the <i>Consumer</i> field on the Interaction [interaction] table, which references the Consumers [csm_consumer] table.
<i>interaction_contact</i>	Used with CSM chats that are initiated by B2B users who are tracked as contacts for a particular account. Corresponds with the <i>Contact</i> field on the Interaction [interaction] table, which references the Contacts [customer_contact] table.
<i>interaction_id</i>	Sys_id of the interaction record associated with the chat session.

Live Agent variables included with Virtual Agent (continued)

Variable	Description
	For more information, see Virtual Agent interaction records .
<i>language</i>	Two-letter language code for the requester's chat. Note: Language values use ISO standard two-character language codes. For more information, see ISO 639:1 language codes .
<i>mandatory_skills</i>	Required skills and skill level for an agent. For example, German language proficiency with an associated high skill level may be required for German-speaking requesters. You can define mandatory skills and activate skill levels in Advanced Work Assignment. For more information, see Configure agent assignment rules .
<i>optional_skills</i>	Skills and skill levels that would be useful for a given chat scenario. You can define optional skills in Advanced Work Assignment. For more information, see Configure agent assignment rules .
<i>page</i>	The specific page (within a portal) that the chat was accessed from.
<i>portal</i>	Name of the portal that the chat was accessed from.
<i>search_text</i>	Search terms entered by the requester. Used to search Virtual Agent topics.
<i>short_description</i>	Used to set the short description in the interaction record associated with the chat.
<i>sys_id</i>	Sys_id of a record that relates to the interaction. Typically, this is the record being viewed in the portal when the chat is requested.
<i>table</i>	Table containing the record that relates to the interaction. Typically, this is the record being viewed in the portal when the chat is requested.

Additional resources

- [How to transfer a chat to a specific queue using context variables](#)
- [Virtual Agent and Natural Language Understanding \(NLU\) community forum](#)
- [Conversational Interfaces Academy](#)

Change Virtual Agent and Agent Chat system messages

Customize the default system messages displayed during Virtual Agent conversations and Agent Chat.

Before you begin

Role required: virtual_agent_admin or admin

About this task

Use **System messages** in Chat Settings to change the properties that control standard chat messages displayed in your instance. If you're using Virtual Agent and Agent Chat, the **System Messages** list displays properties for both Virtual Agent and Agent Chat messages. If you're using Agent Chat only, the **System Messages** list displays only the properties relevant to Agent Chat.

Note: While the chat widget uses the Messages table [sys_ui_message] to configure the greeting and closing messages, third-party Conversational Integrations (such as Microsoft Teams) use system messages. To change them, modify these messages in System Messages as follows:

- For greetings that call `vaSystem.getTopicSelectionMessage()`, modify the value of `com.glide.cs.topic_picker_msg`.
- For closings that call `vaSystem.endConversation()`, modify the value of `com.glide.cs.conversation_ended_msg`.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Under **System messages**, select **View All**.
3. In the System Messages list, select the property record for the message you want to change.
4. In the **Value** field, enter the new message text and select **Save**.
Any changes are immediately applied to the system messages displayed in your instance.

Conversational Interfaces reference

Conversational Interfaces reference topics provide shared technical descriptions of features that apply to Virtual Agent and Agent Chat, such as the Interactions table.

Interaction Insights table

User sentiment analysis prepares agents for the tone of incoming conversations. Business rules can be created based on this value and agents can take appropriate actions on the chat, whether it comes from Virtual Agent, another live agent, or from a queue.

Both synchronous and asynchronous channels support sentiment analysis. Use [Task Intelligence](#) to set up sentiment analysis.

When configured, sentiment analysis is performed at the end of a Virtual Agent or live agent conversation. The user sentiment is stored in the Interaction Insights [sys_cs_interaction_insight] table.

Interaction Insights table

Field	Description
Interaction	The sys ID for the conversation in the Interactions [interaction] table.
Sentiment	Shows the sentiment level of the interaction, if sentiment analysis is enabled on the instance. This value can be shown to agents in the Agent Chat interface. Business rules can be created based on this value at handoff (Virtual Agent to live agent, live agent to live agent, or live agent to queue). Valid values are as follows:

Interaction Insights table (continued)

Field	Description
	• Positive • Neutral • Negative • null (no value assessed)
Sentiment Normalized	Sentiment score between -0.5 (negative sentiment) and 0.5 (positive sentiment). You can modify these values by adjusting the <code>com.glide.cs.neutral_sentiment_max_value</code> and <code>com.glide.cs.neutral_sentiment_min_value</code> system parameters.
Type	Type of analysis performed. For example, <i>Sentiment</i> .
User	Name of the agent or Virtual Agent.
User Type	Type of user. For example, <i>Agent</i> .

Virtual Agent

Unlock your enterprise productivity with ServiceNow® Virtual Agent. Increase deflections by empowering your employees and customers to serve themselves using a friendly messaging interface, featuring prebuilt conversations powered by artificial intelligence.

https://player.vimeo.com/video/988245428?badge=0&autoplay=0&player_id=0&app_id=58479

Get started with Virtual Agent

Select a tile to get started.

Explore  Learn how employees, customers, and agents use Virtual Agent.	Configure  Configure Virtual Agent.	Create assistants  Create and edit LLM assistants that make up the chat experience.
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Build conversations  Design and build automated conversations and reusable topic components.	Analyze and optimize performance  Analyze and improve assistant performance using insights into conversational data.	Use Virtual Agent  Use Virtual Agent and escalate to a human.
Translate conversations  Use Dynamic Translation in your Virtual Agent conversations.	Reference  Get Assistant Designer interface descriptions and Virtual Agent technical details and system properties.	

The ServiceNow AI Platform now brings you a new AI experience with three licensing tiers available:

- Foundation: AI basics to deliver insights
- Advanced: AI to boost productivity across relevant use cases
- Prime: Act autonomously with all AI assets, and create your own

For more information, see [ServiceNow product tiers](#).

Note: We improve performance and the user experience by tracking aggregate in-app activity, including interaction with our app. This tracking is focused on aggregated technical information rather than personal information.

AI limitations

This application uses artificial intelligence (AI) and machine learning, which are rapidly evolving fields of study that generate predictions based on patterns in data. As a result, this application may not always produce accurate, complete, or appropriate information. Furthermore, there is no guarantee that this application has been fully trained or tested for your use case. To mitigate these issues, it is your responsibility to test and evaluate your use of this application for accuracy, harm, and appropriateness for your use case, employ human oversight of output, and refrain from relying solely on AI-generated outputs for decision-making purposes. This is especially important if you choose to deploy this application in areas with consequential impacts such as healthcare, finance, legal, employment, security, or infrastructure. You agree to abide by [ServiceNow's AI Acceptable Use Policy](#), which may be updated by ServiceNow.

Data processing

This application requires data to be transferred from ServiceNow customers' individual instances to a centralized ServiceNow environment, which may be located in a different data center region from the one where your instance is, and potentially to a third-party cloud provider, such as Microsoft Azure. This data is handled per ServiceNow's internal policies and procedures, including our policies available through our [CORE Compliance Portal](#).

Data collection

ServiceNow collects and uses the inputs, outputs, and edits to outputs of this application to develop and improve ServiceNow technologies including ServiceNow models and AI products. Customers can opt out of future data collection at any time, as described in the [Now Assist Opt-Out page](#) .

For more information, see the [Now Assist documentation](#) .

Exploring Virtual Agent

The ServiceNow Virtual Agent platform provides user assistance through conversations within an intelligent messaging interface. Design and build automated conversations that use large language models (LLMs) and AI to improve deflection rates.

Overview of Virtual Agent

Virtual Agent helps solve ordinary issues and delivers results for common requests, leaving your agents and technicians free to focus on more complex user issues. You can change the look and feel of the chat experience to suit each audience for your business, including running your chatbot in a variety of common or custom messaging channels. Use the Assistant Designer Analytics tab to monitor your bot's success.

Your developers have access to large language model (LLM) topic discovery. Assistant Designer includes LLM controls that make topic authoring easier so that you can deliver self-service solutions more quickly.

Virtual Agent and ServiceNow Otto for Virtual Agent

Virtual Agent refers to the Glide Virtual Agent plugin [com.glide.cs.chatbot]. ServiceNow Otto for Virtual Agent refers to the [sn_nowassist_va] plugin. Some of the original NLU and keyword functionality that comes with the Glide Virtual Agent plugin is planned for deprecation, and therefore the remaining topic discovery option is LLM discovery. For more information about NLU deprecation, see [\(Legacy\) Virtual Agent for NLU](#).

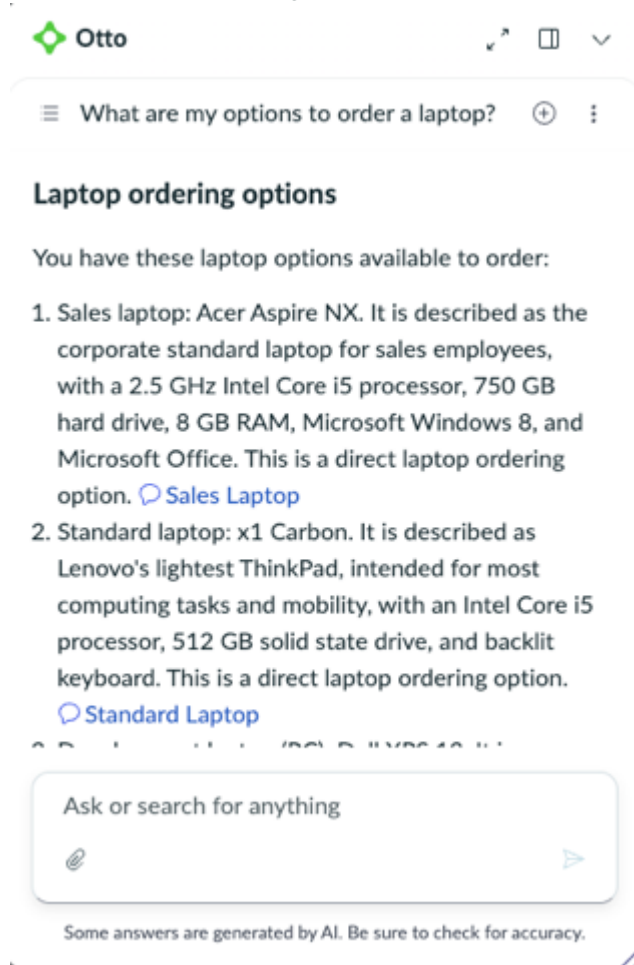
Search in ServiceNow Otto for Virtual Agent

ServiceNow Otto for Virtual Agent enhance the user experience by combining AI Search with chat. These skills can increase issue resolution in Virtual Agent and reduce deflections to a live agent.

The following figure shows how the requester uses natural language rather than keywords in the chat. The LLM determines the most likely option based on the requester's input and sends

a synthesized response with possible action items. Queries can apply to both information searches and service catalog requests.

Example of standard chat's synthesized response with conversational and non-conversational catalog options



ServiceNow Otto for Virtual Agent shows users the best possible answer to a query, in the form of actionable options displayed along with the results. The bot may generate answers based on what it found, or return actionable options or links. Users have the option to see more results as needed.

Service Catalog access

ServiceNow Otto for Virtual Agent also gives users access to available options in the Service Catalog. Users can request an item, such as a mobile phone. The user can then provide more information to refine the search. For example, they may refine their request to a blue 256-GB iPhone. They can even request a new item instead, all in the same conversation, and the generative AI creates its responses using natural language.

For full catalog functionality in the chat window, enable the generative AI experience for catalog item request submissions. For more information, see [Configure ServiceNow Otto in Conversational Catalog Request](#).

AI agents in Virtual Agent

Virtual Agent supports AI agents. When a user asks a question in chat, an AI agent understands the query and can reason, plan, and execute using tools such as the following:

- AI agents
- Virtual Agent topics
- Conversational actions and subflows
- Catalogs
- Knowledge articles
- Generative AI skills

Virtual Agent supports multi-intent queries with AI agents if there are associated AI agents per user query.

Virtual Agent availability

The Virtual Agent platform is available as a professional subscription that is automatically included with the ServiceNow AI Platform[®].

Note: Depending on your license, you will have access to certain application features, generative AI skills, agentic workflows, and AI agents. For more information, see [ServiceNow product tiers](#).

Assistant Designer provides all the core functionality for creating and deploying Virtual Agent conversations. Virtual Agent includes the following features, which are automatically installed with the Glide Virtual Agent plugin (com.glide.cs.chatbot):

- Virtual Agent chat widget
- Virtual Agent notifications
- Conversational custom chat integration framework
- Conversational Interfaces console for admin configuration

Virtual Agent benefits

Benefit	Feature	User
Configure ServiceNow Otto for Virtual Agent in a few minutes, from either the Conversational Interfaces console or the AI Admin Hub console.	Guided setup experience	virtual_agent_admin or admin
Use a conversation designer to build and test conversations without scripting or advanced skills. Drag and drop elements on the graphical canvas to see the entire flow. Go further with branching, looping, and scripting.	Assistant Designer Asset library	virtual_agent_admin or admin
Deploy ServiceNow Otto for Virtual Agent on multiple portals using the chat widget, the mobile app, and Microsoft Teams.	Assistants overview	virtual_agent_admin or admin
Give users in-chat access to available options in the Service Catalog.	ServiceNow Otto Multi-Turn Catalog Ordering skill	requesters
Seamlessly transfer the entire conversation history and context to the right human agent so they can	Escalate to human assistance	virtual_agent_admin or admin

Benefit	Feature	User
quickly address any escalations and resolve user issues.		
ServiceNow Otto for Virtual Agent switch easily between requests, using plain language when new queries are made in the same conversation.	Mid-topic switching during ServiceNow Otto for Virtual Agent conversations	requesters
Analyze the performance of assistants in Assistant Designer.	Analyzing assistants	virtual_agent_admin or admin
Connect to where your employees and customers already are—in web portals, Now [®] Mobile apps, and collaboration tools like Slack and Microsoft Teams, and any other popular chat or messaging app.	Conversational Integration apps for Virtual Agent	virtual_agent_admin or admin
Serve your international Virtual Agent users, regardless of their language and locale.	Dynamic Translation in Virtual Agent	virtual_agent_admin or admin

Note: For developer training, go to the [Developer's Portal](#) (login required). Navigate to **Learn > Courses > Virtual Agent**.

Assistant Designer

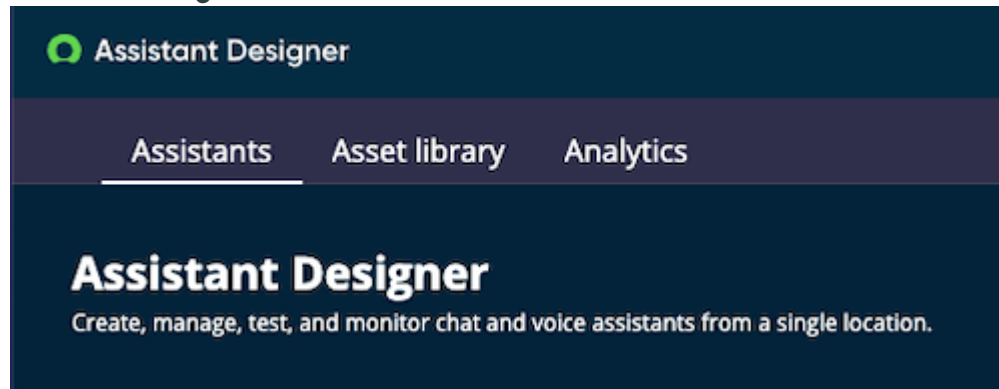
Create, configure, manage, and test LLM-based chat and voice assistants within Assistant Designer, a centralized assistant administrator experience.

To access Assistant Designer navigate to **All > Assistant Designer**.

Assistant Designer is comprised of four main areas:

- 1. Assistants:** From the **Assistants** tab, an admin creates, manages, and tests assistants. Voice assistants can't be tested within Assistant Designer at this time. Assistant Designer is only available if you have installed a ServiceNow Otto product. Customers who are only using Natural Language Understanding (NLU) can't access Assistant Designer. For more information about configuring chat or voice assistants, see [Assistants overview](#).
- 2. Asset library:** The **Asset library** tab opens the Virtual Agent Designer home page where you can create NLU/Keyword topics and LLM assets. For more information, see [Build conversations in the Asset library in Assistant Designer](#).
- 3. Analytics:** Monitor, evaluate, and optimize the performance of your chat and voice assistants from the **Analytics** tab. For more information, see [Analyzing assistants](#).
- 4. Conversations:** Review a log of completed voice interactions and investigate individual call details from the **Conversations** tab. For more information, see [Reviewing voice conversations](#).

Assistant Designer



Key terminology

Term	Definition
Virtual Agent	Virtual Agent provides user assistance through conversations within an intelligent messaging interface. It helps solve ordinary issues and delivers results for common requests, increasing the productivity of agents and technicians. Virtual Agent supports both large language model (LLM) and Natural Language Understanding (NLU) topic discovery. Assistant Designer only supports LLM conversations in ServiceNow Otto for Virtual Agent.
Assistant	An assistant is the container for the end-to-end administrative configuration for ServiceNow Otto for Virtual Agent. It's a ServiceNow Otto for Virtual Agent chat or voice conversation. An administrator can create multiple ServiceNow Otto for Virtual Agent assistants. By placing assistants in various channels such as a portal, mobile app, Microsoft Teams, and Sidebar discussions, any user benefits from the assistants.
Conversational assets	Conversational assets are components that an admin can use to build an LLM conversation. Asset types that are offered are: • Topics • Subflows • Actions • AI agents • Custom skills

Key terminology (continued)

Term	Definition
Information sources	Information sources designate what content areas should be included in the assistant for AI Search queries. Currently, the following information source categories are offered: • Knowledge base (KB) articles • External content • Conversational catalog

Chat experiences

ServiceNow Otto for Virtual Agent offers three different chat experiences that vary in capability, AI integration, and deployment model. Consider the experience that matches your organization's licensing, infrastructure, and user engagement requirements.

Each chat experience builds on the previous tier, adding AI-powered features and configuration options. All three experiences are configured in [Assistant Designer](#) as you select a display experience, such as a portal, channel, or mobile app.

Chat experience comparison

Feature	Standard	Enhanced	Premium
Conversational topic flows	Supported	Supported	Supported
Generative AI responses	Not supported	Supported	Supported
Knowledge search integration	Basic	AI-powered	AI-powered
Dynamic search window	Not supported	Supported	Supported
Integrated third-party messaging	Not supported	Not supported	Supported
Chat history panel	Not supported	Supported	Supported
Post-chat survey	Supported	Supported	Supported

For more information about each chat experience, see:

- [Standard chat](#)
- [Enhanced chat](#)
- [Premium chat](#)

Standard chat

ServiceNow® Otto for Virtual Agent standard chat is a conversational support experience within a static chat window.

ServiceNow Otto for Virtual Agent enhances the user experience by combining AI Search with generative AI chat skills. These skills can speed up issue resolution and reduce deflection to a live agent.

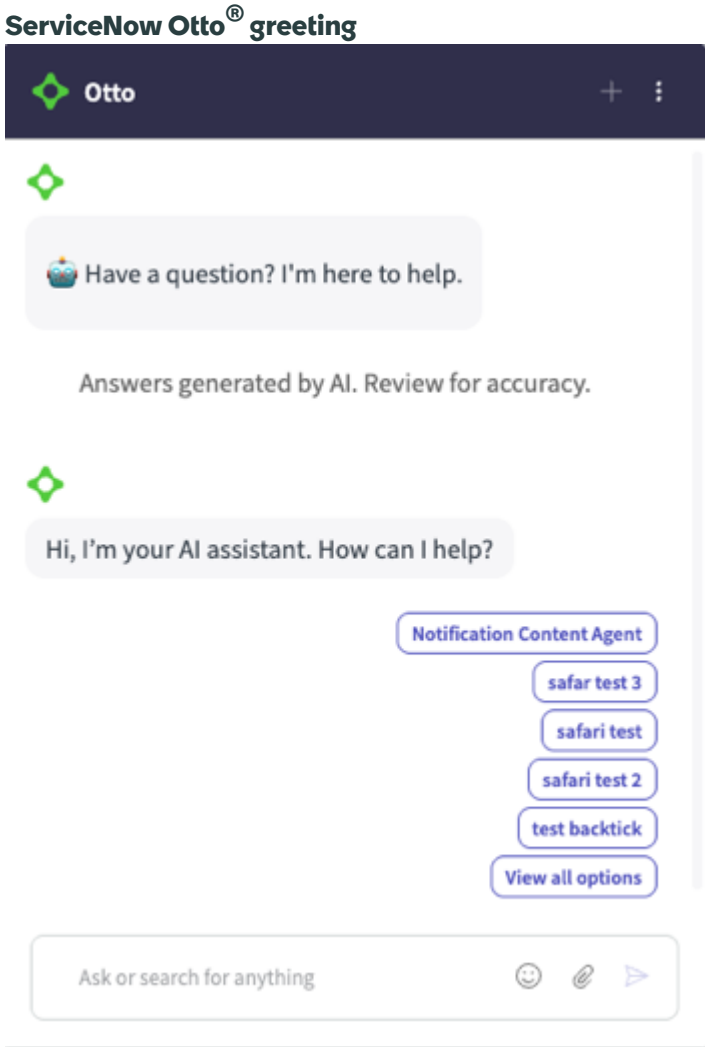
Note: For more information about selecting a chat experience in the admin guided setup, see [Display your assistant on a portal, channel, or mobile app](#).

ServiceNow Otto for Virtual Agent provides your users with an interactive generative AI experience. A friendly, natural language conversation is easier to understand and helps users to be more comfortable with chatting with a bot.

The following sections highlight how a conversation powered by generative AI might look in Virtual Agent.

Starting the conversation

The following figure shows an example of the beginning of a new conversation.



ServiceNow Otto® greeting elements

Element	Description
1: Bot greeting	Note: The Answers generated by AI. Review for accuracy . message prior to the greeting can't be edited or turned off.

ServiceNow Otto[®] greeting elements (continued)

Element	Description
	After greeting the user, the bot provides an explanation of what the user can expect. Because the large language model (LLM) is still learning, the bot indicates that it may make mistakes, and that the user should check answers for accuracy.
2: User request	The user can enter any utterance.
3: Response indicator	While the LLM processes the utterance, an animated avatar appears alongside latency feedback messages in the chat window to let the user know that the bot is working.

Chatting with the Virtual Agent

After the user enters an utterance and a search result is found, a synthesized response may appear. A synthesized response includes a brief summary of the requested information and search results along with Genius Results. For more information on how these search results are found, see [Actions Genius Results](#) and [Knowledge base articles Genius Results](#).

If multiple results are found, they are presented to users, and users can view inline citations and/or the Sources section at the bottom of the synthesized response. Users can view Knowledge Base articles, Virtual Agent topics, subflows or actions, external content, people citations, and complete catalog request items. Virtual Agent can only return available catalog items that match a user's request when the ServiceNow Otto Multi-Turn Catalog Ordering skill is enabled. Users can follow up on a synthesized response and receive an answer that considers the previous context. For example, if you previously were chatting about the company's travel policy and then enter `International`, the system recognizes that you're wanting additional information on the company's international travel policy.

Note: For full catalog functionality in the chat window, enable the generative AI experience for catalog item request submissions. For more information, see [Configure ServiceNow Otto in Conversational Catalog Request](#).

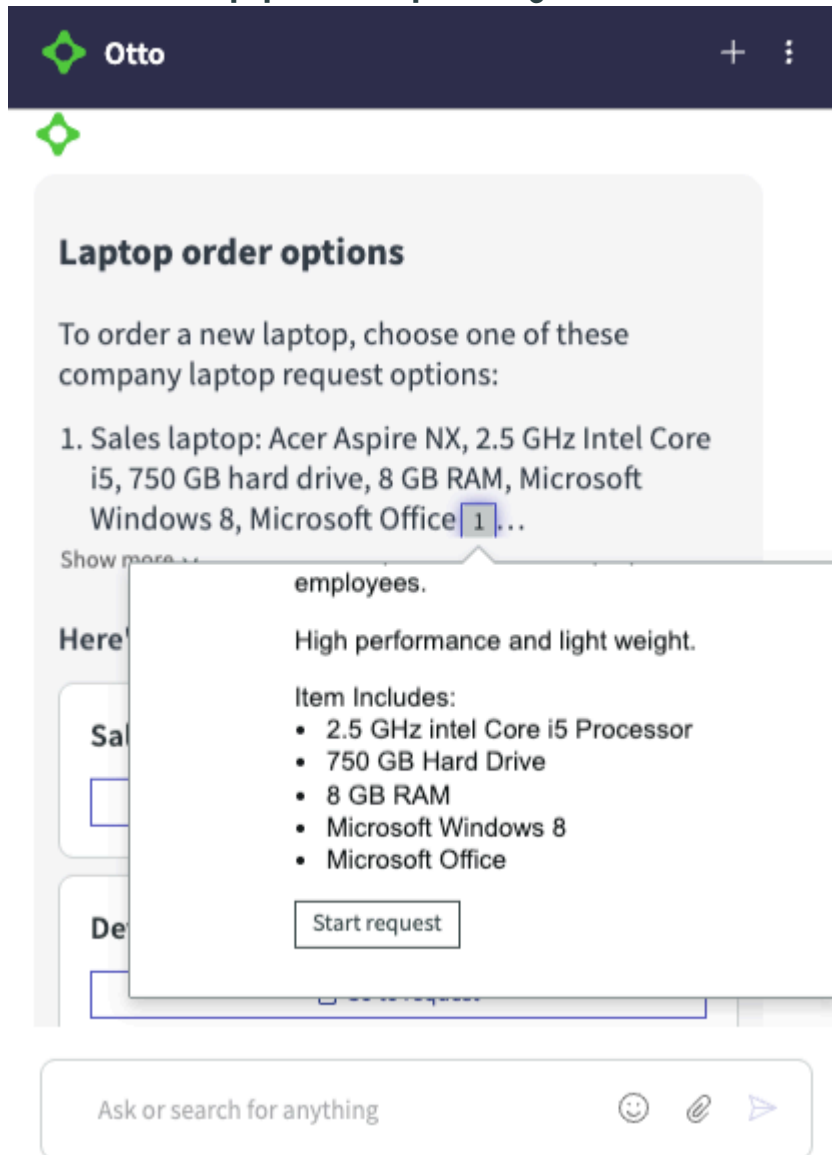
Whenever a single Virtual Agent topic is found within a synthesized response, users are brought directly into that action's flow. You may consider bypassing the synthesized response and options by automatically launching catalog items, too. For more information on automatically launching single search result actions, search for the `sn_nowassist_va.synthesized_autostart_items` system property in [Available system properties](#).

Responses generated in ServiceNow Otto for Virtual Agent can come from a combination of catalog items, Virtual Agent topics, subflows and actions, Knowledge Base articles, attachments, external content, and people sources. The following citations may appear inline and/or within the expandable Sources section depending on what search results are returned:

- Catalog
- Topic, subflows, or actions
- Q&A Knowledgebase articles
- External content connections
- People

If you select an inline citation, a popover appears containing either additional information or an action to start a request.

An inline citation popover example linking to a source or action



Responses can also be generated based on content from the catalog item description and the Virtual Agent topic description. When this occurs, citations lead the user to one of the items in the *Here's what you can do next* section of the response.

Each Virtual Agent response includes a feedback icons panel. The user can indicate if the response was helpful by selecting the like thumbs up icon (👍). If the response wasn't helpful, the user can select the dislike thumbs down icon (👎). This feedback is used to train the LLM model and improve responses over time.

If AI Guardian is enabled and your request contains profane content, the Virtual Agent responds with a message prompting you to re-enter an appropriate request without profanity or offensive content. If your request is too ambiguous in a Virtual Agent chat, Virtual Agent asks a clarifying question and displays a citation with an action. Citations are presented starting from the second clarifying question. Select a citation to start the request. If there are no actions relative to the request, citations aren't shown.

If you need more help, ServiceNow Otto for Virtual Agent directs you to either a live agent, resets the conversation, or creates an incident. The option is determined by the admin in the ServiceNow Otto for Virtual Agent guided setup. For more information, see [Assistants overview](#).

1. Live agent support routes the user to an available agent when configured.
2. Reset the conversation restarts the conversation to the beginning to ask another question.
3. Record producer directs the user to a catalog record producer to create an incident or case.

If you entered a single message with multiple questions or requests, a **Ready to move on to your next task?** card appears. For example, a response like `Order a loaner laptop and also what is spam?` When you select the **Continue to next task** button on the **Ready to move on to your next task?** card, Virtual Agent searches for a response to your second question or request. In this example, Virtual Agent would search for an answer to your `what is spam?` question.

For information about configuring a ServiceNow Otto skill, see [Activate an AI skill](#) .

Agentic conversations

Note: Admins must first enable AI agents before end users can experience agentic conversations. For more information on how to set up AI agents for agentic conversations, see [Configuring agentic conversations in Virtual Agent](#).

When you submit a single question to the Virtual Agent, the agent understands the query and begins a flow. When you submit a message with multiple questions or requests, Virtual Agent answers the multiple questions consecutively in a response. It can reason, plan, and execute across AI agents, Virtual Agent topics, conversational actions and subflows, catalogs, Knowledge Base articles, custom skills, and any ServiceNow Otto for Virtual Agent supported skills to help you. Before receiving a response, you receive acknowledgment messages from the Virtual Agent and on-screen messages to let you know where the agent is at in the agentic processing flow. After the processing has completed its flow, a View AI Steps section header appears, where the processing flow steps can be expanded and viewed. You can stop the agentic processing flow at anytime by selecting the End flow icon (). After an action starts, it cannot be stopped. Selecting the End flow icon () only stops the proceeding processing steps.

Example of an agentic conversation starting

The screenshot shows a chat interface for a virtual agent named Otto. At the top, there's a dark blue header bar with Otto's logo (a green star) and name on the left, and a plus sign and three dots on the right. Below the header, a blue button labeled "Order a new laptop" is visible. The conversation history shows three messages from Otto, each preceded by a green star icon. The first message says "Let me look up information related to ordering a laptop for you." The second message is "View AI Steps" followed by a downward arrow. The third message is "Just now" followed by "Laptop order options" and "To order a new laptop, choose one of these company laptop request options:". At the bottom, there's a white input box with the placeholder text "Ask or search for anything" and three icons: a smiley face, a paperclip, and a right-pointing arrow.

Otto

Order a new laptop

Let me look up information related to ordering a laptop for you.

View AI Steps ▾

Just now

Laptop order options

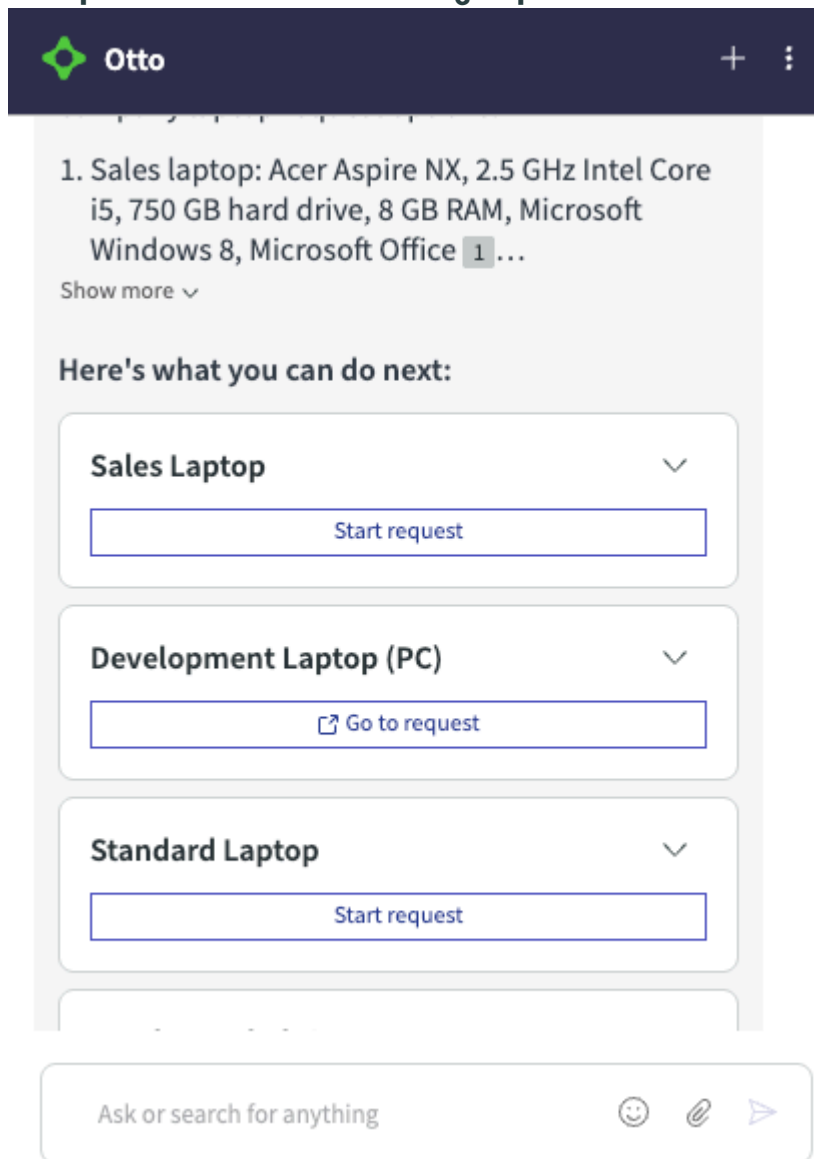
To order a new laptop, choose one of these company laptop request options:

Ask or search for anything

Catalog citations

For conversational catalogs, the **Start request** option appears, and if selected, the catalog request flow launches within the Virtual Agent. For non-conversational catalogs, the **Go to request** option appears with an external link that if selected, either redirects you to a new browser or pop-up window to order the catalog item.

Example of a conversational catalog response flow



When the catalog order is complete, Virtual Agent displays a card for the order.

Example of a summary confirmation for a completed catalog request



Submit



I've submitted your request

Requested Item [RITM0010014](#)

Short desc... Acer Aspire NX

State Open



Thanks for chatting! I'll go ahead and close this conversation now. I'm here if you need anything else.

[Click here to start a new conversation](#)



Topic, subflows, or actions citations

The **[Asset's name]** option appears, and if selected, the asset flow begins in Virtual Agent.

Q&A Knowledge Base citations

The answer is shown with the option to view your sources through the numbered inline citations icon (¹). These Knowledge Base inline citations show which ServiceNow knowledge articles were used to generate the response.

Note: If you have activated Knowledge Graph, you may get more personalized Q&A Knowledge Base responses depending on whether the user schema attributes were triggered. For more information about receiving these personalized responses, see [Access Knowledge Graph Schema](#).

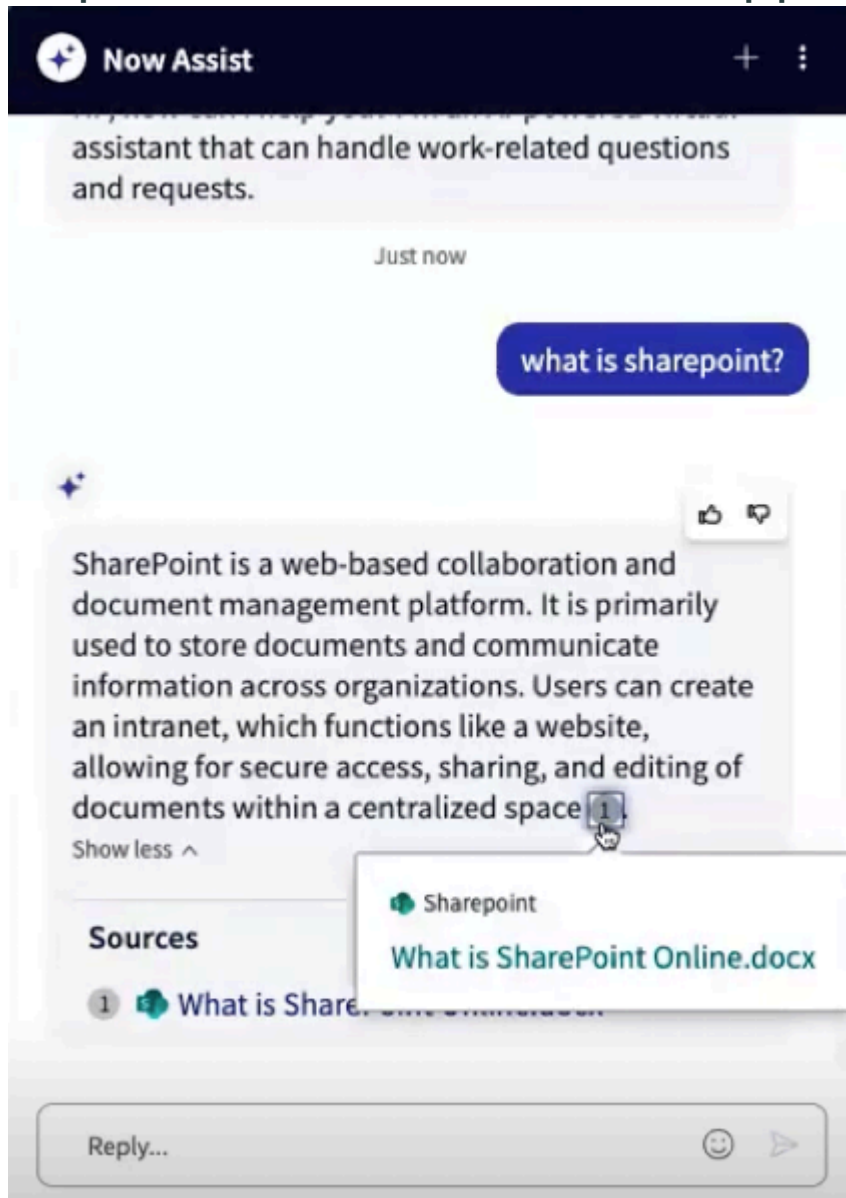
External content connections citations

If external search sources are added to your information sources when [Assistants overview](#), you can search through external content connections. This can include information from attachments and knowledge blocks, or from the following list of content connection:

- Microsoft SharePoint
- Confluence
- Atlassian Jira Cloud
- Google Drive
- Microsoft Teams
- Predefined web sources
- ServiceNow® documentation
- Slack

For more information about external content connections, see [External Content Connectors](#) .

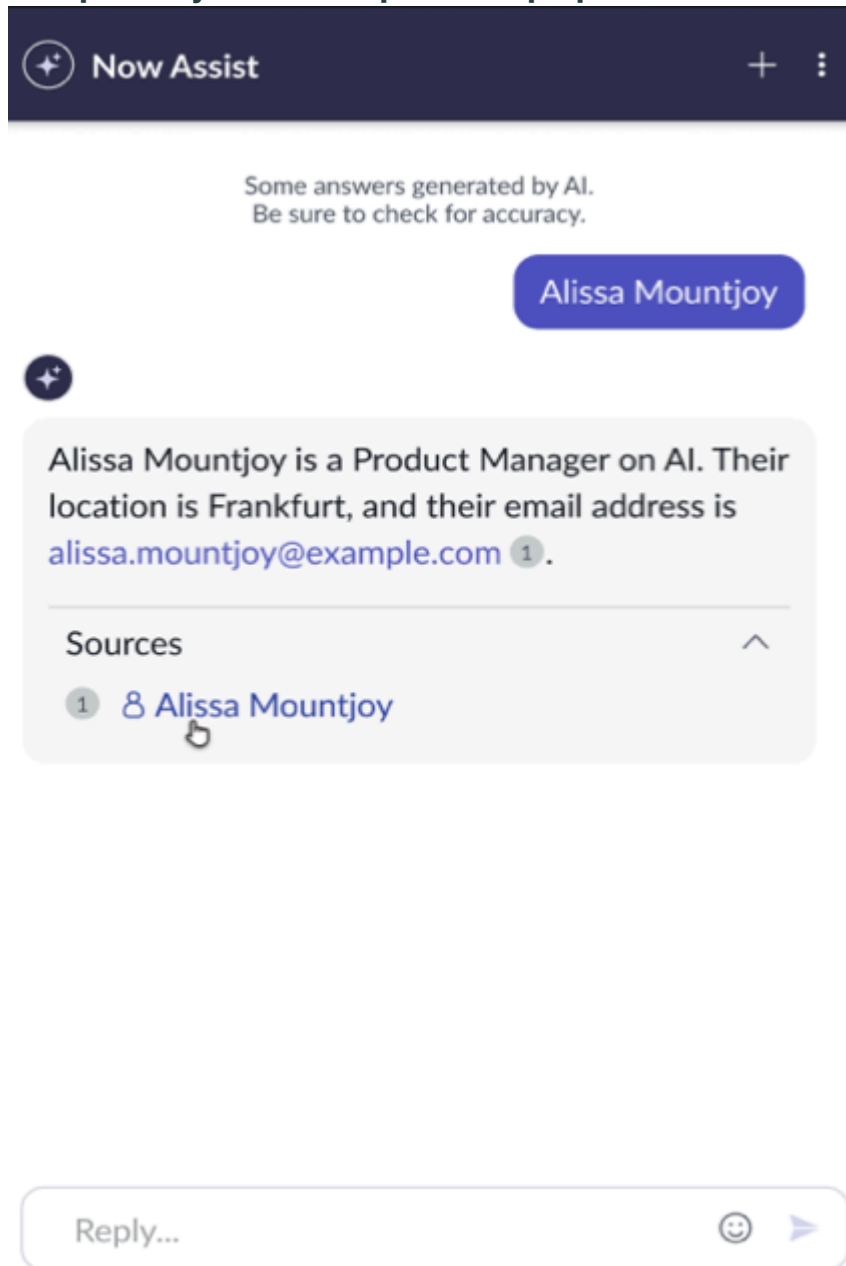
Example of an inline citation with external content source popover



People citations

Information about people in your organization can be found if you have activated Knowledge Graph. Information about the person you're searching for appears in the synthesized response, along with an in-line numbered citation and people citation in the **Sources** section. If a direct match doesn't occur and multiple people are found, try providing more information to narrow down the people search results. Up to three people can appear in a synthesized response. You may be asked a clarifying question, such as Are you asking about [user_1], the programmer, or [user_2], the faculty member? to yield better results. Selecting the person's name in the **Sources** section redirects you to the portal's user profile landing page.

Example of a synthesized response with people results



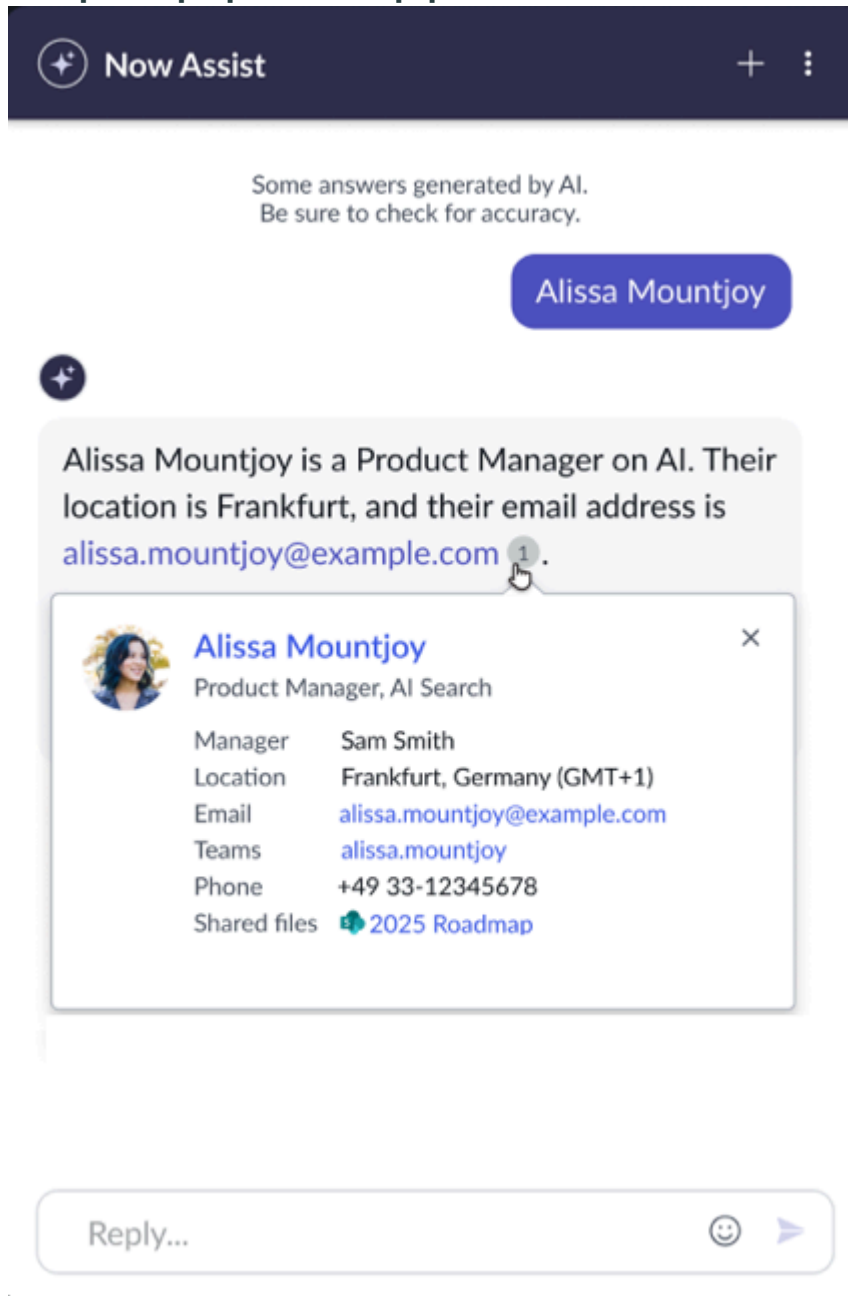
Selecting the person's inline numbered citation presents a popover. The information in the popover can include the following information:

Note: The following popover details can be customized through EVAM. For more information about customizing the data details, see [Define an EVAM view template](#).

- Manager
- Location
- Email
- Teams
- Phone
- Shared files

i Important: Shared Microsoft SharePoint files between you and the person found appear only on the people popover. These shared files only appear after you have completed the prompt to **Log in**, signed in successfully, and have entered a new search query for that person. A new search query is necessary after you have signed in so that up to three shared Microsoft SharePoint files can appear. You're automatically logged out of your Microsoft account every three months and must repeat the **Log in** prompt again to see shared files.

Example of a people citation's popover



Although rare, when you receive a synthesized response that includes a person, you may also receive other citations associated with that person. For example, a Knowledge Base article that was authored by the person you searched for may also appear.

Extended entities and view records

Extended entity information can be found if you have activated Knowledge Graph.

Note: To enable the Knowledge Graph natural language query (NLQ) schema, configure this schema for the assistant. To configure the schema for an assistant, see [Assign search sources to a chat assistant](#).

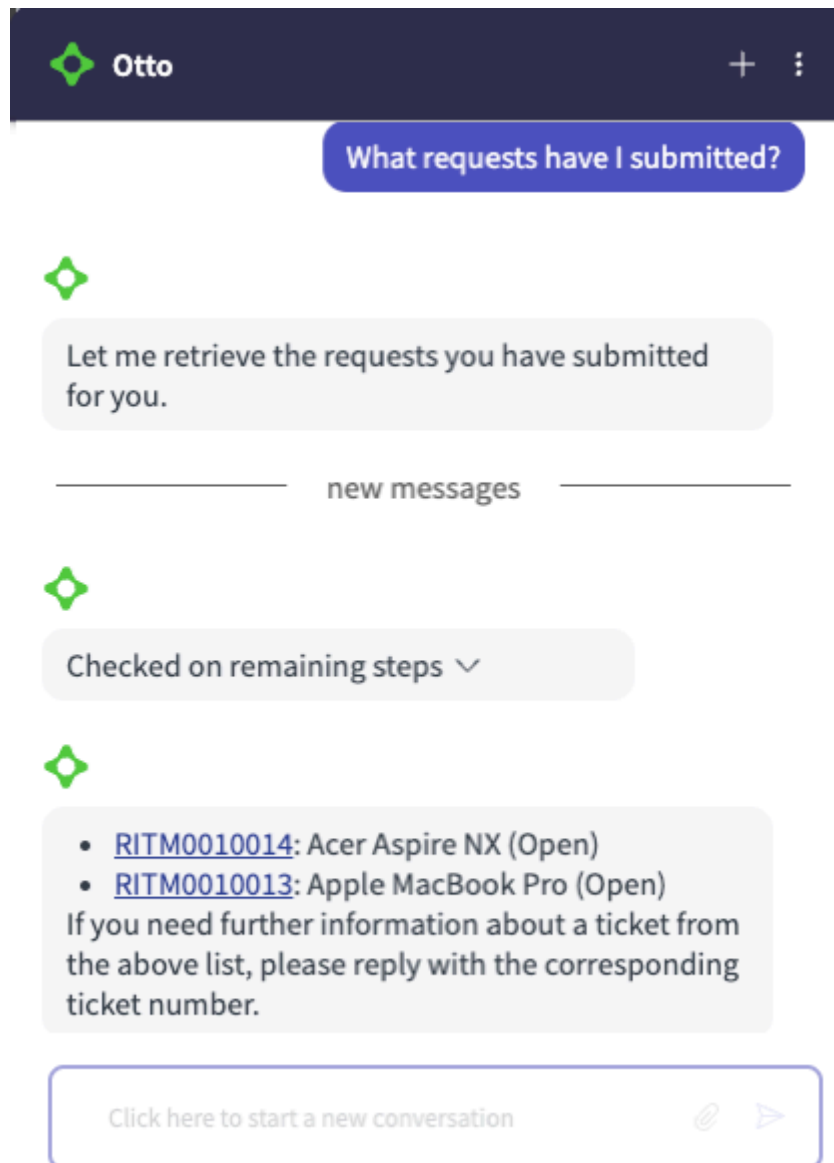
These extended entities that come from the additional custom tables associated with the Knowledge Graph natural language query (NLQ) schema can include:

- Assets
- Incidents
- Recently viewed knowledge base articles
- Requests
- Tasks

Select an entity in-line citation to view that entity record in a popover, or select **View records** to view a list of additional entities. Selecting a link from the **View records** pop-up opens a new tab with that entity table's data.

Example of extended entities and view records

The following example is of a conversation showing 3 out of 12 requests and the option to view records and sources.



Fallback options

Note: For more information about where and how to enable fallback options, see [Manage an assistant chat experience](#).

A fallback state can occur whenever search results are unavailable. Scenarios where search results are unavailable include the Virtual Agent didn't understand the query, complaint small talk was found, or an error occurred. When search results are unavailable, a single or multiple fallback options may appear. These fallback options include:

- **Request a live chat:** Triggers live agent mode and routes you to a human support representative.
- **Search the web:** Triggers web search mode and uses the internet to search for the results.

Note: Only the last query entered into the conversation is considered when entering web search mode via this **Search the web** fallback option.

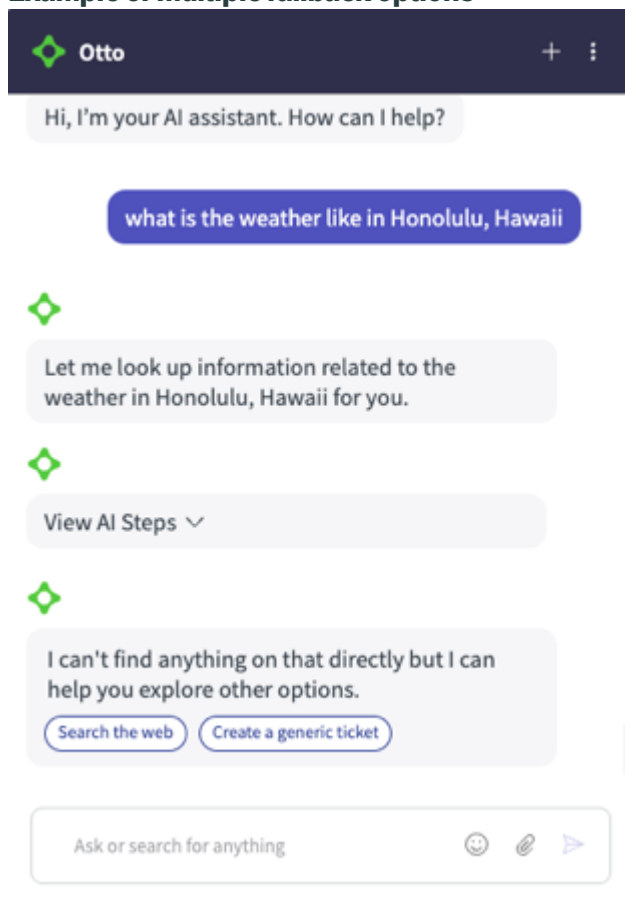
- **Create a generic ticket:** Creates a record.
- **End this chat:** Ends the chat.

Note: This option is only available to standard chat conversations.

- **Custom fallback option:** Presents a fallback Virtual Agent topic.

Select a fallback option to launch that mode or action.

Example of multiple fallback options



Enhanced chat

ServiceNow® Otto for Virtual Agent enhanced chat is a conversational support experience within a dynamic window that also includes the ability to have multiple active conversations and superior search capabilities. Turning on enhanced chat's full-page experience further combines

chat and search capabilities by redirecting you into a full-page chat after entering a query into a portal's search bar.

https://player.vimeo.com/video/1116073820?h=3bb4f47d4e&badge=0&autoplay=0&player_id=0&app_id=58479

ServiceNow Otto for Virtual Agent enhances the user experience by combining AI Search with generative AI chat skills. These skills can speed up issue resolution and reduce deflection to a live agent.

Note: For more information about selecting a chat experience in the admin guided setup, see [Display your assistant on a portal, channel, or mobile app](#).

ServiceNow Otto for Virtual Agent provides your users with an interactive generative AI experience. A friendly, natural language conversation is easier to understand and helps users to be more comfortable with chatting to a bot.

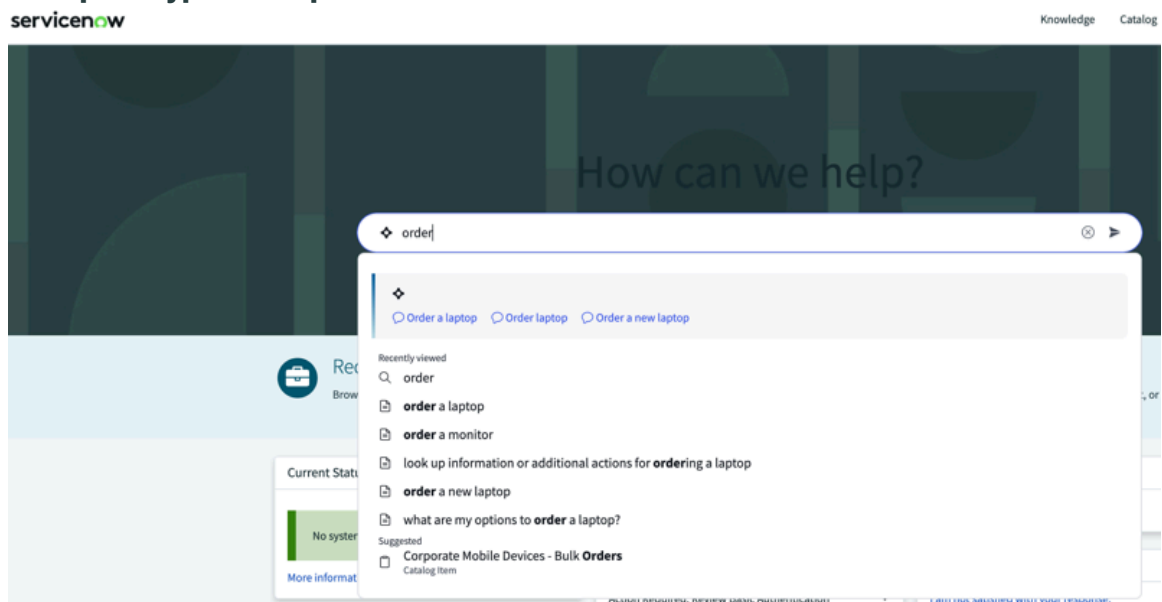
The following sections highlight how a conversation powered by generative AI might look in Virtual Agent.

Note: This content's primary focus is on enhanced chat's default chat window rather than on the optional full-page experience. The conversational fluidity and citation behavior between the enhanced chat and enhanced chat's full-page experience remains the same regardless of which chat experience you use. The conversations that you have either through the enhanced chat's window or full-page experience remain in synchronization, and the conversational history is retained in both mediums. For more information about the full-page experience, see that relevant section in [Using ServiceNow Otto for Virtual Agent](#).

Starting the conversation

With enhanced chat, chat and search capabilities are combined. Suggested conversational prompts and searches may appear in a drop-down list on the portal's search bar. A section header may appear at the top of the portal search bar's drop-down list. When you select one of these suggested queries, you're redirected into a conversation within a chat window or full-page experience. You receive relevant answers based on the prompt that you have selected. If you select a suggested type-ahead search outside of the header, that search query begins in either the portal's search results page or within the full-page experience's **Search** tab.

Example of type-ahead portal search

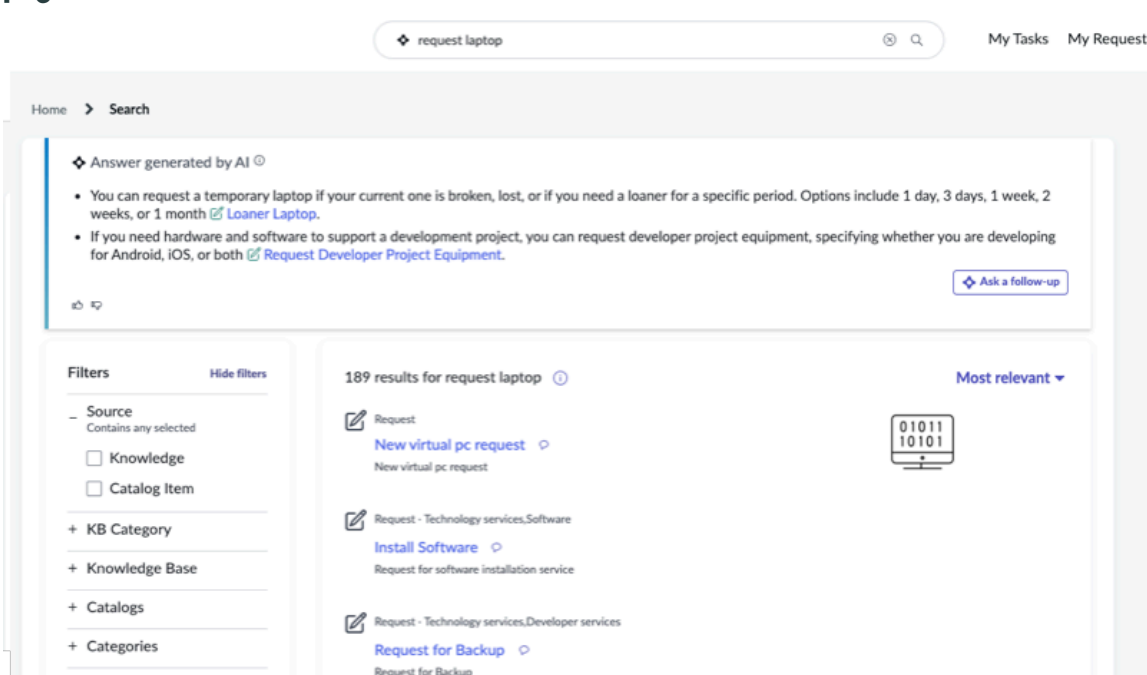


Note: For more information about how ServiceNow Otto for Virtual Agent and ServiceNow Otto for AI Search combine to include these suggestion type-ahead searches, see [Auto-complete suggestion types included with ServiceNow Otto for AI Search](#). To learn how to activate suggestion term bold highlighting, see [Configure AI Search as the source for Ask ServiceNow Otto suggestions](#).

When you're using enhanced chat and you enter a search query through your portal's search bar, you're redirected to the portal's search results page. At the top of the search results page, you see Genius Results in a synthesized response generated by ServiceNow Otto. This synthesized response answer provides inline citations that appear at the end of each sentence. You can select citations and if applicable, such as for conversational catalog items, select whether to

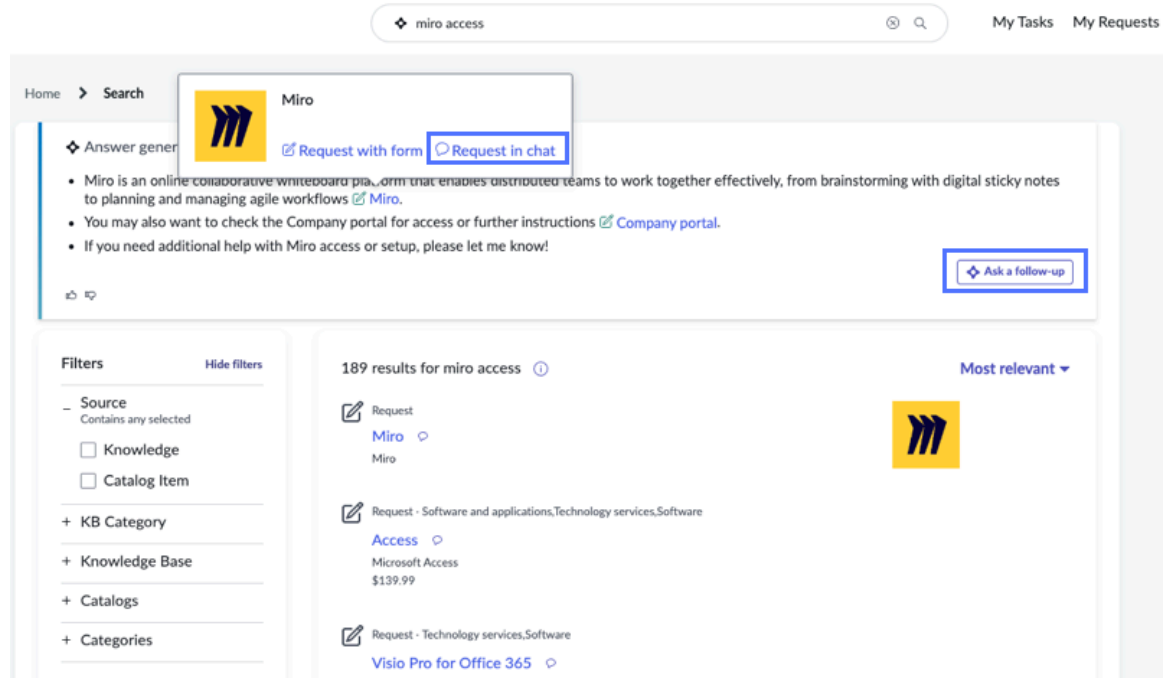
Request with form or **Request in chat**. Similar options also appear in the regular search results area, as indicated by the request in chat icon () and request with form icon (). Depending on your selection, the catalog request flow launches within either the Virtual Agent chat or a form.

Example of enhanced chat synthesized response on the portal's search results page

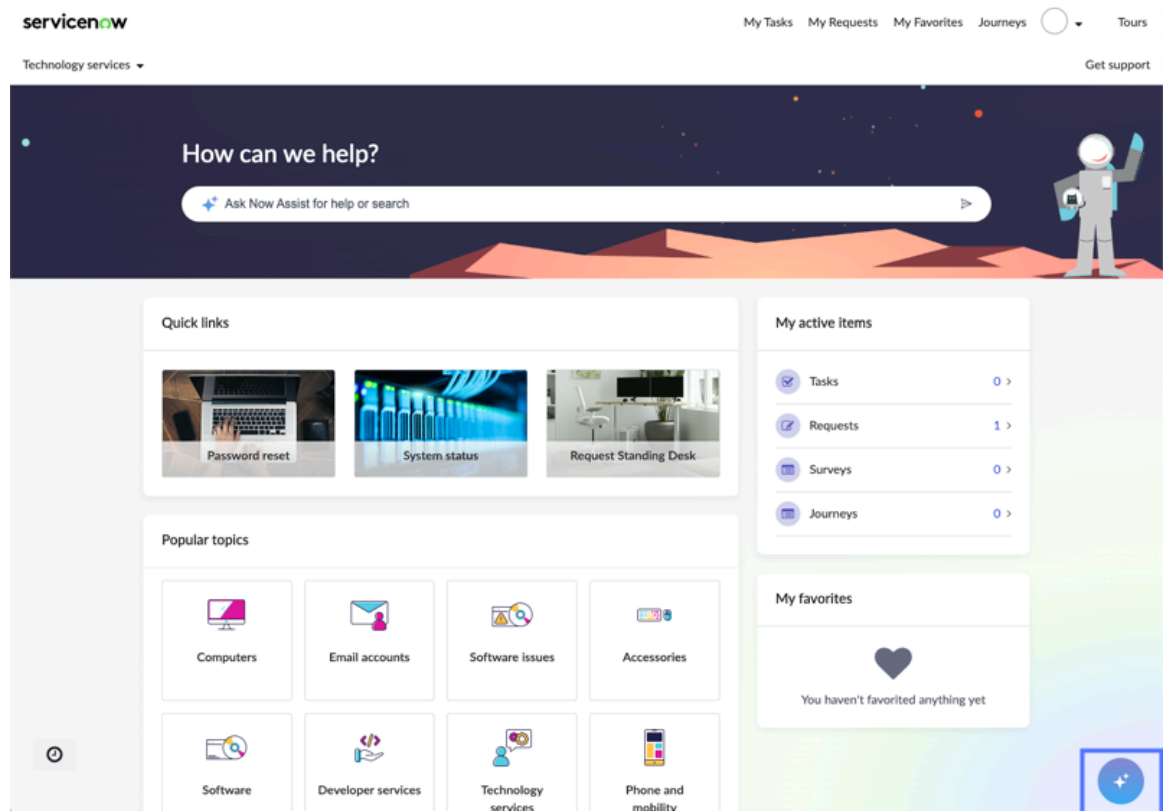


You can start the chat experience either through the chat icon on the portal's search results page or through the portal's chat widget button.

Example of chat entry points on the portal's search results page



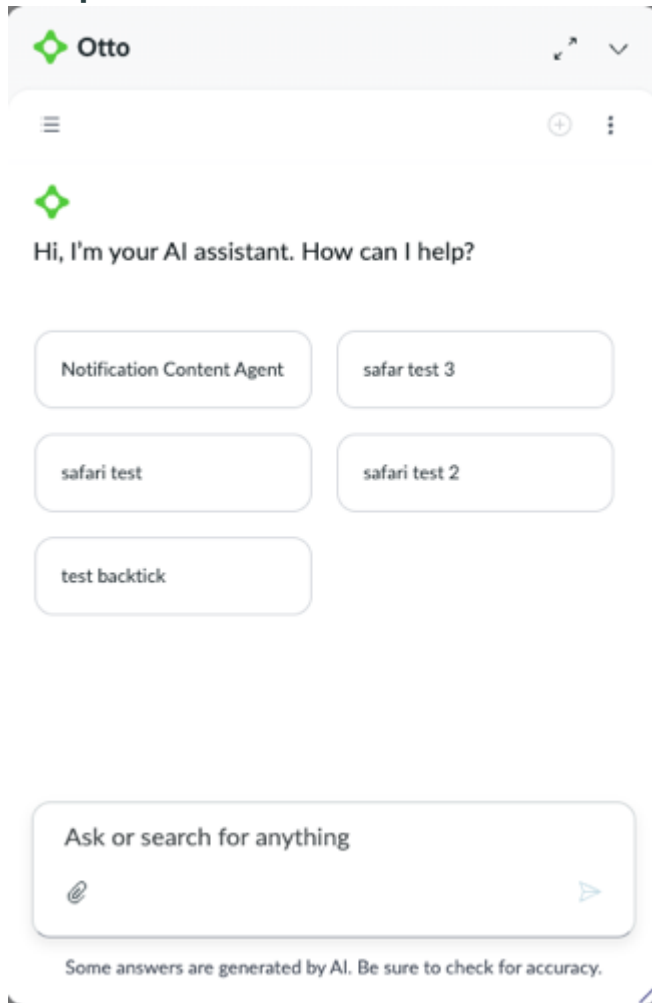
Example of a chat widget button



After selecting the chat widget button on the portal, the floating chat window opens and replaces the chat button. A greeting message appears, and a chat is created only after you have entered an initial utterance. If you have an active chat ongoing, the current active chat appears instead of a greeting message. You can select a predefined action, topic, suggested search query, start a new conversation, or view all options, if applicable. The **View all options** link only shows if more than one suggested search query or promoted topic is available.

Note: Any search query entered into the portal's search bar or Virtual Agent is incorporated into the greeting topic for future conversations as a suggested search query. Suggested search queries can be viewed in the Search Suggestions [sys_search_suggestion.list] table. For more information on how to enable suggested search queries, see [ServiceNow Otto for Virtual Agent system properties](#).

Example of the start of an enhanced chat conversation



If language detection is active and the initial utterance in the search bar or chat differs from user language preference, the conversation switches to the detected language. For more information and examples of language detection in enhanced chat conversations, see [Language detection and dynamic machine translation in Virtual Agent in enhanced chat](#).

Navigating the chat window resizing options and controls toolbar

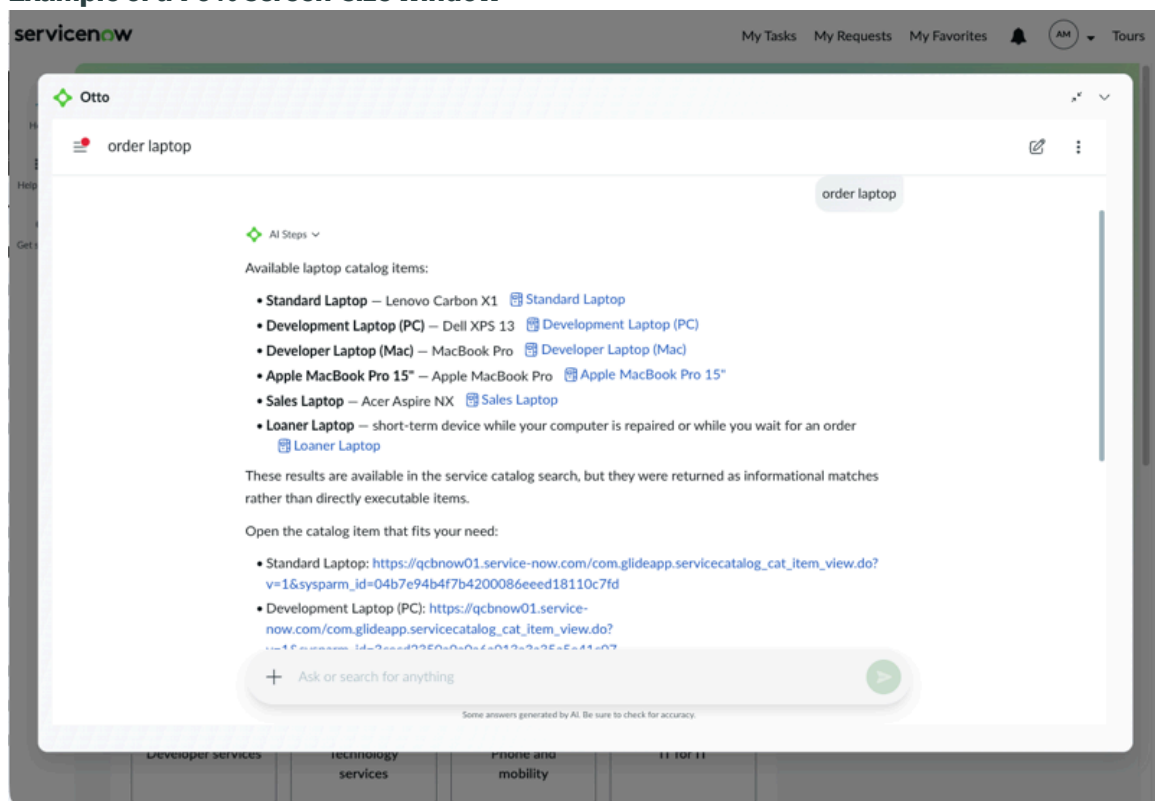
After selecting the chat widget button, the floating chat window opens and replaces the chat button. You can move the chat window by selecting the header and dragging the chat window to the desired location. You can resize the chat window by using the window's edges to resize to your desired size or use the toolbar icons. The following list details the chat window adjustment icons:

- : Selecting the expand icon  expands the chat into a 90% screen-size window. The 90% screen-size window can't be resized or moved. Selecting outside of the 90% screen-size chat window resizes the chat back into the floating window.
- : Selecting the pin icon  pins the chat to the side of the browser but you can still resize this window to fill half the browser, if desired. When you duplicate a browser tab, open a new tab, or use the browser back button, the chat window state persists as long as you have not minimized the chat.

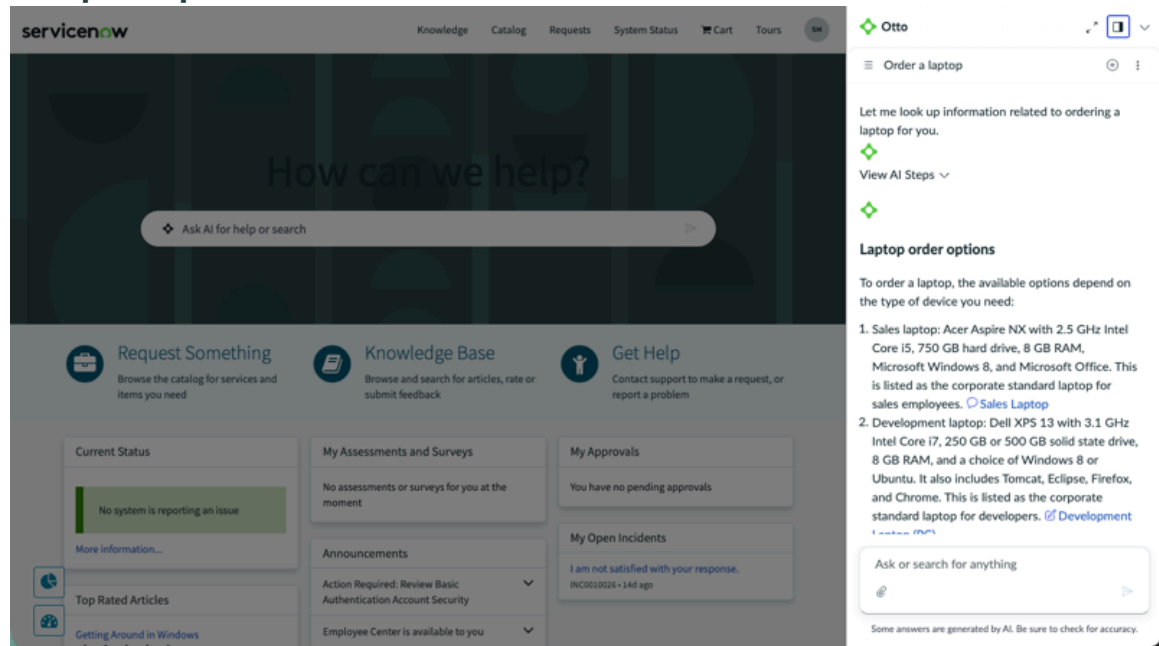
i Important: By default, pinning a chat window is enabled for Service Portal. For all other portals, an admin needs to create a system property to enable pinning a chat window. For more information, see [ServiceNow Otto for Virtual Agent system properties](#).

- : Selecting the down arrow  minimizes the chat and the chat widget button reappears.

Example of a 90% screen-size window

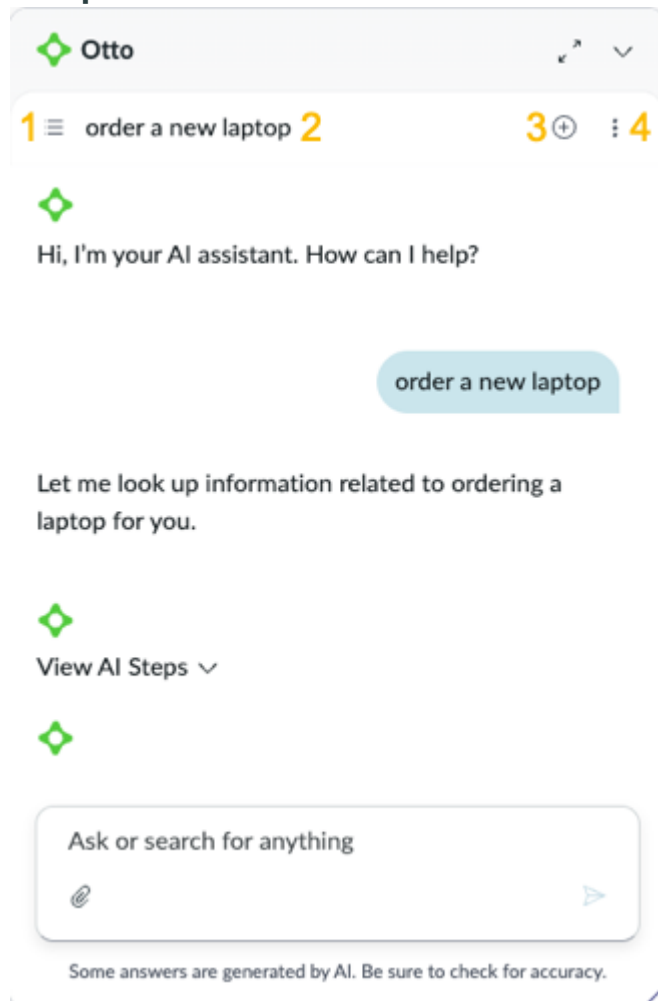


Example of a pinned chat



The ServiceNow Otto sub-header consists of four elements. The following figure and table shows an example and description of those elements.

Example of chat controls



ServiceNow Otto sub-header elements

Element	Description
1. Chats (☰)	All chats appear. Chats are organized with the most recent conversations at the top. Selecting a chat opens the chat in the conversation area. If there are unread chats or notifications, a badge number appears on the Chats icon (☰). Any unread chat or notification appears with a red dot next to it and the chat title appears in bold. Additionally, if you switch to a new chat while another active chat is ongoing, a pop-up message on the Chats icon (☰) appears: Your previous chat was saved. You can revisit all of your past chats and continue ones that are still active. The following list includes the chat sections that you may see in the chats area. • Active: Chats where you can continue the conversation. If applicable, active chats move to the Closed chats section after two hours of inactivity. This 2 hour time limit can be configured within the Messaging Channels {sys_cs_channel.list} table. To change the inactivity time limit, from the Messaging Channels {sys_cs_channel.list} table, select the NASS record and populate the Conversation Idle Timeout field with your preferred active chat time limit. If you have no active chats, No chatter at the moment is displayed. If more than 12 active chats are running, a Show more link appears to view more chats. Selecting Show more displays an additional 10 chats. • Updates: Updates for important notifications and reminders can be configured to display. When <code>sn_nowassist_va.nass_notification_enabled</code> is set to true (the default), simple (nonactionable) Virtual Agent notifications appear on your portal home page. After selecting a notification, you're redirected to this Updates section. If you have no updates, You're all caught up is displayed. If more than four updates are available, a Show more link appears to view more updates. Selecting Show more displays an additional 10 updates.

ServiceNow Otto sub-header elements (continued)

Element	Description
	Note: If <code>sn_nowassist_va.nass_notification_enabled</code> is set to <code>false</code>, the Updates section doesn't appear. • Closed: Closed chats can be configured to display. You know that a message has closed when the designated time has passed (2 hours of inactivity) or you receive the following response in the chat: It looks like you're finished with this chat, so I'll go ahead and close it. Turn on closed chats by selecting the Show closed chats check box within Conversational Interfaces > Assistants > [Selected Assistant Name] > Chat experience > Closed chats. After being turned on, closed chats are displayed for as long as they're available within the Conversations (<code>sys_cs_conversation</code>) table. Closed chats appear in a read-only mode and can't become active again. If more than four closed chats are available, a Show more link appears to view more closed chats. Selecting Show more displays an additional 10 closed chats. After a conversation has closed, you can't reopen it. Hovering over a closed chat displays the delete icon (🗑️). Confirm the chat deletion on the Delete this chat? modal to permanently delete the chat from the interface.
2. [Chat name]	The name of the conversation. If you select a promoted asset or query, that asset's title appears as the chat name. If instead you enter an utterance into the Reply field, your initial utterance becomes the chat name. The chat name appears in both the ServiceNow Otto subheader and Chats list > Active section.
3. New chat (⊕)	A new conversation begins. You may be prompted with a greeting message along with any promoted conversational assets such as topics, subflows, and/or actions, or suggested queries.

ServiceNow Otto sub-header elements (continued)

Element	Description
4. Support and settings ()	Support contact information such as phone numbers and email addresses are listed. If live agents are available, an active Contact Live Agent button is displayed. Although multiple active conversations are possible, you can only have one live agent conversation at a time. Selecting Contact Live Agent begins a chat with a live agent. After a live agent enters the chat, the Contact Live Agent button becomes inactive. If live agents are unavailable, an inactive No live agents currently available button is displayed. Settings toggles for Audio notifications and Notifications appear. By default, audio notifications are turned on and notifications are turned off. If admins have enabled notifications within the guided setup, users can turn on the notifications.
5. Interactive view ( or )	Note: This icon only appears in the sub-header whenever the interactive view is available. Open or close the interactive view. The interactive view appears to the right of the conversational chat area. Interactive view is only available in the following scenarios: • An organizational chart is available to view. • A document was uploaded and you choose to preview the document. • A source is available and you choose to select and view the source content.

Chatting with Virtual Agent

After the user enters an utterance and a search result is found, a synthesized response may appear. A synthesized response includes a brief summary of the requested information and search results along with Genius Results. For more information on how these search results are found, see [Actions Genius Results](#)  and [Knowledge base articles Genius Results](#) .

If multiple results are found, you can follow inline citations to either begin an action or learn more. The option to **Show sources** appears at the end of the synthesized response for internal and external Knowledge Base articles. Virtual Agent can only return available catalog items that match a user's request when the ServiceNow Otto Multi-Turn Catalog Ordering skill is enabled.

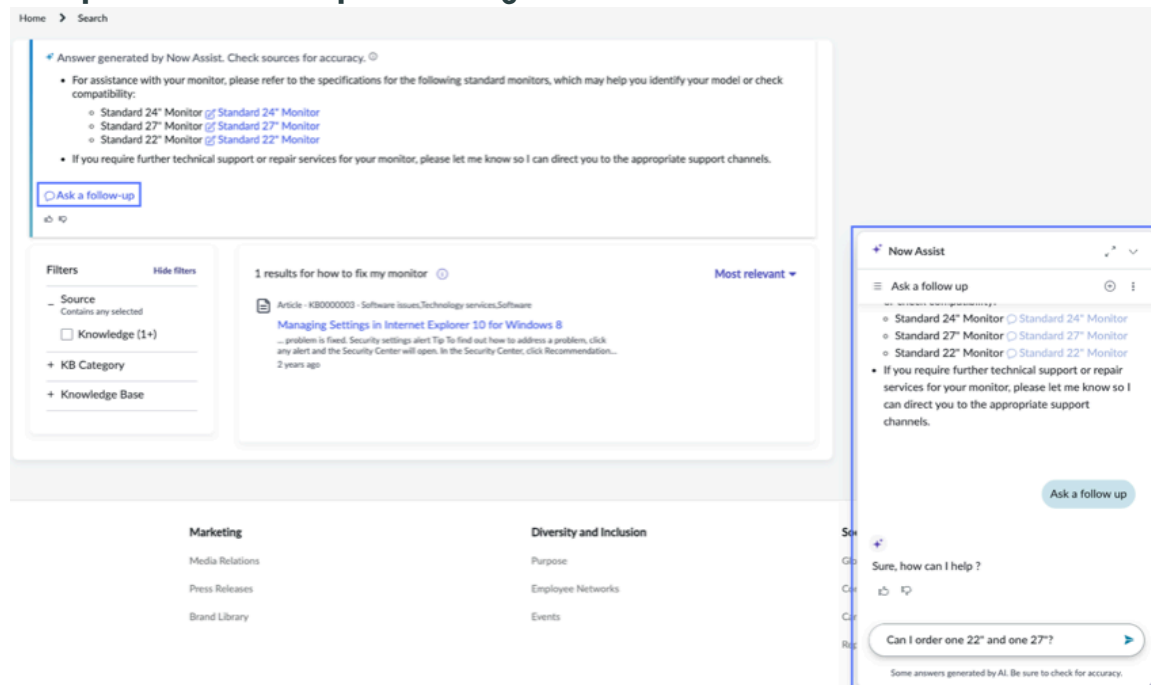
Note: For full catalog functionality, enable the generative AI experience for catalog item request submissions. For more information, see [Configure ServiceNow Otto in Conversational Catalog Request](#).

Whenever only a single search result for topics is found, the synthesized response and options are bypassed by default and users are brought directly into that action's flow. You may consider bypassing the synthesized response and options by automatically launching catalog items, too. For more information on automatically launching single search result actions, search for the `sn_nowassist_va.synthesized_autostart_items` system property in [Available system properties](#).

You can create a new query from within a ServiceNow Otto conversation using mid-topic discovery. For more information, see [Mid-topic switching during ServiceNow Otto for Virtual Agent conversations](#).

If AI Guardian is enabled and your request contains profane content, the Virtual Agent responds with a message prompting you to re-enter an appropriate request without profanity or offensive content. If your request is too ambiguous on the portal search, a synthesized response appears along with an **Ask a follow up** option. Selecting the **Ask a follow up** option redirects you to a Virtual Agent chat. In the Virtual Agent chat, you can submit your follow-up question or request, but the synthesized response links are only available to select on the portal page and are unavailable to select in the chat window. If your follow-up question or request is too ambiguous in the Virtual Agent chat, Virtual Agent asks a clarifying question and displays the go to search results icon (🔍) in the feedback panel.

Example of Ask a follow up in Virtual Agent



Responses generated in ServiceNow Otto for Virtual Agent can come from a combination of catalog items, Virtual Agent topics, subflows and actions, knowledge articles, attachments, external content sources, and people citations. Inline citations appear at the end of the relevant synthesized response sentence. Selecting an inline citation results in a popover containing either a link to an article or source, or a description and action to start the action. The following options may appear as synthesized response in-line citations depending on what search results are returned:

- Catalog
- Topic, subflows, or actions
- Q&A Knowledge Base articles
- External content connections

- People
- Extended entities and additional records

Note: Q&A Knowledge Base and external content connection citations also appear within the expandable **Show sources** option.

Response feedback

Each Virtual Agent response includes a feedback icons panel. The feedback icons panel appears on the latest Virtual Agent response and whenever you hover over any Virtual Agent response. You can indicate if the response was helpful by selecting the like thumbs up icon (👍).

If the response wasn't helpful, select the dislike thumbs down icon (👎). When you select the thumbs up or thumbs down icon, you are prompted to provide detailed feedback by selecting one or more reason check boxes. You can also select **Other** to add comments or suggestions (up to 300 characters). After making your selection, select **Submit** to submit your feedback or select **X** to close the dialog without submitting feedback. All submitted feedback is captured, stored, and made available through analytic dashboards.

Example of additional feedback panel from thumbs down icon

How can we improve this response?

☐ Missed important details
 ☐ Included irrelevant details
 ☐ Mixed up who said what
 ☐ Put details in the wrong spot
 ☐ Made up things that didn't happen
 ☐ Other

Add comments or suggestions (optional)

Characters left: 300

Submit Feedback

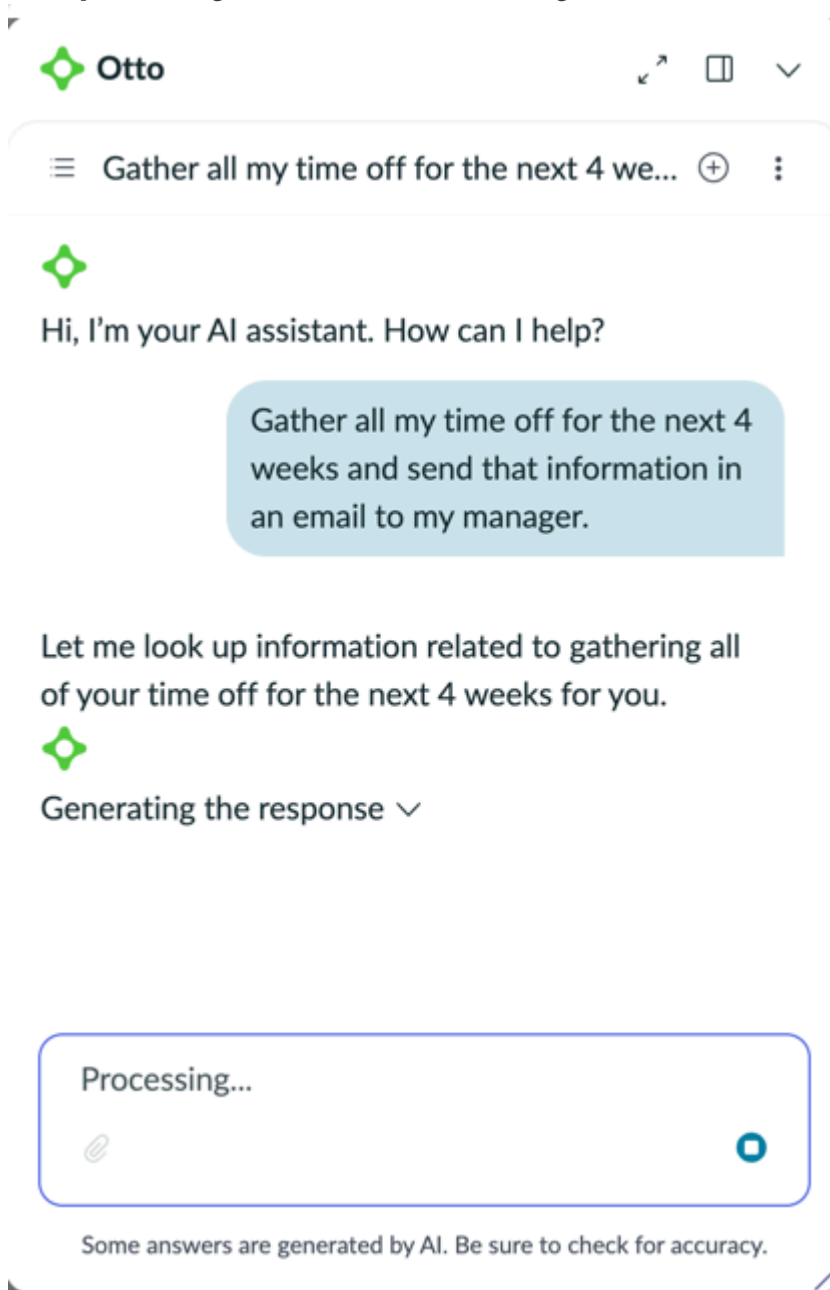
Depending on the context of the response, an additional go to search results icon (🔍) may appear in the feedback icons panel. This icon appears alongside synthesized responses in Virtual Agent, clarifying questions in Virtual Agent, and regular search results or Virtual Agent fallback topics whenever a synthesized response is unavailable. Selecting the go to search results icon (🔍) redirects you to the search results page and begins a search query using the last five chat utterances you entered. Additionally, a copy message icon (📄) appears on received Virtual Agent responses.

Agentic conversations

Note: Admins must first enable AI agents before end users can experience agentic conversations. For more information on how to set up AI agents for agentic conversations, see [Configuring agentic conversations in Virtual Agent](#). ServiceNow Otto for Virtual Agent discovers and executes AI agents. For more information about AI agents, see [AI Agent Studio \(legacy\)](#) .

When you submit a single question to the Virtual Agent, the agent understands the query and begins a flow. When you submit a message with multiple questions or requests, Virtual Agent answers the multiple questions consecutively in a response. It can reason, plan, and execute across AI agents, Virtual Agent topics, conversational actions and subflows, catalogs, Knowledge Base articles, custom skills, and any ServiceNow Otto for Virtual Agent supported skills to help you. Before receiving a response, you receive acknowledgment messages from the Virtual Agent and on-screen messages to let you know where the agent is at in the agentic processing flow. After the processing has completed its flow, a View AI Steps section header appears, where the processing flow steps can be expanded and viewed. You can stop the agentic processing flow at anytime by selecting the End flow icon (). After an action starts, it cannot be stopped. Selecting the End flow icon () only stops the proceeding processing steps.

Example of an agentic conversation starting



Catalog citation

If you're accessing the catalog citation through the synthesized response popover, the popover options vary depending on where you're located. The only popover option when in chat is the **Start request** option which begins the catalog action within the chat. There are two popover options when you select the synthesized response through the portal's search bar: **Request with form** and **Request in chat**. Similar options also appear in the regular search results area, as indicated by the request in chat icon () and request with form icon (). Depending on your selection, the catalog request flow launches within either the Virtual Agent chat or a form.

Example of synthesized response popover on the portal's search results page

miro access

My Tasks My Requests

Home > Search

Miro

Request with form

Request in chat

Answer generated

- Miro is an online collaborative whiteboard platform that enables distributed teams to work together effectively, from brainstorming with digital sticky notes to planning and managing agile workflows [Miro](#).
- You may also want to check the Company portal for access or further instructions [Company portal](#).
- If you need additional help with Miro access or setup, please let me know!

Ask a follow-up

Filters Hide filters

Source

Contains any selected

☐ Knowledge
 ☐ Catalog Item

KB Category

Knowledge Base

Catalogs

Categories

189 results for miro access ⓘ

Most relevant ▾

Request

Miro ⓘ

Request - Software and applications,Technology services,Software

Access ⓘ

Microsoft Access

\$139.99

Request - Technology services,Software

Visio Pro for Office 365 ⓘ

Example of a synthesized response with catalog and knowledge base citations

The screenshot shows the 'Now Assist' chat interface. At the top, there's a header bar with the 'Now Assist' logo and some navigation icons. Below that, the user's query 'Order laptop' is displayed. The response from the Virtual Agent is as follows:

Here are the Mac OS requirements and options for ordering a MacBook:

- **Mac OS Requirements:** For OS X 10.12 (Sierra), you need a MacBook Pro (Mid/Late 2008 or newer), 2GB of memory, OS X v10.6.8 or later, and 64GB of available space ¹.
- **Developer Laptop (Mac):** The MacBook Pro with Intel core i7 processor and 512GB PCIe-based flash storage is available [Developer Laptop \(Mac\)](#).
- **Apple MacBook Pro 15":** Features include a 2.6 GHz Quad-Core Intel Core i7 processor and 8 GB DDR3 RAM [Apple MacBook Pro 15"](#).

Below the list, there is a link 'Show sources'. At the bottom of the chat window, there is a text input field labeled 'Reply to Now Assist...' with a paperclip icon and a send button. A disclaimer at the very bottom states: 'Some answers generated by AI. Be sure to check for accuracy.'

If you chose to complete the catalog request through chat, after the catalog order is complete, Virtual Agent displays a summary card for the order.

Example of summary card for catalog order in chat

The screenshot shows a chat window with a header bar containing the 'Otto' logo and navigation icons. Below the header is a search bar with the text 'Order laptop'. The chat history shows a user asking 'What would you like to do?' and a bot replying 'I've submitted your request'. A summary card is displayed, containing the following information:

Requested Item	RITM0010013
Short descr...	Apple MacBook Pro
State	Open

Below the summary card, the bot asks 'All done! Is there anything else I can help you with?' and provides a search bar with the placeholder text 'Ask or search for anything'. At the bottom, a disclaimer states: 'Some answers are generated by AI. Be sure to check for accuracy.'

Topic, subflows, or actions citations

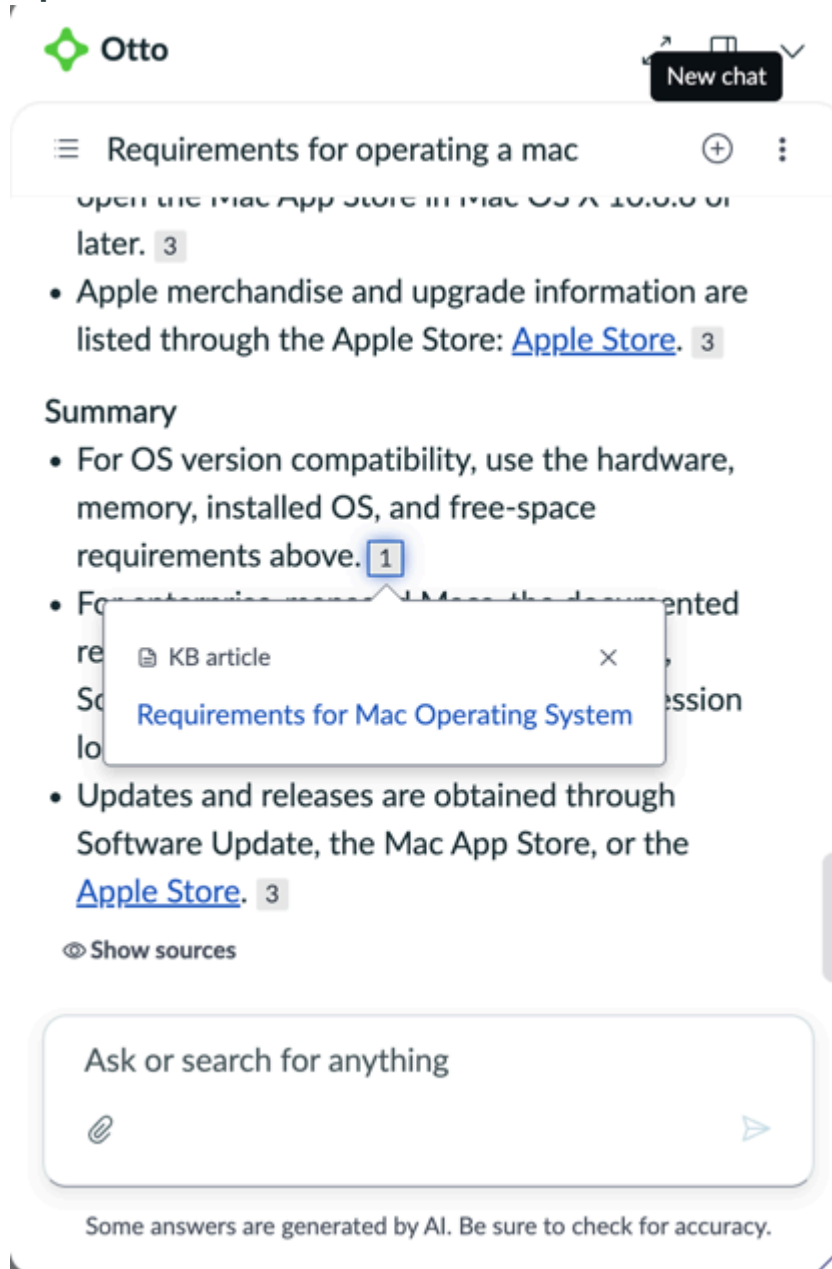
These assets are associated with the chat icon (💬) and if selected, that flow begins within Virtual Agent. The popover is not applicable to these types of assets.

Q&A Knowledge Base citations

The answer is shown with the option to view your sources through the numbered inline citations icon (1) and in the **Show sources** section. These Knowledge Base inline citations show which ServiceNow knowledge articles were used to generate the response.

Note: If you have activated Knowledge Graph, you may get more personalized Q&A Knowledge Base responses depending on whether the user schema attributes were triggered. For more information about receiving these personalized responses, see [Access Knowledge Graph Schema](#).

Example of Knowledge Base inline citation, popover, and Show sources expanded



External content connections citations

The answer is shown with the option to view your sources through the numbered inline citations icon (¹) and in the **Show sources** section. If external search sources are added to your information sources when [Assistants overview](#), you can search through external content connections. This can include information from attachments and knowledge blocks, or from the following list of content connections:

- Adobe Acrobat Sign external content connector
- Adobe Experience Manager as a Cloud Service external content connector
- Aha! Roadmaps external content connector
- Amazon S3 external content connector
- Asana external content connector

- Atlassian Confluence Cloud external content connector
- Atlassian Jira Cloud external content connector
- Box external content connector
- Cornerstone external content connector
- Docusign external content connector
- Fluid Topics external content connector
- Dropbox external content connector
- GitHub Enterprise Cloud external content connector
- GitLab external content connector
- Google Drive external content connector
- HubSpot external content connector
- Lucidchart external content connector
- ManageEngine external content connector
- Microsoft OneDrive external content connector
- Microsoft SharePoint Online external content connector
- Microsoft Teams external content connector
- Microsoft Viva Engage external content connector
- Miro external content connector
- monday.com external content connector
- Notion external content connector
- SAP DMS external content connector
- SAP SuccessFactors external content connector
- ServiceNow documentation external content connector
- ServiceNow instance external content connector
- Slack external content connector
- Smartsheet external content connector
- Trello external content connector
- Webcrawler external content connector
- WordPress external content connector
- Workday external content connector
- Workvivo external content connector
- Zendesk Guide external content connector
- Zoom external content connector

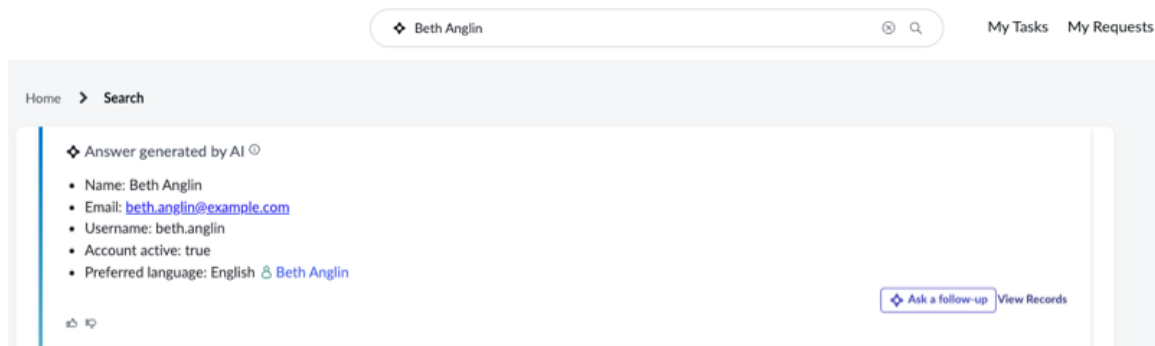
For more information about external content connections, see [External Content Connectors](#) .

People citations

Information about people in your organization can be found if you have activated Knowledge Graph.

Information about the person you're searching for appears in the synthesized response, along with an inline people citation. If a direct match doesn't occur and multiple people are found, try providing more information to narrow down the people search results. Up to three people can appear in a synthesized response. You may be asked a clarifying question, such as Are you asking about [user_1], the programmer, or [user_2], the faculty member? to yield better results. Selecting the person's name redirects you to the portal's user profile landing page.

Example of synthesized response for people on the portal's search results page



Example of synthesized response with people inline citations in chat



Selecting the person's name presents a popover. The information in the popover can include the following information:

Note: The following popover details can be customized through EVAM. For more information about customizing the data details, see [Define an EVAM view template](#).

- Manager
- Location
- Email
- Teams
- Phone
- Shared files

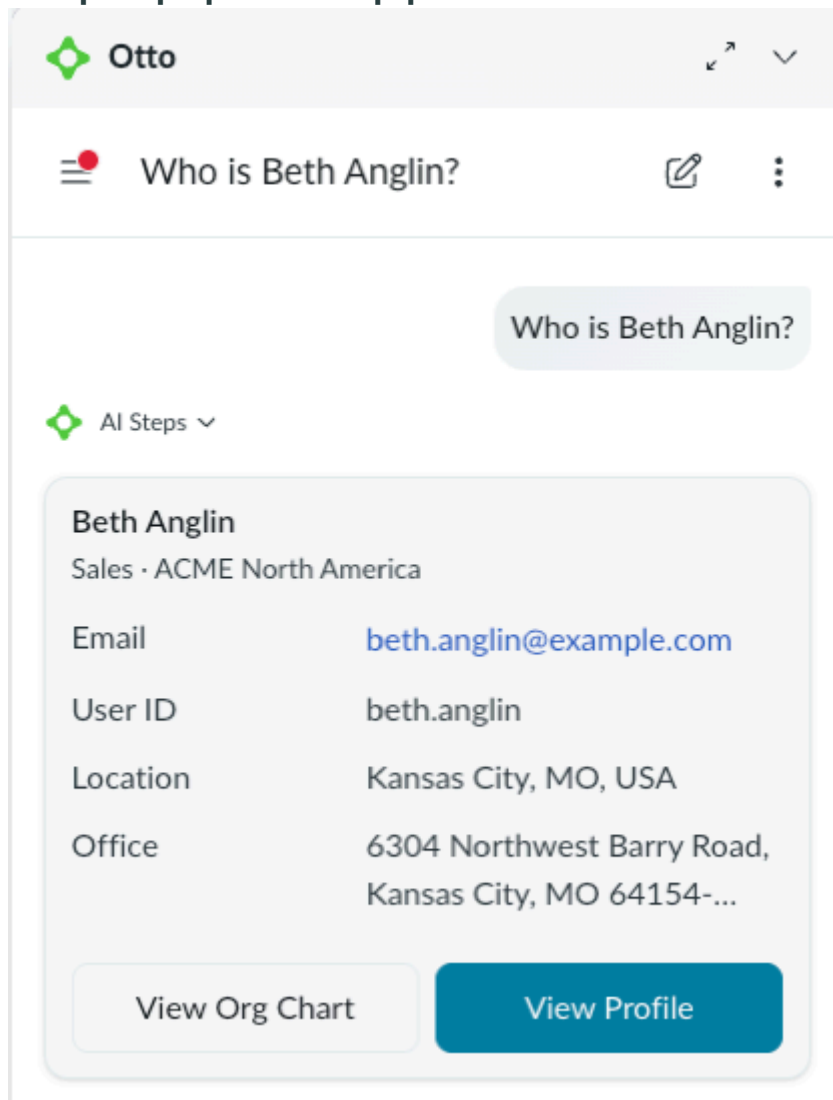
i Important: Shared Microsoft SharePoint files only appear if a Knowledge Graph admin has activated the *sn_kg_conn_user_shared_files* record in the Knowledge Graph Related Data Map [sn_kg_related_data_map_list] table. Shared Microsoft SharePoint files between you and the person found appear only on the people popover. These shared files only appear after you have completed the prompt to **Log in**, signed in successfully, and have entered a new search query for that person. A new search query is necessary after you have signed in so that up to three shared Microsoft SharePoint files can appear. You're automatically logged out of your Microsoft account every three months and must repeat the **Log in** prompt again to see shared files.

If you do not have a valid token, you are prompted to sign in and are redirected to the Microsoft login page. If you have not configured the Microsoft OneDrive application, see [Configure Microsoft OneDrive application for Knowledge Graph](#).

- View org chart

i Note: Selecting **View org chart** opens the interactive view to the right of the chat conversation. The person's information is shown along with their reporting structure in their company's organization chart. You can view and select contact options in the reporting structure of the organization chart. Secondary links like **View profile** open in a new tab and do not disrupt the conversation.

Example of people citation's popover



Although rare, when you receive a synthesized response that includes a person, you may also receive other citations associated with that person. For example, a Knowledge Base article that was authored by the person you searched for may also appear.

Note: If you have activated Knowledge Graph, you may get more personalized Q&A Knowledge Base responses depending on whether the user schema attributes were triggered. For more information about receiving these personalized responses, see [Knowledge Graph integration with ServiceNow® Otto for Virtual Agent and ServiceNow Otto® panel](#).

Extended entities and view records

Extended entity information can be found if you have activated Knowledge Graph.

Note: To enable the Knowledge Graph natural language query (NLQ) schema, configure this schema for the assistant. To configure the schema for an assistant, see [Assign search sources to a chat assistant](#).

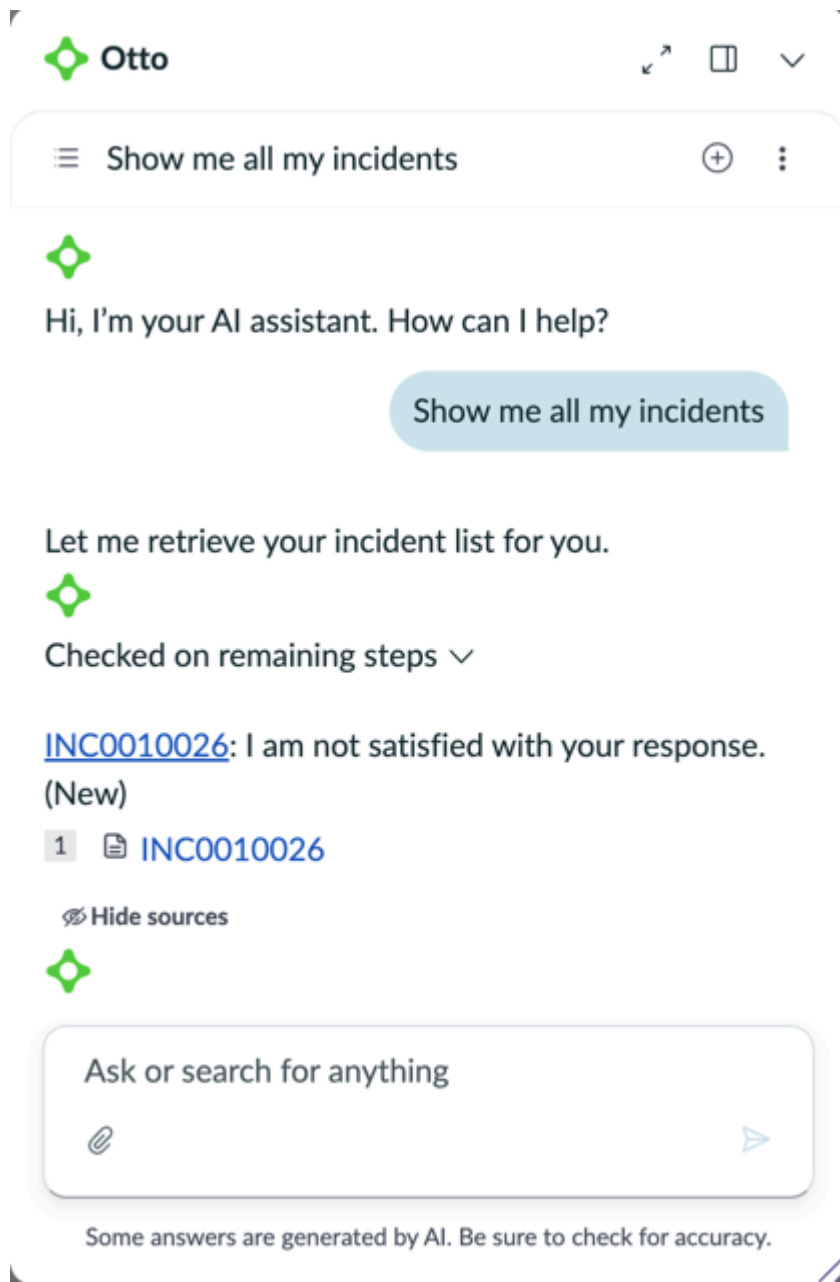
These extended entities that come from the additional custom tables associated with the Knowledge Graph natural language query (NLQ) schema can include:

- Assets
- Incidents
- Recently viewed knowledge base articles
- Requests
- Tasks

Select an entity in-line citation to view that entity record in a new tab, or select **View records** to view a list of additional entities. Selecting a link from the **View records** pop-up opens a new tab with that entity table's data.

Example of extended entities and view records

The following example is of a conversation showing 3 out of 11 incidents and the option to view records to view additional users and incident records.

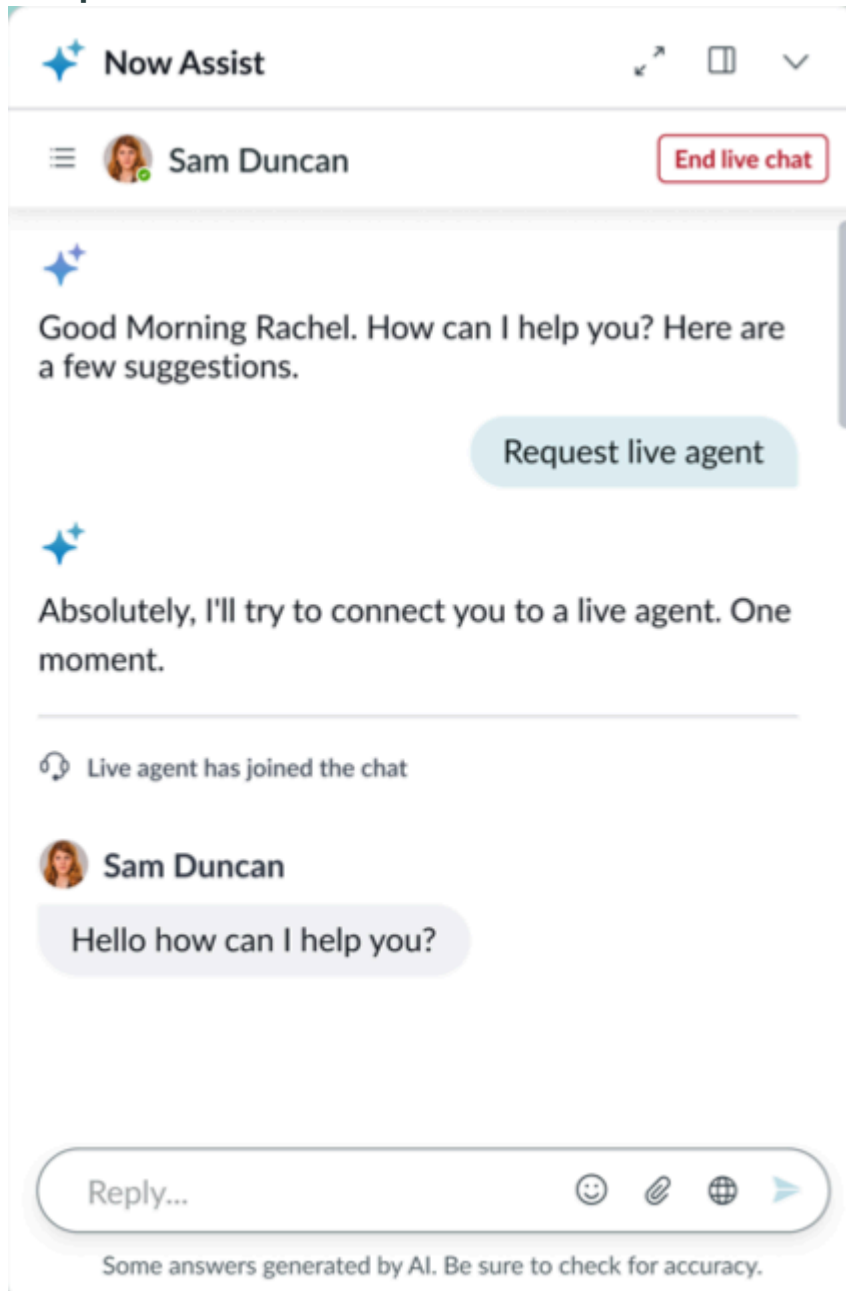


Chatting with a live agent in Virtual Agent

You can chat with a live agent if you need more support. Select the **Contact Live Agent** button found in the Support and settings (⋮) option, enter a request such as `Chat with live agent` into the chat, or select the **Request a live agent** fallback option. After an agent has accepted your chat, the agent's name and avatar appears at the top of the chat in a banner. Only one live agent chat at a time is permitted. To exit the live chat, select **End live chat**. The chat history then moves to the Closed chat section.

Note: When enhanced chat is turned on, post-chat surveys only appear after a live agent conversation has ended.

Example of the live chat banner



Fallback options

Note: For more information about where and how to enable fallback options, see [Manage an assistant chat experience](#).

A fallback state can occur whenever search results are unavailable. Scenarios where search results are unavailable include the Virtual Agent didn't understand the query, complaint small talk was found, or an error occurred. When search results are unavailable, a single or multiple fallback options may appear. These fallback options include:

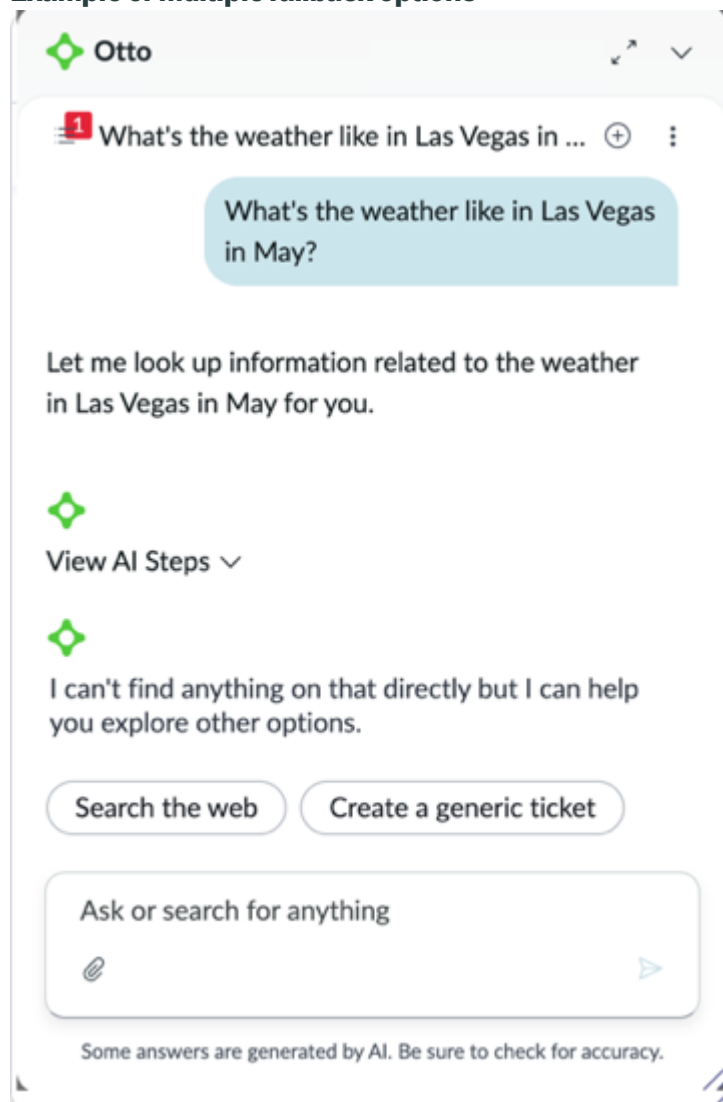
- **Request a live chat:** Triggers live agent mode and routes you to a human support representative.
- **Search the web:** Triggers web search mode and uses the internet to search for the results.

Note: Only the last query entered into the conversation is considered when entering web search mode via this **Search the web** fallback option.

- **Create a generic ticket:** Creates a record.
- **Custom fallback option:** Presents a fallback Virtual Agent topic.

Select a fallback option to launch that mode or action.

Example of multiple fallback options



Prerequisites for enhanced chat

Before configuring enhanced chat for ServiceNow Otto for Virtual Agent, your environment must meet the requirements for your deployment channel.

Requirements differ depending on whether you're deploying enhanced chat in a Service Portal or a mobile app.

Service Portal

Enhanced chat in a portal includes a resizable chat window and an integrated search experience. To support search, your portal must have AI Search enabled. If you only need the chat experience without search, AI Search is not required, but your portal must include the default chat button widget. The full-page experience is an optional addition to enhanced chat. Both configurations require specific portal widgets to be in place. If you have customized the Faceted Search widget or the Typeahead Search widget, reconcile those customizations with the latest widget versions before you begin configuration.

Mobile app

Enhanced chat in a mobile app supports three components: a mobile search widget, a chat launcher, and a custom app built with the Mobile SDK. Prerequisites and available capabilities vary by component. The mobile search widget supports the full-page experience only and requires a mobile search configuration. The chat launcher and custom app support native Virtual Agent with ServiceNow Otto for Virtual Agent responses.

Note: The AI Search experience is not available in custom apps.

For component-specific prerequisites, see [Portal prerequisites for enhanced chat](#) and [Mobile app prerequisites for enhanced chat](#).

Portal prerequisites for enhanced chat

ServiceNow Otto for Virtual Agent provides users with a content-driven and search-driven generative AI experience. To benefit from chat and search capabilities, your portal must have AI Search enabled before configuring your assistant.

Standard chat or enhanced chat offers different experiences. Enhanced chat provides users with a resizable chat window and search experience. To understand the differences between standard chat, enhanced chat, and enhanced chat with an additional full-page experience option, see [Using ServiceNow Otto for Virtual Agent](#). If you only want a chat experience, there's no dependency on a portal's search configuration. However, ensure that your portal has the default chat widget button.

To benefit from enhanced chat's search capabilities, your portal should have AI Search enabled. To configure AI Search for your portal, navigate to **All > AI Search Admin Home**. For more information, see [Enable and configure AI Search in Service Portal](#).

Note: When you activate enhanced chat in a portal, that portal uses the VA Search Profile instead of the search profile specified in the portal's search application configuration. To learn more about search profiles and how they affect search behavior, see [Search profiles in AI Search](#).

Within the enhanced chat experience, the full-page experience is an additional option.

The prerequisites for both the enhanced chat experience and the enhanced chat with full-page experience are:

1. Portal AI Search configuration
2. Faceted Search widget
3. ServiceNow default Typeahead Search widget (required only for the enhanced chat with full-page experience)

Note: If you customized the Faceted Search widget or the Typeahead Search widget, you must reconcile your customizations with the latest versions to ensure that you have all of the updates.

Mobile app prerequisites for enhanced chat

ServiceNow Otto for Virtual Agent provides users with a content-driven and search-driven generative AI experience. Depending on whether you have opted into standard or enhanced chat when configuring your assistant, you can integrate three different mobile app components with an assistant.

For information on choosing how you want ServiceNow Otto for Virtual Agent to display on your mobile app, see [Mobile Now Assist display experience for Virtual Agent](#). To understand the differences between ServiceNow Otto for Virtual Agent standard and enhanced chat experiences, see [Using ServiceNow Otto for Virtual Agent](#).

The three different mobile app components that admins can integrate with an assistant are a mobile search widget, chat launcher, and custom app.

Mobile app components and offerings

Mobile app component	Description	Standard chat	Enhanced chat
Mobile search widget	The search bar widget within the ServiceNow Mobile App	No	Full-page experience only
Chat launcher	The default Virtual Agent chat widget	Yes, but only offered to existing ServiceNow Otto for Virtual Agent customers	Yes
Custom app (Mobile SDK)	The tool to display native Virtual Agent interface in a customer's own third-party app.	Yes, but only offered to existing ServiceNow Otto for Virtual Agent customers	Yes

Mobile app enhanced chat prerequisites

Mobile app component	Enhanced chat behavior	Prerequisites
Mobile search widget	Typing an utterance in the search bar opens a full-screen chat experience. Users can launch the search results page from the chat.	Admins must select the mobile search configuration to be used. For more information, see Display your assistant on a portal, channel, or mobile app .

Mobile app enhanced chat prerequisites (continued)

Mobile app component	Enhanced chat behavior	Prerequisites
Chat launcher	Selecting the chat function in a mobile app opens native Virtual Agent. A user can ask questions in native Virtual Agent and get ServiceNow Otto for Virtual Agent responses. Users can also launch the search results page from the chat.	Admins can optionally select the Mobile Search Configuration to improve the metadata quality.
Custom app (mobile SDK)	Selecting the custom chat function in a third-party mobile app opens native Virtual Agent. Users can ask questions in native Virtual Agent and get ServiceNow Otto for Virtual Agent responses.	You can't use the ServiceNow Otto for Virtual Agent AI Search experience in a custom app. Search is run by the customer's third-party mobile app/

Premium chat

ServiceNow[®] Otto for Virtual Agent premium chat is a contextual chat experience that appears throughout the platform, adapting its behavior and interface based on where users are and what they're doing.

To access the ServiceNow Otto for Virtual Agent premium chat screen, select the ServiceNow Otto icon or enter text in the omnibar.

After the premium chat screen appears, begin entering a prompt in the chat input box. You can enter the entire prompt or select one of the recommended prompts that displays below the chat input box. Recommended prompts may include:

- Related workflows and actions
- Keyword-based prompts
- Direct links to relevant content

Note: For more information about how ServiceNow Otto for Virtual Agent and Now Assist in AI Search combine to include recommended prompts, see [Auto-complete suggestion types included with ServiceNow Otto for AI Search](#).

Chat input box features

The chat input box has these features:

Multi-line input

The chat input box starts as a single-line field and automatically expands to multi-line mode when text exceeds the available width.

Plus sign icon

Select the plus sign (+) icon to access additional options including web search and file upload.

Web search

When you select the plus sign icon, the **Web search** toggle appears. You can toggle the **Web search** option on to receive responses that combine both internal knowledge base results and web search results. You can toggle the web search on or off at any time during a conversation.

File upload

You can upload files by selecting the file upload icon or by dragging and dropping files directly into the chat input box. You can upload a maximum of 10 files per conversation and a total upload limit of 50 MB. Supported file formats are:

- PDF
- JPEG
- PNG
- TXT
- PPTX
- Word
- Excel
- CSV

Navigating the chat window resizing options and controls toolbar

The ServiceNow Otto sub-header consists of four elements. The following figure and table shows an example and description of those elements.

Example of chat controls

ServiceNow Otto sub-header elements

Element	Description
1. Chats (☰)	All chats appear. Chats are organized with the most recent conversations at the top. Selecting a chat opens the chat in the conversation area. If there are unread chats or notifications, a badge number appears on the Chats icon (☰). Any unread chat or notification appears with a red dot next to it and the chat title appears in bold. Additionally, if you switch to a new chat while another active chat is ongoing, a pop-up message on the Chats icon (☰) appears: Your previous chat was saved. You can revisit all of your past chats and continue ones that are still active. The following list includes the chat sections that you may see in the chats area.

ServiceNow Otto sub-header elements (continued)

Element	Description
	• Active: Chats where you can continue the conversation. If applicable, active chats move to the Closed chats section after two hours of inactivity. This 2 hour time limit can be configured within the Messaging Channels {sys_cs_channel.list} table. To change the inactivity time limit, from the Messaging Channels {sys_cs_channel.list} table, select the NASS record and populate the Conversation Idle Timeout field with your preferred active chat time limit. If you have no active chats, No chatter at the moment is displayed. If more than 12 active chats are running, a Show more link appears to view more chats. Selecting Show more displays an additional 10 chats. • Updates: Updates for important notifications and reminders can be configured to display. When <code>sn_nowassist_va.nass_notification_enabled</code> is set to <code>true</code> (the default), simple (nonactionable) Virtual Agent notifications appear on your portal home page. After selecting a notification, you're redirected to this Updates section. If you have no updates, You're all caught up is displayed. If more than four updates are available, a Show more link appears to view more updates. Selecting Show more displays an additional 10 updates. Note: If <code>sn_nowassist_va.nass_notification_enabled</code> is set to <code>false</code>, the Updates section doesn't appear. • Closed: Closed chats can be configured to display. You know that a message has closed when the designated time has passed (2 hours of inactivity) or you receive the following response in the chat: It looks like you're finished with this chat, so I'll go ahead and close it. Turn on closed chats by selecting the Show closed chats check box within Conversational Interfaces > Assistants > [Selected Assistant Name] > Chat experience > Closed chats. After being turned on, closed chats are displayed for as long as they're available within the Conversations (sys_cs_conversation) table. Closed chats appear in a read-only

ServiceNow Otto sub-header elements (continued)

Element	Description
	mode and can't become active again. If more than four closed chats are available, a Show more link appears to view more closed chats. Selecting Show more displays an additional 10 closed chats. After a conversation has closed, you can't reopen it. Hovering over a closed chat displays the delete icon (🗑️). Confirm the chat deletion on the Delete this chat? modal to permanently delete the chat from the interface.
2. [Chat name]	The name of the conversation. If you select a promoted asset or query, that asset's title appears as the chat name. If instead you enter an utterance into the Reply to field, your initial utterance becomes the chat name. The chat name appears in both the ServiceNow Otto subheader and Chats list > Active section.
3. New chat (⊕)	A new conversation begins. You may be prompted with a greeting message along with any promoted conversational assets such as topics, subflows, and/or actions, or suggested queries.
4. Support and settings (⋮)	Support contact information such as phone numbers and email addresses are listed. If live agents are available, an active Contact Live Agent button is displayed. Although multiple active conversations are possible, you can only have one live agent conversation at a time. Selecting Contact Live Agent begins a chat with a live agent. After a live agent enters the chat, the Contact Live Agent button becomes inactive. If live agents are unavailable, an inactive No live agents currently available button is displayed. Settings toggles for Audio notifications and Notifications appear. By default, audio notifications are turned on and notifications are turned off. If admins have enabled notifications within the guided setup, users can turn on the notifications.

ServiceNow Otto sub-header elements (continued)

Element	Description
5. Interactive view ( or )	Note: This icon only appears in the sub-header whenever the interactive view is available. Open or close the interactive view. The interactive view appears to the right of the conversational chat area. The drop-down selector displays the names of all interactive views opened in the current conversation, including Knowledge Base articles, catalog forms, and org charts. Interactive view is only available in the following scenarios: • An organizational chart is available to view. • A document was uploaded and you choose to preview the document. • A source is available and you choose to select and view the source content.

Chatting with Virtual Agent

After the user enters an utterance and a search result is found, a synthesized response may appear. A synthesized response includes a brief summary of the requested information and search results along with Genius Results. For more information on how these search results are found, see [Actions Genius Results](#) and [Knowledge base articles Genius Results](#).

If multiple results are found, you can follow inline citations to either begin an action or learn more. The option to **Show sources** appears at the end of the synthesized response for internal and external Knowledge Base articles. Virtual Agent can only return available catalog items that match a user's request when the ServiceNow Otto Multi-Turn Catalog Ordering skill is enabled.

Note: For full catalog functionality, enable the generative AI experience for catalog item request submissions. For more information, see [Configure ServiceNow Otto in Conversational Catalog Request](#).

Whenever only a single search result for topics is found, the synthesized response and options are bypassed by default and users are brought directly into that action's flow. You may consider bypassing the synthesized response and options by automatically launching catalog items, too. For more information on automatically launching single search result actions, search for the `sn_nowassist_va.synthesized_autostart_items` system property in [Available system properties](#).

You can create a new query from within a ServiceNow Otto conversation using mid-topic discovery. For more information, see [Mid-topic switching during ServiceNow Otto for Virtual Agent conversations](#).

If AI Guardian is enabled and your request contains profane content, the Virtual Agent responds with a message prompting you to re-enter an appropriate request without profanity or offensive content. If your request is too ambiguous on the portal search, a synthesized response appears along with an **Ask a follow up** option. Selecting the **Ask a follow up** option redirects you to a Virtual Agent chat. In the Virtual Agent chat, you can submit your follow-up question or request, but the synthesized response links are only available to select on the portal page and are

unavailable to select in the chat window. If your follow-up question or request is too ambiguous in the Virtual Agent chat, Virtual Agent asks a clarifying question and displays the go to search results icon () in the feedback panel.

Each Virtual Agent response includes a feedback icons panel. The feedback icons panel appears on the latest Virtual Agent response and whenever you hover over any Virtual Agent response. You can indicate if the response was helpful by selecting the like thumbs up icon ().

If the response wasn't helpful, select the dislike thumbs down icon (). When you select the thumbs up or thumbs down icon, you are prompted to provide detailed feedback by selecting one or more reason check boxes. You can also select **Other** to add comments or suggestions (up to 300 characters). After making your selection, select **Submit** to submit your feedback or select **X** to close the dialog without submitting feedback. All submitted feedback is captured, stored, and made available through analytic dashboards.

Example of additional feedback panel from thumbs down icon

How can we improve this response?

☐ Missed important details
 ☐ Included irrelevant details
 ☐ Mixed up who said what
 ☐ Put details in the wrong spot
 ☐ Made up things that didn't happen
 ☐ Other

Add comments or suggestions (optional)

Characters left: 300

Submit Feedback

Depending on the context of the response, an additional go to search results icon () may appear in the feedback icons panel. This icon appears alongside synthesized responses in Virtual Agent, clarifying questions in Virtual Agent, and regular search results or Virtual Agent fallback topics whenever a synthesized response is unavailable. Selecting the go to search results icon () redirects you to the search results page and begins a search query using the last five chat utterances you entered. Additionally, a copy message icon () appears on received Virtual Agent responses.

Example of feedback panel in premium chat

Responses generated in ServiceNow Otto for Virtual Agent can come from a combination of catalog items, Virtual Agent topics, subflows and actions, knowledge articles, attachments, external content sources, and people citations. Inline citations appear at the end of the relevant synthesized response sentence. Selecting an inline citation results in a popover containing either a link to an article or source, or a description and action to start the action. The following options may appear as synthesized response in-line citations depending on what search results are returned:

- Catalog
- Topic, subflows, or actions
- Q&A Knowledge Base articles
- External content connections
- People
- Extended entities and additional records

Note: Q&A Knowledge Base and external content connection citations also appear within the expandable **Show sources** option.

Response feedback

Each Virtual Agent response includes a feedback icons panel. The feedback icons panel appears on the latest Virtual Agent response and whenever you hover over any Virtual Agent response. You can indicate if the response was helpful by selecting the like thumbs up icon (👍).

If the response wasn't helpful, select the dislike thumbs down icon (👎). When you select the thumbs up or thumbs down icon, you are prompted to provide detailed feedback by selecting one or more reason check boxes. You can also select **Other** to add comments or suggestions (up to 300 characters). After making your selection, select **Submit** to submit your feedback or select **X** to close the dialog without submitting feedback. All submitted feedback is captured, stored, and made available through analytic dashboards.

Example of additional feedback panel from thumbs down icon

How can we improve this response?

☐ Missed important details
 ☐ Included irrelevant details
 ☐ Mixed up who said what
 ☐ Put details in the wrong spot
 ☐ Made up things that didn't happen
 ☐ Other

Add comments or suggestions (optional)

Characters left: 300

Submit Feedback

Depending on the context of the response, an additional go to search results icon (🔍) may appear in the feedback icons panel. This icon appears alongside synthesized responses in Virtual Agent, clarifying questions in Virtual Agent, and regular search results or Virtual Agent fallback topics whenever a synthesized response is unavailable. Selecting the go to search results icon (🔍) redirects you to the search results page and begins a search query using the last five chat utterances you entered. Additionally, a copy message icon (📋) appears on received Virtual Agent responses.

Extended entities and view records

Extended entity information can be found if you have activated Knowledge Graph.

Note: To enable the Knowledge Graph natural language query (NLQ) schema, configure this schema for the assistant. To configure the schema for an assistant, see [Assign search sources to a chat assistant](#).

These extended entities that come from the additional custom tables associated with the Knowledge Graph natural language query (NLQ) schema can include:

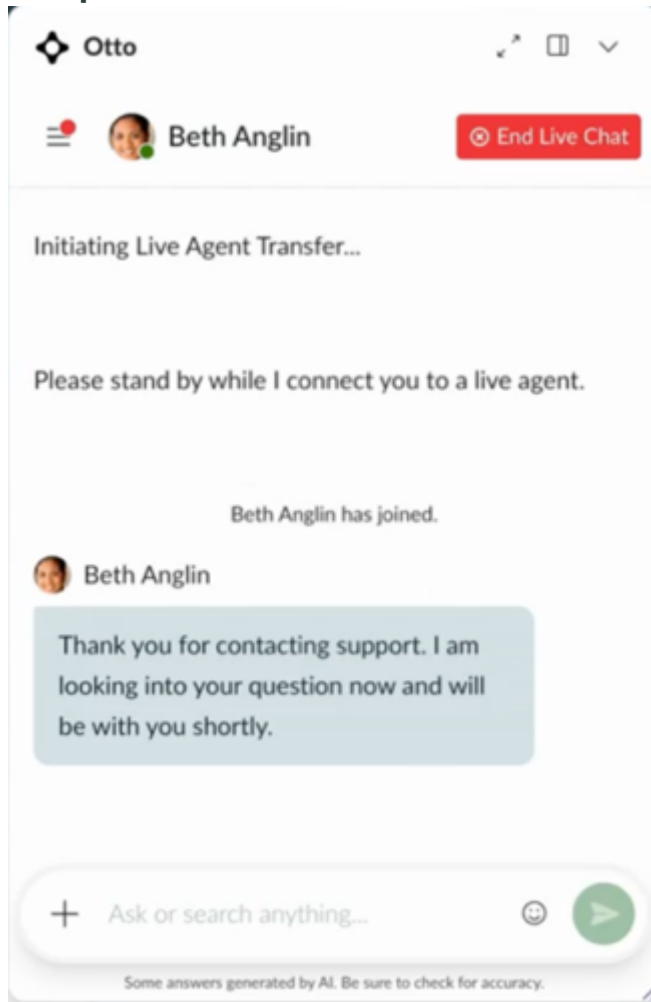
- Assets
- Incidents
- Recently viewed knowledge base articles
- Requests
- Tasks

Select an entity in-line citation to view that entity record in a new tab, or select **View records** to view a list of additional entities. Selecting a link from the **View records** pop-up opens a new tab with that entity table's data.

Chatting with a live agent in Virtual Agent

You can chat with a live agent if you need more support. Select the **Contact Live Agent** button found in the Support and settings (⋮) option, enter a request such as `Chat with live agent` into the chat, or select the **Request a live agent** fallback option. After an agent has accepted your chat, the agent's name and avatar appears at the top of the chat in a banner. Only one live agent chat at a time is permitted. To exit the live chat, select **End live chat**. The chat history then moves to the Closed chat section.

Example of the live chat banner



Submitting catalog requests

You can submit catalog requests directly from ServiceNow Otto for Virtual Agent premium chat without leaving the chat experience.

To submit a catalog request:

1. Open ServiceNow Otto for Virtual Agent premium chat.
2. Find a catalog item through chat.
3. Select the item and a catalog form opens inline in the interactive view.
4. Complete the required form fields.
5. Select **Submit**. A confirmation message appears and your request record is created.

Catalog submission confirmation

After you successfully submit a catalog item, a confirmation message appears with a **View Details** button that opens your submitted request record.

The **View Details** button behaves in the following ways:

- In Virtual Agent portals: Select **View Details** to open the submitted request record in a new browser tab. The Virtual Agent chat window shrinks to floating mode.
- In pop-out windows: If you select the pop-out icon on a submitted catalog form, the new window displays the submission confirmation page with your request details, not a blank form to start over.

Fallback options

- **Note:** For more information about where and how to enable fallback options, see [Manage an assistant chat experience](#).

A fallback state can occur whenever search results are unavailable. Scenarios where search results are unavailable include the Virtual Agent didn't understand the query, complaint small talk was found, or an error occurred. When search results are unavailable, a single or multiple fallback options may appear. These fallback options include:

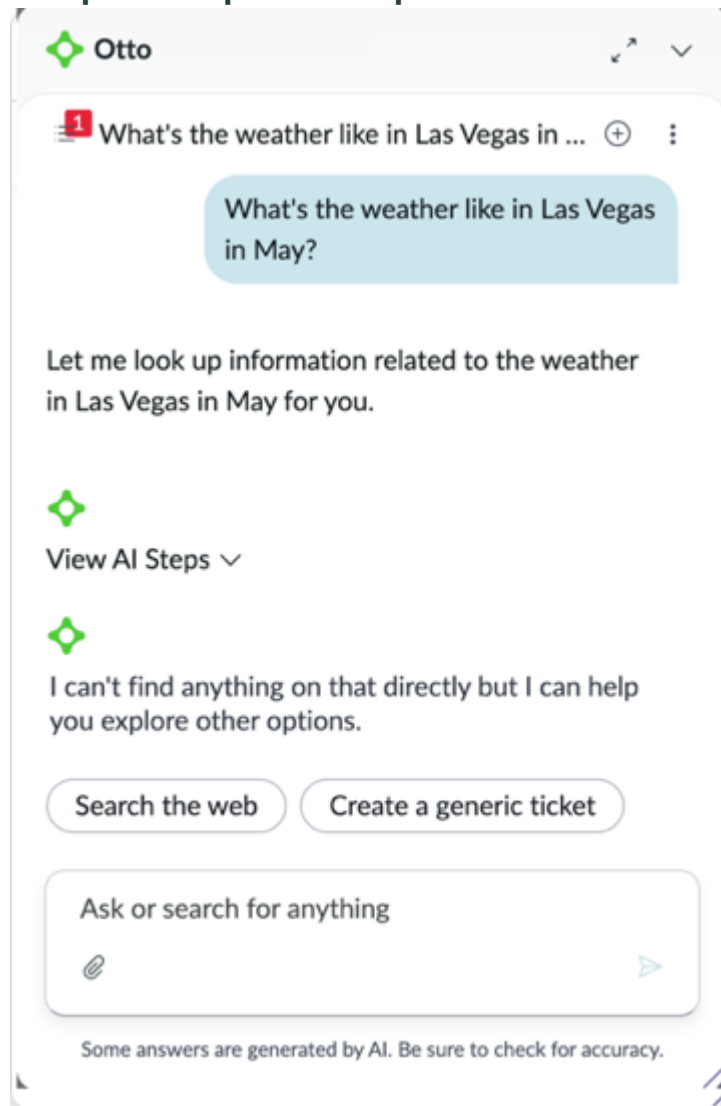
- **Request a live chat:** Triggers live agent mode and routes you to a human support representative.
- **Search the web:** Triggers web search mode and uses the internet to search for the results.

- **Note:** Only the last query entered into the conversation is considered when entering web search mode via this **Search the web** fallback option.

- **Create a generic ticket:** Creates a record.
- **Custom fallback option:** Presents a fallback Virtual Agent topic.

Select a fallback option to launch that mode or action.

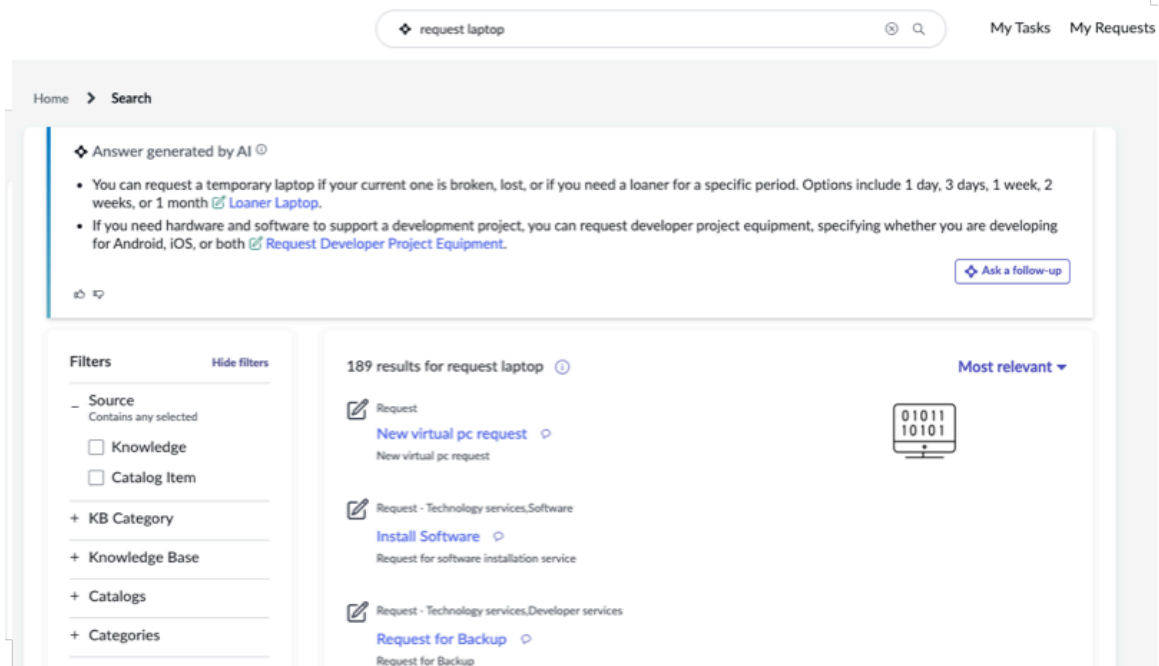
Example of multiple fallback options



When you're using premium chat and you enter a search query through your portal's search bar, you're redirected to the portal's search results page. At the top of the search results page, you see Genius Results in a synthesized response generated by ServiceNow Otto. This synthesized response answer provides inline citations that appear at the end of each sentence. You can select citations and if applicable, such as for conversational catalog items, select whether to

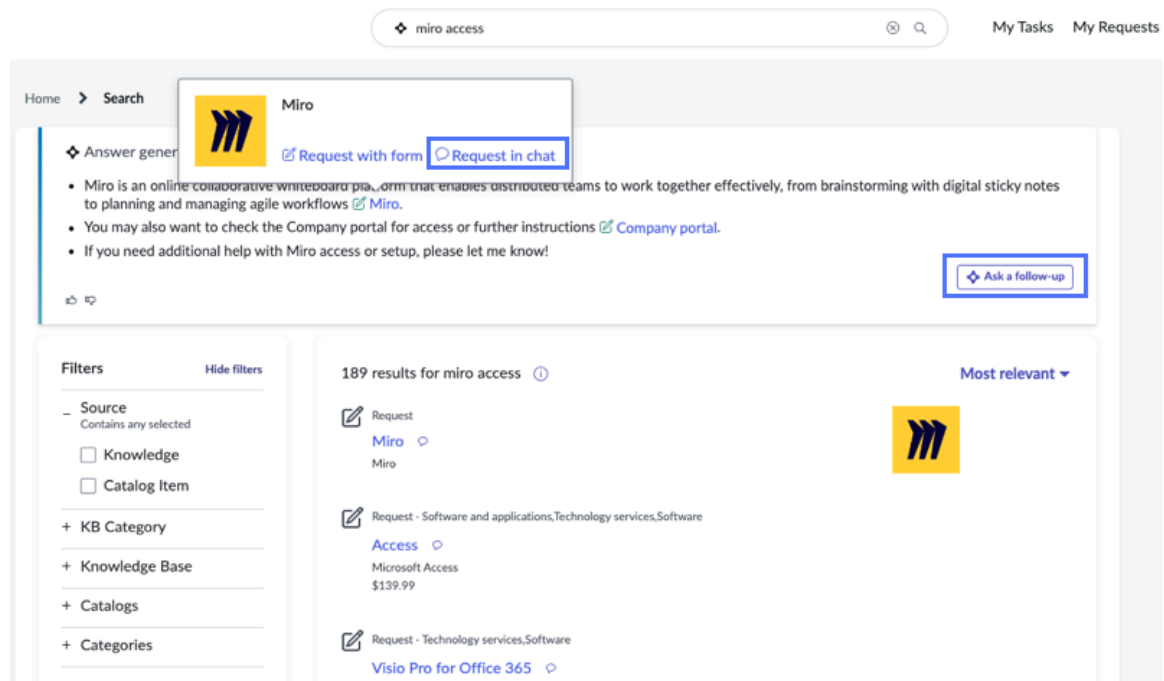
 **Request with form** or  **Request in chat**. Similar options also appear in the regular search results area, as indicated by the request in chat icon () and request with form icon (). Depending on your selection, the catalog request flow launches within either the Virtual Agent chat or a form.

Example of premium chat synthesized response on the portal's search results page



You can start the chat experience either through the chat icon on the portal's search results page or through the portal's chat widget button.

Example of chat entry points on the portal's search results page



Example of a chat widget button

After selecting the chat widget button on the portal, the floating chat window opens and replaces the chat button. A greeting message appears, and a chat is created only after you have entered an initial utterance. If you have an active chat ongoing, the current active chat appears instead of a greeting message. You can select a predefined action, topic, suggested search query, start a

new conversation, or view all options, if applicable. The **View all options** link only shows if more than one suggested search query or promoted topic is available.

Note: Any search query entered into the portal's search bar or Virtual Agent is incorporated into the greeting topic for future conversations as a suggested search query. Suggested search queries can be viewed in the Search Suggestions [sys_search_suggestion.list] table. For more information on how to enable suggested search queries, see [ServiceNow Otto for Virtual Agent system properties](#).

If language detection is turned on and the initial utterance entered into the portal's search bar or chat differs from the user's profile language preference, the conversational language automatically switches to the detected language. For more information and examples of language detection in premium chat conversations, see [Language detection and dynamic machine translation in Virtual Agent in enhanced chat](#).

Prerequisites for premium chat

Premium chat is available for instances that meet ServiceNow readiness requirements.

ServiceNow automatically performs eligibility checks and displays the premium chat option when your instance qualifies. Premium chat isn't available for:

- Domain-separated instances
- Instances that use regional data routing
- Regulated market (Government Cloud Community) instances

If your instance doesn't meet the requirements for premium chat, you can continue using the standard or enhanced chat experience. For new customers, premium chat might be the only available chat experience depending on the assistant type and supported display experience. Existing customers can choose whether to opt in to premium chat when eligible.

LLM topic discovery in Virtual Agent

Large language models (LLMs) enable Virtual Agent to process user statements in plain language. Conversations that use LLMs can outperform those conversations that use Natural Language Understanding (NLU), with easier setup.

How LLMs work in Virtual Agent

Watch this video to learn about LLM topics in Assistant Designer Asset library.

https://player.vimeo.com/video/1011425825?h=9a3dc725e1&badge=0&autopause=0&player_id=0&app_id=58479

When you create a topic in Assistant Designer Asset library, you can select LLM as the model type for your topic whenever ServiceNow Otto for Virtual Agent is turned on. Virtual Agent then uses LLM generative AI to discover topics that match the user's intent.

Unlike NLU topics, LLMs don't require models, intents, or keywords to be linked to the topic. LLMs can discover topics and perform language-related tasks, such as text generation for case summaries and resolution notes, without months of training on NLU models. Overall, you can create, configure, and deploy LLM topics faster than working with NLU.

With LLMs, Virtual Agent can do the following:

- Perform topic discovery without needing a singular declared intent in a given topic.
- Find intents without backup keywords as in NLU modeling.

- Extract entity values without prior mapping as in NLU modeling.
- Handle multiple conversation topic switches in a single conversation session.

For more information about LLMs, see [Large language models on the ServiceNow AI Platform](#) .

Topic discovery

With LLM topic discovery, topic authors no longer need to create and maintain complex NLU models and intents with backup keywords. The LLM does all of the heavy lifting for you. The only requirement is a robust, plain language topic description on the **Properties** tab in Assistant Designer Asset library. The LLM uses this description to find the best topic match for the user utterance. If there are multiple potential matches, the user will see a list of topics to choose from.

For example, if a user asks Virtual Agent to calculate a ride share fee, the LLM matches the user utterance with an existing topic that can calculate the ride share with a tip.

Entity extraction

With LLM topics, the LLM has all the information needed to determine if an utterance has the information to fulfill a request. Unlike NLU models, you don't need to associate entities with a user input node or add nodeless NLU entities as input variables to a topic. The LLM simply finds the entity that most closely fits the user intent.

Topic switching

Topic switching is faster and easier with LLMs compared to NLU topics. The LLM processes your requests to change intent made in natural language, and activates the appropriate topic.

For example, if you start a conversation by asking for a mobile phone, you don't have to cancel the order first or restart the conversation. Instead, you can ask Virtual Agent to order a laptop instead. Virtual Agent immediately switches from the mobile phone topic to the laptop topic. Topic switching can be done during a query, but not within a catalog ordering flow.

Another example is when a user might ask a casual question or engage in small talk. The question might be unrelated to the original request. You can create small talk topics or set up small talk filters to help the Virtual Agent match and launch the appropriate conversation for the switched topic. For more information, see [Create a small talk topic](#) and [Configure small talk filters](#) .

Additional resources

- [Exploring Virtual Agent](#)
- [Create LLM assistants](#)

LLM description and instruction guidelines for Virtual Agent topics

When you create large language model (LLM) topics, you provide instructions that determine the behavior of the LLM and a description that determines how the topic is discovered by the LLM.

Overview of LLM description and instruction guidelines

Topic authors can use plain text wording to tell the LLM how to discover an LLM topic, as well as tell the LLM how to respond. The Assistant Designer interface provides text fields that let you provide both.

Descriptions

Topics require a description when you create them. The description is used for topic discovery, so the more detailed and specific the topic description is, the more likely it will be to find a good match.

Instructions

When you add LLM user input controls to your conversation flow, you can provide instructions to the LLM in the **Detail description** field, which tells the LLM how to respond. You can use this field to define tone, employ small talk, or provide a dynamic greeting. Your instructions can also function as entity detection.

General guidelines

When constructing an LLM description or instruction, consider these basic guidelines.

- Lead with action verbs. Use the imperative form or direct commands.
- Users should avoid answering a question with a question.

For example, if the LLM asks `What is your question?`, the user response `Who is on call today?` can confuse the LLM. Instead, the user should enter `Tell me who is on call today.`

- Avoid references to third parties or pronouns. Removing the subject or any identifiers generally prevents the LLM from personifying or otherwise misidentifying the end user.
- Your words instruct the logic that your bot will use. Detailed, chain-of-thought instructions work well for this.
- Continually test and refine your instructions. Creating strong LLM instructions is an iterative process.

Don't use NLU utterances as LLM descriptions

NLU utterances are more dependent on keywords and their phrasing, but LLM descriptions work very differently. The problem with NLU utterances in descriptions is that they don't provide instructions for the LLM. Google search descriptions won't work well with LLMs, either. When writing descriptions, you need to be specific about the purpose of the topic and the context of the task being performed in that topic. Keywords aren't necessarily helpful, but logic is.

For more information, see [General guidelines for writing instructions for generative AI large language models \(LLMs\)](#).

Example topic descriptions

The following examples describe weak and strong topic descriptions. Stronger topic descriptions result in more accurate topic discovery.

Company holiday calendar topic descriptions

Strength	Description
Weak description	This topic is about a holiday calendar for employees in a company.
Strong description	This topic is about a holiday calendar for employees in a company. Users can ask for the holiday list or company holiday for a specific year, specific date, inquire about a specific holiday, or ask if they have a day off for a particular holiday. The topic also covers the availability of a holiday calendar and specific holidays like Freedom Day and wellbeing Day.

Active Directory password change topic descriptions

Strength	Description
Weak description	This topic is related to the management and administration of Active Directory, a directory service provided by Microsoft.
Strong description	This topic is related to the management and administration of Active Directory, a directory service provided by Microsoft. It involves making changes to the Active Directory, such as creating, modifying, or deleting directories and processes. The topic also includes tasks performed by administrators, such as managing user accounts, groups, and permissions within the Active Directory environment.

Example input control instructions

The **Node name** field should be unique and explain the operation the user is trying to perform, so that the LLM can identify entities and slot-fill properly. For example, if there are two defined input nodes named `AD Operation Type` and `AD Operation`, there is a chance the LLM could identify the entity and map it to the wrong input node variable. Renaming the nodes to differentiate the two is best. For example, `AD Operation for Password Reset` and `AD Operation for Locked Credentials and Change Password` are stronger, more unique node names.

The **Detail description** field for the node should have clear instructions for the possible values that the LLM should extract from the user wherever it is applicable. For example, if the node will perform an Active Directory operation, then you should be specific about which operations are allowed in the **Additional instructions for LLM** area. Then the LLM will use the value mapping to identify the entity and fill the slots.

The following example describes weak and strong input node instructions. The better instructions result improved outcomes.

Collect Active Directory operation type input control instructions

Strength	Detail description
Weak instruction	Collect AD Operation Type
Strong instruction	Collect AD Operation Type Additional instructions for LLM: For this input, these are mapped values, : { "reset": ["reset", "locked", "unable to sign in", "expiry", "expired", "expire"], "change": ["change"] }. The key needs to be extracted if the user input contains the values associated with the keys.

Strong detail description example of LLM input node


Text input
×

Collect an input from the user. [Learn more](#)

* Node name

Collect AD Operation Type

Variable name: collect_ad_operation_type

Allow automatic slot filling ⓘ

☒

* Detail description ⓘ

Collect Active Directory (AD) Operation Type
Additional instructions: For this input, these are mapped values, : {"reset":["reset","locked","unable to sign in","expiry","expired","expire"],"change":["change"]}. The key needs to

* Input format ⓘ

Text ▼

Advanced (optional)

Enforce user prompt ▼

Validation ▼

Hide or skip this node ▼

Domain separation and Virtual Agent

Domain separation is supported in the Virtual Agent application. Domain separation enables you to separate data, processes, and administrative tasks into logical groupings called domains. You can control several aspects of this separation, including which users can see and access data. Virtual Agent has standard support. ServiceNow Otto for Virtual Agent has basic support.

Support level: Standard

- Includes all aspects of **Basic** level support.
- Application properties are domain-aware as needed.

- Business logic: The service provider (SP) creates or modifies processes per customer. The use cases reflect proper use of the application by multiple SP customers in a single instance.
- The instance owner must configure the minimum viable product (MVP) business logic and data parameters per tenant as expected for the specific application.

Sample use case: An admin must be able to make comments required when a record closes for one tenant, but not for another.

For more information on support levels, see [Application support for domain separation](#) .

Support level: Basic

- Business logic: Ensure that data goes into the proper domain for the application's service provider use cases.
- The application supports domain separation at run time. The domain separation includes separation from the user interface, cache keys, reporting, rollups, and aggregations.
- The owner of the instance must set up the application to function across multiple tenants.

Sample use case: When a service provider (SP) uses chat to respond to a tenant-customer's message, the customer must be able to see the SP's response.

For more information on support levels, see [Application support for domain separation](#) .

Domain separation allows you to partition your organization's data and administrative control into separate domains. This lets you isolate the data and control access to it, which is particularly important in environments where multiple tenants share a common platform.

Domain separation in Virtual Agent works by creating separate Virtual Agent views that are isolated from each other. The chat configuration, branding, and topics and components can be assigned to a given domain within Virtual Agent. Users within a domain can only access the Virtual Agent conversations that are associated with their domain. This means that users in one domain cannot access data or functionality that belongs to another domain, including Virtual Agent conversations. Additionally, administrators who are assigned to a domain cannot see or manage Virtual Agent conversations in other domains, ensuring complete separation and security.

Domain separation is best for customers with any of the following requirements:

- You need to enforce absolute data segregation between business entities (data separation).
- Customize business process definitions and user interfaces for each domain (delegated administration).
- Maintain some global processes and global reporting in a single instance.
- Separate data between customers or sub-organizations.
- The session scope is set upon session establishment to the domain listed in the user's user record. Users can manually change their session domain scope with the domain picker.
- The record scope uses the domain of the record and is active when viewing the form of any record.

By default, the record scope takes precedence over the session scope so that users in higher-level domains adhere to each record's data and process constraints. However, these users can choose to expand or collapse the domain scope to show or hide data from other domains. For

example, a user in the service provider (SP) global domain also has visibility into child domains such as the ACME domain. When looking at an incident record from the ACME domain, the user can choose to expand the domain scope to show values from the MSP domain or collapse the domain scope to show only record values that match the record's ACME domain.

Note: Users have access to data from domains that have been explicitly granted to them by domain visibility.

When domain separation is used, guest users are restricted to the domain used in the session. For custom chat channels, the domain of the [provider application](#) is used. For the chat widget, you can associate a domain ID with the chat portal. For details, see [Associate a domain ID with a chat portal](#).

For more information, see [Domain scope](#).

Requirements

All domain support features require the Domain Support - Domain Extensions Installer [com.glide.domain.msp_extensions.installer] plugin. For details, see [Request domain separation](#).

Configuring Virtual Agent with domain separation

Branding

Service providers can create a [chat branding configuration](#) per domain.

Chat experiences

Chat experiences, including the default experience and any custom experiences, allow for domain separation. Each chat experience profile belongs to a domain. Each child customization, such as a setup topic change, belongs to a domain. Each child customization implements system overrides so that sub-domains can override parent-domain customizations.

Creating topics in subdomains in Assistant Designer

Roles required: admin or virtual_agent_admin

The service provider either logs in to one of the subdomains and creates and publishes topics or allows subdomain admin users to [create](#) and [publish](#) their own topics.

Topic names within a domain must be unique, but Virtual Agent does allow you to create topics with the same name in other domains. For example, each domain might have a topic called **Greeting**.

Only service provider admins can do the following:

- Activate Virtual Agent conversation plugins or store apps for other ServiceNow business applications, such as ITSM, CSM, or HRSD, to enable pre-built topics for the subdomain.
- Assign roles on a particular subdomain to control which topics can be run by users.

Admin users assigned to the subdomain can do the following:

- Create topics in the instance.
- Be logged into the global domain and impersonate a user in the subdomain.
- Publish all available topics in the subdomain to chat widgets and messaging applications.

Domain separation in the chat widget channel

The chat widget does not support domain separation. However, you can provide a domain-separated chat experience in the chat widget channel by using separate, domain-separated portals. For example, you can create two separate support portals that are restricted to separate domains. Use the *domain_id* in the portal script to designate the domain. This gets passed as the *sysparm_domain_id* parameter in the portal URL.

To configure the portal, see [Associate a domain ID with a chat portal](#).

For information about URL parameters, see [Virtual Agent URL parameters](#).

Domain separation and Virtual Agent messaging app integrations

Roles required: admin or virtual_agent_admin

The domain-separated instance has one setup record for Slack or Microsoft Teams.

Customers on the subdomain license run either Slack or Microsoft Teams independently of the ServiceNow instance.

The admin of the subdomain installs the integrations within the subdomain and configures the appropriate credentials to access Virtual Agent from the third-party client. For details, see [Integrating Virtual Agent with messaging apps](#).

Related topics

[Domain separation for service providers](#) 

Associate a domain ID with a chat portal

The Service Portal platform is not domain-separated, but you can create different versions of a portal and restrict each version's use to a single domain for chat purposes. For example, you could create two employee service portals and define a different domain for each.

Before you begin

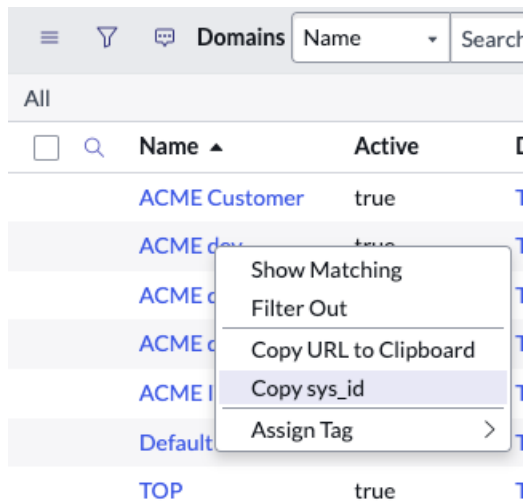
Role required: admin

About this task

Elements of the Service Portal platform such as settings, portals, pages and widgets are not domain-separated. However, the data within widgets does display when based on the appropriate domain. To provide different experiences, admins should create separate service portals, each with unique URLs, that they can redirect users to. For a domain-separated chat experience in the chat widget channel, create a portal and use the *sysparm_domain_id* parameter in the URL to designate the domain. For more information, see [Virtual Agent URL parameters](#).

Procedure

1. **Optional:** [Create a new domain](#)  and assign roles to the domain as needed.
2. Copy the domain's sys ID.
 - a. Navigate to **All > Domain Admin > Domains**.
 - b. Right-select the name of a domain, and then select **Copy sys_id**.

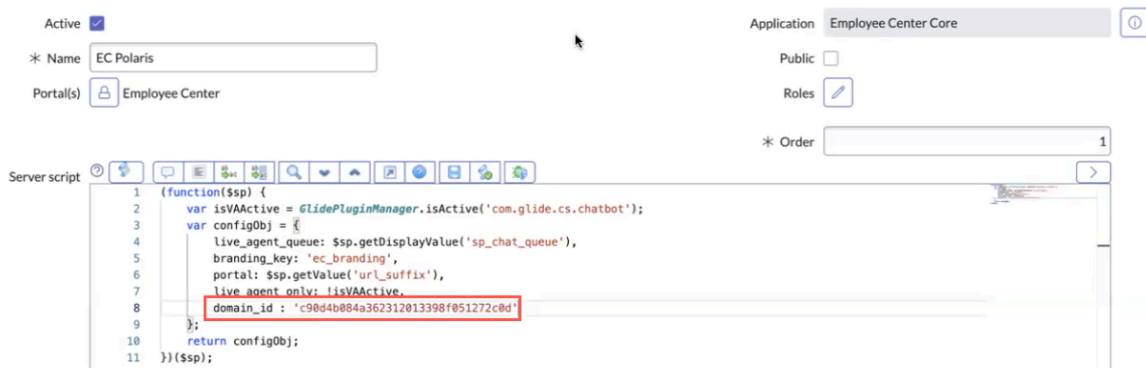


c. Paste the ID in a text editor and save it for later.

3. Navigate to **All > Service Portal > Agent Chat**.

4. Select the name of the portal that you want to restrict to a domain, or [create a new one](#) . If prompted, open the record for editing.

5. In the **Server script** area, add the `domain_id` parameter and the domain's sys ID that you copied earlier.



6. Select **Update** or **Submit** to save your changes.

Result

The `sysparm_domain_id` parameter gets passed in the portal URL.

Configuring Virtual Agent

Change the preconfigured Virtual Agent default chat experience or create a custom chat experience for your LLM users. You can configure setup topics, specify promoted topics, and if needed, change the search profile.

If you want to specify custom setup topics or promoted topics that are displayed to your users in the chat window, make those topics active (published) so that they're available for configuration in the chat experience.

Role required: virtual_agent_admin or admin

Use the Conversational Interfaces Console to activate and configure Virtual Agent. Some of the general settings in the console are shared with other applications, such as Agent Chat.

General chat settings

I want to...	See these topics
Display options	
Branding	Branding your chat client
Message preview	Enable message preview on the chat widget
Public access	Enable public access to the chat widget
Channels and routing	
Channels	Integrating Virtual Agent with messaging apps.
Context variables	Configure context variables for storing chat-related information
System actions	
System messages	Change Virtual Agent and Agent Chat system messages
Missed activity emails	Sending missed chat activity emails

Virtual Agent settings

I want to...	See these topics
Get recommendations for Virtual Agent topics based on my data	
Configure performance tracking for Virtual Agent topics	
Create custom greetings and setup topics	Customizing a Virtual Agent chat experience
Determine which issues are routed to Virtual Agent first	
Send notifications to users in Virtual Agent	Configuring Virtual Agent notifications Enable Virtual Agent notifications
Use AI Search to return fallback results for Virtual Agent	
Detect and dynamically translate Virtual Agent topics into a different language	Language detection and dynamic machine translation in Virtual Agent in enhanced chat

Virtual Agent security

Platform hardening for your instance is leveraged by Virtual Agent, so you should follow the overall platform hardening recommendations. For details, see [Secure your instance](#) .

Configuring agentic conversations in Virtual Agent

When you query a Virtual Agent, it reasons, plans, and executes across a wide variety of options. The Virtual Agent can use AI agents, virtual agent topics, conversational actions and subflows,

catalogs, KB articles, custom skills, and any ServiceNow Otto for Virtual Agent supported skills to help you.

- If specific agents are available for the assistant to perform user tasks or subtasks, they are used.
- If no specific agent is available for the task or subtask, the system automatically employs the Search Agent to discover answers or appropriate skills within the system. This is based on the assistant's scope.
- If skill execution is required, the system automatically executes the discovered skills.
- The system plans and orchestrates execution among multiple agents, skills, and QnA to accomplish complex tasks.

i Note: When a Virtual Agent conversation is triggered, any updates or comments in the record's work notes display as the AI agent rather than the user who initiated the conversation.

Examples of AI agent behavior for user utterances

The examples will consider the following available example resources in the system:

Agents	Skills/Topics	KB Articles
Check IT Ticket status agent	Order coffee	Spam
Email Agent	Order food	ESPP policy
Meeting scheduling Agent	Order laptop	
	Order accessories	

Scenario 1: Multiple questions from KB articles

Utterance: How do I avoid spam? How do I detect it?

- Non-agentic response: Produces a single mixed answer.

Hi , how can I help you? I'm an AI-powered virtual assistant that can handle work-related questions and requests.

How do I avoid spam? How do I detect it?



To avoid and detect spam:

- **Emails:** Follow tips like not trusting display names, avoiding clicking on suspicious links, and reporting phishing emails using the "Report Phish" button. If compromised, contact the Threat Intelligence and Global Incident Response (TIGIR) team at phishing@servicenow.com or call the Cybersecurity Hotline at +1.855.732.6695 ¹.
- **Phone Calls:** Use features like "Silence Unknown Callers" on iPhones or third-party apps to block spam calls. Adjust settings under "Call Blocking & Identification" to filter spam effectively ².
- **Social Engineering Scams:** Avoid sharing personal data, clicking on suspicious links, or responding to unsolicited calls. Report suspicious emails to reportphishing@apple.com and scam calls to the Federal Trade Commission ³.
- **iCloud Mail:** Report junk mail by moving it to the Junk folder and adjust Mail Privacy Protection settings to prevent spammers from tracking your activity. Use iCloud email aliases or "Hide My Email" to reduce spam ⁴.

Show sources

Reply to Now Assist...

Some answers generated by AI. Be sure to check for accuracy.

- Agentic response: Breaks it into two questions and provides a better answer for each one of them.



Hi , how can I help you? I'm an AI-powered virtual assistant that can handle work-related questions and requests.

How do I avoid spam? How do I detect it?



View AI Agent Processing Steps



To effectively avoid spam, consider the following strategies:

- Do not reply to spam emails, as this confirms your email address to spammers ¹.
- Be cautious when sharing your email address and check privacy policies to ensure it won't be shared or sold ¹.
- Adjust your browser's security settings to limit personal information exposure, such as disabling cookies and autofill features ¹.

Show sources



View AI Agent Processing Steps

Some answers generated by AI. Be sure to check for accuracy.

Disabling Cookies and Autofill Features ¹

Show sources

View AI Agent Processing Steps



To effectively detect spam emails, consider the following:

- Be cautious of display names and email headers, as spammers often use deceptive names ¹.
- Avoid clicking on suspicious links or attachments and update your browser ¹.
- Look for spelling mistakes, vague salutations, and urgent common phishing tactics ¹.
- Legitimate businesses typically use personal salutations and include company information in their emails ¹.
- Do not provide personal credentials via email, as legitimate companies won't ask for this way ¹.

Show sources



View AI Agent Processing Steps

Reply to Now Assist...

Some answers generated by AI. Be sure to check for accuracy.

Scenario 2: Multiple skills with slot filling

Utterance: Hey, order a coffee for me, preferably dark roast and something to eat, maybe a pizza?

- Non-agentic response: Produces a single answer. Mostly listing all matching available skills. No auto-execution since it matched multiple skills.

Hi, how can I help you? I'm an AI-powered virtual assistant that can handle work-related questions and requests.

Hey, order a coffee for me, preferably dark roast and something to eat, maybe a pizza?

- You can use the "Order Coffee" option to request a dark roast coffee [Order Coffee](#).
- For pizza, the "order food" option is available [order food](#).



Reply to Now Assist...

Some answers generated by AI. Be sure to check for accuracy.

- Agentic response: Breaks it into two distinct tasks, order coffee and order food/pizza. Executes one after another, completing the entire user request.

Hey, order a coffee for me, preferably dark roast and something to eat, maybe a pizza?

View AI Agent Processing Steps

You can explore the "Order Coffee" option to find available services or options for ordering dark roast coffee [Order Coffee](#).

Starting "Order Coffee"...

Would you like your coffee hot or cold?

hot cold

- Coffee type: **dark roast**
- Hot or cold: **hot**

Does everything look good, or would you like

Thank you for your dark roast hot coffee order

Reviewing the details

- ✓ Taking a moment to plan and reflect
- ✓ Finding the needed info
- Reviewing the details

Scenario 3: Complex utterance with a combination of skills, agents, and QnA

Utterance: I am going on PTO tomorrow. Get my expense report and my IT ticket status. Send a summary of the expense report to John Jacob and the details on ticket status to Robert Williams, informing them of my PTO and requesting them to work on them.

- Non-agentic response: Produces a single answer. It lists all matching available skills. No auto-execution will take place since it matched multiple skills.

Hi, how can I help you? I'm an AI-powered virtual assistant that can handle work-related questions and requests.

I am going on PTO tomorrow. Get my expense report and my IT ticket status. Send a summary of expense report to John Jacob and the details on ticket status Robert Williams informing both of them of my PTO and requesting them to work on them.

Show more ▾

- To retrieve your expense report, you can use the "Get expense report" option [Get expense report](#).
- To check the status of your IT ticket, you can use the "Check Ticket & Support Status" option [Check Ticket & Support Status](#).
- Once you have the details, you can send a summary of the expense report to John Jacob and the ticket status details to Robert Williams, informing them of your PTO and requesting their assistance.

Reply to Now Assist...

Some answers generated by AI. Be sure to check for accuracy.

- Agentic response: Breaks it into multiple distinct tasks, reasons and plans, understands the dependencies, and executes one after another, completing the entire user request using output from prior actions as context as needed.

Hi , how can I help you? I'm an AI-powered virtual assistant that can handle work-related questions and requests.

I am going on PTO tomorrow. Get my expense report and my IT ticket status. Send a summary of expense report to John Jacob and the details on ticket status Robert Williams informing both of them of my PTO and requesting them to work on them.

View AI Agent Processing Steps

To retrieve your expense report, you can use the "Get expense report" option, which allows you to access and view the details of your expense reports [Get expense report](#).

Starting "Get expense report"...

Some answers generated by AI. Be sure to check for accuracy.

Status	Unsettled
Transaction date	2024-12-14
Payment type	Out of Pocket

Expense report

Title	Office supplies
Amount	\$23.4966
Status	Unsettled
Transaction date	2024-12-12
Payment type	Company prepaid card

Getting the latest open requests

- ✓ Taking a moment to plan and reflect
- ✓ Executing agent Ticket Status Agent
- ✓ Getting the latest open requests

Some answers generated by AI. Be sure to check for accuracy.

Scenario 4: Complex utterance with a combination of QnA (KB) and agent

Utterance: What is the maximum contribution amount for espp? Send an email to Robert with the details.

- **Non-agentic response:** Produces a single answer and doesn't complete or even suggest the second action since there's no corresponding skill.

Hi , how can I help you? I'm an AI-powered virtual assistant that can handle work-related questions and requests.

what is the maximum contribution amount for espp? Send an email to Robert with the details.

- The maximum contribution amount for the Employee Stock Purchase Plan (ESPP) is up to 15% of your cash compensation during each Offering Period. Contributions can be made in 1% increments, with a minimum of 1% and a maximum of 15% of your gross compensation, which includes base salary, bonuses, commissions, and other cash compensation ¹.

Unfortunately, I cannot send an email to Robert directly. Please use your email client to share this information with him.

Show sources

👍 🗨 📄

Reply to Now Assist...

Some answers generated by AI. Be sure to check for accuracy.

- **Agentic response:** Understands the two separate intents and executes them in sequence while using the output from the first intent to fulfill the second intent.

what is the maximum contribution amount for espp? Send an email to Robert with the details.

View AI Agent Processing Steps

The maximum contribution amount for the Employee Stock Purchase Plan (ESPP) is determined by law and ServiceNow's plan. Participants may not accrue the right to purchase shares exceeding USD \$25,000 per calendar year, calculated based on the fair market value of the stock on the grant date. Additionally, no more than 1,500 shares may be purchased during any one Offering Period ¹.

Show sources

View AI Agent Processing Steps

- ✓ Taking a moment to plan and reflect
- ✓ Executing agent Email Agent
- ✓ Sending email to Robert

Reply to Now Assist...

Some answers generated by AI. Be sure to check for accuracy.

View AI Agent Processing Steps

- ✓ Taking a moment to plan and reflect
- ✓ Executing agent Email Agent
- ✓ Sending email to Robert

Following email has been sent to Robert
Subject : Maximum Contribution Amount
Body: Hello Robert;

The maximum contribution amount for the Employee Stock Purchase Plan (ESPP) is determined by law and ServiceNow's plan. Participants may not accrue the right to purchase shares exceeding USD \$25,000 per calendar year, calculated based on the fair market value of the stock on the grant date. Additionally, no more than 1,500 shares may be purchased during any one Offering Period.

Thanks.

Show less

👍 🗨

How else can I help you?

👍 🗨

Reply to Now Assist...

Some answers generated by AI. Be sure to check for accuracy.

Halting and restarting agentic conversations

If you want to stop an agentic conversation mid-query, hover over the send icon  while the agent is researching a query. The icon becomes an interrupt flow icon . Select the icon and the conversation stops. A message appears: The current conversation has been stopped, but you can begin again. Enter a new query to restart the agentic conversation.

Error handling and fallback options

When the AI agent can't understand a request, encounters a system error, or a session becomes inactive, it displays a message and presents options to help you continue.

- When ServiceNow Otto can't find an answer, it will provide options based on how the assistant was configured. Options may include:
 - Requesting a live agent
 - Creating a support request
 - Viewing office hours

For example, if you ask about a topic the AI agent can't find information on, you might see a message such as: "I can't find anything on that directly but I can help you explore other options." Select one of the displayed options to continue.

- Session timeout due to inactivity:

If you stop responding during a conversation, the AI agent waits for a set period before ending the session. When a session is about to time out, you will receive a warning message. For example: "Looks like you've left this conversation. Would you like to keep going?". If you want to continue, respond to resume the conversation.

If there is no response to the warning, the session ends with a session end message. For example, "Our chat has timed out due to inactivity. Just start a new conversation whenever you're ready. I'll be here to help!". You can start a new chat to continue getting help.

- Technical errors and system timeout:

If the AI agent encounters a backend error or can't complete a request due to a technical issue, it displays a message and presents fallback options. For example: "It looks like I'm having trouble completing your request right now because of a technical failure. But I can help you explore other options." You can select one of the available fallback options to continue.

- Errors during agentic tasks:

When you ask the AI agent to complete a multi-step task on your behalf, it plans and carries out the steps automatically. If a step in the plan can't be completed, it lets you know and offers fallback options so you can decide how to proceed.

For example, if the AI agent is creating an expense report and encounters a problem, it displays a message such as: "Unfortunately that didn't work. But I can help you explore other options." The fallback options available depend on your configuration.

- **Note:** Review AI generated responses for accuracy before taking action.

Enable AI agents in Virtual Agent

Create and configure multiple assistants with specific scope and map the assistants to one or more portals.

Before you begin

Role required: admin or virtual_agent_admin

Note: When a Virtual Agent conversation is triggered, any updates or comments in the record's work notes display as the AI agent rather than the user who initiated the conversation.

Procedure

1. Do one of the following:

a. Create an assistant in Assistant Designer or use a default assistant.

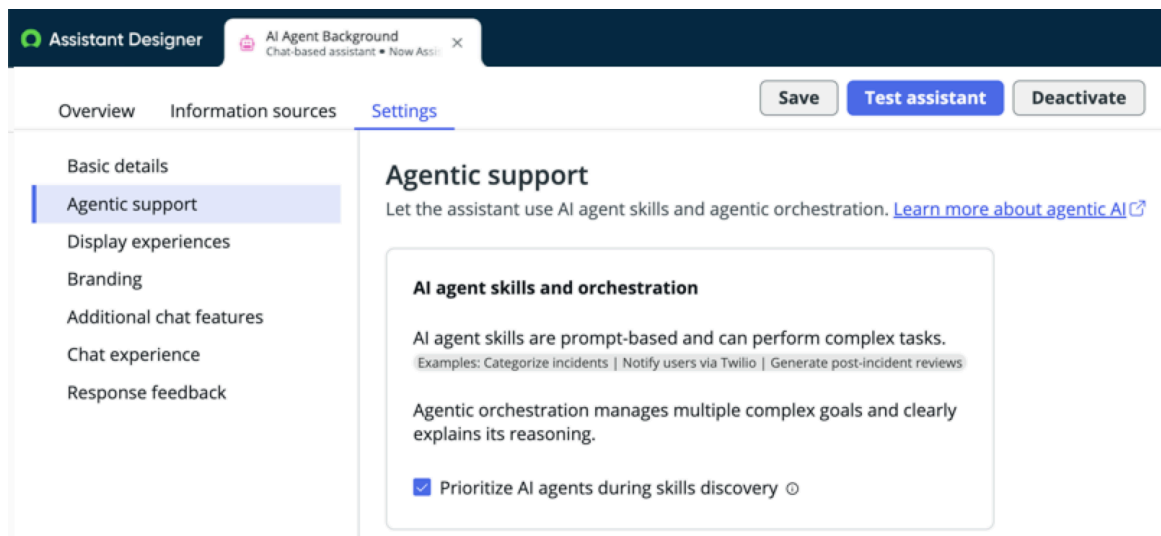
For more information, see [Create a chat assistant](#).

b. Assign the assistant to a specific portal or portals.

For more information, see [Display your assistant on a portal, channel, or mobile app](#).

2. Ensure that the **AI agents** skill is added to the assistant.

In the assistant settings in Assistant Designer, select the **Agentic support** page, and select the **Prioritize AI agents during skills discovery** check box.



3. Map or publish an AI agent to one or more assistants in AI Agent Studio to make the agent available within a specific assistant.

Select channels and status for an AI agent

Survey Analysis AI agent

Exit

Define the specialty

Add tools and information

Define security controls

Define user access

Define data access

Add triggers

Select channels and status

Select channels and status

This AI agent can engage with users who initiate an interaction when it's available for use in channels. Select channels where you want this AI agent to be available to engage with users.

In addition, this AI agent is designed to be part of an agentic workflow that users can discover in the Now Assist panel.

Engage via Virtual Agent assistants

How it works:

- First, users send a message to a chat assistant.
- Then, this AI agent is discovered and used.
- As a result, users see agentic responses from this AI agent.

Allow

Choose chat assistants

These chat assistants were created in [Assistant Designer](#).

Chat assistants

Now Assist in Virtual Agent (default)

FAQs

How does this AI agent get discovered?

What's an agentic response?

Do users know they're interacting with...

Resources

Product documentation

Community forum

Back

Save and test

For more information, see [Create an AI agent](#).

Result

During execution, only the configured AI agents are considered for the current assistant and dynamically makes them available to the Orchestrator for planning.

Customizing a Virtual Agent chat experience

Create different chat experiences for your end users based on the context in which they initiate a conversation with Virtual Agent.

Get started with chat experiences

Navigate to **All > Conversational Interfaces > Settings**, and then select **Virtual Agent**. Use the **Custom Greetings and Setup** tile to manage the default and custom chat experiences. You can do the following:

- Configure the default chat experience, including the setup topics, promoted assets, and search criteria used. For example, you can activate the Virtual Agent Feedback setup topic so that it is applied to all your bot conversations.
- Create different custom chat experiences based on the context in which your end users run Virtual Agent. The settings that you define in a custom chat experience override the default chat experience.

How chat experiences work

A chat experience defines the structure of a bot conversation (setup topics), an initial set of topics displayed to users (promoted assets), and the AI Search configurations for displaying search results in conversations. Virtual Agent provides a preconfigured, default chat experience that you (admins and topic authors) can use to control the user experience with Virtual Agent.

You can configure the default chat experience and also create custom chat experiences, tailored to the context in which different users run Virtual Agent, such as the service portal or channel that they're using. Custom chat experiences inherit the default chat experience settings, but you can override the defaults as needed for a given context.

A chat experience consists of setup topics, promoted assets, and a search profile:

Setup topics

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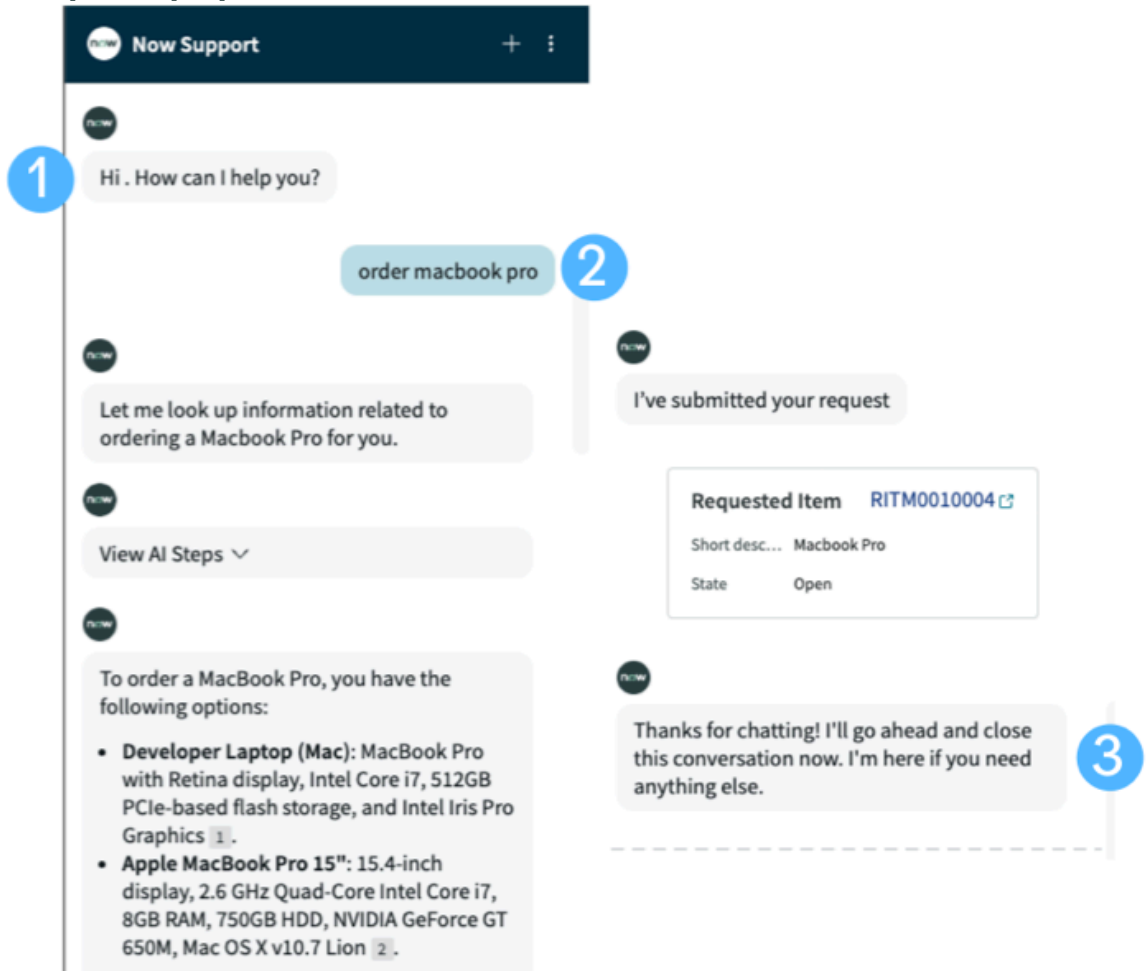
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Virtual Agent provides common conversational elements, such as a welcome greeting to begin a conversation and a conversation closing, and automatically includes them in virtual agent conversations. These prebuilt elements, called setup topics, are part of a basic conversation structure that is applied to all your conversations. They are installed with Virtual Agent.

These setup topics run automatically at appropriate points in a conversation, based on the topic description or keywords that users enter during the conversation.

Example setup topics in a conversation



1. Greeting
2. LLM topic (conversational catalog request)
3. Closing

Virtual Agent provides the following types of prebuilt setup topics:

Setup topic	Description
Greeting	Presents a welcome greeting to users, and asks users to enter a request or see what items it can assist with.
Provide Virtual Agent Feedback	Displays a survey to get user feedback on the conversational experience, before the conversation ends.

Setup topic	Description
Live Agent Support	Enables users to request a live agent transfer and view items that the live agent can assist with.
Virtual Agent Capabilities	Presents a list of what the virtual agent can help with.
Error Handling Topic	Displays a standard error message when an unrecoverable system error occurs and transfers the user to a live agent.
Closing Conversation	Displays a closing message that ends the conversation.
AI Search Fallback	Generates AI Search results for a user when Virtual Agent can't find a matching intent and topic or keyword.
Fallback Topic	Presents standard messages that ask the user to enter another request or select a different topic when the virtual agent does not understand a user entry or selection.
Anything Else Topic	After completing a task or request, virtual agent asks if the user needs further assistance with another request or task.

Setup topics for LLM conversations rely on their own descriptions as the intents, which the LLM uses for topic discovery.

You can preview (test) the prebuilt setup topics to see how they work. On the Assistant Designer home page, use the filter icon  to sort only for Setup Topics, and then select the setup topics to test. Prebuilt topics are read-only, but you can duplicate, customize (modify) if needed, and publish them.

Promoted topics

You can display a collection of up to six topics that are relevant to your users, displayed before the **Show me everything** button in the chat window. You can use these promoted assets in a chat experience to give your users quick and convenient access to the topics used for a given context.

Note: Promoted topics may not be supported on all clients.

For more information, see [Promote or demote LLM conversational subflows, actions, and topics in Assistant Designer](#)

Search profile

A search profile defines how Virtual Agent AI Search results are generated. You can assign search sources to a chat assistant. Search sources are used to determine what the assistant looks at to answer user queries. For more information, see [Assign search sources to a chat assistant](#).

Working with setup topics

Setup topics are part of a standard conversation structure applied to all your conversations, such as the welcome greeting or fallback responses. Setup topics run at the appropriate spot in a conversation based on the context, keywords, or utterances entered by the user, and any conditions that are specified for the setup topic.

You define setup topics in a Virtual Agent chat experience using the Custom Greetings and Setup option. A chat experience sets the context in which users run Virtual Agent. This context includes:

- Setup topics applied to bot conversations.
- A small list of topics, called promoted topics, initially displayed in the chat window.
- AI Search configuration used to display AI Search results for your users.

For more information on chat experiences, see [Customizing a Virtual Agent chat experience](#). For details on configuring a chat experience, see [\(Legacy\) Configure a Virtual Agent NLU chat experience](#).

Note: Setup topics in conversations are discoverable (via topic discovery) only when they're [configured in a Virtual Agent chat experience](#) using the **Custom Greetings and Setup** option. If any setup topics are not included in a chat experience, those setup topics are not listed in the chat window's All Topics menu (topic picker) and cannot be discovered by Virtual Agent.

Setup topics run during a conversation as follows.

1. Conversation beginning: Virtual Agent presents the Greeting topic and the list of available topics (Virtual Agent capabilities) that the user can select.

Note: If you want the chat window to immediately take users to a live agent, do not select the Live Agent Support topic as a greeting. Instead, use the system method to [transfer to a live agent](#).

2. Conversation body: These setup topics are presented at different points in the conversation depending on the context:

- User requests help: Virtual Agent presents the Explore help topic (Virtual Agent capabilities).
- User enters a request or keyword that Virtual Agent doesn't understand: Virtual Agent presents the Fallback topic, unless the AI Search fallback topic is enabled.
- If the AI Search Fallback topic is enabled and the user enters a request or keyword but Virtual Agent can't find a matching topic or keyword, or finds too many topics to determine the matching topic: Virtual Agent runs AI Search to generate relevant search results for the user. If the AI Search results do not help the user, or if the AI Search Fallback setup topic is not activated, Virtual Agent runs the Fallback topic.
- An unrecoverable system error occurs during conversation: Virtual Agent runs the Error Handling topic, and then transfers the user to a live agent.
- User requests a transfer to live agent: Virtual Agent runs the Live Agent topic, which transfers the user to a live agent.
- After a task or user request is completed: Virtual Agent runs the Anything else topic to ask if the user wants to continue with another request or task.

3. Conversation ending:

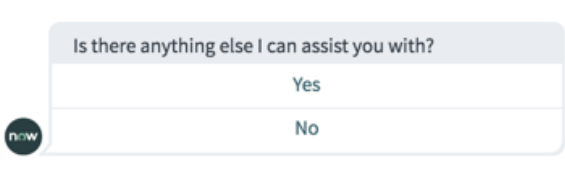
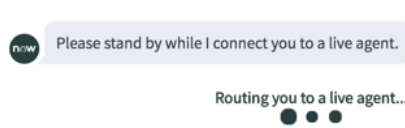
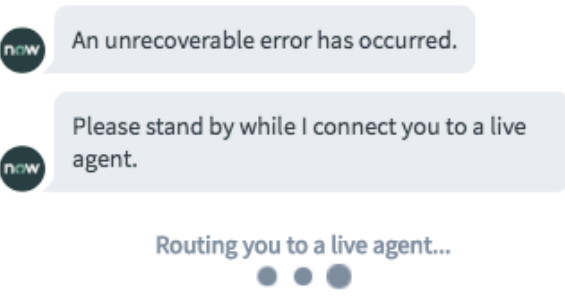
- If the user doesn't want further assistance after a task or the request is completed, Virtual Agent presents the Survey topic for feedback on the conversational experience.
- After the survey, Virtual Agent confirms that the feedback has been received, and runs the Closing topic to end the conversation.

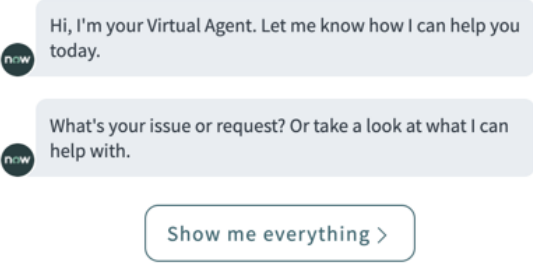
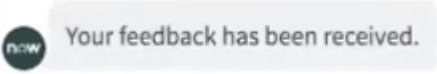
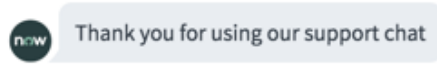
The default setup topics are read-only and have topic names with a period at the end of the setup topic name, such as **Greeting.** You can create your own custom setup topics by duplicating

a setup topic and changing it as needed. You can also change prompts or add other controls to the topic, just as you might when creating other topics.

If you want a closing message to be different from the default Closing topic, create a custom setup topic that contains the revised closing text. You also need to create an intent for that custom setup topic in the NLU model for setup topics, or define topic keywords in the Topic Properties page. You can then select the custom setup topic to be used in a custom chat experience instead of using a default setup topic.

The following table provides examples of the pre-built setup topics in the default chat experience.

Setup topic type	Setup topic name and description
Anything else	Anything Else Topic. Virtual Agent asks users if they need further assistance.  If users select Yes, Virtual Agent returns a list of related items that it can help with.
Live agent	Live Agent Support. Tells users that a live agent transfer is in process: 
Error	Error Handling Topic. Displays a generic error message to the user when the Virtual Agent encounters a problem that it can't resolve (unrecoverable system error) and transfers the user to a live agent. 
Greeting	Greetings. Starts a conversation by greeting users and giving them the option to enter a request or see the items that the Virtual Agent can assist with.

Setup topic type	Setup topic name and description
	 Note: The pre-built setup topics include a personalized greeting called the Dynamic Greeting Topic, which welcomes the user by name. To change the default greetings topic, double click Setup topic name and then choose the personalized greeting from the list of available setup topics.
Survey	Virtual Agent Feedback topic. Gathers user feedback on the conversational experience with the Virtual Agent. The survey setup topic displays randomly in 33% of your Virtual Agent conversations. The survey topic includes an introductory sentence that admins can customize as needed. The survey then presents a choice list with options users can select to describe their experience. Example survey feedback choices  After the users provide their feedback, a message confirms that their feedback has been received:  Note: To change the probability (percentage) that the survey setup topic occurs in your conversations, change the value in the <code>com.glide.cs.survey.probability</code> system property. To display the survey setup topic randomly in 50% of your Virtual Agent conversations, set the Value to 0.50.
Closing	Closing Conversation. Displays a closing message to the user that ends the conversation: 

Setup topic type	Setup topic name and description
AI Search fallback	AI Search Fallback. When enabled, this setup topic uses AI Search search to generate fallback AI Search results when Virtual Agent can't find a matching intent or it finds too many intents and can't determine the appropriate topic to display to a user.
Fallback	Fallback Topic. Displays a standard message to the user when: - When virtual agent doesn't understand a user utterance or keyword and the AI Search fallback setup topic is not enabled in the chat experience. AI Search fallback topic was deactivated in the chat experience, and the virtual agent doesn't understand a user statement or keyword. - Users indicate that the AI Search results aren't helpful. Please try giving me your request in a different way. I'm currently better at understanding short sentences. What's your issue or request? Or take a look at what I can help with.
Explore help	Virtual Agent Capabilities. Enables users to ask for assistance during a conversation and view a list of items that the Virtual Agent can assist with (Virtual Agent capabilities). What's your issue or request? Or take a look at what I can help with. Show me everything >

Change text in the Show me everything button

Configure the text in the **Show me everything** button displayed in the chat window to control the display of the initial greetings and the **Show me everything** button in Virtual Agent conversations. Edit the message in the System Properties [sys_properties] table, or in a copy of the Greetings setup topic.

Before you begin

If you're updating the Greetings setup topic, first [Create a copy](#) of the Greetings setup topic, since the prebuilt Greetings setup topic is read-only.

Role required: virtual_agent_admin or admin

About this task

You can change the Virtual Agent greeting message by either updating the default greeting through the System Properties [sys_properties] table, or changing the message in the Greetings setup topic itself in AI assets.

If you change the message in the System Properties table, the default greetings setup topic (and any custom greetings topics that don't override the default **Show me everything**) all show the updated message. If you change the greeting message, you can make more targeted changes, such as a message for an HR-based greeting topic.

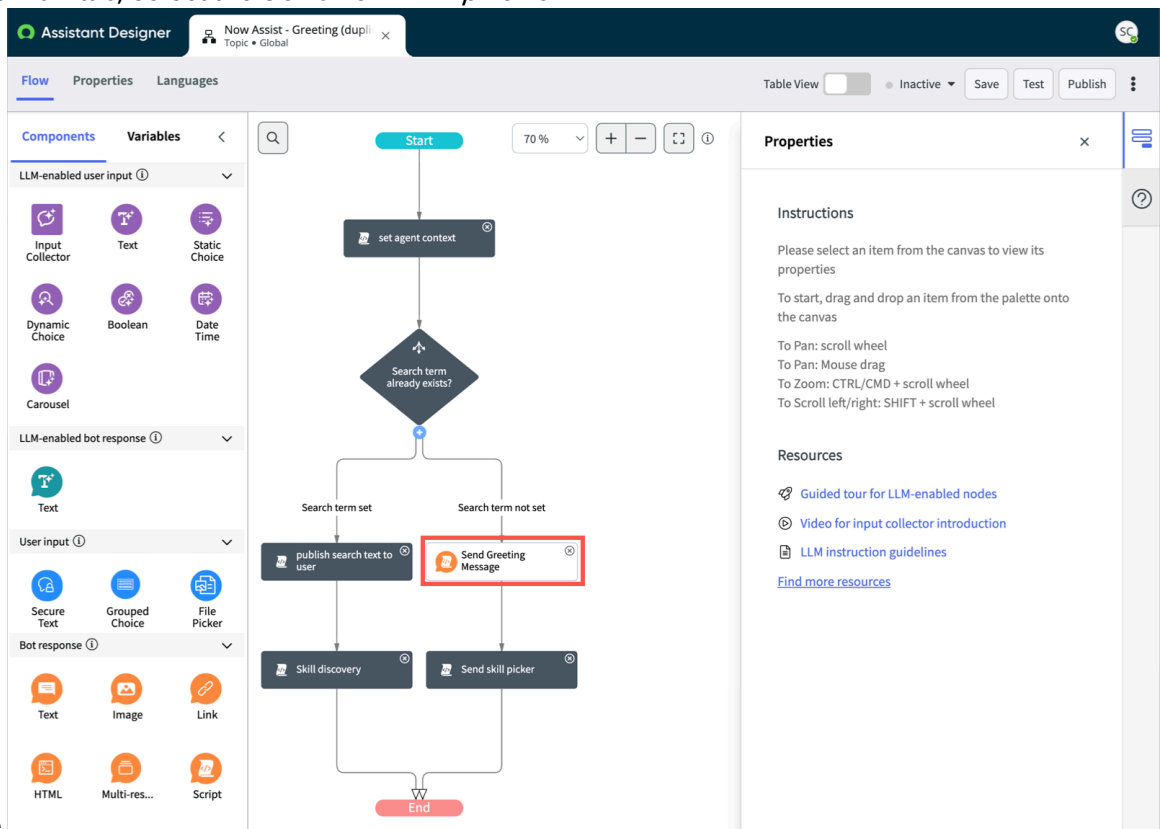
The Greetings setup topic contains the Send Topic Picker script action, which controls the text in the **Show me everything** button. To change the text, edit the Send Topic Picker script action in the copy of the Greetings setup topic.

Procedure

Navigate to **All** and use one of the following methods.

Method	Description
System properties	- Input <code>sys_properties.list</code>. - Under <code>com.glide.cs.topic_picker_button_label</code>, set the value to a message of your choice, such as <code>Show me everything</code>. - Select the Save icon .
Assistant Designer Asset library	- Navigate to Conversational Interfaces > Assistant Designer. - Select the Asset library tab. - Select the copy of the Greetings setup topic that you created. - In the Flow tab, select the node for the Send Topic Picker script action. - In the Script action properties sheet, select the Script icon  to open the Action expression script. - Change the <code>greetingMessage</code> text string as needed, and select Save. For example, to change the button text to Show more, you would change the script as follows: <pre>(function execute() { var greetingMessage = vaSystem.getTopicSelectionMessage(); vaSystem.sendTopicPickerControl(greetingMessage, "Show more"); })();</pre> - Preview the change in the chat window by selecting Test in the header bar. The button text change displays as follows:

4. In the Flow tab, select the *Send skill picker*



node.

The *Script* action utility control for the *Send skill picker* node opens in the property sheet.

5. In the property sheet, select the **Script** that defines the operation of the node button .

6. In Line 3 of the script, set the "hideShowMeEverything" value from false to

Action expression

```

1  (function execute() {
2    if (!vaVars.isNASS) {
3      vaSystem.sendSkillPickerControl("", {"hideShowMeEverything": true, "appendPromotedSkillsToMsg": false
4    } else {
5      // experience is NASS
6      var shouldShowAllOptions = gs.getProperty("sn_nowassist_va.enable_nass_show_all_options", "false") ==
7
8      if (vaSystem.hasPromotedSkills()) {
9        // and has promoted skills then send skill picker
10       vaSystem.sendSkillPickerControl("", {"hideShowMeEverything": !shouldShowAllOptions, "appendPromot
11     } else if (gs.getProperty("sn_nowassist_va.enable_suggested_queries", "true") == "true") {
12       // and does not have promoted skills, then send suggested query picker (if active)
13       vaSystem.sendQueryPickerControl();
14     } else {
15       vaSystem.sendSkillPickerControl("", {"hideShowMeEverything": !shouldShowAllOptions});
16     }
17   }
18 })()

```

true.

7. Select **Save**.

The greeting Setup topic activates, and the **Show me everything** button disappears from the Virtual Agent chat where the topic is used.

8. Select **Publish**.

What to do next

To reveal the **Show me everything** button again, set the "hideShowMeEverything" value from `true` to `false`.

The duplicated greeting Setup topic is associated with the LLM assistant as the original topic. You can associate the duplicate with another LLM assistant. For more information, see [Customizing a Virtual Agent chat experience](#).

(Legacy) Change the Virtual Agent greeting messages in the Greeting setup topic

The Virtual Agent greeting setup topic provides default greeting messages for your conversations. Customize these greetings by adding system properties that change the default welcome message and the top selection message prompting users to enter an issue or request.

Before you begin

Role required: `virtual_agent_admin` or `admin`

About this task

Starting with the Orlando release, the `com.glide.cs.general.welcome_message` and `com.glide.cs.general.top_selection_message` properties are no longer automatically installed with Virtual Agent. These properties define the greeting messages used in the Greeting setup topic.

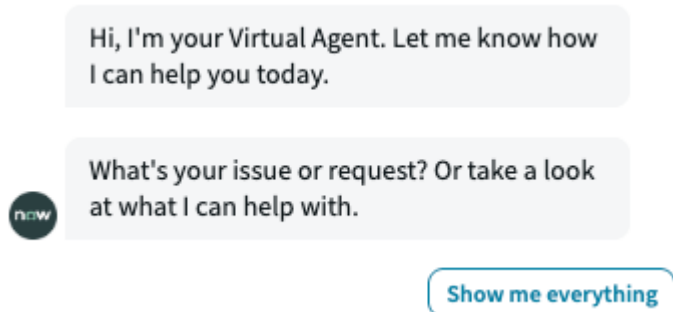
In the Orlando release, the default Greeting setup topic was updated. If you upgraded from the New York release, these properties are retained so that you can continue using the original Greeting setup topic. If you want to use the updated Greeting setup topic, delete the `com.glide.cs.general.welcome_message` and `com.glide.cs.general.top_selection_message` system properties that contain the original Greeting messages.

Note: These properties aren't present in the base system, but creating them enables you to override these messages.

For new customers, the updated Greeting setup topic (see the following example) is the default. If you want to change the default message text in the Greeting setup topic, add these system properties to the System Property [sys_properties] table:

- `com.glide.cs.general.welcome_message`: Change the default welcome message
- `com.glide.cs.general.top_selection_message`: Change the top selection message that displays after the welcome message

Default messages in Greeting setup topic (starting with the Orlando release)



Procedure

1. Navigate to **All**, and then enter `sys_properties.list` in the filter.
2. Select **New** to add the `com.glide.cs.general.welcome_message` property.
 - a. On the form, complete the following fields.

Field	Value
Name	Enter the system property name: <code>com.glide.cs.general.welcome_message</code>
Description	Enter an explanation for this property: Welcome message
Type	Select string.
Value	Enter the greeting text. For example: How can I help you?

- b. Select **Submit**.

3. In the System Properties table, select **New** to add the `com.glide.cs.general.top_selection_message` property.

- a. On the form, complete the following fields.

Field	Value
Name	Enter the system property name: <code>com.glide.cs.general.top_selection_message</code>
Description	Enter an explanation for this property: Top selection message
Type	Select string.
Value	Enter the text that specifies the next selection action that the user can make after the welcome message is presented to the user. For example: You can enter your request below, or use the button to see everything that I can help with.

- b. Select **Submit**.

Configuring Virtual Agent notifications

Send ServiceNow notifications directly to users via the Virtual Agent chatbot on supported messaging channels. Notifications can be simple informational messages for review, or actionable messages with buttons that users can select to perform certain actions.

Notifications are sent to recipients via the Virtual Agent bot in the chat widget, pre-built messaging integrations (for example, SMS Twilio, Slack, Microsoft Teams), and custom chat integrations.

Notification functionality is included with the Glide Virtual Agent (`com.glide.cs.chatbot`) plugin and also with Virtual Agent Lite, which is included with the ServiceNow AI Platform. However, Virtual Agent Lite users can receive only simple notifications, while Virtual Agent users can

receive both actionable notifications and simple notifications. Users with no associated ServiceNow profiles in the [sys_user] table can receive non-actionable Virtual Agent notifications.

How Virtual Agent notifications work

As an admin, you can define different types of notifications that have specific layouts and content. You can also customize certain aspects of notification content, such as the message heading and message content.

Simple notifications

The content can be a standard informational message, record card, or an image card. Simple notifications are delivered to users immediately, even when they're engaged in a conversation with a virtual or live agent.

Actionable notifications

These notifications have buttons that enable the recipient to perform certain actions, such as adding a comment or requesting a live agent. When you create an actionable notification, you associate an action with a published Virtual Agent topic, a scriptable action, or a flow action that handles the action to be performed. To encourage users to act on a notification, admin users can choose to remove the **Skip** option. If the user still doesn't act, the conversation will be completed as inactive.

Note: The notifications are actionable only when there is an associated link action to its content.

Actionable notifications are delivered to users when they're not in an active conversation with a virtual or live agent. A queue stores actionable notifications that are waiting to be delivered, for up to eight hours by default.

Actionable notifications are best suited for conversational purposes, such as:

- Password reset
- Incident update
- Approval request
- Course survey
- Service follow-ups and surveys
- Employee onboarding follow-ups

When a topic conversation completes, Virtual Agent automatically prompts the user to view pending notifications (if any). Admins can suppress this prompt by setting the `com.glide.cs.show_pending_notifications_prompt` property on the System Properties table to false.

Notifications with dynamic content

You can personalize Virtual Agent notifications by adding dynamic content to message headers and messages. For record- and event-based notifications, you use parameter substitution to specify the variables that identify the record values (from the notification table) to be included in the content.

Advanced notifications with dynamic content

You can create Virtual Agent notifications that use a script to add dynamic content in message headers and messages. The content can come from multiple data sources and include third-party services, such as URL shortening.

Variables in notifications

You can pass information to a completed survey when the notification is triggered. Context is defined by the script found in the notification topic. This script cannot be modified.

```
vaVars.global_notification_context =
  JSON.stringify({
    'tableName': table_name,
    'tableSysId': sys_id,
    'actionId': actionId,
    'eventParm1': eventParm1,
    'eventParm2': eventParm2});
```

Notifications are triggered by records updates or by creating a platform event in the event queue. `actionId` is the ID number for the action. The platform event takes in the `eventParm1` and `eventParm2` parameters. If a notification is triggered, the parameters are passed to the topic. To capture the notification incident number in your topic, use the following script.

```
var notificationContext =
  JSON.parse(vaVars.global_notification_context);
vaVars.sysId = notificationContext.tableSysId;
vaVars.tableName = notificationContext.tableName;
```

Notification processing

Virtual Agent notifications have certain processing controls and limitations, such as the maximum number of recipients allowed per notification and the number of notifications that can be sent per day. The following table identifies these processing controls and the system properties that can be used to change their default values.

Virtual Agent notification processing controls and limitations

Notification processing control or limitation	Default value	Associated system property
Maximum number of recipients per notification per channel	100,000 recipients	<code>com.glide.cs.per_notification_us</code> Max limit: None

Virtual Agent notification processing controls and limitations (continued)

Notification processing control or limitation	Default value	Associated system property
		Note: - If there are more recipients than the configured number, warning messages are displayed to reduce the recipient list while you're configuring the notification and when the notification is delivered. The warnings are displayed only when there is Virtual Agent content associated with the notification. - Recipient limits may apply to third-party delivery channels based on the level of service or subscription.
Maximum number of notifications per day, per channel	100,000 notifications	<i>com.glide.cs.daily_notification</i> Max limit: None Note: Rate limits may apply to third-party delivery channels based on the level of service or subscription.
Lifespan of actionable notifications (a queue stores actionable notifications that are waiting to be delivered)	8 hours	<i>com.glide.cs.idle_actionable_not</i> Note: You can specify a maximum value of 72 hours.
Allow access to notification card content and parameter substitutions in notification headings and messages	False (not enabled)	<i>com.glide.cs.notification_record</i> Note: This property does not apply to advanced notifications.

Notification experience for end users

The notification experience for end users depends on the type of notification that they're receiving. End users can also manage how their notifications are delivered by subscribing to or unsubscribing from notifications.

- **Simple message notifications** - These notifications are delivered immediately to the end user, even when the user is chatting with a bot or live agent. The user sees the incoming message but can continue with the current conversation.
- **Actionable notifications** - These notifications are delivered only when the user is not in an active conversation with a virtual or live agent. When users complete their conversation with a bot or live agent, they can use the **Show notification** command to view a list of pending notifications, which displays the heading of each notification. Users can select a pending notification to review, then perform the appropriate action for the notification, or skip the action.

User subscriptions for notifications

End users can subscribe or unsubscribe to notifications on the channel that they're using. For example, the chat menu provides a toggle switch that users can use to subscribe or unsubscribe to notifications on the web channel.

In the conversational integrations for Slack and Microsoft Teams, end users manage their notification subscriptions by using the **Subscribe** and **Unsubscribe** commands.

Create Virtual Agent notifications

Create a notification that is sent directly to users via the Virtual Agent chatbot. The notification specifies when users receive the notification (triggers for the notification) and who receives it (recipients with and without accounts in the User [sys_user] table).

Before you begin

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > System Notification > Provider > Notifications** and select **New**.
2. On the form, fill in the fields.

Notifications form

Field	Description
Name	Name of the notification.
Table	Table to receive notifications about.
Application	Application scope of the notification.
Type	Type of the notification.
Category	Category of the notification. For Virtual Agent, it's chat.
Active	Option to activate the notification. The notification is active by default.
Trigger	
Triggered By	System action that triggers the notification. You can choose to send the notification after a record is changed or after an event is triggered.

Field	Description
Inserted	Option to send the notification after a record is inserted. This field appears when you select Record Change in the Triggered By field.
Updated	Option to send the notification after a record is updated. This field appears when you select Record Change in the Triggered By field.
Event	Event that triggers the notification. For example, to send a notification after an incident is closed or resolved, you would select the <i>incident.inactive</i> event. By default, this event is logged in the system each time a user resolves or closes an incident. This field appears when you select Event in the Triggered By field.
Conditions	Filter to specify the table records that users receive notifications about. For example, to send notifications about top-priority incidents, you would select Incident [incident] in the Table field and set the conditions to [Priority] [is] [1 - Critical].
Recipients	
Users	Users who receive the notification. Add users from the static User ([sys_user] table or its extension tables) to define recipients for the notification. i Note: You can define the recipients for notifications only for chat channels using this field.
Recipients in fields	Record fields that include recipients who receive the notification. For example, to send the notification to the record assignee, select Assigned to. Add recipients from the User [sys_user] table or its extension tables to trigger the notification. i Note: You can define the recipients for notifications for both chat channels and messaging channels using this field.
Is originating user included?	Option to include the user who changed the record or triggered the event.

3. Select **Submit**.

i Note: Use the **Submit** button for Virtual Agent notifications. The **Submit and Add Common Content** button is for other use cases.

What to do next

- [Create additional recipients for Virtual Agent notifications.](#)
- [Define the notification contents.](#)

Create additional recipients for Virtual Agent notifications

Create and define additional recipients for a Virtual Agent notification to be delivered on chat channels or messaging channels.

Before you begin

Role required: admin

About this task

- The admin can define recipients under the Additional Recipients related list for messaging channels.

Note: Selecting the channel (chat channel or messaging channel) is a prerequisite to defining the content for the notification.

- The admin can define recipients under the Additional Recipients related list for chat and messaging channels using a dynamic condition.

Procedure

- Navigate to **All > System Notification > Provider > Notifications** and select the notification that you want to create additional recipients for.
- In the Additional Recipients related list, select **New**.
- On the form, fill in the fields.

Additional Notification Recipients form

Field	Description
Notification	Identifier of the notification. The notification name is auto-populated.
Recipient Table	The scope of the recipient record for the notification. The Recipient Table field is auto-populated with the user [sys_user] as the default value.
Application	The scope of the recipient record.
Active	Option to activate the notification for the defined additional recipients.
Static Recipients	Names of the recipients from the scope of the selected recipient table.
Dynamic Recipients	
Dynamic Conditions	Dynamic filter conditions for the defined recipients. The dynamic condition is applicable for both messaging and chat channels. This dynamic condition enables you to define the recipients list for a group of users to send a notification.

Field	Description
	Click the refresh icon  next to the records match condition link to update the exact number of records matching the latest filter condition. By default, it shows the total number of records in the current table. Note: Only one active record can be added for a particular recipient table. If you want to add another record for the recipient table, you must deactivate the current record.

4. Select **Submit**.

Define Virtual Agent notification contents

Create the content for a Virtual Agent notification delivered in a chat or messaging channel.

Before you begin

- Images for image cards must be 400 pixels wide or larger and must be in .jpg, .png, .bmp, .gif, .ico, or .svg format.
- If you're upgrading from an earlier release and want ACLs observed for data displayed in record cards and parameter substitutions in chat notifications, set the `com.glide.cs.notification_record_access_check` system property to true. The default value for this system property is false, which means that data is delivered regardless of the user's access level.

Note: This property does not apply to advanced notifications.

- Role required: virtual_agent_admin or admin

About this task

You can personalize Virtual Agent notifications by using parameter substitution to add dynamic content to the message header and message. When adding dynamic content to your notifications, you specify the variables that identify the record values to be included in the content. You can add dynamic content to the following types of notifications:

- Record-based notifications - Use the `${<variable_name>}` format in your content to specify a variable that represents a record value from the table used for the notification. For example, if you want to customize the message heading for a notification that uses the Incident table and you want to include the incident **Priority** in the message, use the **Select variable** column to select the variable for incident priority.
- Event-based notifications - Use the `${event.parm1}` and `${event.parm2}` format to specify event-specific parameters that pass record information in the notification content. To learn more about event parameters and how they work, see [Events](#).
- Advanced notifications - Modify a script provided for advanced notifications to specify dynamic content from different data sources and identify third-party services, such as URL shortening for streamlining links in the content.

Procedure

1. Navigate to **All > System Notification > Provider > Notifications** and select the notification for which you're defining or updating content.
2. Do one of the following:
 - If you're defining new content, navigate to the **Notification Contents** related list, select **New Provider Content**, and go to step 3.
 - If you're updating content, navigate to the **Notification Contents** related list, select the content to be updated, and go to step 4.
3. Select the Virtual Agent content type:
 - **Virtual Agent Content - Chat**: The notification is for chat channels.
 - **Virtual Agent Content - Messaging**: The notification is for a messaging channel, such as SMS.
4. Provide or update the notification content:
 - a. On the form, fill in the fields for the chat or messaging notification:

Notification Content - Virtual Agent Chat or Virtual Agent Messaging

Field	Description
Name	Name of the notification content.
Notification	Notification that is associated with the content. This field is populated automatically with the notification that you created.
Type	Notification layout: ▪ Simple: A message-only notification, that contains information for review. ▪ Record card: A notification that contains information about a particular record in a table. ▪ Image card: A notification that contains images.
Table	(For Record Cards) Table to receive notifications about. This field is populated automatically with the table defined in the notification.
Fields	(For Record Cards) Fields to be displayed in the notification. For example, if you select Comments and Work notes , the notification includes the comments and work notes that users have added to the record.
Application	Application scope of the notification content.
Active	Option to activate the notification content.
Enable link	(For Record Cards) Option to add a link to the record.
Advanced	Option that opens the script editor for entering a script that returns dynamic content for notification heading and message content pulled from multiple data sources.
Script	(For advanced notification content) Script that you can edit to specify dynamic content from various data sources, including third-party services (such as URL shortening), to be used in the message heading and message content.

Field	Description
Message heading	Text that appears at the top of the message. The default message heading is: A notification has arrived. You can continue the conversation after viewing the notification. If you want to create a custom heading with dynamic content, enter the heading text and specify the variables used in the text: - For record-based notifications: Expand the Select variables column and choose the variables for the record values to be included in the heading. The variables map to records in the table used for the notification. For example: An incident has been assigned to you with Priority: <code>\${priority}</code> - For event-based notifications: Specify the <code>\${event.parm1}</code> and <code>\${event.parm2}</code> variables to identify event-specific parameters that pass record information in the notification content.
Message	Content of the message with rich text format. If you want to create a custom message with dynamic content, enter the message text and specify the variables used in the text: - For record-based notifications: Expand the Select variables column and choose the variables for the record values to be included in the message. The variables map to records in the table used for the notification. For example: Here's a brief description of your assigned incident: <code>\${short_description}</code> - For event-based notifications: Specify the <code>\${event.parm1}</code> and <code>\${event.parm2}</code> variables to identify event-specific parameters that pass record information in the notification content. A notification message defined with rich text format is displayed in bold, italics, link (url), and unordered list. Hi your incident has been updated. Please review and provide additional information as needed. You can do one of the following - Add a comment - Request for help Please check this link Knowledge article for more info When users click the URL in the message, they are redirected to the destination as per the portal configuration.
Image Source	(For Image Cards) Option for selecting the image to be displayed in the notification: Upload image: Add the image by uploading. URL: Specify the URL for the image.
Image	(For Image Cards) Image displayed in the card.

Field	Description
	- To add the image, select Click to add. From the file finder, choose your image file and select OK. - To change the image, select Update. From the file finder, select the new image file and select OK. - To remove the image, select Delete. The file is immediately deleted.
Image alt text	(For Image Cards) Alternative text for the image to be displayed in the card.

Note: To create or update the messaging notification details, navigate to the **Delivery Channel** related list and complete the form. For more information, see [Configure a delivery channel for Virtual Agent notification](#).

b. Select **Submit** or **Update**.

What to do next

- To configure a delivery channel, see [Configure a delivery channel for Virtual Agent notification](#).
- If you're creating an actionable notification, see [Define the actions](#).

Configure a delivery channel for Virtual Agent notification

Configure a delivery channel for Virtual Agent notifications by specifying the messaging channel information to send notifications to users.

Before you begin

Ensure that a messaging channel is configured in your instance. Virtual Agent admins can only select one or more chat channels for the notification from the list of chat channels associated with the instance.

Role required: virtual_agent_admin

About this task

Use the delivery channel to support multiple channels for the same notification content. The procedure to configure delivery channels depends on the channel type. There are two notification channel types: messaging channels and chat channels. For more information about channels, see [Channels in Conversational Interfaces](#).

Procedure

- Navigate to **All > System Notification > Provider > Notifications**.
- Select the notification for which you want to define or update content.
- In the notification Contents related list, open the notification content.
- Follow the procedure according to the channel type for the notification that you're configuring.
 - To update delivery channels for messaging content, select **New** in the Delivery Channels related list.
 - To update delivery channels for chat content, select the **Add/Remove multiple** option in the Delivery Channels related list.

Delivery channels related list

Use the arrows to add or remove specific delivery channels from your Selected Delivery Channels list. When you've defined all applicable delivery channels, select **Save**.

Note: The mweb channel is for standard chat, and the NASS channel is for enhanced chat. If no specific chat channel is defined, notifications are triggered to all available chat channels by default. Virtual Agent admins can modify the chat channels associated with a notification at any time.

5. On the form, fill in the fields.

Delivery channel form

Field	Description
Notification Content	Reference of the notification content pre-populates for the delivery channel.
Active	Option to activate the delivery channel.
Connection	Connection record for the messaging channel configured in the instance.
Send From	Provider application for the selected messaging channel.
Send To (Table)	Name of the table that you want to send the notifications to.
Send To (Field)	Name of the field that you want to send the notifications to. This field is optional.

6. Select **Submit** (new notification records) or **Update** (existing notification records).

Define Virtual Agent notification actions

Create the actions for a Virtual Agent chat or messaging channel to send actionable notifications.

Before you begin

- An action requires an associated, published (active) Virtual Agent topic, a Scriptable action, or a Flow action which can perform the action represented by a button in the notification, such as talk to an agent (live agent support) or bot feedback (Virtual Agent feedback). Consider working with your topic authors to determine the appropriate topics and corresponding actions. For more information about designing the Virtual Agent topics, see [Designing a Virtual Agent topic](#).

Note: Scriptable actions and Flow actions are asynchronous and are executed when you select the action without a Virtual Agent topic. You can select either an existing flow that is defined or coordinate with the flow authors to send actionable notifications.

- Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > System Notification > Provider > Notifications** and select the notification for which you're defining actions.
2. Navigate to the **Notification Actions** related list and select **New Provider Action**.
3. Select a notification action.

Select notification action

<

Notification Action

What type of Notification Action would you like to create?

[Scriptable Action](#)

[Flow Action](#)

[Virtual Agent](#)

4. On the form, fill in the fields to define the notification actions.

Notification Content - Actions

Field	Description
Name	Name of the notification action. For example, Talk to an agent.
Notification	Notification that is associated with the action. This field is populated automatically with the notification that you created.
Async	Option to enable the action execution without blocking the current request. Both Script and Flow actions in Virtual Agent are asynchronous.
Model Type	Type of actions that are configured. For example, NLU/Keyword topic or LLM topic.

Field	Description
	If a user selects LLM, that action will be sent to an LLM Virtual Agent. If NLU is selected, that action will only be for an NLU enabled Virtual Agent.
Topic	Virtual Agent topic that handles this notification action. Note: Virtual Agent Pro is required to send a topic with actionable notification.
Script	Script to execute the notification action. The script filed is available only when you select Scriptable notification action. Note: The Scriptable Action is available only for Virtual Agent Pro users.
Application	Application scope of the notification content.
Active	Option to activate the notification content.
Choose Flow or Action	
Flow	Flow to trigger the sequence of the notification action. Note: - You cannot choose the flow if you provided the action. - The Flow field appears only when you select Flow notification action. - The Flow Action is available only for Virtual Agent Pro users.
Action	Action to use the correct table and field configuration for the notification action. Note: - You cannot choose the action if you provided the Flow. - The Action field appears only when you select the Flow notification action. - The Flow Action is available only for Virtual Agent Pro users.
Inputs	
Script	Script to pass inputs to a flow action. This Script field appears when you select the Flow notification action.

5. Select **Submit**.

6. To define another action for the notification, repeat steps 3 through 5.

What to do next

[Define link actions to notification content.](#)

Define the Virtual Agent link actions to notification content

Create the link actions for Virtual Agent notification content to be delivered in a chat or messaging channel as actionable notifications.

Before you begin

- Ensure that you have activated the Glide Virtual Agent plugin (com.glide.cs.chatbot).
- Role required: virtual_agent_admin or admin

About this task

Notification content, with no associated link actions, is delivered as a non-actionable notification.

Procedure

1. Navigate to **All > System Notification > Provider > Notifications** and select the notification for which you're defining the link actions.
2. In the Link Actions related list, select **New**.
3. On the form, fill in the fields.

Actionable Content form

Field	Description
Name	Name of the link action.
Actions	Notification action that the link action is created to. You can select one or more notification actions for a notification and also put them in the order that you want them to be shown on the notification.
Actions listed in event parm1	Actions listed in an event parameter. Users and actions cannot both be passed into the parameter. For example, if you input a sys_id of a user in event param1, the user is considered in the output.
Application	Application scope of the notification content.
Notification	Notification that is associated with the content. This field is populated automatically with the notification that you created.
Content	Notification content for the link action created.
Active	Option to activate the notification content.
Actions listed in event parm2	Actions listed in an event parameter. Users and actions cannot both be passed into the parameter. For example, if you input a sys_id of a user in event param2, the user is considered in the output.

4. Select **Submit**.

5. To define another link action for the notification content, repeat steps 3 and 4.

Note: Only a single notification with active content is supported for a provider. However, if the content for the notification is not active, you can define the secondary content for the notification and make that content active.

6. **Optional:** To remove the **Skip** action from an actionable notification, do the following steps:

- a. Select the notification and open the Link Actions to Content related list.
- b. Select the Actionable Content and select the **Disable skip** option.

Note: This option only displays when the Content Type is Virtual Agent.

What to do next

Enable Virtual Agent notifications. For more information, see [Enable Virtual Agent notifications](#).

Enable Virtual Agent notifications

Enable Virtual Agent notifications so that your end users can receive notifications in supported Virtual Agent channels.

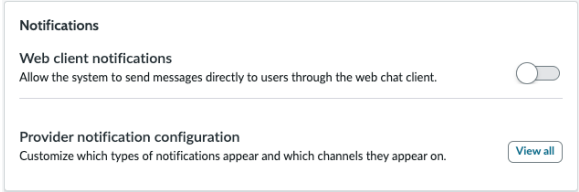
Before you begin

Role required: virtual_agent_admin or admin

Procedure

Enable notifications for your users in the appropriate channel:

Channel	Description
Enhanced chat	The <code>sn_nowassist_va.nass_notification_enabled</code> system property defaults to <code>true</code> in System Properties (sys_properties.list). This property enables Virtual Agent notifications to appear to users within the enhanced chat. For more information on setting up Virtual Agent notifications, see Configure a delivery channel for Virtual Agent notification .
Chat widget (mweb)	a. Navigate to All > Conversational Interfaces > Settings. b. Select Virtual Agent.

Channel	Description
	c. Under Notifications, slide the Use notifications toggle switch to enable notifications.  Note: You can also change the notification text color and background in chat branding configurations. For details, see Set up your Virtual Agent bot's branding.
Custom chat integration	a. Navigate to All and in the filter navigator, enter <code>sys_cs_channel.list</code>. b. In Messaging Channels, select the custom integration record to update. c. Select Enable Notifications to activate notifications. d. Select Update. For more information on configuring custom chat integrations, see Creating conversational custom chat integrations in Virtual Agent.

Notifications are sent to recipients via the Virtual Agent bot in the channels that you enabled.

Configure cross-scope access privileges for topic blocks and custom controls

Enable topic authors and developers to access Virtual Agent topic blocks and custom controls from other scoped applications.

Before you begin

Role required: admin

About this task

Developers and topic authors may need to access [topic blocks](#) and [custom controls](#) created in other application scopes. To give them access, define cross-scope privilege records for the appropriate applications. For more information on cross-scope privileges, see [Cross-scope privilege record](#).

Procedure

1. Activate the Virtual Agent conversation plugins for the applications that are the source and target scopes, for example the CSM (com.sn_csm.virtualagent) or ITSM Virtual Agent (com.snc.itsm.virtualagent) plugins.
2. Set your application scope (the Source scope requesting access) using the [application picker](#).
3. Navigate to **All > System Applications > Application Cross-Scope Access** and select **New**.
4. On the Cross scope privilege form, complete the following fields.

Field	Value
Source scope	Application requesting access to another application's resources.
Target Scope	Application whose resources are being requested (the scope with the topic blocks or custom controls).
Target Name	Name of the asset being requested: sys_cs_topic
Target Type	Table
Operation	Read
Status	Authorization for this record: Allowed

5. Select **Submit**.

Result

The cross-scope privilege is listed in the Cross scope privileges [sys_scope_privilege] table. Topic authors or developers can access the topic blocks or custom controls from the target scope.

Create or modify custom Virtual Agent categories

Create or change custom categories for organizing and grouping related Virtual Agent assets, such as topics. You can also make category labels visible in the Topic picker menu displayed to end users.

Before you begin

Role required: virtual_agent_admin or admin

About this task

Use topic categories to group related conversation topics. When you create or update a topic, you can assign one or more categories to which the topic belongs. You can also view your topics by category in the Asset library.

For your end users, you can make the custom category label visible in the Topic picker menu so that associated topics are displayed by category.

Before you create a new category, review the existing categories (**All > Conversational Interfaces > Virtual Agent > Categories**) to determine if you need a new category.

Note: Prebuilt topics have associated, default categories that can't be changed or deleted. Also, you can delete a custom category only when the category does not have any topics assigned to it.

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Categories**.
2. Select **New** to create a custom category or select a category record to change it.

Field	Description
Name	Label for the category.
Description	Brief description of the category purpose.

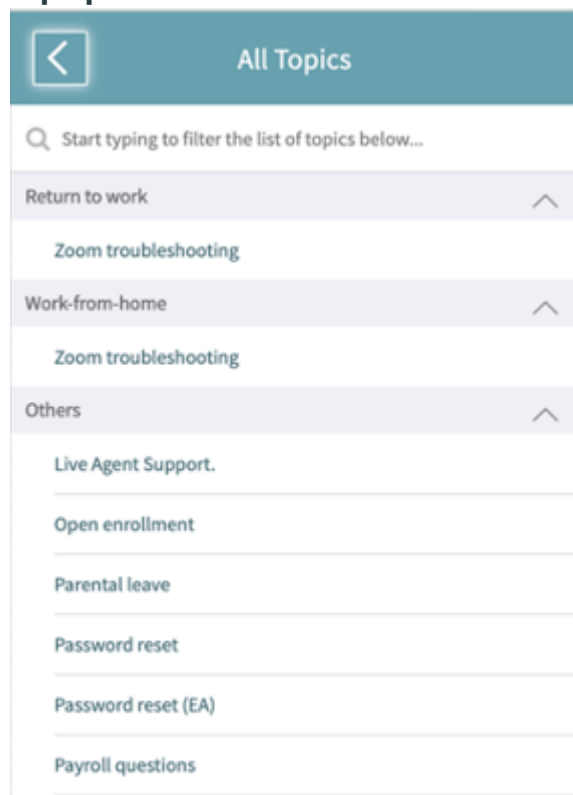
Field	Description
Application	Application scope of the category.
Visible to end user	Option to display the category label in the Topic picker menu for end users. Note: - If you upgraded from a previous release, existing category labels are set to not visible. - This option does not control the topics displayed within the category. At the topic level, use the Condition field in the Topic Properties page to set conditions that control when a topic is displayed to end users.

3. Select **Submit** or **Update**.

The topic category appears in the following items:

- Category** list collector on the Topic Properties page in Asset library so that you can assign one or more categories to a topic.
- Category** filter on the Topics page, so that you can view topics by category.
- Topic cards on the Topics page, for topics that have assigned categories.
- Topic picker menu displayed to end users, if you made the category visible. Topics with multiple categories are displayed in the appropriate categories. Topics without categories are listed in the Others category.

Topic picker menu



4. To delete a topic category, open the category record and click **Delete**.

If there are no topics associated with the category, the category is deleted. It is no longer listed in the **Category** field on the Topics Properties page and in the **Category** filter on the Topics page in Assistant Designer.

Use the portable chat widget to add Virtual Agent to your web page

The portable chat widget can run on third-party web pages, in the service portal, or in UI Builder portals.

The portable chat widget is a new Seismic component that makes it easy to add Virtual Agent chat to your page. It simplifies configuration and provides the following features:

- Easily configurable
- Simpler single sign-on (SSO) authentication flow
- Connect to Service Portal Agent Chat
- System parameters and context variables work the same as before

Note: Do not use `/sn-va-web-client-app.do?` or `/sn_va_web_client_app_embed.do` as a standalone page configuration. Instead, refer to the information in [Virtual Agent URL parameters](#) for how to embed the Virtual Agent chat widget successfully.

Prerequisites for using the portable Virtual Agent chat widget

The portable chat widget uses an inline frame element (iframe). The third-party website must be under the same parent domain as your ServiceNow® instance. For example, `site1.company.com` and `site2.company.com` share the same parent domain. If you're embedding the chat widget on any subdomain that is not shared with your ServiceNow instance, the URL must be a custom instance URL. Due to increased browser security, the chat widget may fail to load if you don't use a custom URL.

Before you begin, do the following:

1. [Activate the custom URL plugin \(com.snc.customurl\) in your instance.](#)
2. [Add the custom URL \(that you previously purchased and registered\) to your instance.](#)

Note: To learn more about using custom URLs, see [Associating custom URLs to your instance](#).

Using SSO authentication with the portable Virtual Agent chat widget

After you embed the Virtual Agent client, you can optionally trigger SSO authentication from the chat widget, but only when your instance is set up to use an external SSO provider. Your hosting site must also use the same SSO provider as your instance. For details on setting SSO providers, see [External single sign-on \(SSO\)](#).

To trigger SSO authentication, create a JavaScript script that defines conditions for running authentication and redirects users to a chat widget page that you specify. You also specify the allowed URLs that can be passed in this script, by identifying them in the `com.glide.cs.web_client_login_redirect_urls` system property. Specify the full redirect URLs or the host part of the URL, such as `https://example.com`.

This procedure requires that you set values for the following two system properties:

- `com.glide.cs.embed.csp_frame_ancestors`
- `com.glide.cs.embed.xframe_options` (IE 11 only)

These properties determine the security policy for the embedded chat widget, namely how browsers render and secure HTML content for Virtual Agent and Live Agent chat, in an iframe, before you embed the web chat client. The HTTP header directives that you specify tell the browser whether a page can be embedded on certain domains to mitigate clickjacking attempts. Setting both properties ensures that there are security directives for major browsers and also older browsers, such as Internet Explorer.

- Note:** If you're using the Content Management System (CMS) application to create custom interfaces for the ServiceNow AI Platform and ServiceNow® applications, be aware that it does not support Virtual Agent.

Related topics

[Configure the portable Virtual Agent chat widget](#)

[Add the portable Virtual Agent chat widget to a third-party website](#)

Configure the portable Virtual Agent chat widget

Configure the portable Virtual Agent chat widget to run Virtual Agent on third-party web pages.

Before you begin

Note:

For the enhanced chat Virtual Agent display experience, the assistant's **Allow public access for this assistant** check box must be selected to instantiate correctly, regardless if you want guest sessions. Go to **Conversational Interfaces > Assistant Designer > [Assistant name]** and select **Edit**. While editing the assistant, go to **Settings > Display experiences**, and then select the **Allow public access for this assistant** check box and **Save**. For more information about this check box, see [Display your assistant on a portal, channel, or mobile app](#).

For the standard chat Virtual Agent display experience, the chat widget is only accessible to authenticated users by default. To allow unauthenticated users to access the chat widget, you must enable the `sn_va_web_client_app_embed` page for public access. For more information, see [Make UI pages public or private](#) and [Enable public access to the chat widget](#).

Role required: admin

About this task

ServiceNow only supports the portable Virtual Agent when the top-level domain and domain name match the site that is loading the chat widget. SSO is only supported through the `servicenow.com` URL. Anything beyond that will require custom solution and implementation.

Procedure

1. Navigate to **All**, and then enter `sys_properties.list` in the filter.
2. In the System Properties [`sys_properties`] table, search for the `com.glide.cs.embed.csp_frame_ancestors` property by name.
3. Select the property name to open the form and specify the directive values.

Field	Description
Type	string This is the default value.
Value	Source value of the HTTP header directive: <code>Content - Security - Policy : frame - ancestors<source></code> This property applies to most major browsers, except for Internet Explorer. Specify one or more sources, including the following: - o 'self': Indicates that the origin is the same as the page being served. For example, if the value is <code>'self' http://mywebsite.com</code>, then the iframe is embedded within the parent domain and mywebsite.com. This is the default value. - o host-source: The domains in which the external web page can be embedded. Specify the Internet host site by name, IP address, or optional URL or port number. Site address can start with a wildcard (asterisk) character. Example value: http://*.example.com - o scheme-source: A schema. For example: http: or https: - o none: No matching URLs.

4. Return to the System Properties [sys_properties] table to search for the `com.glide.cs.embed.xframe_options` property by name.
5. Select the property name to open the form and specify the directive values.

Field	Description
Type	string This is the default value.
Value	Value of the of the X-Frame-Options header directive, to indicate whether the browser can render an external web page in a frame. Specify one of the following values: - o sameorigin: Displays the page in a frame that has the same origin as the page itself. This is the default value. This property applies to older browsers, such as Internet Explorer 11. Example value: allow from https://example.com - o deny: Does not display the page in a frame. - o allow-from uri: Displays the page only in a frame on the specified origin. Note: This value no longer works in browsers.

6. For enhanced chat, return to the System Properties [sys_properties] table, and then select **New**.
7. For enhanced chat, complete the following fields to create the `glide.uxf.cors.allowed_assets` property, and then **Submit**.

Field	Description
Name	Enter <code>glide.uxf.cors.allowed_assets</code> .
Type	Select string . This is the default value.
Value	Enter <code>embedded-enhanced-chat/index</code> .

8. Configure CORS Rules for the REST API to give access across domains.

This rule gives the web domain you specify the rights to call the API that gives it access to the chat widget on the web page without a security restraint. All domains must share a common parent domain. Also, you must create a CORS Rule for each subdomain that you want to support.

a. Navigate to **All > System Web Services > REST > CORS Rules.**

b. Click **New.**

c. On the form, fill in the fields.

Field	Description
Name	Unique name for the rule.
Application	Scope of the application. Global is the default value.
REST API	Name of the REST API. Select Conversation Consumer Account [now/cs] .
Domain	The domain for your website. For example: https://mycompany.com If you have multiple subdomains for your website, you must create a CORS Rule for each. For example, support.mycompany.com and products.mycompany.com would require two separate CORS Rules. Note: Wildcards are not allowed.
Max age	The number of seconds to cache the client session. After an initial CORS request, further requests from the same client within the specified time do not require a preflight message. If you do not specify a value, the default value of 0 indicates that all requests require a preflight message.

d. On the **HTTP Methods tab, select **GET**.**

The portable chat widget will only receive requests.

e. Select **Submit.**

f. Optional: Repeat these steps if you want to add the portable chat widget to another subdomain on your website.

9. Optional:

Note: This step is only applicable if your users must be logged in and authenticated with ServiceNow.

Standard chat only: Create a JavaScript script that uses the `window.postMessage()` method (Web API) to define event conditions that trigger SSO authentication in a user interface page and returns users to a chat widget page that you specify.

To redirect users to a chat widget page, use this string: `https://<your-instance>.service-now.com/sn_va_web_client_login.do?sysparm_redirect_uri=' + encodeURIComponent(<your-page>)`

Note: Before you run the script, use the `com.glide.cs.web_client_login_redirect_urls` system property to specify the URLs that can be passed in the script. The redirection works only when you specify one or more allowed URLs in the property value. Specify the full redirect URLs or the host part of the URL, such as `https://example.com`.

Example script:

```
<script>
    window.addEventListener("message", function(e) {
        // redirect to SSO login if the chat widget logs in but
        is logged in as a guest user(unauthenticated)
        if(e.data.type==="SESSION_CREATED" &&
        e.data.authenticated === false)
            window.location.href =
            "https://<your-instance>.service-now.com/sn_va_web_client_login.do?sysparm_redirect_uri="+ encodeURIComponent(location.href);

        // redirect to SSO login if the ServiceNow platform logs
        out from underneath the chat widget
        if(e.data.type==="SESSION_LOGGED_OUT")
            window.location.href =
            "https://<your-instance>.service-now.com/sn_va_web_client_login.do?sysparm_redirect_uri=" + encodeURIComponent(location.href);
    });
</script>
```

In this example, authentication is triggered in the specified instance when the `SESSION_CREATED` or `SESSION_LOGGED_OUT` events occur. After authentication (when the SSO credentials for users are accepted), users are redirected to the embedded chat widget page that you specified in `sn_va-web_client_login.do?sysparm_redirect_uri=' + encodeURIComponent(<your-page>)`, as long as you also specified the page URL in the `com.glide.cs.web_client_login_redirect_urls` property.

What to do next

[Add the portable Virtual Agent chat widget to a third-party website.](#)

Add the portable Virtual Agent chat widget to a third-party website

To use the portable chat widget for Virtual Agent on third-party web pages, add the necessary code to your web page.

Before you begin

[Configure the portable Virtual Agent chat widget](#) before completing this topic's steps.

For more information, review the [How to embed Virtual Agent in an external site](#) article on the ServiceNow Community site.

Note: Interactive view and the ability to move and drag the chat window are currently unavailable in embedded enhanced chat.

Role required: virtual_agent_admin or admin

About this task

Both enhanced and standard chat code is included in this topic. Review the beginning of each step to confirm you're implementing the applicable chat experience's steps.

Procedure

- Enhanced chat only: Verify that your enhanced chat assistant is linked to a portal in **Conversational Interfaces > Assistant Designer > [Assistant name]**. You can link to either a placeholder portal or an applicable portal. The portal suffix, for example, `esc`, is required for the following step.
- Enhanced chat only: Import and instantiate this script reference to the page header to create a ServiceNow chat instance on your external page header:

Note: In the script reference example, `site1.example.com` refers to the URL for your ServiceNow instance.

```
<script type="module" >
  import {EnhancedChat} from
  "https://site1.example.com/uxasset/externals/embedded-enhanced-chat/index.jsdbx?sysparm_substitute=false";
  var chat = new EnhancedChat ({ instance:
  https://site1.example.com, portal:<portal-suffix> });
</script>
```

Tip: If your organization uses a custom domain name, input the custom domain name as the instance property, rather than the ServiceNow domain name, to verify that browser results are consistent among multiple browsers.

JSON configuration schema

```
instance: <string> - required. Origin of your
ServiceNow instance, e.g.
'https://yourco.service-now.com'.
portal: <string> - required. ServiceNow portal suffix
(e.g. 'esc', 'sp', or a
custom portal's suffix). Sent as the embed URL's
`portal_suffix` param.
manageNowLogin: <boolean> - default false. When true,
listens for the iframe's
SESSION_CREATED (unauthenticated) and
SESSION_LOGGED_OUT postMessages and
redirects the *host page* to the instance's SSO
login when either fires.
showSupportAndSettingsMenu: <boolean> - default false.
Shows the chat's built-in
support/settings menu.
context: <object> - flat map of sysparm-style query
params appended as-is to the
```

embed URL, e.g. { skip_load_history: 1, sysparm_debug: true }. Keys/values are not validated or transformed - sent through with String(value).

pinnable: <boolean> - default true. Shows/hides the header's pin button, which docks the panel full-height along the screen edge (position: 'pinned').

expandable: <boolean> - default true. Shows/hides the header's expand button, which blows the panel up into a centered modal (position: 'modal').

position: <'modal' | 'pinned' | undefined> - initial docking state of the panel. Leave undefined for the default floating panel. Also changes at runtime when a visitor clicks the pin/expand buttons (see Events, below) - this is docking state, not which side of the screen the launcher sits on (there's currently no config for that; the launcher is fixed bottom-right).

container: <HTMLElement> - default document.body. Where the widget's root element is appended.

title: <string> - default 'Now Assist'. Header title text and the iframe's accessible title.

unread: <object> - unread-message badge and proactive nudges. See "Unread messages and proactive nudges" below for what this does and its limits.

enabled: <boolean> - default true. Set false to disable all of it.

notificationSoundUrl: <string> - URL of a chime played when a new unread message arrives. No sound plays if omitted; there's no bundled default.

branding: <object> - colors accept any valid CSS color value (hex, rgb(), a named color, etc), not just rgb tuples or hex codes. Grouped by which part of the widget each field paints, so it's always explicit whether a color applies to just the launcher button, just the chat panel, just its header, or both.

launcher: <object> - the always-visible floating button that opens/closes the panel.

bgColor: <string> - background color, default state (default: a green-to-blue gradient; set this to any solid color to replace it).

bgColorHover: <string> - background color on hover. The button also

```

        scales up slightly on hover (not
        configurable).
        bgColorActive: <string> - background color
        while pressed/active.
        color: <string> - icon color, default state.
        colorHover: <string> - icon color on hover.
        colorActive: <string> - icon color while
        pressed/active.
        openIcon: <string> - URL of a custom icon for
        the closed state (default: a sparkle).
        sizeMultiplier: <number> - scales the button
        and its icon uniformly
        (default is a 60px button with a 24px
        icon).
        panel: <object> - the chat panel/window itself,
        not including its header.
        bgColor: <string> - background color.
        border: <string> - full CSS `border`
        shorthand, e.g. '1px solid #d1d5db'.
        Whole-property override, not separate
        color/width/style fields.
        shadow: <string> - full CSS `box-shadow`
        value, e.g.
        '0 4px 12px rgba(0,0,0,0.2)'.
        header: <object> - the header bar inside the panel
        (title, and its
        expand/pin/close buttons).
        iconColor: <string> - title icon color.
        titleIcon: <string> - URL of a custom title
        icon (default: a sparkle).
        buttonColor: <string> - expand/pin/close
        buttons' icon color, default
        state.
        buttonColorActive: <string> - buttons' icon
        color while aria-pressed
        (i.e. the expand button when position is
        'modal', or the pin
        button when position is 'pinned').
        buttonBgColorHover: <string> - buttons'
        background on hover.
        buttonBgColorActive: <string> - buttons'
        background while aria-pressed.
        expandIcon: <string> - URL of a custom icon
        for the expand button,
        default state.
        collapseIcon: <string> - URL of a custom icon
        for the expand button,
        expanded (position: 'modal') state.
        pinIcon: <string> - URL of a custom icon for
        the pin button, default
        state.
        pinnedIcon: <string> - URL of a custom icon
        for the pin button, pinned
        (position: 'pinned') state.
        closeIcon: <string> - URL of a custom icon shared
        by the launcher's open

```


state and the header's close button (both mean "close this widget").

focusRing: <string> - full CSS `box-shadow` value for the focus-visible ring, shared by both the launcher and header buttons.

offsetX: <number> - default 25. Distance in pixels the widget is offset from its default right edge.

offsetY: <number> - default 25. Distance in pixels the widget is offset from its default bottom edge.

zIndex: <number> - default 1000. Stacking order of the widget while not in modal position.

modalZIndex: <number> - default 4000. Stacking order while position is 'modal'.

modalWidth: <string> - default '95vw'. Any valid CSS size (e.g. '900px', '80%').

modalHeight: <string> - default '85vh'. Any valid CSS size.

translations: <object> - overrides for the widget's built-in English aria-labels.

Every button in the widget is icon-only, so these are its accessible names, not visible tooltip text.

openLabel: <string> - launcher, closed state. Default 'Open chat'.

closeLabel: <string> - launcher opened state, and the header's close button. Default 'Close chat'.

pinLabel: <string> - header's pin button, default state. Default 'Pin'.

unpinLabel: <string> - header's pin button, pinned state. Default 'Unpin'.

expandLabel: <string> - header's expand button, default state. Default 'Expand'.

contractLabel: <string> - header's expand button, expanded state. Default 'Contract'.

3. Standard chat only: Import and instantiate this script reference to the page header to create a ServiceNow chat instance on your external page header:

Note: In the script reference example, `site1.example.com` refers to the URL for your ServiceNow instance.

```
<script type="module" >
  import ServiceNowChat from
  "https://site1.example.com/uxasset/externals/now-requestor-chat-popover-app/index.jsdbx?sysparm_substitute=false";
```



```
var chat = new ServiceNowChat({ instance:
"https://site1.example.com/", });
</script>
```

Tip: If your organization uses a custom domain name, input the custom domain name as the instance property, rather than the ServiceNow domain name, to verify that browser results are consistent among multiple browsers.

Example with configuration

```
const chat = new ServiceNowChat({
  instance: 'https://site1.example.com',
  context: {
    skip_load_history: 1
  },
  branding: {
    bgColor: '#333',
    primaryColor: '#000',
    hoverColor: '#EFEFEF',
    activeColor: '#AAA',
    openIcon: 'custom-open.svg',
    closeIcon: 'custom-close.svg',
    sizeMultiplier: 1.6
  },
  offsetX: 50,
  offsetY: 50,
  position: 'left',
  translations: {
    'Open dialog': 'Open chat',
    'Open Chat. {0} unread message(s)': 'Click to open',
    'Close chat.': 'Click to close',
  },
});
```

JSON configuration schema

```
{
  instance: <string> - url to your instance, must be
of the same domain (sub-domain)
  context: <object> - sys_parm variables to pass
into the iframe
  branding: <object> - branding settings
    bgColor: <rgb|hex> - can take an rgb tuple,
ie: '56,56,56' or a 3 or 6 hex color code, ie: #333
or #efefef. background color of button
    primaryColor: <rgb|hex> - font color
    hoverColor: <rgb|hex> - hover background color of
button
    activeColor: <rgb|hex> - click / active background
color of button
    openIcon: <string> - name of the uploaded custom
icon in settings
    closeIcon: <string> - name of the uploaded custom
icon in settings
    offsetX: <integer> - distance in pixels the button
moves along the x-axis
    offsetY: <integer> - distance in pixels the button
moves along the y-axis
```

```

    position: <enum: left|right> - position left or
    right side of screen
    translations: <object> - contains label mappings
    for translations or label changes
    'Open dialog': <string> - replacement text for
    accessibility
    'Open Chat. {0} unread messages(s)': <string> -
    replacement text for tooltip
    'Close chat.': <string> - replacement text for
    tooltip
  }

```

Creating conversational custom chat integrations in Virtual Agent

Conversational custom chat integration framework is a powerful framework consisting of scriptable APIs and configurations to bring the ServiceNow® Virtual Agent to any conversational interface.

How custom chat integrations work

Virtual Agent Chat Server (VACS) supports the following chat client integration without enhancements or plugins:

- Microsoft Teams
- Slack
- Workplace
- WhatsApp
- LINE
- Facebook Messenger
- Twilio
- Alexa
- Amazon Connect
- Google Assistant
- ServiceNow® Service Portal
- ServiceNow® Now Mobile
- Apple Messages for Business

If you're using a chat client that is not in the list, you can create a custom integration using conversational custom chat integration framework.

Note: Custom chat integrations are not supported for premium chat.

You can use any channels that support conversational interfaces, such as Web Portals, Mobile Apps, Slack, Microsoft Teams, SMS, and any other channel and add ServiceNow® Virtual Agent to them.

With a conversational custom chat integration, you can manage and control how your end users' chat experience. The framework helps transform messages from a chat client to VACS, and VACS back to the chat client in a format that renders well on your chat interface.

The transformation is carried out through a set of Workflow Studio scripts. If you want more information on how to use Workflow Studio, see [Workflow Studio](#).

Basic integration using conversational custom chat integration framework

You can use the following links to configure a basic custom chat integration.

To see an example of a custom chat integration using Telegram Messenger, see the [Telegram demo and integration](#) on the ServiceNow Developer Site. (You may need to log in to access the demo.)

Create a Virtual Agent conversational custom chat integration

Use the Custom Chat Configuration Integration Framework (CCCIF) to create a conversational custom chat integration to support third-party chat clients so they can connect to the Virtual Agent Chat Server (VACS).

Before you begin

Activate the [Glide Virtual Agent plugin](#) (com.glide.cs.chatbot) if it's not already activated. This plugin automatically activates the Conversational Custom Chat Integration plugin (com.glide.cs.custom.adapter) for custom chat integrations.

Role required: admin

About this task

To integrate chat clients with Virtual Agent, follow these configuration steps and add action scripts to Workflow Studio.

Note: The CCCIF uses Integration Hub. Transactions count against your Integration Hub quota.

Procedure

1. [Create a new channel or update an existing channel for the integration.](#)
2. [Configure a new provider for the integration.](#)
3. [Set up message authentication.](#)
4. [Create a channel identifier.](#)
5. [Select rich controls for inbound \(user input\) and outbound \(bot response\) transformation.](#)
6. [Create and configure a scripted REST API for your custom chat integration.](#)
7. [Create the action scripts.](#)

Create a channel for your custom chat integration

Create a new channel or update an existing channel for your custom chat integration. Channels are defined in the Messaging Channels [sys_cs_channel] table.

Before you begin

Activate the [Glide Virtual Agent plugin](#) (com.glide.cs.chatbot) if it's not already activated. This plugin automatically activates the Conversational Custom Chat Integration plugin (com.glide.cs.custom.adapter) for custom chat integrations.

Note: The Conversational Custom Chat Integration Framework (CCCIF) uses Integration Hub. Transactions count against your Integration Hub quota.

Role required: admin

Procedure

1. Navigate to **All**, and then enter `sys_cs_channel.list` in the navigation filter.
2. On the Messaging Channels page, select **New**.
Alternatively, select an existing channel to open it.
3. On the form, fill in the fields.

Field	Description
Name	Name of your channel, such as Mobile App or SMS.
Opted in all topics by default	Option to make all topics available in this channel.
Enable Notifications	Option to turn notifications on or off on this channel.
Live Agent Only	Option to initiate conversations with live agents, bypassing the Virtual Agent bot.
Store app page link	This field should be left empty.
Type	Channel type. ○ Chat: Standard chat experience ○ Messaging: Long-running conversation ○ Phone: Phone (audio) conversation ○ Walk-up: In-person conversation
Conversation Idle Timeout	Number of seconds that abandoned Virtual Agent and Agent Chat conversations remain open in the channel, after the requester's last response. This channel-specific value overrides the following settings: ○ Default idle conversation timeout value, which is 7200 seconds ○ Idle conversation time-out value set through the <code>com.glide.cs.conversation_idle_timeout</code> system property to override the default timeout value For more information about conversation idle timeouts, see Closing Virtual Agent and Agent Chat conversations .
Secure	Option for the channel to be secure to support handling of sensitive data such as passwords.
Support typing indicator	Option to display typing indicators for this channel. Flag applies to both agent and bot indicators.
Icon	This field should be left empty.

4. Select **Submit**.

What to do next

[Configure a provider for your custom chat integration](#)

Configure a provider for your custom chat integration

Create a new provider for your custom chat integration. Providers are defined in the Connections [sys_cs_provider] table.

Before you begin

[Create a channel for your custom chat integration.](#)

Role required: admin

About this task

Configure a new provider for each integration that you set up.

Procedure

1. Navigate to **All**, and then enter `sys_cs_provider.list` in the filter.
2. On the Connections page, select **New Custom**.
3. On the form, fill in the fields.

Field	Description
Name	Name of your provider application. For example: VA SMS Twilio Adapter
Provider attributes action	Name of the provider attributes action script. The provider attributes action script can return a Provider auth token, a user identifier, user input, and context variables.
Response processor action	Name of the response processor action script. The Response processor action script performs platform actions. For example, updating a message status based on the response received for an outbound message.
Version	The version of the provider. The framework is able to send the expected inputs to actions and subflows and handle the expected outputs. There are 2 versions: ○ 1.0.0: The assumed version unless explicitly defined on the provider. ○ 1.1.0: The <code>outbound_token</code> input parameter (from the provider channel identity) was added to invocations of the sender subflow/action.
HTML to Image conversion required	Option to convert an HTML bot response into an image and link. Used for chat interfaces that do not support HTML rendering.
Allow account linking	Option to link your account to an existing ServiceNow® profile.
Channel	Channel that this provider supports and the one to which the integration is being built.
Sender action	The sender action script. The sender action script bundles the request and then sends the response via Workflow Studio or Integration Hub asynchronously.

Field	Description
Sender subflow	The sender subflow bundles the request and sends the response via Workflow Studio (FD) or Integration Hub (IH) asynchronously.
Contextual action	Name of the contextual action script. The contextual action script supports custom contextual actions.

4. Click **Submit**.

The screenshot shows the configuration page for the 'VA Teams Adapter Provider'. The page has a header with 'Provider Channel' and 'VA Teams Adapter Provider'. Below the header, there is a message: 'You are editing a record in the Conversational Integration with Microsoft Teams application (cancel)'. The main form contains several sections:

- Name:** VA Teams Adapter Provider
- Channel:** Teams
- Provider attributes action:** sn_va_teams.va_ms_teams_adapter_provider_att
- Response processor action:** (empty field)
- Version:** 1.0.0
- HTML to Image conversion required:** ☒
- Allow account linking:** ☒
- Account linking type:** Basic
- Auto link users:** ServiceNow profiles ☒
- Maintain message ordering:** ☐
- Trusted media domains:** smb.trafficmanager.net,giphy.com,sharepoint.com,teamsproxy.service-now.com
- Sender subflow:** sn_va_teams.va_ms_teams_adapter_sender_subf
- Contextual action:** sn_va_teams.va_teams_adapter_contextual_acti
- Support external wrap up:** ☐
- Link account action:** sn_va_teams.va_teams_adapter_link_account_ac
- Automatic link action:** sn_va_teams.va_ms_teams_adapter_automatic_li

The 'Submit' button is located in the top right corner of the form.

What to do next

[Set up message authentication for your custom chat configuration](#)

Set up message authentication for your custom chat configuration

Create a Hash Message Verification record and Message Auth record to set up message authentication for your custom chat integration. This is configured in the Hash Message Verifications [hash_message_verification] table.

Before you begin

[Configure a provider for your custom chat integration.](#)

Role required: admin

About this task

You can create a Hash Message Verification record and Message Auth record to set up message authentication.

Procedure

1. Navigate to **All**, and then enter `hash_message_verification.list` in the filter.
2. On the Hash Message Verifications page, click **New**.
3. On the form, fill in the fields.

Field	Description
Name	Name of the authentication token, such as TwilioSMSTestAppAuthToken.
Description	Description of the authentication token, such as "Twilio SMS Testing application Auth Token."
Secret	Authentication token (random string).

4. Click **Submit**.
5. Navigate to **All**, and then enter `message_auth.list` in the filter.
6. On the Message Auths page, click **New**.
7. On the form, fill in the fields.

Field	Description
Name	Name of the message authentication, such as VA Twilio SMS Test App Message Authentication.
Provider	Provider, such as Twilio.
Group name	Name of the group or team of the provider channel.
Service Portal	Option to redirect users to a service portal for authentication during account linking.
Inbound message verification	Hash message token that was created.
Outbound message creation	Hash message token that was created.
Outbound service token	Token passed to the sender subflow that is used to invoke REST endpoint for the chat client. Use the outbound token to send a message using the REST API.

8. Click **Submit**.

What to do next

[Create a channel identifier for your custom chat integration](#)

Create a channel identifier for your custom chat integration

Create a channel identifier for your custom chat integration in the Provider Channel Identities [sys_cs_provider_application] table.

Before you begin

[Set up message authentication for your custom chat configuration.](#)

If you're using [domain separation](#), change the scope to the domain you want to use before you create the channel identifier. The domain ID will be stored in the [sys_cs_provider_application] table and passed to the Virtual Agent server as a context parameter, which will set the domain for the user.

Role required: admin

Procedure

1. Navigate to **All**, and then enter `sys_cs_provider_application.list` in the filter.
2. On the Provider Channel Identities page, click **New**.
3. On the form, fill in the fields.

Name	Name of the channel identity. For example: VA SMS Twilio Adapter
Provider	Select the name of your provider application that you set up in a previous step. For example: VA SMS Twilio Adapter Pro.
Default Portal	Portal in which chat links to ServiceNow records are opened by default, including links in cards used for Virtual Agent notifications and AI Search results.
Message auth	Select message authentication for the channel identifier that you set up in a previous step.
Inbound ID	Identifier for your bot. For example, the phone number.
Short description	Description for your channel identifier.

4. Click **Submit**.

5. **Optional:** Follow these steps again to create additional channel identifiers.

What to do next

[Map rich controls to the channel in your custom chat integration](#)

Map rich controls to the channel in your custom chat integration

Create records for rich controls in the Custom Adapter Configurations [sys_cs_custom_adapter_config] table. If a rich control is missing an outbound transformer implementation, a response is not served to the end user and that user may get an unsatisfactory chat experience.

Before you begin

[Create a channel identifier for your custom chat integration.](#)

Role required: admin

About this task

You must create a mapping for any rich controls your conversations will use in the channel. For example, you may need a mapping for *DefaultText*, which supports input and output text response, along with file upload and image response. If your channel doesn't support a control, then you won't need to map it. For example, SMS doesn't support video responses. For a description of each default rich control, see [Default input and output rich controls for a custom chat integration](#).

Procedure

1. Navigate to **All**, and then enter `sys_cs_custom_adapter_config.list` in the filter.
2. On the Custom Adapter Configurations page, click **New**.
3. On the form, fill in the fields.

Field	Description
Provider	Provider that you created.
Control type	Default rich control type.

Field	Description
	For example, the DefaultPicker rich control type maps to File Picker, Topic Picker, and Boolean. For more information about the types of controls, see Default input and output rich controls for custom chat integration .
Inbound transformer action	Name of the inbound transformer action script for this rich control. For example: <code>sn_va_sms_twilio.va_sms_twilio_adapter_input_text_inbound_trans</code>
Outbound transformation action	Name of the outbound transformer action script for this rich control. For example: <code>sn_va_sms_twilio.va_sms_twilio_adapter_input_text_outbound_trans</code>

4. Click **Submit**.

What to do next

[Create and configure a scripted REST API for your custom chat integration](#)

Create and configure a scripted REST API for your custom chat integration

Create a scripted REST API, add a scripted REST resource, set security and content negotiation, and set REST API rate limits.

Before you begin

[Map rich controls to the channel in your custom chat integration](#).

Role required: admin

Procedure

1. Create the REST API.

- a. Navigate to **All > System web services > Scripted Web Services > Scripted REST APIs**.
- b. Click **New**.
- c. On the form, fill in the fields.

Field	Description
Name	Name of your API. For example, ACME Mobile App Chat Adapter.
API ID	API identifier. For example, acme_chat.
Protection policy	The protection policy for the script. ▪ Read-only: Script is viewable only. ▪ Protected: Users with password permissions can edit the script.
Application	The application containing the script record. Global is selected by default.
API namespace	The namespace the API belongs to. The value depends on the current application scope.

d. Click **Submit**.

- e. **Optional:** Open the new record, navigate to **Related Links** and click **Enable Versioning**, and then click **OK**.
Click **Update** to save your changes.

2. Add a scripted REST resource to your new REST API.

The scripted REST resource defines the scripted REST API definition that you created.

- a. Open the REST API record you created, and then navigate to the **Resources** tab under **Related Links**.
- b. Click **New**.
Retrieve the payload from the request, and then write it to a hybrid queue.
- c. On the form, fill in the fields.

Field	Description
API Definition	Name of the parent API.
Application	The application containing the script record.
Name	Name of your API REST Resource. For example, ACME chat .
API version	API version. For example, v1 . This field displays only if you enabled versioning for the REST API.
Active	Option to make the REST resource active.
HTTP method	HTTP method, such as POST, GET, and so forth.
Relative path	Relative path to the resource.
Script	Script for the REST resource.
Protection policy	The protection policy for the script. ▪ Read-only: Script is viewable only. ▪ Protected: Users with password permissions can edit the script.

Example of a scripted REST resource:

```
(function process(/*RESTAPIRequest*/
request, /*RESTAPIResponse*/ response) {
    var body = request.body;
    var queryParams = request.queryParams; // incoming
    content is application/x-www-form-urlencoded in this example
    // get the provider application sys id. this can be done
    via a glide query using incoming data such as where the
    original message is being sent to. or it can be hard-coded
    such as this example.
    var providerAppId = "a5f8b75b7377001042281188caf6a73a";
    // the time of receipt is recorded for analytics purposes
    var d = new Date();
    var logTime = d.getTime();
    // add this message to the VA Server queue for processing
    var queued =
    sn_cs.VASystemObject.enqueueCustomAdapterMessage(providerApp
```

```
Id, JSON.stringify(queryParams),
JSON.stringify(request.headers), logTime);
    if (queued == false) {
        response.setError(new sn_ws_err.BadRequestError('Failed to
process the request.'));
    }
})(request, response);
```

3. Set security and content negotiation for your scripted REST resource.
Choose to set authentication and request formats. If your custom integration does not rely on authentication, you may want to remove it as follows.
 - a. In the new record for the Scripted REST Resource, navigate to the **Security** tab.
 - b. Clear **Requires authentication**.
 - c. Click the **Content Negotiation** tab, and then select **Override supported request formats**.
 - d. Click **Submit**.
4. Set REST API rate limits to define the rate of incoming requests.
 - a. Navigate to **All > System web services > REST > Rate Limit Rules**.
 - b. Click **New**.
 - c. On the form, fill in the fields.

Field	Description
Name	Unique name for the rate limit rule.
REST API	REST API that you created in an earlier step.
Version	Version of the REST API. Values listed depend on the selected REST API.
Resource	Resource for the specified Version. Values listed depend on the selected Version.
Active	Check box to indicate that the rate limit rule is active. Rate limit rules are activated by default as soon as you create them. You can deactivate rate limit rules to stop enforcing a rate limit or activate rate limit rules to resume enforcing a rate limit.
Request limit per hour	Maximum number of requests allowed per hour. i Note: Whenever you update the value of this field, the ServiceNow AI Platform resets the count of requests to 0 and deletes all violations for the current hour.
Apply to	Users restricted by this rule. Select All users .

- d. Click **Submit**.

What to do next

[Create the action scripts for your custom chat integration](#)

Create the action scripts for your custom chat integration

Set up the transforms that your custom chat integration needs to communicate through the chat process.

Before you begin

Create and configure a scripted REST API for your custom chat integration.

Note: All action messages relevant to the chat client are displayed to requesters during live agent conversations.

Role required: admin

Procedure

1. Navigate to the **All > Process Automation > Workflow Studio**.
2. Click the **Actions** tab.
3. [Create the actions](#) you require to complete the conversational custom chat integration. For details about the input and output used in action scripts, along with script examples, see [Virtual Agent action scripts](#).

Default input and output rich controls for a custom chat integration

Input and output rich controls must be mapped to your custom chat integration in the Custom Adapter Configurations [sys_cs_custom_adapter_config] table. If a rich control is missing an outbound transformer implementation, a response is not served to the end user and that user may get an unsatisfactory chat experience.

The following default rich controls map to input and output rich controls. The *uiType* parameter refers to a topic control used to build conversations in Assistant Designer.

Default input and output rich controls

Rich control	Description
ActionRichControl	This component handles the different events and actions that occur in a conversation. Some actions may not apply to all channels. For example, StartSpinnerActionMsg is ignored in SMS. Virtual Agent produces the following types of action messages through this framework. The custom chat interface only recognizes certain action message types. • SeparatorActionMsg actionMsg instanceof • SystemActionMsg actionMsg instanceof • TopicFinishedActionMsg actionMsg instanceof • SwitchToVirtualAgentActionMsg actionMsg instanceof • SwitchConversationActionMsg actionMsg instanceof • ChatSubHeaderActionMsg actionMsg instanceof • StartSpinnerActionMsg actionMsg instanceof EndSpinnerActionMsg • SubscribetoSupportQueue actionMsg instanceof

Default input and output rich controls (continued)

Rich control	Description
	• <code>SubscribeToChatPresence</code> <code>actionMsg</code> instanceof • <code>SwitchToLiveAgentActionMsg</code> <code>actionMsg</code> instanceof ActionRichControl wraps these messages inside the <i>actionMsg</i> element. So, a single outbound transformer for ActionRichControl can handle all of these messages. There is no need for an inbound transformer for this component.
<i>agentInfo</i> parameter	If the rich control is sent from a live agent, then the <i>agentInfo</i> attribute is added to the rich control. Example: <pre>{ uiType: "someType", group: "someGroup" agentInfo: { sentFromAgent: true } // please note that this object may contain more info in subsequent releases. ... }</pre>
DefaultPicker	Maps to File Picker, Topic Picker, and Boolean controls. Example: <pre>{ uiType: "Picker/TopicPicker/Boolean", group: "DefaultPicker", nluTextEnabled: true/false, promptMsg: "", // optional (needed for TopicPicker) label: "The question for the list", // always filled itemType: "Picture/List" // needed to user key to expect picture attached options: [{ label: "display label prompt", value: "the value required to satisfy the question", description: "a description of value_1 item" attachment: "www.foo", enabled: true/false }, ...] }</pre>

Default input and output rich controls (continued)

Rich control	Description
	<pre>] } </pre> The optional <i>order</i> parameter lets you specify the order in which promoted topics should display. For example: <pre> "options": [{ label: "Check IT Ticket Status", value: "55720b465bf0201024f11fc40a81c72d", order: 100, enabled: true }, { label: "Live Agent Support", value: "ce2ee85053130010cf8cddeeff7b12bf", order: 200, enabled: true }, { label: "Open IT Ticket 2", value: "2a46cffbc7602010v088bbf603c260a7", order: 300, enabled: true }] </pre>
DefaultText	Maps to Input Text, Output Text, and File Upload controls. Example: <pre> { uiType: "InputText/OutputText/FileUpload/Pict ure", group: "DefaultText", required: true/false, nluTextEnabled: true/false, itemType: "file/image/inputtext/outputtext", maskType: "SECURE/SENSITIVE/NONE" // null except for InputText/OutputText label: "The Question?" } </pre>
DefaultDate	Maps to Date and Time controls. <pre> { uiType: "Date/DateTime/Time", group: "DefaultDate", </pre>

Default input and output rich controls (continued)

Rich control	Description
	<pre> required: true/false, nluTextEnabled: true/false, label: "The Question?" } </pre>
DefaultOutputLink	Maps to link response controls. Example: <pre> { uiType: "OutputLink", group: "DefaultOutputLink", label: "link label", header: "link header", type: "link", value: { action: "www.foo", } } </pre>
DefaultOutputImage	Maps to image response controls. Example: <pre> { uiType: "OutputImage", group: "DefaultOutputImage", value: "www.foo" } </pre>
DefaultOutputCard	Maps to card response controls. Example: <pre> { uiType: "OutputCard", group: "DefaultOutputCard", templateName: "Card", data: "some json data string" } </pre>
DefaultOutputHtml	Maps to HTML response controls. Example: <pre> { uiType: "OutputHtml", group: "DefaultOutputHtml", style: "inline", height: 100, width: 100, value: "<div>html</div>" } </pre>

Default input and output rich controls (continued)

Rich control	Description
DefaultOutputTable	Maps to table response controls. Example: <pre>{ uiType: "OutputTable", group: "DefaultOutputTable", label: "Table Title", headers: ["Column 1", "Column 2"], navigationBtnLabel: "See next", data: [["foo1", "foo2"], ["bar1", "bar2"]] }</pre>
DefaultGroupedPartsOutputControl	Maps to multi-response controls. Example: <pre>{ uiType: "GroupedPartsOutputControl", group: "DefaultGroupedPartsOutputControl" groupPartType: "Link", header: "header message", values: [{ action: "www.foo", description: "description", label: "link_1 label", context: "ITSM" }, ...] }</pre>
DefaultMultiPartOutput	Maps to multi-response controls. Example: <pre>{ uiType: "MultiPartOutput", group: "DefaultMultiPartOutput" navigationBtnLabel: "Go next", content: { uiType: "OutputHtml", style: "inline", type: "html", height: 100, width: 100, value: "<div>html</div>" } }</pre>

Default input and output rich controls (continued)

Rich control	Description
	<pre> } } </pre>
DefaultCustomControl	Maps to custom controls. Example: <pre> { uiType: "CustomControl", group: "DefaultCustomControl", name: "The name of the Custom Control (sys_cs_custom_control.name)", required: true/false, uxComponentDefinitionSysId: "seismicComponentId" // or null if not isInput: true/false, // whether to wait for a response value or if just output serializedControlData: "User defined JSON from generateControlData function"; } </pre>

Modify adapter card styles for Virtual Agent

Adapter cards are defined in the Adapter Cards [sys_cs_adapter_card] table. Each card has a template for each supported channel to ensure it displays correctly. You can modify the channel templates to accommodate your organization's style requirements.

Before you begin

Adapter card templates are stored in the Adapter Card Templates [sys_cs_adapter_card_template] table, which is available from the Adapter Cards table as a related list. For example, the YouTube Video Card adapter has three default templates, for the chat widget, iOS, and Android devices.

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All**, and then enter `sys_cs_adapter_card.list` in the navigation filter. The Adapter Cards page opens.
2. Select an entry in the **Card Name** column.
3. In the **Adapter Cards Template** related list, select the channel you want to view or modify. For example, select the active link for **Chat Widget** or **Android Device** to view the corresponding style sheet.
4. Make any changes in the **Template Definition** field.
5. Select **Update**.

Supported Virtual Agent and Agent Chat features for custom chat integrations

The chat integrations framework supports a multitude of Virtual Agent and Agent Chat features to provide a robust conversational experience.

User authentication, authorization, and secure connection setup

Synchronous authentication of messages

Provider authentication is synchronous. They will get an immediate response with the request successful or failure code. For configuration information, see [Synchronous authentication of messages](#).

Note: As of the Paris release, asynchronous authentication is no longer supported.

Account auto-linking

Allow a user's third-party account to be auto-linked to their ServiceNow® profile. This feature bypasses the prompt for the user to link their accounts manually. Without account linking, conversations will take place in Guest mode. For configuration information, see [Account linking in pre-built messaging integrations](#).

Specify the outbound endpoint URL to which the Virtual Agent responses are posted and configure outbound authentication. For configuration information, see [Outbound authentication using a token](#).

Secure data transfer

Sensitive data such as passwords can be masked and transferred via the integration framework securely.

Trusted media domains

Use trusted media domains to check the URLs of attachment files before uploading them. For configuration information, see [Set up trusted media domains for secure file upload](#).

Rich control transformation

Design a rich and unique conversational experience for a channel through rich control transformation via inbound and outbound transformation scripts. All standard rich controls are supported. For detailed information about Virtual Agent controls, see the following sections:

- [Assistant Designer user input controls](#)
- [Assistant Designer bot responses](#)
- [Assistant Designer utilities](#)

Supported Virtual Agent chat features

No configuration or scripting required to implement these features in Custom Chat Integration Framework.

Support for all standard Virtual Agent controls

- Pass context variables, system parameters, or a user's time-zone along with user input.
- By default the Virtual Agent processes only one user request at a time. If a user sends a second request before the first request is finished, the second request is ignored. This does not apply when the user is connected to a live agent.
- Ignore duplicate requests from client.

Topic discovery using keywords or Natural Language Understanding

Custom chat integrations can avail topic discovery via keywords or NLU depending on how Virtual Agent is set up on your instance.

Standard chat and long-running conversations

Channels can be set up as either chat or messaging. For more information on long-running conversations, see [Using Asynchronous Chat in messaging channels](#).

Custom Virtual Agent chat experiences

Define a custom chat experience for a specific context in which your users run Virtual Agent.

Dynamic translation

Display a message in chat client that messages are being translated if dynamic translation is enabled.

Customize Virtual Agent and Agent Chat system messages

System messages are a set of pre-built messages that can be served as bot response in common conversation scenarios such as greeting a user or transferring to a live agent. Admins can override the message text to suit their business needs.

Notifications

Deliver both simple and actionable notifications via the integration framework.

Standard timeouts for idle agent conversations

You can change the default timeout period for closing Virtual Agent and live agent conversations by adding the system property `com.glide.cs.conversation_idle_timeout`.

Virtual Agent interaction records

The channel (`sys_cs_channel.Name`), channel type (`sys_cs_channel.Type`), provider (`sys_cs_provider.Name`), provider identifier name (`sys_cs_provider_application.Name`) and provider channel id (`sys_cs_provider_application.InboundID`) fields are available for reporting.

API rate limiting

Ability to control the rate at which API calls are made via the platform rate limiting feature.

API versioning

Specify the version of the provider. The framework is able to send the expected inputs to actions and subflows and handle the expected outputs. See [Configure a provider for your custom chat integration](#) for more information.

Specify the default portal for URL navigation at the Provider Channel Identities level

For a provider channel, specify the portal in which chat links, including links in output cards and cards for Virtual Agent notifications and AI Search results, are opened. For details on setting the default portal in the Provider Channel Identities [`sys_cs_provider_application`] table, see [Create a channel identifier for your custom](#)

[chat integration](#). To learn more about URL navigation, see [\(Legacy\) Configure URL navigation for chat links](#).

Supported Agent Chat features

Support for all standard live agent controls

- Transfer to live agent from Virtual Agent or directly by user
- Persistent messages after live agent is initiated
- Interaction history (chat transcripts) for live agents
- Channel-level flag to initiate conversations with live agents, bypassing Virtual Agent

Live agent status for end users

- Agent availability
- Wait time for next agent
- Display agent name and avatar, if enabled in [Agent Chat settings](#).

Channel-level flag to initiate conversations with live agents, bypassing Virtual Agent

Enable the **Live Agent Only** option in the Messaging Channels [sys_cs_channel] table to route conversations directly to a live agent and skip the Virtual Agent conversation greeting. If an agent isn't available, the message **No agent available** is displayed to the user. For channel configuration information, see [Create a channel for your custom chat integration](#).

Pass the agent avatar and name if enabled in Agent Chat settings

When the **Agent Names and Avatars** field is enabled in Agent Chat settings, the Custom Chat Integration Framework supports the display of the agent name and avatar in the chat. For more information, see [Setting up Agent Chat](#).

Pre-chat and post-chat surveys

After an agent ends a chat, the post-chat survey runs automatically when the following criteria are met:

- The Virtual Agent Feedback setup topic is enabled.
- The chat service channel and the queues that your live agents support are configured in Advanced Work Assignment.

Synchronous authentication of messages

Inbound message authentication is performed before the message is added to the hybrid queue.

This code has to be implemented in the provider attribute script. For more information, see [Virtual Agent action scripts](#).

Example: Synchronous authentication of messages

```
var validated =
  sn_cs.VASystemObject.validateMessage(providerApp.sysId,
    payload, JSON.stringify(headers));
if (validated === false) {
  response.setStatus(401);
  response.setContentType("text/xml")
  var writer = response.getWriter();
  writer.writeString(
```

Outbound authentication using a token

Pass an outbound token from the authentication API to the sender script.

Secure fields contain the maskType metadata field as "SECURE". The client can handle the following script appropriately.

Example: Outbound authentication token script

```
(function execute(inputs, outputs) {
    try {
        var results = inputs.result;

        var sendInputs = {
            app_inbound_id : inputs["app_inbound_id"],
            channel_user_id: inputs["channel_user_id"],
            messages: JSON.stringify(results)
        };

        sn_fd.FlowAPI.startSubflowQuick('sn_va_sms_twilio.va_sms_twilio_adapter_send_sms', sendInputs);
        //return
        sn_fd.FlowAPI.executeActionQuick('sn_va_sms_twilio.va_sms_twilio_adapter_sender_handler', sendInputs);

    } catch (e) {
        gs.error("Messages: " + JSON.stringify(sendInputs));
        gs.error("Error is twilio sms sender : " + e.message);
    }
})(inputs, outputs);
```

Message delivery order

Control message delivery order by enabling the **Maintain message ordering** option in the Provider Channel [sys_cs_provider] table. You can view the message order and status in the Custom Adapter Message [sys_cs_ca_message] table.

When you enable the **Maintain messaging order** option in the Provider Channel table, a Sender Subflow occurs only after the previous Sender Subflow completes to ensure that messages are delivered in the order that they were sent.

Messages are stored in the Custom Adapter Message [sys_cs_ca_message] table, which is cleaned nightly. If the Custom Chat Integration Framework client is not receiving any messages, you can use this table to check the message delivery status:

- Processing
- Pending - not yet processed
- Completed
- Error - problem with processing an outbound message, possibly due to Integration Hub issues that could occur when the Sender Subflow is invoked

Virtual Agent action scripts

You need to write a set of mandatory Workflow Studio action and subflow scripts to pass the user data to VACS, apply transformations and send the response back to your chat interface endpoint.

Provider and inbound/outbound scripts

A provider, such as Twilio, provides the chat capability. User action scripts perform provider actions, as well as conversational custom chat integration configuration for inbound and outbound transformer actions for your chatbot or custom conversations. Examples of each script are provided. They include a description of what each script does, as well as the action input and action output. You also see examples of the script JSON.

You use Workflow Studio to build these scripts to transform server and client messages. The provider, sender, and inbound/outbound transformer scripts are required. You can use the additional scripts to add more functionality to your chat.

Scripts

Script name	Purpose	Required (Y/N)
Provider attribute	Contains a Provider Auth token, a user identifier, user input, and context variables.	Y
Sender action	Bundles the request, and sends a response asynchronously via Workflow Studio or Integration Hub.	Y
Response processor	Performs platform actions, such as an update message status, that's based on a response received for an outbound message.	N
Contextual action	Supports contextual actions.	N
Link account action	Provides a callback about whether account linking was successful or not.	N
Outbound transformer	Transforms a chat server's supported control to chat interface-specific rendering.	Y
Inbound transformer	Optional. You can use the default rich controls if they apply to your chat provider. You do not need to provide a separate inbound transform for each input control. If a default behavior does not work, you can override the default with your own inbound transform for a specific Virtual Agent server control.	Y

Provider attributes action script

The provider attributes action script extracts data from the incoming message. The script knows about the conversational custom chat integration protocol and outputs the content of the incoming message, the user ID of the sender, and an optional authentication token.

Note: If your provider attributes action script has a contextual action, your script must have both the `request_context.contextual_action` and `request_context.typed_value` so that the user input (which is matched to a contextual action) is included in the transcript. If you do not set the `request_context.typed_value`, that message content does not appear in the transcript.

Provider attributes action script input/output

Input	Output
• Headers (JSON) - Request headers • Payload (JSON) - Request body	• Token (String) - Authentication token. • provider_user_id (String) - Name of the sender, for example, a user name in a Slack message. • request_context (JSON) - Actual content received. ◦ typed_value - Typed content such as an answer to a question. ◦ attachment_value.url - URL of the attachment. ◦ attachment_value.content_type - Content type of the attachment. ◦ attachment_value.name - File name of the attachment. ◦ contextual action - Action to perform, such as END_CONVERSATION, START_CONVERSATION, AGENT. This script looks at the incoming message. If there is a recognized keyword, then one of the actions can be set, such as <code>outputs.request_context.contextual_action = "END_CONVERSATION"</code>; The framework recognizes this keyword and invokes the contextual action script. ◦ context_vars - Contextual variables to pass into a conversation, such as <code>\`outputs.request_context.context_vars = {language: "en"};\`</code>.

Example: Workflow Studio provider attributes action script input, including headers and payload

ACTION

Virtual Agent - SMS Twilio Adapter Provider Attributes

Status: Published

Application: Virtual Agent SMS Twilio Adapter

Properties

Test

Action Outline

Inputs

1 Script step Script

Outputs

Action Input

Create Input

Label	Name	Type	Mandatory
Headers	headers	JSON	☒
Payload	payload	JSON	☒

Example: Workflow Studio provider attributes action script output, including token, request_context, and provider_user_id

ACTION Virtual Agent - SMS Twilio Adapter Provider Attributes Status: Published Application: Virtual Agent SMS Twilio Adapter Properties Test

Action Outline		Action Output	
Inputs		Label	Value
1	Script step Script	* token	step → Script step → token
		request_context	step → Script step → request_context
		provider_user_id	step → Script step → provider_user_id
Outputs			

Edit Outputs

Example: Provider attributes action script.

```
(function execute(inputs, outputs) {
    var headers = (inputs.headers);
    var payload = (inputs.payload);

    // check if an authentication token was included. this is optional.
    var smsUtil = new VASMSTwilioUtil();
    outputs.token = JSON.stringify(smsUtil.getToken(headers, payload));

    var data = payload.data;
    var request_context = {};
    // inspect the actual message. it could be an MMS (attachment) or raw text
    if (data['MediaUrl0']) {
        var attachment_value = {};
        attachment_value.url = data['MediaUrl0'];
        attachment_value.content_type = data['MediaContentType0'];
        attachment_value.name = smsUtil.getFileName(attachment_value.url, attachment_value.content_type);
        request_context.attachment_value = attachment_value;
    } else {
        request_context.typed_value = data['Body'];
    }

    // set the mandatory outputs
    outputs.request_context = request_context;
    outputs.provider_user_id = data.From;
})(inputs, outputs);
```

Sender action script (Decommissioned in Quebec see sender subflow)

The sender action script knows how to send a message to the provider. The script should asynchronously invoke a Workflow Studio or Integration Hub subflow. The Virtual Agent is freed to continue processing messages rather than trying to send external requests.

Sender action script input

Input	Output
• Results (JSON) - Array of messages to send. • Payload (JSON) - Last payload received from a requester. • app_inbound_id (String) - Identifier of the sender, such as the "From" phone number in an SMS case. • channel_user_id (String) - Identifier of the recipient, such as the "To" phone number in an SMS case.	None

Example: Sender action script.

```
(function execute(inputs, outputs) {
    var results = inputs.results;
    // transform the inputs to something this custom subflow
    knows about
    var sendInputs = {
        app_inbound_id : inputs["app_inbound_id"],
        channel_user_id: inputs["channel_user_id"],
        messages: JSON.stringify(results)
    };

    // invoke an asynchronous subflow which will send the
    external request. so this sender script will immediately
    return,
    // freeing up the chat server thread to do further message
    processing while putting the external request work on the
    // Workflow Studio/Integration Hub

    sn_fd.FlowAPI.startSubflowQuick('sn_va_sms_twilio.va_sms_twilio
_adapter_send_sms', sendInputs);
})(inputs, outputs);
```

Sender subflow

Instead of a script, the sender subflow handles the process of sending a message to a provider. The message is contained in a *payload* string as part of the subflow. The sender has a *service_url* and *origin_service_url*, while the outbound URL varies depending on the provider. For example, a message sent through Microsoft Teams uses the value *tenant_id*. When the Virtual Agent sends the message containing options, the recipient selects an option. The subflow updates the message display based on their choice and removes the options. The conversation continues based on the user's selected option. The Virtual Agent is freed to continue processing messages rather than trying to send external requests. When creating a subflow do not have an action call an action within the subflow. For more information on subflows, see [Managing conversational subflows in Assistant Designer](#).

Contextual action script

The contextual action script performs special keyword actions such as typing agent while inside a Virtual Agent topic to get immediately handed off to a live agent.

Contextual action script Input

Input	Output
• conversation_id (String) - The conversation ID. • request_context (JSON) - Request passed from the provider attribute script that contains the action to perform, such as (END_CONVERSATION, START_CONVERSATION, AGENT).	None

Example: Contextual action script.

```
(function execute(inputs, outputs) {
  var contextual_action =
  inputs.request_context.contextual_action;
  if (contextual_action === "END_CONVERSATION") {

    sn_cs.VASystemObject.endConversation(inputs.conversation_id);
  } else if (contextual_action === "AGENT") {

    sn_cs.VASystemObject.switchToLiveAgent(inputs.conversation_id);
  } else if (contextual_action === "START_CONVERSATION") {

    sn_cs.VASystemObject.startConversation(inputs.conversation_id);
  }
})(inputs, outputs);
```

Link account action script

The link account action script contains identifiers for the user who is linking. The script also contains the account that it is linked to.

Link account action script Input

Input	Output
• provider_user_id (String) - Identifier of the user who is linking, such as a phone number in an SMS case. • status (String) - Success/failure. • user_id (String) - ServiceNow user_sys_id for the account that was linked to.	None

Example: Link account action script.

```
(function execute(inputs, outputs) {

  var richControl = (inputs.rich_control);
  var value = richControl.value;
  outputs.result = richControl.header + ': ' + value.action;

})(inputs, outputs);
```

Response processor action script

The response processor action script performs specialty actions that are based on the response to a send message request. The framework already does basic message status tracking.

Response processor account action script input

Input	Output
- message_id (String) - Identifier of sys_cs_message record that is associated with this response. - headers (JSON) - Headers that are received. - body (String) - Body that is received. - status code (Integer) - The HTTP status code that is received.	None

Example: Response processor action script.

```
(function execute(inputs, outputs) {
    gs.debug("Response from provider: message_id = " +
        inputs.message_id + ", status_code = " +
        inputs.status_code + ", headers = " +
        JSON.stringify(inputs.headers) + ", body = " + inputs.body);
})(inputs, outputs);
```

Outbound transformer scripts

The outbound transformer scripts convert outgoing Virtual Agent messages to a protocol that is related to the conversational custom chat integration.

Input.

- rich_control (JSON) - Virtual Agent server rich control component that must be transformed.
- payload (JSON) - Last response that was received from a requester.

Output.

result (String) - Provider-appropriate component message to send.

Examples: Outbound transformer scripts

Outbound transformer name	Script example
Virtual Agent - SMS Twilio Adapter Default Text Outbound Transformer	<pre>(function execute(inputs, outputs) { var rich_control = inputs.rich_control; outputs.result = rich_control['label']; })(inputs, outputs);</pre>
Virtual Agent - SMS Twilio Adapter Default Link Outbound Transformer	<pre>(function execute(inputs, outputs) { var richControl = (inputs.rich_control);</pre>

Examples: Outbound transformer scripts (continued)

Outbound transformer name	Script example
	<pre> var value = richControl.value; outputs.result = richControl.header + ': ' + value.action; })(inputs, outputs); </pre>
Virtual Agent - SMS Twilio Adapter Default Picker Outbound Transformer	<pre> (function execute(inputs, outputs) { var rich_control = inputs.rich_control; var options = rich_control['options']; if (options && options.length > 0) { var optionsLength = options.length; var picker = rich_control['label'] ""; for (var x = 0; x < optionsLength; x++) { picker += "\n" + (x+1) + ": " + options[x].label; } outputs.text_message = picker; }) })(inputs, outputs); </pre>
Virtual Agent - SMS Twilio Adapter Default Multi Link Outbound Transformer	<pre> (function execute(inputs, outputs) { var rich_control = inputs.rich_control; var linkResult = rich_control['header']; var totalValues = rich_control['values'].length; for (var i = 0; i < totalValues; i++) { linkResult = linkResult + '\n'; var linkValue = rich_control['values'][i]; linkResult = linkResult + '\n' + linkValue['description'] + ': ' + linkValue['action']; } outputs.result = linkResult; })(inputs, outputs); </pre>
Virtual Agent - SMS Twilio Adapter Default Card Outbound Transformer	<pre> (function execute(inputs, outputs) { var richControl = (inputs.rich_control); var data = JSON.parse(richControl.data); var tableTitle = data.title; var fields = data.fields; var subtitle = data.subtitle; </pre>

Examples: Outbound transformer scripts (continued)

Outbound transformer name	Script example
	<pre> var url = data.url; var message = subtitle ? getCardLine(tableTitle, subtitle) : tableTitle + "\n"; for (var i= 0; i<fields.length; i++) { message += getCardLine(fields[i].fieldLabel, fields[i].fieldValue); } message += url; outputs.result = message; function getCardLine(key, value) { if (value == '' value == null key == '' key == null) return; return key + ": " + value + "\n"; } })(inputs, outputs); </pre>

Inbound transformer scripts

The inbound transformer scripts convert incoming conversational custom chat integration messages to a protocol that the Virtual Agent recognizes. It determines the required value to be injected into the rich control that is presented to the user.

Input.

- **request_context (JSON)** - The request passed from the Provider Attribute script.
- **rich_control (JSON)** - The last rich control sent to the requester that contains the original "question".

Output.

result (JSON) - The result expected by the Virtual Agent server. If the requester is responding to a topic picker, it is the sys_id of the topic. If the requester is responding to an input text, it is the text response.

- **value** - sys_id or text value.
- **search_text** - Text that is used if the requester selected something that was unexpected. For example, a user typed something that the NLU could assist with, such as, "None of these options match what I want" in response to a topic picker component.

Examples: Inbound transformer scripts

Inbound transformer name	Script example
Virtual Agent - SMS Twilio Adapter Default Text Inbound Transformer Purpose: Find the text response to the InputText question posed	<pre>(function execute(inputs, outputs) { var requestContext = inputs.request_context; var richControl = inputs.rich_control; var typedValue = requestContext['typed_value']; var attachmentValue = requestContext['attachment_value']; var smsUtil = new VASMSTwilioUtil(); var result = {}; if(richControl['itemType'] == 'image' richControl['itemType'] == 'file') { if (attachmentValue && attachmentValue.content_type.include s('image')) { result.url = attachmentValue.url; result.content_type = attachmentValue.content_type; result.name = attachmentValue.name; result.headers = attachmentValue.headers; } else if (typedValue) { result.url = typedValue; var contentType = smsUtil.getContentType(typedValue); if (typeof contentType === 'undefined') gs.error('Please enter a valid image link. Inbound image link: {0}', typedValue); else result.content_type = contentType; } else { gs.error('Please upload an image or enter a valid image link.');</pre>

Examples: Inbound transformer scripts (continued)

Inbound transformer name	Script example
Virtual Agent - SMS Twilio Adapter Default Picker Inbound Transformer Purpose: Find the sys_id of the option that the user selected for this picker question. This script uses the same algorithm of the outbound transformer. If no options are selected, and the user typed something instead, then the "search_text" is set and fed into NLU if it is enabled on this instance.	<pre>(function execute(inputs, outputs) { var request_context = inputs.request_context; var rich_control = inputs.rich_control; var selectedValue = request_context["typed_value"]; var result = {}; result["value"] = ""; result["search_text"] = ""; if (rich_control['options']) { var options = rich_control['options']; var optionsLength = options.length; selectedValue === Number(selectedValue) if (selectedValue > 0 && selectedValue <= optionsLength) { var selectedOption = options[selectedValue - 1]; result["value"] = selectedOption.value; } else { result["search_text"] = request_context["typed_value"]; } } outputs.result = result; })(inputs, outputs);</pre>

Set up trusted media domains for secure file upload

Virtual Agent uses trusted media domains to check the URLs of attachment files before uploading them. If a URL is not from a trusted domain, Virtual Agent will not upload the attachment.

Before you begin

Role required: admin

About this task

For custom chat integrations, specify trusted media domains in either the Provider [sys_cs_provider] table or the Provider Channel Identity [sys_cs_provider_application] table. The trusted media domain values in the Provider Channel Identity table override the corresponding values in the Provider table.

Pre-built integrations, such as Slack, Microsoft Teams, and Workplace from Facebook, have default trusted media domain values set at the provider level, in the Provider [sys_cs_provider] table. To change the default trusted values, specify the different trusted media domains in the Provider Channel Identity [sys_cs_provider_application] table.

Procedure

1. Navigate to **All > sys_cs_provider_application.list > Provider Channel Identity** and click **New**.
2. On the form, fill in the fields.

Provider Channel Identity form

Name	Name of the channel identity. For example: VA SMS Twilio Adapter
Provider	Select the name of your provider application that you set up previously. For example: VA SMS Twilio Adapter Pro.
Message auth	Message authentication for the channel identifier.
Inbound ID	Identifier for your bot. For example, the phone number.
Trusted media domains	Comma-separated list of one or more trusted domains for the provider. For example: twilio.com, slack.com Note: Subdomains under a trusted domain are also trusted. You do not need to specify subdomains in this list. If this field is not visible, you can configure the form layout to show it. For security reasons, Virtual Agent checks that the URLs for attachments in conversations are from trusted domains specified here. If the URL is not for a trusted domain, Virtual Agent doesn't upload the attachment. If an attachment upload fails because Virtual Agent didn't trust the domain, Virtual Agent does not inform the end user why the attachment upload failed. Note: For Trusted Domains In custom chat integrations, the values specified in the Trusted media domains field of the Provider Channel Identities table [sys_cs_provider_application] takes precedence over the Connections table [sys_cs_provider] and hence overrides.
Short description	Description for your channel identifier.

3. Click **Submit**.
4. **Optional:** Create additional channel identifiers using the same procedure.

Create bot messages

Create channel-specific bot messages.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Channel Integrations > Connections** and select a connection.
2. In the **Provider Channel Identity** tab, select a provider channel identity.
3. Select **New** in the **Bot Messages** table.
4. In the form, fill in the fields.

Bot Messages Form

Field	Description
Name	Name of your bot message
Value	Text displayed when a bot message is triggered
Description	Description of the bot message, such as Welcome message or Instructional message for image upload
Message Type	Default selection is Bot Message
Provider Channel Identity	Select the Provider Channel Identity

5. Select **Submit**.

Bot message implementation

Use the bot messages API to implement channel-specific bot messages.

Bot message API

Use the following API to incorporate bot messages into your custom chat integration.

Example: Bot message implementation

```
function getBotMessage(providerId, inboundId, botMessageName) {
    // fetch the bot message using bot messages api
    var botMessages =
    sn_cs.VASystemObject.getAllBotMessages(providerId, inboundId);
    if (botMessages && botMessages[botMessageName]) {
        var botMessage = botMessages[botMessageName];
        botMessage = botMessage.trim();
        if (botMessage) {
            return botMessage;
        }
    }
}
```

Integrate custom controls

Implement and leverage custom controls built using the custom control framework in your integration.

Before you begin

Role required: virtual_agent_admin or admin

About this task

Map custom controls to a provider channel.

Implement custom controls created in Workflow Studio

Use the example script to implement custom controls created in Workflow Studio.

Example: Custom controls support

```
{
  uiType: "CustomControl",
  group: "DefaultCustomControl",
  name: "The name of the Custom Control
(sys_cs_custom_control.name)",
  required: true/false,
  uxComponentDefinitionSysId: "seismicComponentId" //
or null if not
  isInput: true/false, // whether to wait for a
response value or if just output
  serializedControlData: "User defined JSON from
generateControlData function";
}
```

Example: Custom controls script

```
(function execute(inputs, outputs) {
  var rich_controls = inputs.rich_control;
  //this is the data returned from the 'serialized
control data function' defined in designer
  var serializedControlData =
rich_control['serializedControlData'];
  // if this rich control will require a response to
move forward in topic flow
  var isInput = rich_control['isInput'];
  // if the component is suggesting using a Seismic
control (web) that handles this
  var uxComponentDefinitionId =
rich_control['uxComponentDefinitionSysId'];
  // the name of the custom control
  var name = rich_control['name'];

  // 1) now perform some logic to transform this
data into a custom ui (slack/facebook/sms ascii
art/html/etc)
  // 2) attach to outputs, i.e.
outputs.text_message='foo :)'; for sms twillio

  // basic flow is to take the
serializedControlData/Name/compId(optional) and create
a custom UI component here
  // that your client understands (i.e. a slack rich
form payload)
})(inputs, outputs);
```

Implement a provider-specific transformation of a custom control

You can implement a provider-specific transformation for each custom control by using the **Sub type** field in the Custom Adapter Configuration [sys_cs_custom_adapter_config] table. You can publish a newer version of a custom control or a pre-built, ServiceNow custom control, also referred to as a default

custom control, if needed. This involves publishing the appropriate Inbound and Outbound Workflow Studio action scripts and updating the configuration in the Custom Adapter Configuration [sys_cs_custom_adapter_config] table.

- If you're publishing your own version of a ServiceNow custom control, overwrite the custom control record in the Custom Adapter Configuration table with your own Inbound and Outbound action script names.
- Only one record with the same **Sub type** is allowed. If the same custom control is implemented by two different parties, only one can update the existing record with new Inbound and Outbound transformers.

Note: Once you override an existing custom control record, the system uses the new version of the custom control. For example, transformation scripts can transform multiple custom controls, such as Time Picker and Auth. If you add a Time Picker control with different inbound and outbound transforms, the newer Time Picker control is used. You cannot revert to the original version of the custom control.

Procedure

1. Navigate to **All**, and then enter `sys_cs_custom_adapter_config.list` in the filter.
2. Select **New**.
3. On the form, fill in the fields.

Custom Adapter Configurations form

Field	Description
Provider	The name of the channel identifier for your custom chat integration. For details, see Create a channel identifier for your custom chat integration .
Control type	Select the custom control that you designed. For custom controls, the type is always DefaultCustomControl. To learn more about custom controls, see Customizing Virtual Agent with custom controls .
Sub type	Name of the custom control.
Inbound transformer action	Name of the inbound transformer action script for this rich control, such as, <code>sn_va_sms_twilio.va_sms_twilio_adapter_input_text_inbound_transformer</code> .
Outbound transformation action	Name of the outbound transformer action script for this rich control, such as, <code>sn_va_sms_twilio.va_sms_twilio_adapter_input_text_outbound_transformer</code> .

4. Select **Submit**.

Multi-step responses

An example of multi-step response is a set of images in a carousel or a date control.

Multipart Control richControl has the following attributes, which can be used to transform control.

- content: Rich Control which must be presented in current step.
- navigationBtnLabel: Label for "next" or "more" button for user to click to move to next step.

Example:

```
{
  uiType: "MultiPartOutput",
  group: "DefaultMultiPartOutput",
  navigationBtnLabel: "Go next",
  content: {
    uiType: "OutputHtml",
    style: "inline",
    type: "html",
    height: 100,
    width: 100,
    value: "<div>html</div>"
  }
}
```

Outbound transformation script

```
(function execute(inputs, outputs) {

  try{
    var richControl = inputs.rich_control;
    var payload = inputs.payload;

    var content = richControl.content;
    var navigationBtnLabel = richControl.navigationBtnLabel;
    var uiType = content.uiType;
    var partResult = null;

    switch (uiType) {
      case "OutputText":
        partResult =
          sn_fd.FlowAPI.executeActionQuick('example_default_text_outbound_transformer', {
            rich_control : content,
            payload : payload
          });
        break;
      case "OutputLink":
        partResult =
          sn_fd.FlowAPI.executeActionQuick('example_default_output_link_outbound_transformer', {
            rich_control : content,
            payload : payload
          });
        break;
      case "OutputImage":
        partResult =
          sn_fd.FlowAPI.executeActionQuick('example_default_image_outbound_transformer', {
            rich_control : content,
            payload : payload
          });
    }
  }
});
```

```

        break;
        case "OutputHtml":
            partResult =
sn_fd.FlowAPI.executeActionQuick('example_default_html_outbound
_transformer', {
                rich_control : content,
                payload : payload
            });
            break;
        default:
            break;
    }
    partResult = partResult +
addButtonMore(navigationBtnLabel)
    outputs.result = JSON.stringify(outActivity);
}
catch(e){
    gs.error("Error in default multipart outbound
transformer : " + e.message);
    throw e;
}

})(inputs, outputs);

```

Inbound transformation script

```

(function execute(inputs, outputs) {
    try {
        var requestContext = inputs.request_context;
        var typedValue = requestContext.typed_value;
        outputs.result = typedValue;
    } catch(e) {
        gs.error("Error in default multipart inbound
transformer : " + e.message);
        throw e;
    }
})(inputs, outputs);

```

Multi-response output controls

Implement controls that involve multiple steps to get user input.

Use the following API to configure context data for multi-output controls.

Common use cases

1. To achieve pagination of pickers: page_no, pagination_length updated in inbound based on next/previous button is read in outbound.
2. Step by step response of date picker like first year, then month, and then date selection.

The following APIs are only available in inbound and outbound transformers.

```

sn_cs.VASystemObject.setProviderUserContext( key, contextData,
providerAppId, providerUserId);
sn_cs.VASystemObject.getProviderUserContext(key, providerAppId,
providerUserId);

```

```
sn_cs.VASystemObject.removeProviderUserContext(key,
  providerAppId, providerUserId);
sn_cs.VASystemObject.removeAllProviderUserContext(providerAppId,
  providerUserId)
```

The outbound transformer of the picker control can store current page details in user contextData.

```
var paginationData = {
    "page_index": 1,
    "pagination_length": 2
};
sn_cs.VASystemObject.setProviderUserContext("picker_pagination",
  paginationData, providerAppId, providerUserId, );
```

The inbound transformer of picker control can get current page details from user contextData.

```
var paginationData =
  sn_cs.VASystemObject.getProviderUserContext("picker_pagination",
  providerAppId, providerUserId);
```

Example code for picker control outbound transformer

```
(function execute(inputs, outputs) {
  var control = inputs.rich_control;
  var payload = inputs.payload;
  var appId = payload.appId;
  var userId = payload.userId;

  var paginationData =
  sn_cs.VASystemObject.getProviderUserContext('picker_control',
  appId, userId);
  paginationData = JSON.parse(paginationData);
  //First time when the outbound picker is called when
  selecting the topic.
  if (paginationData == null) {
    paginationData = {
      'page_index': 1,
      'pagination_length': 5
    };
  }

  sn_cs.VASystemObject.setProviderUserContext('picker_control',
  paginationData, appId, userId);
}

var page_index = paginationData['page_index'];
var pagination_length = paginationData['pagination_length'];
var start = (page_index - 1) * pagination_length;
var end = page_index * pagination_length;

if (control['options']) {
  var options = control['options'];
  var optionsLength = options.length;
  if (end > optionsLength)
    end = optionsLength;
  var picker = control["label"] + ":";
```

```

        if (start > 0)
            picker += "\n" + "*" + ": " + "prev";
        for (var x = start; x < end; x++) {
            gs.log("here " + x + " : " + options[x]);
            picker += "\n" + (x + 1) + ": " + options[x].label;
        }
        if (end < optionsLength)
            picker += "\n" + "#" + ": " + "next";
    }
    outputs.text_message = picker;
})(inputs, outputs);
Example Picker Control Inbound Tranformer
(function execute(inputs, outputs) {

```

```

    var request_context = inputs.request_context;
    var rich_control = inputs.rich_control;
    var appId = request_context.appId;
    var userId = request_context.userId;

```

```

    var selectedValue = request_context["typed_value"];
    var result = {};
    result["value"] = "";
    result["search_text"] = selectedValue;

```

```

    var options = rich_control['options'];

```

```

    var paginationData =
sn_cs.VASystemObject.getProviderUserContext('picker_control',
appId, userId);
    paginationData = JSON.parse(paginationData);

```

```

    switch (selectedValue) {
        case 'prev': {
            --paginationData["page_index"];
            result["send_prev_control"] = true;
        }
        break;
        case 'next': {
            ++paginationData["page_index"];
            result["send_prev_control"] = true;
        }
        break;
        default: {
            var selectedIndex = Number(selectedValue) - 1;
            if (paginationData["page_index"] != undefined &&
paginationData["pagination_length"] != undefined) {
                var highestOptionInPage =
paginationData["page_index"] *
paginationData["pagination_length"];
                if (selectedIndex >= 0 && selectedIndex <
highestOptionInPage) {
                    var selectedOption = options[selectedIndex];
                    result["value"] = selectedOption.value;
                    result["search_text"] = "";
                }
            } else {
                var selectedOption = options[selectedIndex];

```

```

        result["value"] = selectedOption.value;
        result["search_text"] = "";
    }
}

sn_cs.VASystemObject.setProviderUserContext('picker_control',
paginationData, appId, userId);
outputs.result = result;
})(inputs, outputs);

```

Send previous control to client

Provide the ability to send previous control to client.

There are two ways to send previous control back from the server when a client requests:

- In inbound transformation, set `validation_message` in result. Previous control will be sent again with message provided in `validation_message`.
- In inbound transformer, set `send_prev_control` in result to true, previous control will be sent again. Use this method for Multi-Step controls.

Example script:

```

(function execute (inputs, outputs) {
    var result = {};
    var request_context = inputs.request_context;
    var typed_value = request_context ['typed_value'];
    if (typed_value.indexOf("#") > -1)
        result["validation_message"] = "Invalid character, please
don't enter special character '#";
    result["value"] = typed_value;
    result["search_text"] = "";
    outputs.result = result;
})(inputs, outputs);

```

Implement a skip option

Use a rich control to provide the option for users to skip a question.

Use the rich control `\nType SKIP to skip question` to provide the option for a user to skip a question. There are two ways to configure a skip option:

- In the provider attributes script, use `_skip_internal` to trigger a contextual action service to skip the question.
- Map a contextual action for the provider and use `//request_context.contextual_action = "SKIP"` to skip the question. See [Contextual actions for custom chat integrations](#) to learn more about mapping user inputs to contextual actions.

Example script:

```

va_sms_twilio_adapter_default_text_outbound_transformer
(function execute(inputs, outputs) {
    try {
        var richControl = inputs.rich_control;
        outputs.result = richControl['label'];
        if (richControl['required'] === false &&
richControl['uiType'] != "OutputText") { // new

```



```

        outputs.result += "\nType SKIP to skip question"; // new
    } // new
} catch(e){
    gs.error('Error in default text outbound transformer: ' +
e.message);
    throw e;
}
})(inputs, outputs);
va_sms_twilio_adapter_provider_attributes
(function execute(inputs, outputs) {
    try {
        var headers = (inputs.headers);
        var payload = (inputs.payload);
        var smsUtil = new VASMSTwilioUtil();
        outputs.token = JSON.stringify(smsUtil.getToken(headers,
payload));
        var data = payload.data;
        var request_context = {};
        if (data['MediaUrl0']) {
            var attachment_value = {};
            attachment_value.url = data['MediaUrl0'];
            attachment_value.content_type =
data['MediaContentType0'];
            attachment_value.name =
smsUtil.getFileName(attachment_value.url ,
attachment_value.content_type);
            request_context.attachment_value = attachment_value;
        } else {
            var b = data['Body']; // new
            request_context.typed_value = b; // new
            if (b === "SKIP") { // new
                request_context.typed_value = "_skip_internal"; //
new
                //request_context.contextual_action = "SKIP"; //
new
            } // new
        }
        outputs.request_context = request_context;
        outputs.provider_user_id = data.From;
    } catch (e) {
        gs.error("Error in
va_sms_twilio_adapter_provider_attributes : " + e.message);
    }
})(inputs, outputs);
contextual_action (all new)
(function execute(inputs, outputs) {
    var contextual_action =
inputs.request_context.contextual_action;
    if (contextual_action === "SKIP") {

        sn_cs.VASystemObject.skipOptionalQuestion(inputs.conversation_i
d);
    }
})(inputs, outputs);

```

Pass branding to a chat client

Pass custom branding to your custom chat integration.

See [Set up your Virtual Agent bot's branding](#) for more information about branding. Use `sn_cs.VASystemObject.getSettings` to apply branding.

Example script:

```
va_sms_twilio_adapter_default_text_outbound_transformer
(function execute(inputs, outputs) {
  try {
    var richControl = inputs.rich_control;
    var branding =
sn_cs.VASystemObject.getSettings("default_branding"); // new
    var header = "(" + branding["header_label"] + ") "; // new
    outputs.result = header; // new
    outputs.result += richControl['label'];
  } catch(e){
    gs.error('Error in default text outbound transformer: ' +
e.message);
    throw e;
  }
})(inputs, outputs);
```

Contextual actions for custom chat integrations

Commands with a pre-defined behavior can be mapped to certain user-friendly keywords and passed as user input. This input is mapped to supported contextual actions for the most appropriate response in the chat.

Getting started with contextual actions

User inputs can be mapped to a contextual action in two ways.

- UI-based mapping of comma-separated keywords to available contextual actions. For example: Hi, Hola - Start Conversation
- Script-based mapping of user actions to available contextual actions. For example: User clicks "Start" menu - Start Conversation

Available contextual actions

Pre-built contextual actions

Name	Description
Agent	Command to request transfer to a live agent
Bye	Command to end a conversation with a live agent or a virtual agent whenever you are outside of a topic-selection prompt
Help	Command to request help using the bot
Hi	Command to start or end a conversation
Logout	Command to unlink the user messaging account from ServiceNow

Pre-built contextual actions (continued)

Name	Description
Notifications	Command to subscribe or unsubscribe from receiving notifications
Restart	Command to end a bot conversation that is either in progress or runs into an error, and then begin a new conversation

Contextual action mapping

Map user inputs to base system contextual actions.

Before you begin

Role required: admin

About this task

Use the Contextual Actions [sys_cs_contextual_action] table to review the commands used in the chat integrations. You can add more keywords for a command. Each record for a pre-built command has this information:

Contextual Actions fields

Field	Description
Name	Name of the command.
Commands	Keyword for the command. You can add multiple keywords, separated by commas.
Description	Explanation of the command
Applicability	Application in which the command is used: • Virtual Agent only • Agent Chat only • Virtual Agent and Agent Chat

Procedure

1. Navigate to **All**, and then enter `sys_cs_contextual_action.list` in the filter.
2. Select a contextual action from the list.
3. Add comma-separated keywords to the **command** field.
For example: `Agent, Live Agent, Transfer to agent.`
4. **Optional:** Exclude specific messaging channels from contextual actions.
 - a. Select the **Insert a new row...** text.
 - b. Select the magnifying glass.
 - c. Select the messaging channel you would like to exclude from the contextual action.
 - d. Select the green checkmark to save.
5. Select **Update**.

What to do next

Create [bot messages](#) specific to each channel.

Typing indicators

Display a typing indicator when a bot or live agent is preparing a response to a requester.

When Virtual Agent processes a request, the Start typing indicator action is called. When Virtual Agent completes the request processing, the End typing indicator action is called before Virtual Agent processes any output or input controls.

These actions call the defaultText control outbound transformation. The following example shows how the typing indicator is handled in the defaultText control outbound transformation.

Example: Typing indicator script

```
(function execute(inputs, outputs) {
  try {
    var richControl = inputs.rich_control;
    var actionType = richControl.type;
    if(actionType == 'StartTypingIndicatorActionMsg'){
      outputs.result = '{activity:{type: "typing" }}'
    }else if(actionType == 'EndTypingIndicatorActionMsg'){
      outputs.result = '{activity:{type: "message" , text:
"Finished typing"}}'
    }
    /* Handle other type of control */
  } catch (e) {
    gs.error("Error in default action outbound transformer :
" + e.message);
    throw e;
  }
})
```

Create LLM assistants

LLM assistants help with large language model (LLM) topic discovery. The ServiceNow Otto for Virtual Agent assistant is the default LLM assistant created during the Conversational Interfaces Assistants guided setup.

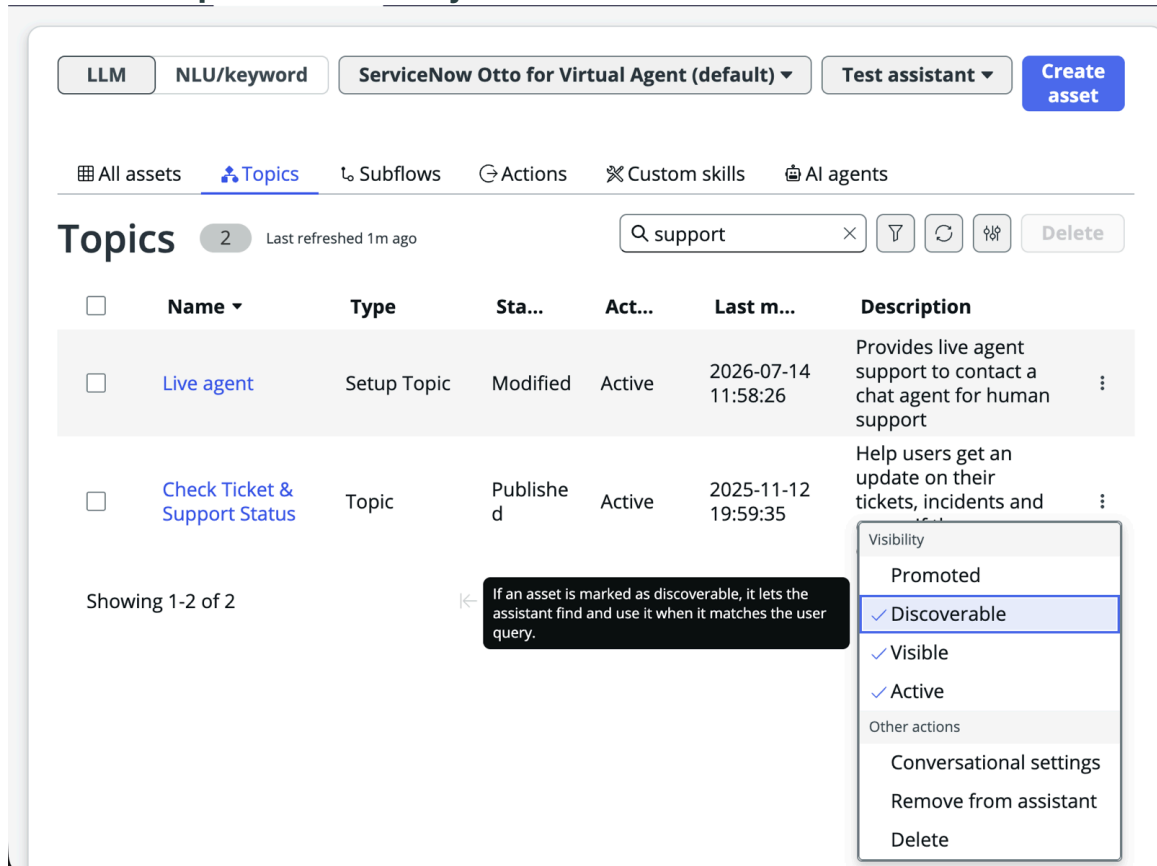
If LLM topics aren't associated with an LLM assistant, they aren't discoverable and can't be tested from the home page via **Test assistant**. The **Test assistant** option only appears if you have an assistant selected in the home page **Select assistant** filter.

When using the **Select assistant** filter, topic blocks or custom controls that aren't associated with an LLM assistant, but are called by a topic that's associated with an LLM assistant, appear in this filtered **Select assistant** home page view. Nested topic blocks or custom controls don't appear in the filtered home page view unless they're directly associated with an LLM assistant. For more information about testing LLM topics, see [Testing LLM topics](#). When a topic is associated with only one LLM assistant, the Assistant drop-down list defaults to that assistant name. If you have multiple assistants, select which assistant you want to work with using the Assistant drop-down list. For more information about creating multiple LLM assistants, see [Assistants overview](#).

 **Tip:** In the Assistant Designer Asset library, there's an **Assistant settings** option in the side panel. Use this option to navigate quickly to the Conversational Interfaces Assistants page to review or update your LLM assistants. For more information on the guided setup, see [Assistants overview](#).

If you want your LLM setup topic to be discoverable in an LLM assistant, you must flag the active setup topic as discoverable. For example, if you create an LLM setup topic by duplicating the ServiceNow Otto Live Agent setup topic and want to associate the setup topic with an LLM assistant, you must flag the duplicated topic as discoverable. Flag the topic as discoverable on the home page once you create an LLM topic and associate it with an assistant. Select the More actions on this row icon  next to your topic, and then select **Discoverable**. A checkmark appears by the text to indicate the topic is now discoverable.

Discoverable option in Asset library



The screenshot shows the ServiceNow Asset Library interface. At the top, there are tabs for 'LLM', 'NLU/keyword', and 'ServiceNow Otto for Virtual Agent (default)'. A 'Test assistant' button and a 'Create asset' button are also visible. Below the tabs, there are filters for 'All assets', 'Topics', 'Subflows', 'Actions', 'Custom skills', and 'AI agents'. The 'Topics' section is active, showing a list of topics. The table has columns: Name, Type, Status, Action, Last modified, and Description. Two topics are listed: 'Live agent' (Setup Topic, Modified, Active, 2026-07-14 11:58:26) and 'Check Ticket & Support Status' (Topic, Published, Active, 2025-11-12 19:59:35). The 'Live agent' topic is highlighted, and its 'More actions' menu is open, showing options like 'Discoverable', 'Visible', 'Active', 'Conversational settings', 'Remove from assistant', and 'Delete'. A tooltip explains that marking an asset as discoverable allows it to be found by the assistant.

Primary and secondary assistants

Primary and secondary assistants provide a framework enabling information flow between different assistants, with the flexibility to configure different experiences, such as search configuration, greeting, branding, and channels. The result is a seamless and integrated experience for the user.

ServiceNow Otto for Virtual Agent assistants can be set as a primary assistant and linked to one or more secondary assistants. A primary assistant inherits the information sources of the secondary assistants. When a user engages with a primary assistant, it understands the query and responds to the question even if the information sources required are within the secondary assistants. For Knowledge Graph, however, configurations must be done for each assistant.

A primary assistant uses search sources from secondary assistants. To set up your primary and secondary assistants, see [Assistants overview](#).

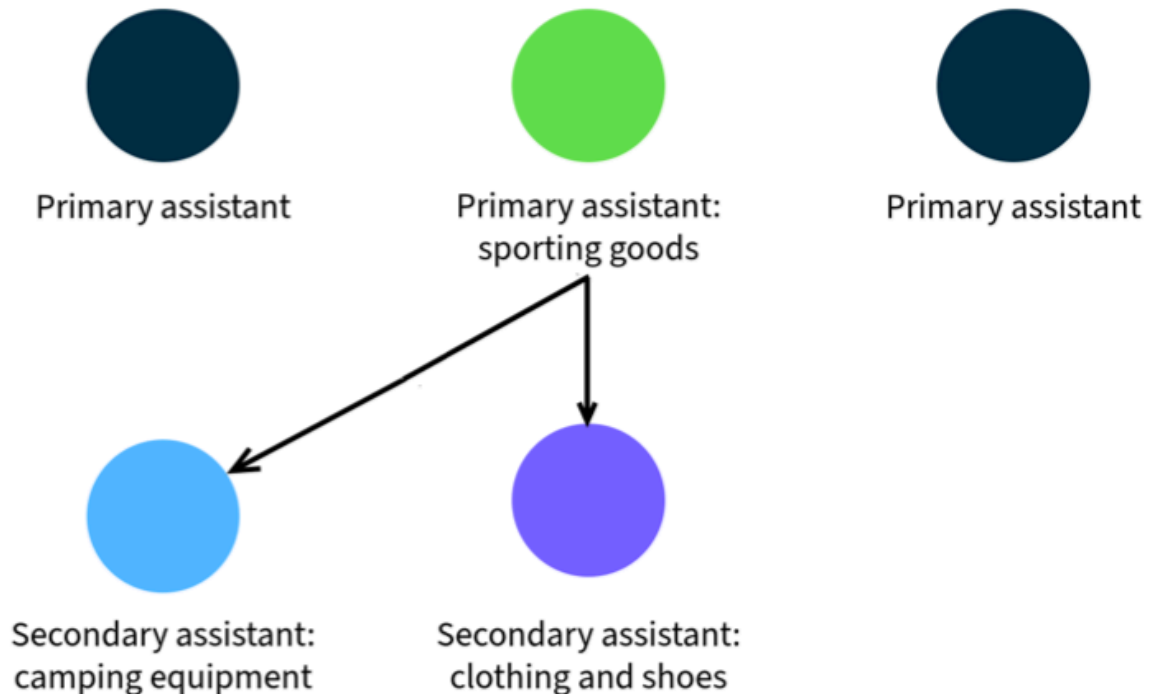
Information that is and isn't shared when linking primary and secondary assistants includes:

- Search application: The primary assistant uses its own settings.
- Generative AI skills: The primary assistant uses its own activation flags regardless of the secondary assistant's configuration.

- Stop words: When there's a conflict between the primary and secondary assistant, the most recent `sys_updated_on` value is used.
- Knowledge Base boosting condition: The primary profile should mirror the rules of all of its secondary assistants.

Using primary and secondary assistants is useful if different business units create and maintain their own assistants but want to have linkages between assistants to effectively share information.

Primary and secondary assistants agentic workflow example



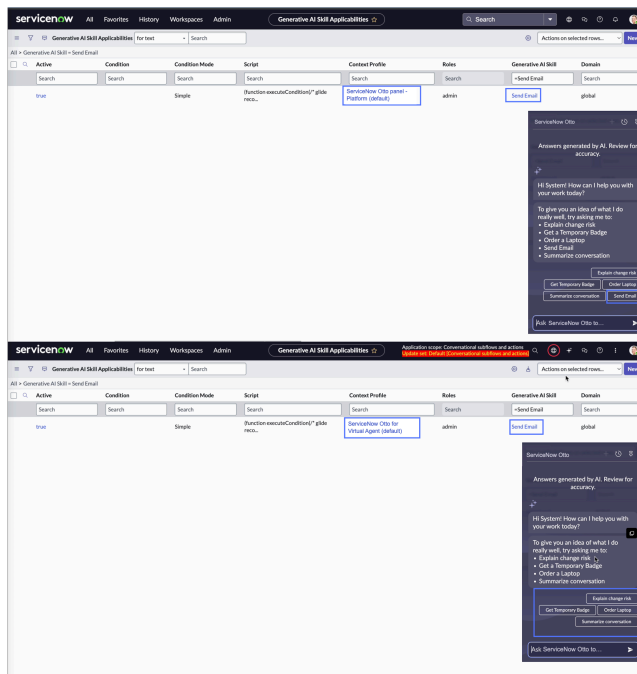
Applicability at an assistant level

You can also control the applicability of a gen AI skill by assistant. When the applicability is set, the skill will only be applied to a specific assistant. To set the skill applicability:

1. Navigate to **All** and enter `sys_gen_ai_skill_applicability.list`
2. In the Generative AI Skill Applicabilities table, find the skill for which you want to set the applicability.
3. In the **Context Profile** column, select the assistant for which you want access to the selected skill.

Note: If you see a Security prevents writing to this field message, set your application scope to match the skill.

In the following example, for the promoted generative AI skill - Send Email, when the context profile is set to the ServiceNow Otto panel assistant, the skill appears when the assistant is called. But when the context profile is changed to a different assistant, the skill does not appear for the ServiceNow Otto panel assistant.



Assistants overview

Use Assistant Designer to build and optimize large language model (LLM) assistants for your conversational needs. Assistant Designer is a centralized assistant administrator experience that allows you to create and manage both chat and voice assistants.

Before you begin

See [Assistant Designer](#).

Role required: virtual_agent_admin or admin

About this task

An admin can create and configure more than one chat or voice assistant within [Assistant Designer](#).

For chat assistants, a primary assistant can be linked to one or more secondary assistants. The linkage enables a primary assistant to use search sources from secondary assistants, enhancing its functionality and efficiency. For more information on primary and secondary assistants, see [Create LLM assistants](#). If multiple assistants are created, users can chat simultaneously with multiple assistants. Conversations are independent from each other.

Each assistant can have more than one display experience, using either the standard chat or enhanced chat experience, depending on the display experience that's configured. Enhanced chat offers a conversational search experience that seamlessly integrates Virtual Agent chat with search results. For more information, see [Standard chat](#) or [Enhanced chat](#). For a comparison of the two, see [Using ServiceNow Otto for Virtual Agent](#).

Note: Opt into premium chat if your instance meets certain criteria. For more information, see [Display your assistant on a portal, channel, or mobile app](#) or [Display your assistant on Platform or ServiceNow Studio](#).

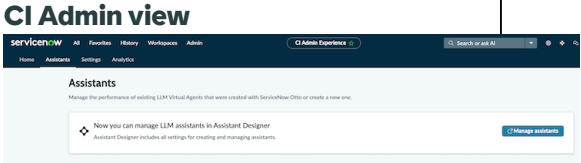
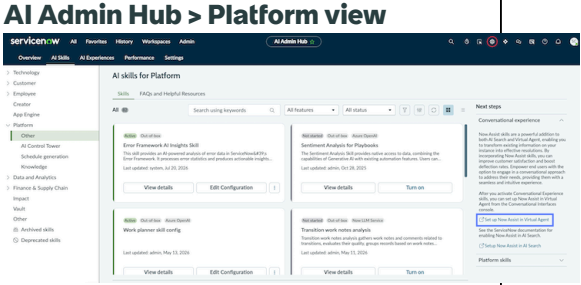
When configuring a chat assistant, notes throughout the procedures show where there are differences between the setup for ServiceNow Otto for Virtual Agent assistants and the setup for ServiceNow Otto panel assistants. You can't create additional ServiceNow Otto panel assistants.

For voice assistants, a voice assistant can be mapped to one or more AI agents. The linkage enables a voice assistant to leverage agentic capabilities to resolve user queries over phone.

Procedure

- 1. To access assistants in [Assistant Designer](#), navigate to **All > Assistant Designer > Assistants** tab.
The **Assistants** tab in [Assistant Designer](#) can also be accessed from different entry points.

Entry points to create and manage a chat or voice assistant

Entry point	Accessing assistants
All > Conversational Interfaces > Assistants	Select Manage assistants . 
All > AI Admin Hub > AI Skills > Platform	Select the Set up ServiceNow Otto for Virtual Agent link. 

- 2. To view and create chat or voice assistants, see [View assistants](#).

What to do next

See [View assistants](#).

View assistants

View and manage all existing chat and voice assistants on your instance.

Before you begin

See [Assistants overview](#).

To view the **Assistants** tab in Assistant Designer, verify that the Platform plugin is installed. The plugin comes with ServiceNow Otto products such as ServiceNow Otto for ITSM, ServiceNow Otto for CSM, and others.

Note:

- With the Platform plugin, you can see all ServiceNow Otto for Virtual Agent and ServiceNow Otto panel assistants.
- If you only have the Creator plugin installed, only the ServiceNow Otto panel - Developer assistant is shown.
- When the *com.snc.ex_ai_portal* (Employee Slate) app is installed, the default Employee Slate assistant is available, and it is automatically displayed with Employee Slate, a portal-based employee experience. For more information, see [ServiceNow EmployeeWorks Web App](#).

Actions that can be taken for default assistants

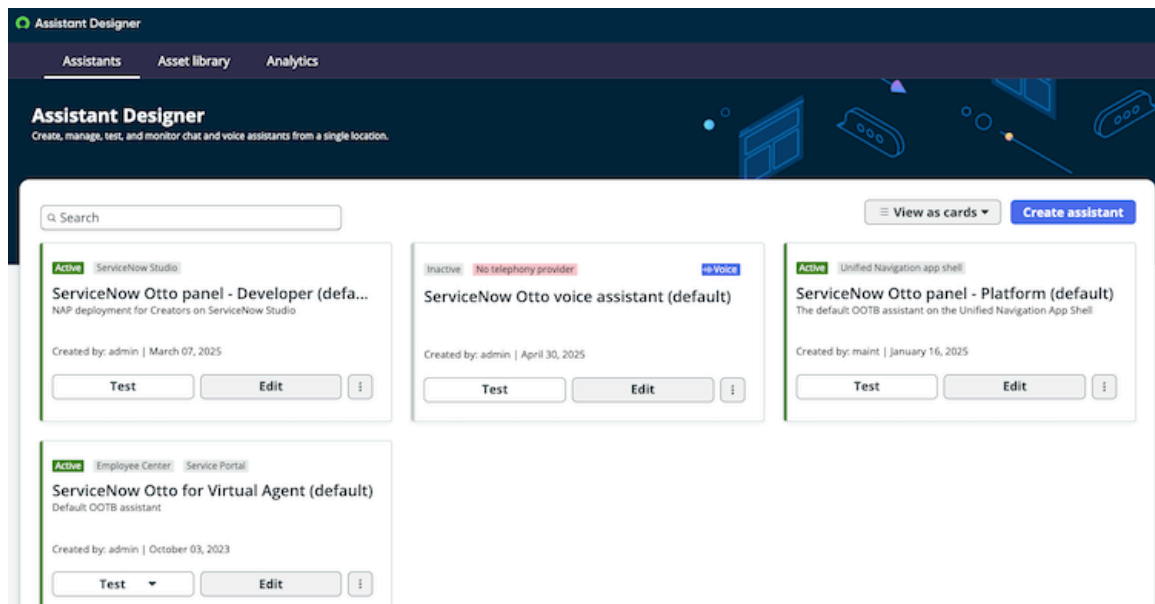
Default assistants	Activate	Deactivate	Edit	Test	Delete
ServiceNow Otto for Virtual Agent (default)	Yes	Yes	Yes	Yes	No
ServiceNow Otto panel - Platform (default)	Yes	Yes	Yes	Yes	No
ServiceNow Otto - Developer	Yes	Yes	Yes	Yes	No
Employee Slate assistant (default)	Yes	Yes	Yes	Yes	No
ServiceNow Otto voice assistant	Yes	Yes	Yes	No	No

Role required: virtual_agent_admin or admin

About this task

By default, chat assistants and voice assistants are shown as cards. Voice assistants show a voice label and icon on the card. Voice assistants can only be edited. They can't be tested in Assistant Designer at the moment.

Assistant card view



Assistants are shown in card view and in map view.

- If an assistant's name or description is too long, it's truncated to fit the card view.
- An assistant status shows as active (in green) or inactive (in gray).
- Labels show in which display experiences the assistant is deployed, for example, HR portal.
- Last updated shows the name of the person who created the assistant and the date that the assistant was created.
- If a card shows **View** and not **Edit**, it means that you don't have the ability to edit the assistant because you only have access to assistants in specific domains.
- A domain label is displayed on all assistant cards if any assistant has been created outside of the global domain. The label shows the domain that the assistant is in. If assistants are only created within the global domain, the label isn't shown.
 - In any sub-domain (e.g., Asia), the assistants from that domain and the assistants from the global domain are shown on the card.
 - Assistants created within a non-global domain can be edited, turned on, off, or deleted only within that domain and not from within the global domain.
 - If you're in a specific domain while opening the edit flow of an assistant created in another domain:
 - Activate/deactivate is inactive.
 - Delete is inactive.
 - Edit triggers the assistant edit flow, but all fields are read-only.
 - Assistants from the global domain can be edited, activated, deactivated, or deleted as long as you're in the global domain. To switch domains, open a new browser tab and navigate to anywhere that has Unified Navigation and select the globe icon to switch domains. For more information, see [Exploring Next Experience pickers](#). If the domain plugin is installed, these options are available:

- **Domain scope: Default** determines the domain that you're in.
- **Application scope: Global** determines the store app or plugin scope that you're in.
- **Update set: Default [Global]** determines where updates are made on the instance are saved.
- For more information on domain separation, see [Exploring domain separation](#) and [Domain separation for service providers](#).

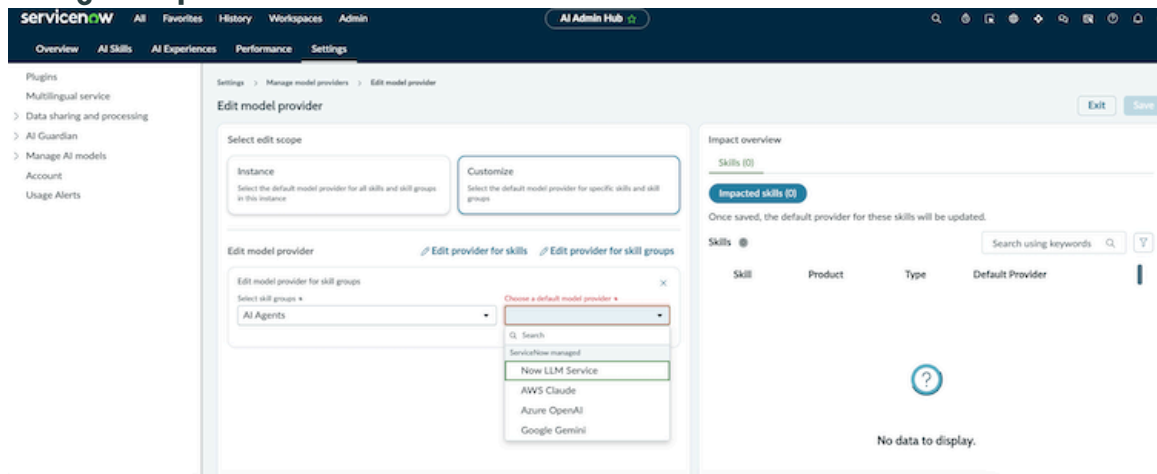
Select the **View as cards** drop-down menu to toggle to the map view. The linkage between primary and secondary assistants is shown. For general information about primary and secondary assistants, see [Create LLM assistants](#).

- In the map view, primary assistants on the top row show secondary assistants that are linked to them.
- Green indicates that the assistant is turned on. Gray indicates that the assistant is turned off.

The side panel shows where you left off, recent activity, and resources. The links that appear within the **Resources** section are hard-coded and can't be changed. If you select the **Manage model provider (Now LLM)** link, you will be redirected to AI Admin Hub. For more information, see [Manage model providers](#).

To change the LLM provider for all assistants on the instance, select **Customize > Edit provider for a skill group > AI agents**.

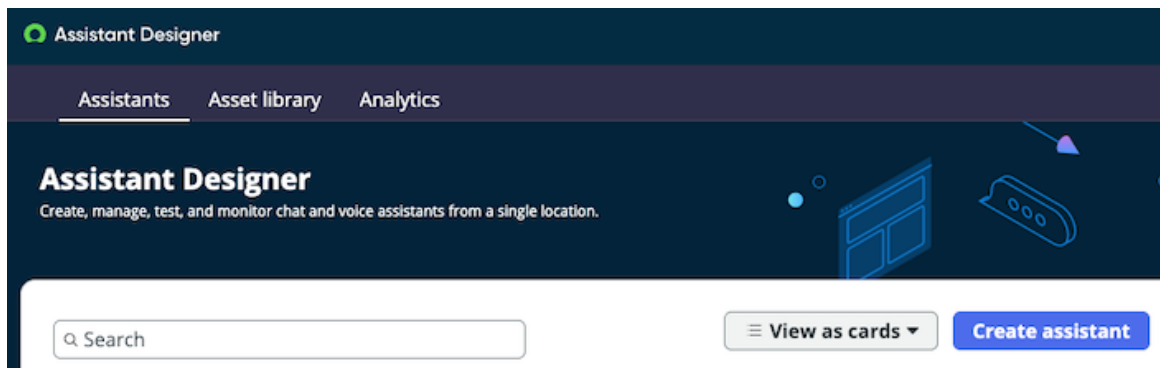
Change LLM provider for an assistant



Procedure

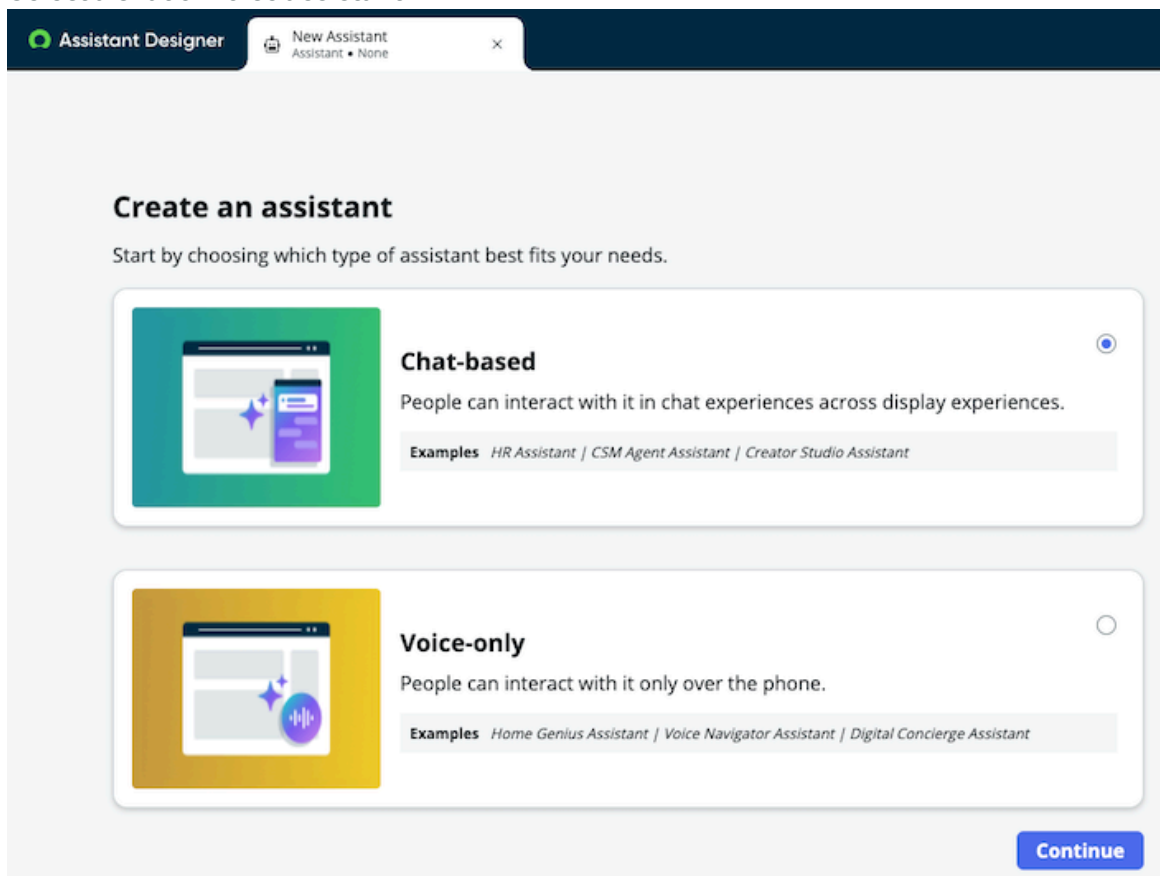
1. To create a chat or voice assistant, select **Create assistant**.
The new assistant is a ServiceNow Otto for Virtual Agent assistant.

Create an assistant



The assistant creation flow launches where you can choose between a chat-based assistant or a voice-based assistant.

Select a chat or voice assistant



Follow the procedures to set up your chat assistant or voice assistant.

2. To set up your chat assistant, see:

- a.** [Create a chat assistant.](#)
- b.** [Use agentic support for a chat assistant.](#)
- c.** [Assign search sources to a chat assistant.](#)
- d.** [Add a Knowledge Graph schema to a chat assistant.](#)
- e.**
- f.** [Add assets to a chat assistant.](#)

- g. [Display your assistant on a portal, channel, or mobile app.](#)
 - h. For ServiceNow Otto panel assistants, see [Display your assistant on Platform or ServiceNow Studio.](#)
 - i. [Brand and personalize an assistant.](#)
 - j. [Enable additional chat features.](#)
 - k. [Manage an assistant chat experience.](#)
 - l. [Review chat assistant settings.](#)
 - m. [Test a chat assistant.](#)
 - n. [Edit a chat assistant.](#)
 - o. [Manage response feedback.](#)
3. To set up your voice assistant, see [Create a voice assistant.](#)
To test your voice assistant, see [Test a voice assistant.](#)
 4. Select the ellipsis to activate, deactivate, or delete an assistant.

What to do next

For chat assistants, see [Create a chat assistant.](#)

For voice assistants, see [Create a voice assistant.](#)

Create a chat assistant

Create a chat assistant on your instance. Add basic details and set your assistant as a primary assistant.

Before you begin

See [View assistants.](#)

When configuring a chat assistant, notes throughout the procedures show where there are variations between the setup for ServiceNow Otto for Virtual Agent assistants and the setup for ServiceNow Otto panel (Platform and Developer) assistants.

ServiceNow Otto for Virtual Agent assistants and ServiceNow Otto panel - Platform (default) assistant can be linked to other assistants.

Additional ServiceNow Otto panel assistants can't be created.

Role required: virtual_agent_admin or admin

About this task

Set up basic details for your assistant and set it as a primary assistant. Primary assistants can be linked to secondary assistants. For general information about primary and secondary assistants, see [Create LLM assistants.](#)

Procedure

1. Provide a name and description for the assistant.
The name of the assistant in this example is ServiceNow Otto for Virtual Agent - TEST. An alert is shown if you attempt to create an assistant with the same name as another assistant.

- Note:** The **Name** and **Description** fields for ServiceNow Otto panel assistants can't be modified.

Add assistant details

2. Select the **Set as a primary assistant** check box if you want to make the assistant a primary assistant to which you can add secondary assistants.

- Note:** The ability to link to another assistant is not available for ServiceNow Otto panel - Developer assistant.

3. Place your cursor within the **Select assistants to link to** field to see a list of available secondary assistants.
Assistants that already have secondary assistants under them can't be selected. Any assistant that you select becomes a secondary assistant to the assistant that is being set as a primary assistant. The primary assistant will contain a combination of search profiles and assets from the secondary assistants.

One or more secondary assistants must be selected. All assistants within the same instance and domain are shown in the drop-down list, enabling you to link your primary assistant with one or more secondary assistants. Two primary assistants can't be linked to each other, and other primary assistants are unavailable in the list.

If one or more secondary assistants selected are inactive, an alert shows **The following secondary assistants are off and will be inaccessible**. A list of inactive assistants is shown.

4. Select **Save and continue**.

What to do next

See [Use agentic support for a chat assistant](#).

Use agentic support for a chat assistant

Let the assistant use AI agents and agentic orchestration. AI agent skills are prompt-based and can perform complex tasks. Admins can choose between agentic or standard search Q&A modes.

Before you begin

See [Create a chat assistant](#).

Agentic orchestration is a design approach that helps AI systems coordinate and manage multiple components such as AI agents, knowledge bases, and Q&A modules to accomplish

complex multi-step tasks. These components work together, make real-time decisions, and adapt workflows based on context, ensuring responses use the most relevant skills and content.

Role required: virtual_agent_admin or admin

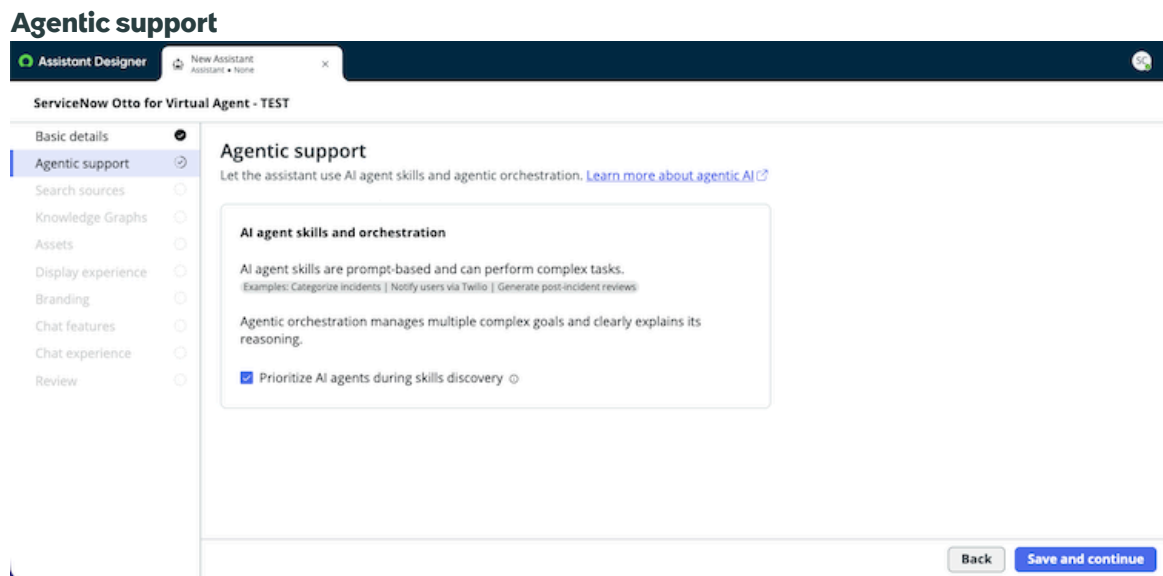
About this task

Select the operational mode of an assistant. For more information about agentic AI, see [Explore AI agents](#).

Procedure

1. Use AI agent skills and agentic orchestration.

The option to toggle on **Prioritize AI agents during skills discovery** only appears for existing customers that previously had the AI agent skill turned off for the assistant. Turning it on is an irreversible action. Agentic orchestration is a prerequisite to assign AI agents to an assistant.



2. Select **Prioritize AI agents during skills discovery**.

For new customers, when a new assistant is created, AI agent skills and orchestration are already turned on. However, you can opt out. When **Prioritize AI agents during skills discovery** is selected, all AI agents are prioritized over other assets for the assistant.

3. Select **Save and continue**.

What to do next

See [Assign search sources to a chat assistant](#).

Assign search sources to a chat assistant

Assign search sources to a chat assistant. Search sources are used to determine what the assistant looks at to answer user queries.

Before you begin

See [Use agentic support for a chat assistant](#).

Role required: virtual_agent_admin or admin

About this task

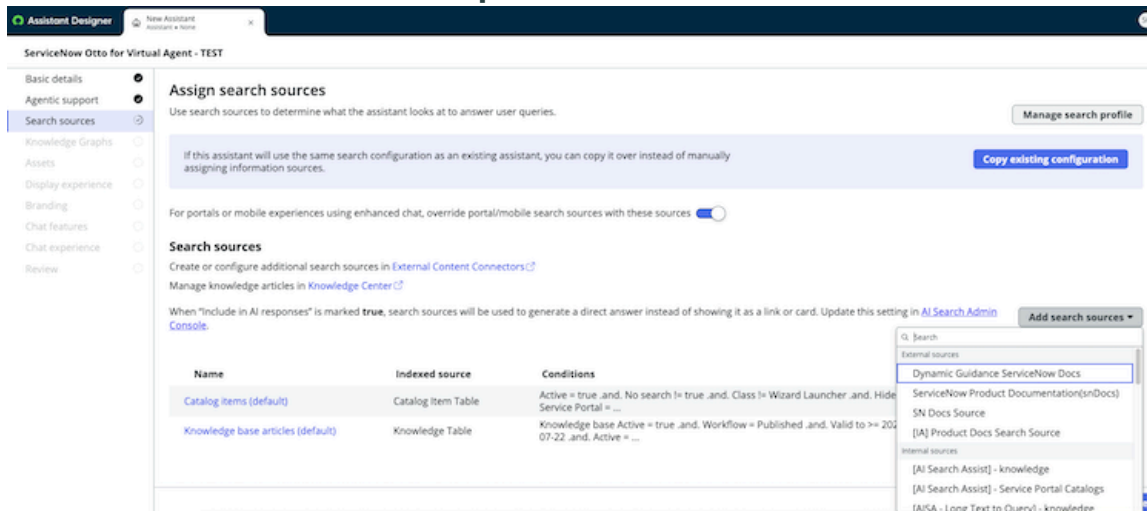
Each assistant has its own search configuration. If you have configured AI Search on any existing portal or mobile app, you can copy the existing configuration to your assistant's search configuration. You can also add external or internal search sources to the assistant.

Note: Search configuration isn't applicable to ServiceNow Otto panel - Developer assistant.

Procedure

1. Assign search sources to your chat assistant.

Search sources in the default search profile



When a chat assistant is created, a search profile for that assistant gets created. All search sources associated with the profile are listed. The default search sources are:

- Catalog items
- Knowledge base articles

Note: By default, portals and mobile apps that use enhanced chat with a dynamic, movable, and resizable chat window inherit the search sources assigned to the assistant, as listed in the following table. This configuration helps ensure that answers returned in portals and mobile apps are consistent with those returned by the assistant.

If you need different search behavior for portals or mobile apps, you can turn off this setting. When deactivated, enhanced chat uses the portal or mobile app search profile instead of the assistant's search sources, allowing the portal/mobile experience to return answers that differ from the assistant.

In the **Include AI Responses** column:

- True = The search source is included in the synthesized response.
- False = The search source is not included in the synthesized response.

To edit the setting, select **Manage Search Profile**. The AI Search Admin console launches. For more information, see [Configure multi-content synthesized sources](#).

2. Select the ellipsis if you want to edit the conditions of each skill.

3. Select **Copy existing configuration** if you have already configured AI Search for your portal, mobile app, or platform search, and you want the assistant to have those same search configurations.

Copying an existing configuration imports an existing search configuration to the assistant's search profile and search configuration.

Using existing search application configurations saves time building assistant search configurations. In addition, for the display experience that uses enhanced chat, the assistant

search configuration takes over the portal, mobile app, and the platform search experience to ensure that search and the assistant always provide consistent answers.

4. Select a search application configuration from the **Copy configuration** drop-down list. The **Copy configuration** list includes all portal search configurations, mobile search configurations, platform search configurations, and the default assistant search configuration from the AI Search Admin console.

For the ServiceNow Otto panel - Platform (default) assistant, copy the Global Search application configuration if you want the answers from the assistant and the platform Global Search to be consistent. The name of the default Global Search app is [AIS] Next Experience Search Configuration. However, AI Search admins can change which search app is configured for the Global Search.

When a user starts a chat with the ServiceNow Otto panel - Platform (default) assistant from the sparkle icon, search typeahead or the (+) button, the ServiceNow Otto panel - Platform (default) assistant search application configuration is used for both Virtual Agent and platform searches.

When a user selects **Ask a follow up** or requests a catalog item from the search results page of a specific workspace, the specific workspace search application configuration is used for both Virtual Agent and search.

The associated search profile is also shown.

Select a search configuration to copy

×

Copy existing search configuration

Copy configuration *

ESC Portal Default Search Application

▼

The current Virtual Agent search configuration will be overwritten with the following:

Search application configuration

ESC Portal Default Search Application

↗

Search profile

ESC Portal Default Search Profile

↗

Cancel

Copy

5. Select **Copy**.

After copying an existing configuration, the existing configuration for your portal, mobile app, or platform search overwrites your assistant's search application configuration. The latest configuration and the search sources are shown.

All search sources are copied into the assistant search profile. However, only knowledge base, conversational catalog items, and external content are used for the LLM-generated conversational responses. Other search sources are used for the query-based search results,

and when the user selects **View more search results**, Virtual Agent responses are seamless with the portal or mobile app search results page.

Note: For premium chat, catalog items have improved fluidity, but some will no longer be conversational. They'll open in a catalog form instead. For more information, see [Conversational catalog item requests](#).

6. Select the ellipsis at the end of each table row to edit conditions or add a new condition set.

The **Edit conditions** pop-up window appears.

7. Select **Apply** after you have edited the conditions or added a new condition set.

8. Select the **External Content Connectors** link to create or configure additional search sources.

Note: If you have any external search sources created on your instance, the external search sources are shown in the **Add search sources** drop-down list.

The External Content Connectors application adds support for indexing content and metadata from documents in external repositories to make those documents searchable in AI Search applications. The External Content Connectors application ships with a default search source for each connector. Connector admins can link the default search source for a connector to a search profile as part of the connector creation process, or after the connector is created. For more information, see [Create a GitHub Enterprise Cloud external content connector](#) and [Connect an external content connector to a search profile](#). For information about creating search sources and linking them to search profiles, see [Search sources in AI Search](#).

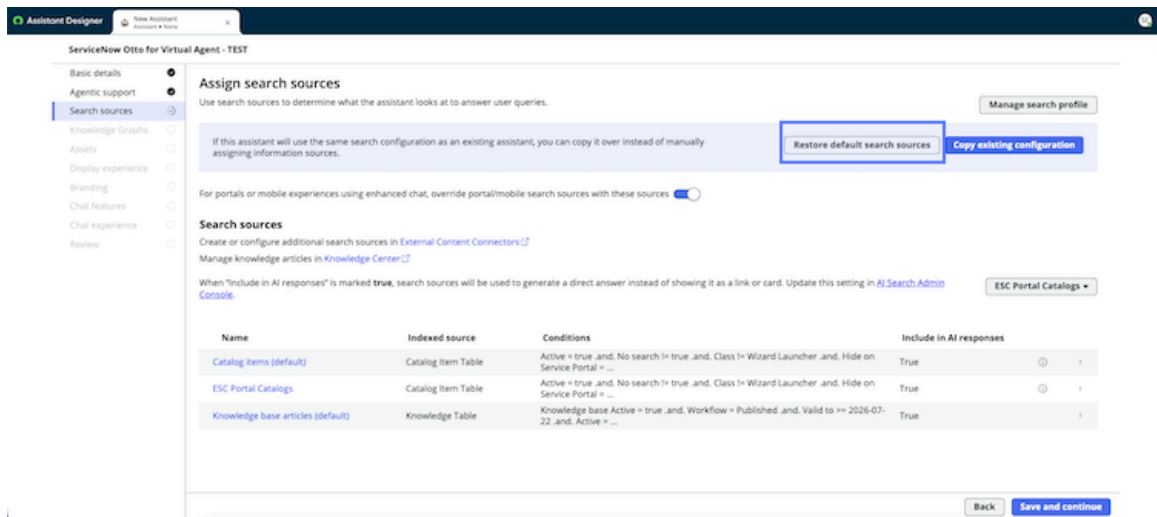
9. Select the **Add search sources** drop-down list to select or deselect search sources and save them into the assistant search profile.

- An internal search source refers to all knowledge base search sources on the instance and all catalog search sources on the instance.
- An external search source refers to all external content search sources on an instance. Examples of external search sources include Microsoft SharePoint or Confluence. For a complete list of external search sources, see [Exploring External Content Connectors](#).
- Semantic search sources enable the assistant to retrieve AI responses.

Search sources that aren't a knowledge base, external content, or catalog won't be used for the LLM-generated responses. They are used for query-based search results shown in the assistant. Tool tips are shown for non-LLM eligible search sources.

10. Select **Restore default search sources** if you want to revert to the default search sources of catalog items and knowledge base articles.

Restore default search sources

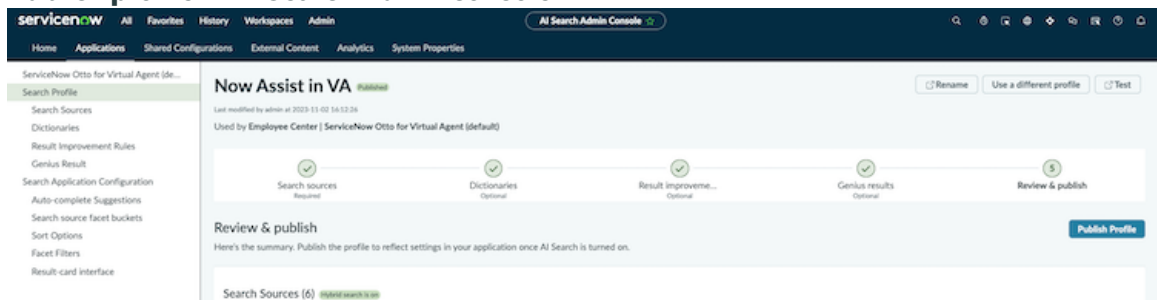


11. Select **Manage search profile** if you have not yet configured AI Search for your portal or mobile app and want to start building the search configuration for your assistant from scratch. You can also edit advanced settings such as dictionaries, improvement rules, and stop words.

A new browser tab opens with your assistant's search sources with profile page from the AI Search Admin console page.

You must first complete the build of your search profile in the AI Search Admin console, and then publish your profile for it to be saved. For more information, see [Configure and manage AI Search in search applications](#).

Publish profile in AI Search Admin console



When navigating back to your assistant admin configuration in Assistant Designer, refresh your browser page to reflect published updates from the AI Search Admin console. For more information about the AI Search Admin console, see [Using AI Search Admin console](#).

Note: If you rename an assistant, the assistant's search profile name is automatically renamed to match the latest assistant's name.

12. Select the ellipsis if you want to remove a search source or edit the conditions, and then save the change.

13. Select **Save and continue**.

The assistant search profile needs to have at least one KB or external content search source to be saved.

What to do next

See [Brand and personalize an assistant](#).

Add a Knowledge Graph schema to a chat assistant

Create Knowledge Graph schemas to represent semantic relationships in your data. Schemas improve assistant responses by providing additional context about users and your organization.

Before you begin

See [Assign search sources to a chat assistant](#).

Role required: virtual_agent_admin or admin

About this task

Knowledge Graph transforms search into an intelligent, predictive, and efficient experience, increasing accuracy, and improving productivity.

Note: Knowledge Graph is not applicable to the ServiceNow Otto panel - Developer assistant.

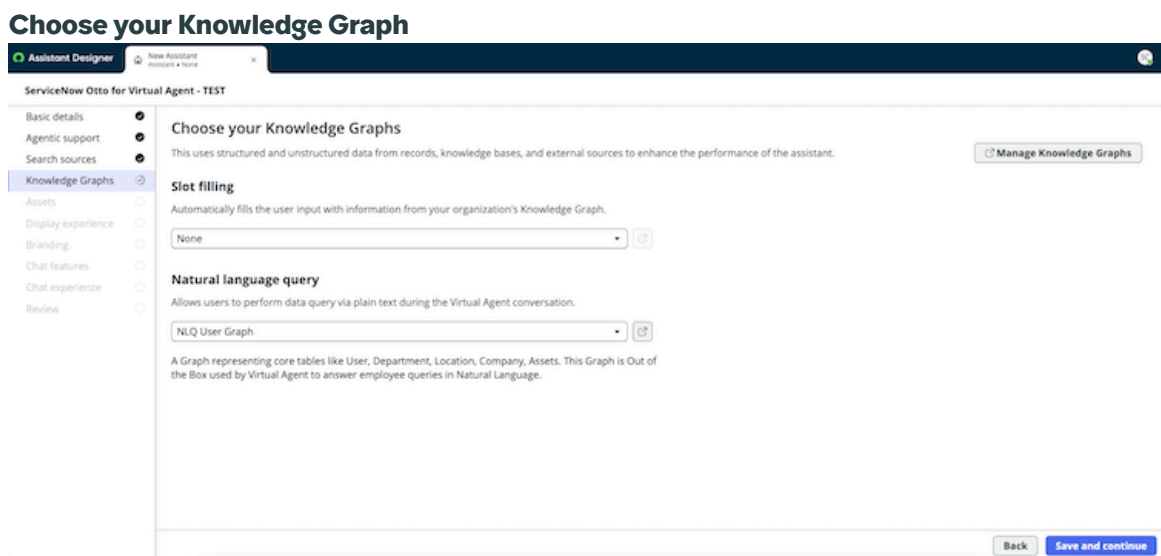
For more information about Knowledge Graph, see [Knowledge Graph integration with ServiceNow® Otto for Virtual Agent and ServiceNow Otto® panel](#).

Note: By default, search personalization is available with AI Search in the assistant, and delivers personalized, context-aware search experiences powered by Knowledge Graph. To disable the integration with Knowledge Graph for personalization, open support ticket.

An empty Knowledge Graph page is shown if the Knowledge Graph app isn't installed on the instance. Selecting **Go to Knowledge Graph** links to the ServiceNow Store's Knowledge Graph page.

Procedure

1. If Knowledge Graph is turned on, select the Knowledge Graph schema to apply to the assistant.



Note: During a platform upgrade, if you previously created an assistant and assigned a Knowledge Graph schema to the assistant, you may need to reassign the schema to the assistant as it may show as **None**.

Slot filling schema (optional): Slot filling automatically fills the user input with information from your organization's Knowledge Graph. The drop-down list consists of Knowledge Graph schemas that are available on the instance. There's no default schema for slot filling. If you select Enterprise Graph, you have the option to add tags.

Natural language query schema (optional): Natural language query enables users to perform data query via plain text during the chat. The drop-down list consists of Knowledge Graph schemas that are available on the instance. The default schema for Natural Language Query is User Graph (now_user_graph_nlg). If you select Enterprise Graph, you have the option to add tags.

Enterprise Graph is a predefined graph schema that represents all tables. Use tags to annotate tables in the global schema for higher accuracy responses to questions on a specific subject matter. Selecting the button next to the Enterprise Graph selection directs you to the Knowledge Graph console where you can edit the specific Knowledge Graph.

Note: For ServiceNow Otto panel - Platform (default) assistant, if Enterprise Graph and Enterprise Graph (Small) are selected within the NLQ schema, tags can be selected for specific workspaces that are active on the instance.

For more information about Knowledge Graph tags, see [Tagging in Knowledge Graph Designer](#).

Select workspace tags

2. Select **Manage tags** to open the tag list from the Knowledge Graph as a new browser tab.
3. Select **Manage Knowledge Graph** to open a new browser tab that directs you to the Knowledge Graph app.

What to do next

See .

Add assets to a chat assistant

Map an asset to an assistant. Assets are the building blocks of each assistant, providing them with instructions and functionality for helping users.

Before you begin

See [Add a Knowledge Graph schema to a chat assistant](#).

Role required: virtual_agent_admin or admin

About this task

Assets are the building blocks of each assistant, providing them with instructions and functionality for helping users.

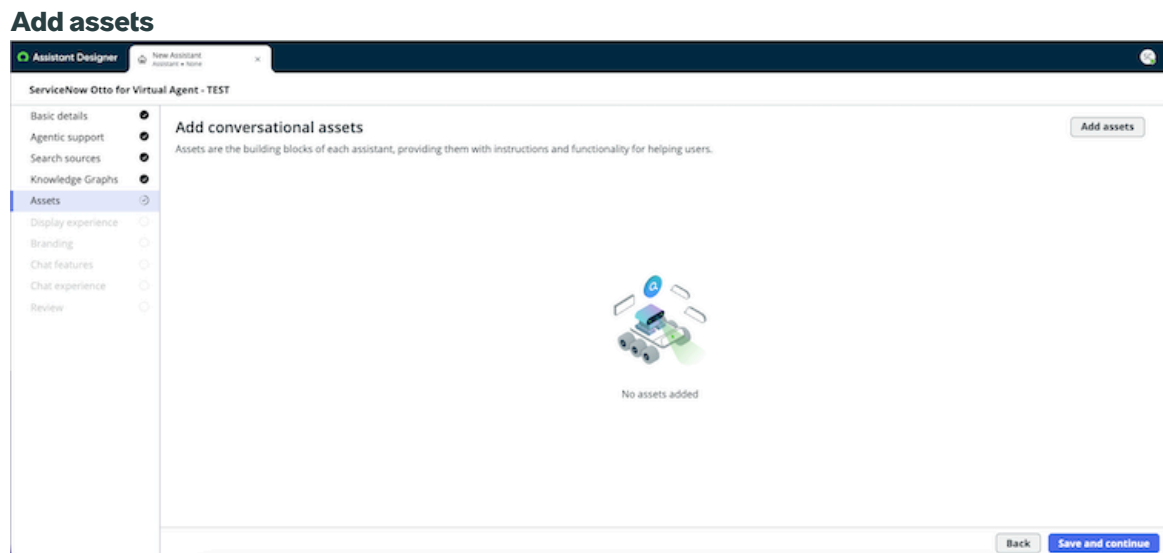
When viewing or editing an existing assistant, you can view or edit the assets that are associated with an assistant. Assets can also be added to an assistant from the Asset Library and/or Topic Migration.

Note: If you're an existing customer who previously turned on or off a skill type for an existing assistant, you can add or remove any individual asset when editing an assistant.

Procedure

1. Select **Add assets**.

By default, no assets are mapped to the assistant.



The **Add assets from library** modal appears where you can multi-select assets that you want to assign to the assistant. Asset types include:

- Topics define what the assistant can talk about and bring structure to back-and-forth conversation.
- Subflows are reusable building blocks of logic that your assistant calls on to complete multi-step processes.
- Actions are single, simple steps that help your assistant complete tasks.
- Custom skills skills are AI-powered capabilities you build to extend what your assistant can do.
- AI agents independently reason, plan, and take action to complete tasks, based on your instruction.

Note: There are variations for ServiceNow Otto panel assistants.

For ServiceNow Otto panel - Platform assistant, the available asset types are topics, subflows, actions, custom skills, and agentic workflows. Agentic workflows are a group of AI agents that work together to independently solve problems.

Note: If you want to use AI agents for your ServiceNow Otto panel - Platform assistant, contact Support.

For ServiceNow Otto panel - Developer assistant, only topics are available.

Select assets from library

Add assets from library

All assets (5)

Search

☒ Topics >

☒ Subflows >

☐ Actions >

☐ Custom skills >

☐ AI agents >

> Subflows

☒ Send SMS

☒ Send Email

Selected assets (4)

Topics

Subflows

... > Send SMS

... > Send Email

Cancel

Save

2. Select **Save**.

The list view appears where you can manage assets that are associated with an assistant. The table is not editable from this view. To further edit the assets, navigate to the assistant edit flow.

Asset list

Add conversational assets
Assets are the building blocks of each assistant, providing them with instructions and functionality for helping users.

Name	Type	Status	Active	Last modified	Description
AIA - Agent invoker from AI Connector	Topic block	Published	Active	2025-11-10 10:04:40	Invoke Agentic Framework
Ask Dynamic Guidance for help	Topic	Published	Active	2026-03-25 06:55:34	The purpose of this skill is to provide voice guidance to us...
_no_skills_configured_topic	Topic	Published	Active	2023-10-17 18:28:47	Executes when there are no applicable skills are configured ...
Carousel result handler	Topic	Modified	Active	2026-07-06 02:06:52	This topic handles conversational AI search results of type ...
Catalog Question Grouping	Topic block	Published	Active	2025-10-16 05:11:18	Handles catalog question grouping logic
unified_planner_ai_agent_skill_executor	Topic	Published	Active	2025-08-20 17:41:19	Executes an AI Agent use case skill type
SP Multi File Upload	Topic block	Published	Active	2025-11-10 09:05:43	
IAFileUploadAndValidator	Topic block	Published	Active	2026-07-14 19:00:15	IA File Upload and Validator tool that takes an array of fil...
AIA-Interrupt Handler	Topic block	Published	Active	2025-09-02 06:41:37	Handles Interruption (STOP/PAUSE/RESUME) in AIA Flows -
Bulk Category Importer	Topic block	Modified	Active	2026-07-17 18:02:09	Enables bulk import of incident categories and subcategories...
Incident Assist - Similar Incidents	Topic	Published	Active	2026-03-19 00:46:22	Retrieve resolved or closed incidents that are similar to th...
_na_notification_controller_topic_block_	Topic block	Published	Active	2024-10-13 19:55:43	Topic block that helps with fetching and displaying VA notif...
Disambiguation handler	Topic	Modified	Active	2026-07-06 02:06:52	LLM Router - Disambiguation handler

To unmap an asset, select **Manage assets** and uncheck the desired asset.

3. Select **Save and continue**.

What to do next

See [Display your assistant on a portal, channel, or mobile app](#).

See [Display your assistant on Platform or ServiceNow Studio](#).

Display your assistant on a portal, channel, or mobile app

Select a display experience for your chat assistant. Display experiences are the different places where a user can find and interact with an assistant. Select from a list of portals, messaging channels, and mobile app. To activate an assistant, at least one display experience must be configured.

Before you begin

See [Add assets to a chat assistant](#).

If you're using a display experience for a ServiceNow Otto panel assistant (Platform or Developer), see [Display your assistant on Platform or ServiceNow Studio](#).

Role required: virtual_agent_admin or admin

About this task

The chat experience configuration defines how users interact with an assistant during a conversation, including message behavior, response generation, and fallback handling.

- Standard chat is a condensed conversational support experience in a chat widget.
- Enhanced chat is a conversational experience that includes a dynamic, movable, and resizable chat window, plus access to multiple active conversations.
- Premium chat is a contextual chat experience that appears throughout the platform, adapting its behavior and interface based on where users are and what they're doing.

If your instance is eligible, you can opt into the premium chat experience. ServiceNow performs a set of readiness checks to see if your instance is eligible for premium chat. The default chat experience is enhanced chat. However, if you also previously had standard chat enabled, you still have that as an option.

An alert is shown when:

- The instance is eligible for premium chat.
- There is a possible delay for premium chat to appear as an option on your instance.

Note: Remember to refresh your browser to view the option to opt in to the premium chat experience.

If your instance doesn't meet the requirements for premium chat, you can continue using your existing standard or enhanced chat experience.

Premium chat is not available for instances that use domain separation or regional data routing.

In premium chat, catalog items have improved fluidity, but some will no longer be conversational. They'll open in a catalog form instead. For more information, see [Conversational catalog item requests](#).

Procedure

1. In **Portals**, select one or more portals from the **Add Portal** drop-down list.

Note: If you have access to the default Employee Slate assistant, Employee Slate is available from within the portal list. Selecting Employee Slate prompts you to add premium chat.

- Standard chat and enhanced chat are not options for Employee Slate.
- Employee Slate can be removed/unmapped from the default Employee Slate assistant and added to any ServiceNow Otto for Virtual Agent assistant.

Options for where an assistant appears

Display experiences

These are all of the different places where a user can find and interact with the assistant.

Portals Channels Mobile apps

Track and manage your portal displays. Add portal ▾

Portal name	Chat experience
Employee Slate	Premium

☐ Allow public access for this assistant ⓘ

One portal can only include one assistant. Any portal in the list that is already used is unavailable for selection.

Natural Language Understanding (NLU) and large language model (LLM) topic discovery cannot coexist in the same portal.

a. Choose between the standard/enhanced or premium chat experience. Select **Add**.

For more information, see [Standard chat](#), [Enhanced chat](#), or [Premium chat](#).

Standard/enhanced or premium chat experience for your portal

Add chat experience



☒ Enhanced chat

A conversational experience that includes a dynamic, movable, and resizable chat window, plus access to multiple active conversations.

You can control whether the assistant uses the assistant search sources or portal search by going to Information Sources > Search sources.

☐ Allow the search bar to open into a full-page chat experience. This will always use the assistant's search sources.



☐ Premium chat

A contextual chat experience that appears throughout the platform, adapting its behavior and interface based on where users are and what they're doing.



☐ If your portal meets requirements, users can chat from search results. [Learn more](#)

Cancel Add

When adding a new assistant into a portal, the chat experience options are:

- Enhanced chat with a dynamic, movable, and resizable chat window.
- Enhanced chat with the option to allow the search bar to open into a full-page chat experience.
- Premium chat opens the search bar into a full-page chat experience.

If your portal has AI Search activated, enhanced chat includes the option to turn on the full-page chat experience. Select **Allow the search bar to open into a full-page chat experience**. Premium chat comes with the full-page chat experience.

For more information about whether your portal meets the requirements to have users chat from search results, see [Portal prerequisites for enhanced chat](#).

Note: When you activate enhanced chat in a portal or mobile app, that portal or mobile app uses the assistant search application configuration rather than the portal or mobile app's search application configuration. This ensures that the portal/mobile app's search results and assistant provide consistent responses. To learn more about search profiles and how they affect search behavior, see [Search profiles in AI Search](#).

Your display experience options depend on the configuration.

- If you're using standard chat, your chat experience options are:
 - Remain with standard chat.
 - Enhanced chat with a dynamic, movable, and resizable chat window.
 - Enhanced chat with the option to allow the search bar to open into a full-page chat experience.
 - Premium chat opens the search bar into a full-page chat experience.

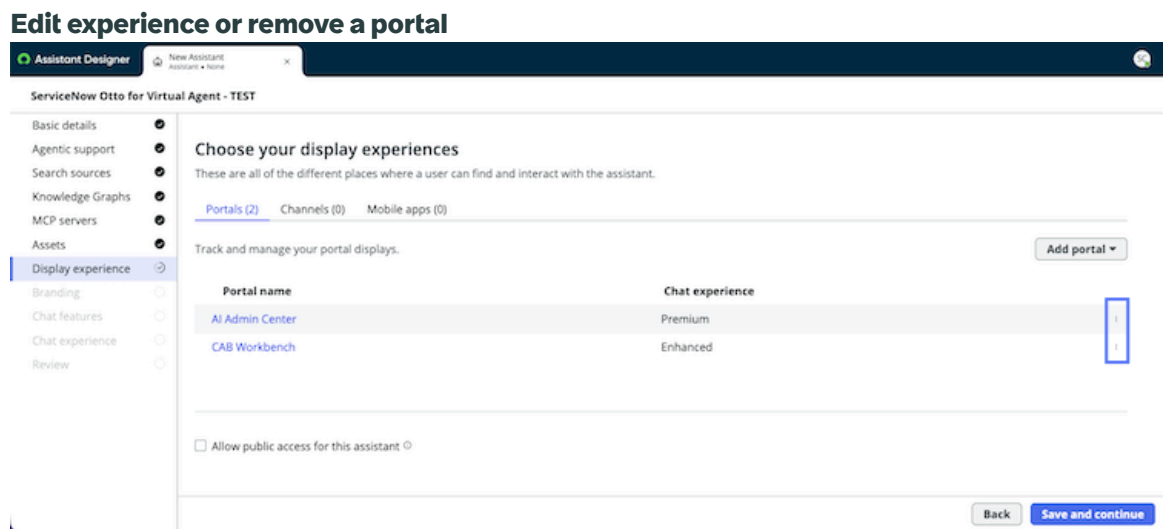
- If you're using enhanced chat with a dynamic, movable, and resizable chat window, your chat experience options are:
 - Remain with enhanced chat with a dynamic, movable, and resizable chat window.
 - Enhanced chat with the option to allow the search bar to open into a full-page chat experience.
 - Premium chat that opens the search bar into a full-page chat experience.
- For portals that do not have AI search enabled, you can choose between standard chat and enhanced chat with a dynamic, movable, and resizable chat window.

Enhanced chat and premium chat (full-page experience) are supported for default Customer Service Management (CSM) portals such as Business Portal, CSM Portal, and Consumer Service Portal (CSP). CSM portals must have AI Search enabled. Enhanced chat is the default when an assistant is added to a default CSM portal.

For premium chat, your premium messages and premium fallbacks are prefilled with what you had in your legacy messages and legacy fallbacks. Review the settings to ensure that everything was prefilled correctly.

For information about the enhanced chat experience option, see [Using ServiceNow Otto for Virtual Agent](#).

- b.** Select the ellipsis to remove a portal or edit settings to toggle between chat experiences.



- c.** Select the **Allow public access for this assistant** check box to enable the assistant on public pages for all selected portals.

Selecting the check box only makes the assistant response available to guest users. In addition to selecting the check box, ensure that the UI page and chat client are also set to public. For more information, see [Make UI pages public or private](#), [Configure page security by role](#), and [Configure widget security](#).

For public access across the entire instance, see **Conversational > Interfaces > Settings**. For more information on public access across the entire instance, see [Enable public access to the chat widget](#).

- 2.** In **Channels**, select your preferred messaging channels to display a chat assistant. ServiceNow Otto for Virtual Agent integrates with these channels: Slack, Microsoft Teams, Google Chat, SMS with Twilio, WhatsApp, and Amazon Connect. If the plugins are already

installed, the available channel cards aren't displayed. For more information on integrating Virtual Agent with messaging apps, see [Integrating Virtual Agent with messaging apps](#).

Getting the plugin redirects you to the ServiceNow Store. After the plugins are installed and configured, you can then select the ones that you want the assistant to integrate with.

- After the plugins are installed and configured, choose the ones that you want the assistant to integrate with by selecting from the Add channel drop down menu.

Channels that integrate with Virtual Agent

Display experiences

Choose where users can find assistants, and how they can interact with them.

Portals (5) **Channels (4)** Mobile apps (0)

Add channel

Name	Channel type	Chat experience	Alert
Teams-bot-name	Microsoft Teams	Standard	
Teams-bot-name	Microsoft Teams	Premium	
Slack-bot-name	Slack		
Slack-bot-name	Slack		© Being used by N/A in VA for ITSM

Available channels

Line

Download the Line integration plugin. Learn more with a [step-by-step guide](#).

[Get Line plugin](#)

Workspace

Download the Workspace integration plugin. Learn more with a [step-by-step guide](#).

[Get Workspace plugin](#)

SMS with Twilio

[Learn more](#)

Whatsapp

[Learn more](#)

- Select the ellipsis to remove a channel. The edit option is only available for Microsoft Teams. You can toggle between standard and premium chat.
 - For standard chat, conversations in Microsoft Teams display a condensed conversational experience.
 - For premium chat, conversations in Microsoft Teams display a contextual chat experience that works best for end users using premium chat in their portal experience.

3. In **Mobile**, select a mobile app display experience.

In the **Mobile** tab, if no mobile app is selected to display standard chat or enhanced chat, users see the traditional NLU Virtual Agent in the mobile app. There are different mobile app components that admins can display with an assistant: mobile search widget, chat launcher, prominent action button override, and a custom app (mobile SDK).

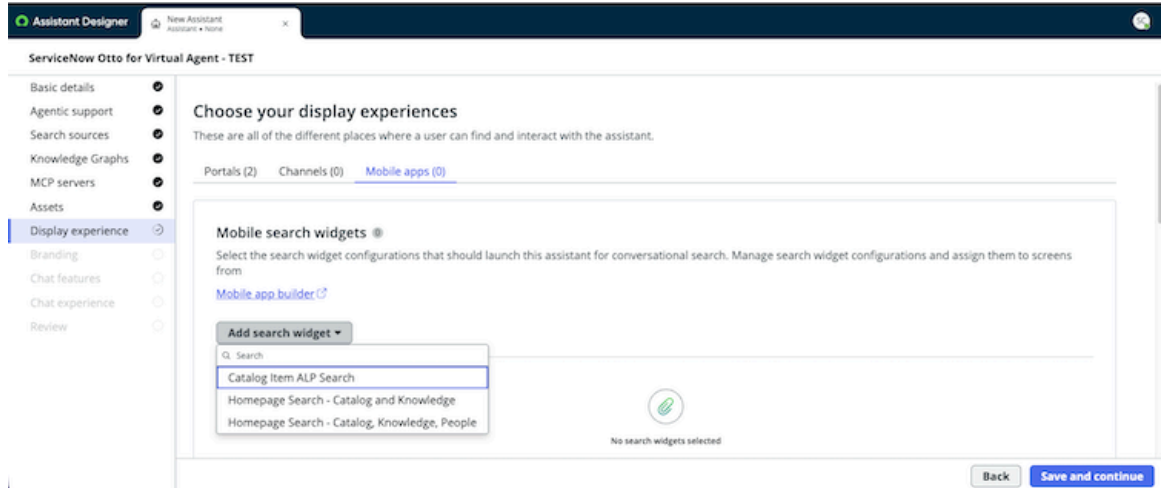
The table shows chat experiences available when editing a mobile widget's display experience or adding an assistant to a new mobile widget. Options vary based on existing configuration.

Available mobile chat experiences

Mobile widget	Edit chat experience options	Add chat experience options	Mobile search configuration
Mobile search widgets	Currently on enhanced chat with a dynamic, movable, and resizable window or full-page experience, your option is premium full-page experience.	- Enhanced chat with a dynamic, movable, and resizable window. - Enhanced chat with full-page experience. - Premium chat with full-page experience.	Required
Chat launcher functions	Currently on standard chat, your options are enhanced chat full-page experience or premium chat full-page experience. Currently on enhanced chat, your option is premium chat full-page experience.	- Enhanced chat with full-page experience. - Premium chat with full-page experience.	Optional
Prominent action button override	Currently on standard chat, your options are enhanced chat full-page experience or premium chat full-page experience. Currently on enhanced chat, your option is premium chat full-page experience.	- Enhanced chat with full-page experience. - Premium chat with full-page experience.	Optional
Custom apps	Currently on standard chat, your options are enhanced chat full-page experience or premium chat full-page experience. Currently on enhanced chat, your option is premium chat full-page experience.	For new custom app widgets, - Enhanced chat with full-page experience. - Premium chat with full-page experience. - Standard chat is not available.	Not applicable

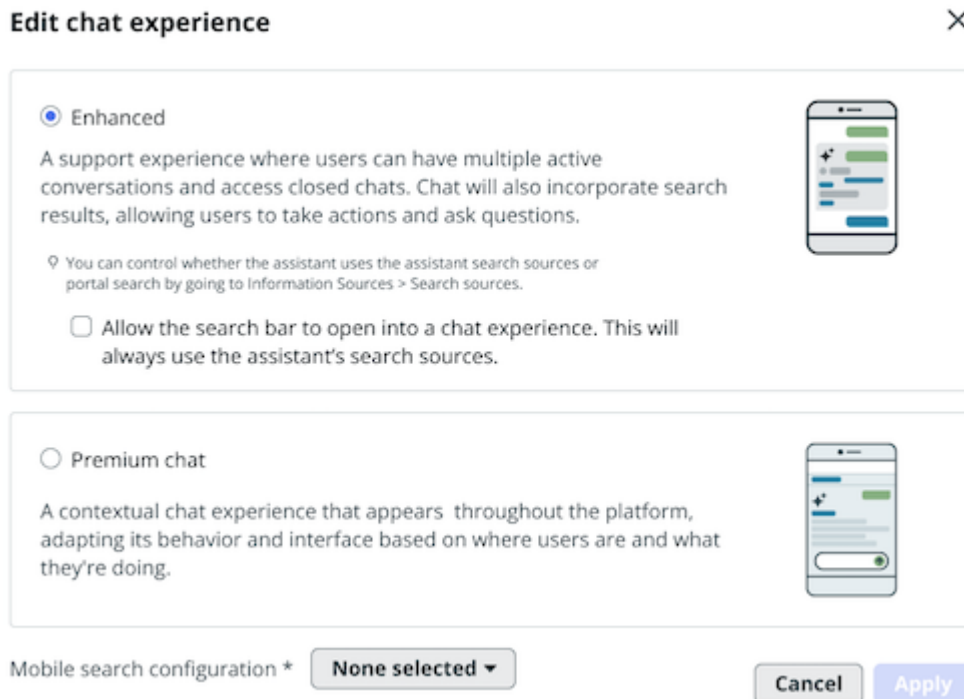
- a. To use ServiceNow Otto for Virtual Agent on your mobile app, download the Now Mobile App or Agent App and use Mobile App Builder to configure Virtual Agent in the app. For information about mobile prerequisites, see [Mobile app prerequisites for enhanced chat](#).
- b. Select a mobile search widget from the **Add search widget** drop-down list. The assistant must have the enhanced chat or the premium chat experience enabled.

Integrate your assistant with a mobile application



The **Add chat experience** pop-up window appears.

Chat experience and mobile search configuration



Select a chat experience and a mobile search configuration. Select **Add**.

The search widget configuration is added to the search widget name list.

- c. In **Chat launcher functions**, select the drop-down menu to add a chat launcher function to open the assistant.

The **Add chat experience** pop-up window appears where you can optionally select a mobile search configuration if you have enhanced chat or premium chat.

Note: Any prior Virtual Agent configurations that applied to the NOW mobile or Agent apps are migrated to apply to the chat launcher functions.

- d. In **Prominent action button override**, select from the **Add tab override** drop-down menu to allow a prominent action button to launch the assistant when it's opened from the selected mobile navigation tab. This overrides what's been defined in the chat launcher function from any other assistant record.

The default setting for the chat launcher function associated with a prominent action button should still be configured in the chat launcher functions. If there is no record in the chat launcher function, the override won't work.

The same chat experience must be used to override the same prominent action button. For example, if the chat launcher section is configured to be enhanced chat, only an override record for enhanced chat would work.

Prominent action button override

Prominent action button override ⓘ

Use the prominent action button to launch this assistant. This will override what's been defined in the chat launcher function. Manage in [Mobile app builder](#) ↗

Add tab override ▾

Q Search

Help center

Home

Information

Services

No tab override selected

The **Add chat experience** pop-up window appears where you can optionally select a mobile search configuration. For more information, see [Using the prominent action button](#) and [Configuring a prominent action button](#).

- e. The **Custom apps section** is displayed when a mobile SDK plugin is installed. Select a custom mobile app integrated with the mobile SDK that launches this assistant.

The **Add custom app** pop-up window appears. Select enhanced chat or premium chat.

4. Select the ellipsis to remove a mobile app or edit settings to toggle between the enhanced chat and standard chat experience, if standard chat is available to you.
5. Select **Save and continue**.

What to do next

See [Brand and personalize an assistant](#).

Display your assistant on Platform or ServiceNow Studio

Use a chat experience for your ServiceNow Otto panel - Platform (default) assistant or ServiceNow Otto panel - Developer assistant.

Before you begin

See [Add assets to a chat assistant](#).

Role required: virtual_agent_admin or admin

About this task

Premium chat is available for instances that meet ServiceNow readiness requirements. ServiceNow automatically performs eligibility checks to determine whether your instance can use premium chat.

For eligible new customers, premium chat is the default and the only available chat experience. For existing customers, enhanced chat remains the default experience unless you opt in to premium chat.

If your instance previously had standard chat enabled, you can continue to use standard chat.

Note: An alert is shown when:

- The instance is eligible for premium chat.
- There is a possible delay for premium chat to appear as an option on your instance.

Remember to refresh your browser to view the option to opt in to the premium chat experience. Premium chat is not available for instances that use domain separation or regional data routing.

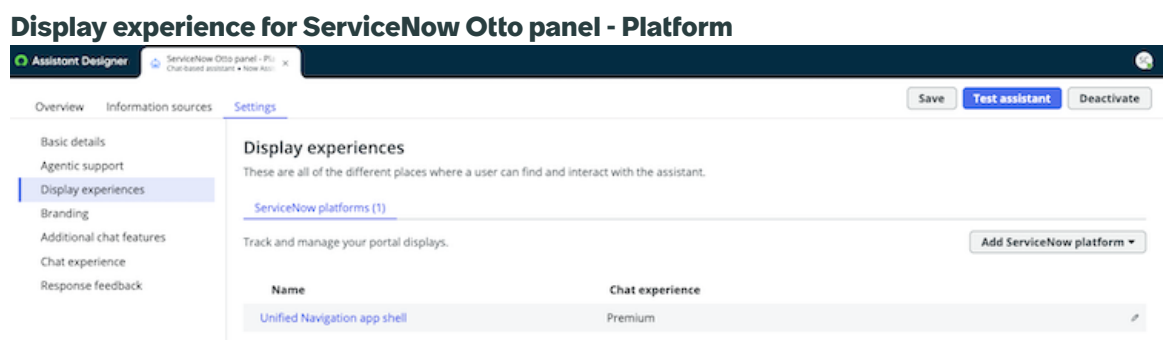
If your instance doesn't meet the requirements, you can continue using your existing standard or enhanced chat experience. For more information about premium chat, see [Premium chat](#), otherwise, proceed to step 1.

For premium chat, your premium messages and premium fallbacks are prefilled with what you had in your legacy messages and legacy fallbacks. Review the settings to ensure that everything was prefilled correctly.

For ServiceNow Otto panel – Developer assistant, premium chat is not available. Proceed to step 2.

Procedure

1. Select a chat experience for your ServiceNow Otto panel - Platform assistant (default).
 - a. The **Add ServiceNow platform > Unified Navigation app shell** is preselected as the display experience.



- b. Select the pencil icon if you want to edit the chat experience. The **Edit chat experience** modal appears. For new customers, the edit option isn't available when:
 - You're eligible for premium chat.
 - You aren't eligible for premium chat and have enhanced chat as the default chat experience.

Note: Premium chat is available only for eligible assistants. If the assistant uses the Now LLM provider, the premium chat option isn't available.

Edit the chat experience

Edit chat experience

☐ Enhanced chat

A conversational experience that includes a dynamic, movable, and resizable chat window, plus access to multiple active conversations.

End users will need to refresh the page to see enhanced chat.

[Learn more about enhanced chat](#)

☒ Premium chat New

A contextual chat experience that appears throughout the platform, adapting its behavior and interface based on where users are and what they're doing.

Cancel Save

In premium chat, catalog items have improved fluidity, but some will no longer be conversational. They'll open in a catalog form instead. For more information, see [Conversational catalog item requests](#).

2. Use ServiceNow Studio with standard chat for your ServiceNow Otto panel Developer assistant.

ServiceNow Studio with standard chat is the only available display experience for the ServiceNow Otto panel - Developer assistant.

Display experience for ServiceNow Otto panel - Developer

Assistant Designer
ServiceNow Otto panel - Developer assistant

Save Test assistant Deactivate

Overview Information sources Settings

Basic details
Display experiences
Additional chat features
Chat experience

Display experiences

These are all of the different places where a user can find and interact with the assistant.

[ServiceNow platforms \(1\)](#)

Track and manage your portal displays.

Name	Chat experience
ServiceNow Studio	Enhanced

3. Select **Save and continue**.

For help with installation, see [Solving installation and configuration issues with ServiceNow AI features](#).

What to do next

See [Brand and personalize an assistant](#).

Brand and personalize an assistant

Decide how your ServiceNow Otto for Virtual Agent assistant should look by using the default branding or by creating a branding.

Before you begin

See [Display your assistant on a portal, channel, or mobile app](#) for ServiceNow Otto for Virtual Agent assistants.

See [Display your assistant on Platform or ServiceNow Studio](#) for ServiceNow Otto panel assistants.

Role required: virtual_agent_admin or admin

About this task

If you haven't selected a display experience, branding options aren't shown.

- For ServiceNow Otto for Virtual Agent, branding is available for standard chat, enhanced chat, and premium chat.
- For ServiceNow Otto panel - Platform assistant, branding is available for premium chat but does not include chat menu items.
- For the default Employee Slate assistant, branding is available for premium chat.
- Branding is not available for ServiceNow Otto panel - Developer assistant.

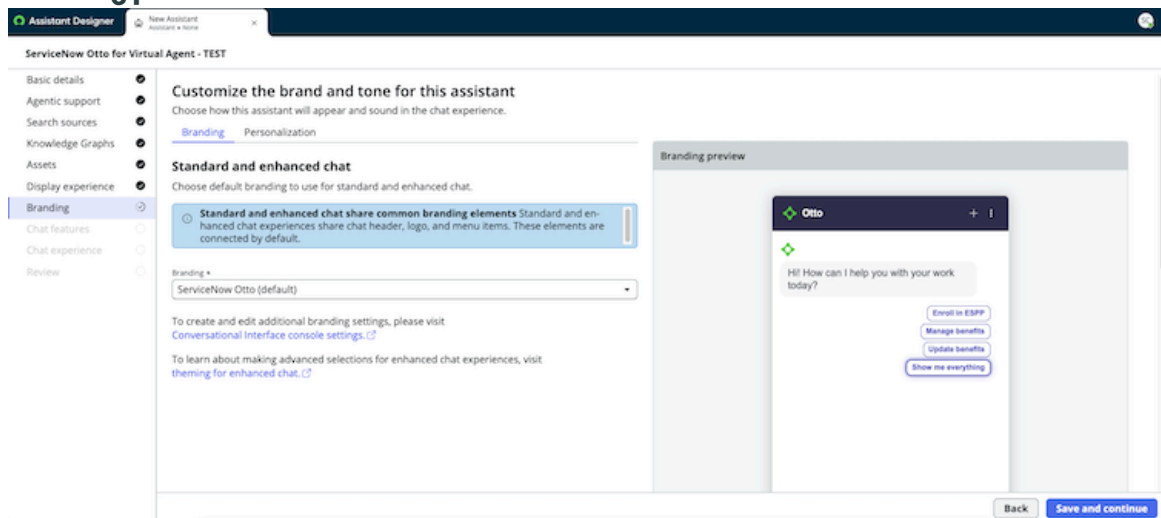
Procedure

1. In the **Branding** section, select a default branding or an existing customized branding.

Note: To create and edit additional settings, select the **Conversational interfaces console** link. For more information, see [Set up your Virtual Agent bot's branding](#).

If your display experience has standard or enhanced chat, the **Standard chat and enhanced chat** section is shown. The branding preview is for illustration purposes only.

Branding preview of a standard chat assistant



Standard and enhanced chat use the same branding profile configuration. Your selection is reflected on your branding settings. For the same assistant, standard and enhanced chat share the same chat header, logo, and menu items. These elements are connected by default.

The shared chat header logo is determined by the selected standard chat branding profile. You can't configure a separate chat header logo for each experience. Updating the chat header logo in one experience updates it for the other.

To create and edit additional brand settings, navigate to **Conversational Interfaces > Settings > Branding**.

Learn more about customizing the look-and-feel of enhanced chat by navigating to [Theming for ServiceNow Otto for Virtual Agent enhanced and premium chat](#).

If your display experience has premium chat, the **Premium chat** section is shown.

Branding for premium chat

- Choose your chat header and update the chat logo. The default chat header name is the name of the assistant. The size of the chat logo should be 144 x 144 pixels. Image file types include: .jpg, .png, .bmp, .gif, .jpeg, .ico, and .svg.
- Add chat menu items to ServiceNow Otto for Virtual Agent assistant or the default Employee Slate assistant.

Note: Chat menu items aren't available for ServiceNow Otto panel - Platform assistant.

By default, chat, phone, and email are listed. Select the ellipsis to edit or remove a chat menu item.

When editing the chat (live agent) option, you can select the check box so that users can see the estimated wait time for the next live agent.

Estimated wait time for the next live agent

c. To add other items, select **Add chat menu item**.

- Phone: Enter a valid phone number. Accepted formats include digits, spaces, hyphens, parentheses, and a leading + for the country code.
- Email: Enter a valid email address. Example format: name@domain.com
- Link
- Text
- Chat: Only one chat type menu item is allowed per assistant.

For each chat menu item type that you add, fill out the label and value fields. Decide whether you want to use the default icon or select a custom icon. Accepted file format for the icon is .svg only. Suggested size is 40 pixels x 40 pixels.

Add chat menu item modal example

Enter a valid phone number. Accepted formats include digits, spaces, hyphens, parentheses, and a leading + for a country code. Enter a valid email address. Example format: name@domain.com

d. Select **Add**.

A warning will display if a mandatory field is left empty, or the value format is incorrect.

e. To reorder the menu items, drag the rows into your preferred order in the table.

For branding Microsoft Teams or Slack channels, refer to the documentation.

A **Channels** section is shown for ServiceNow Otto for Virtual Agent assistants and the default Employee Slate assistant if a channel is configured in the display experience.

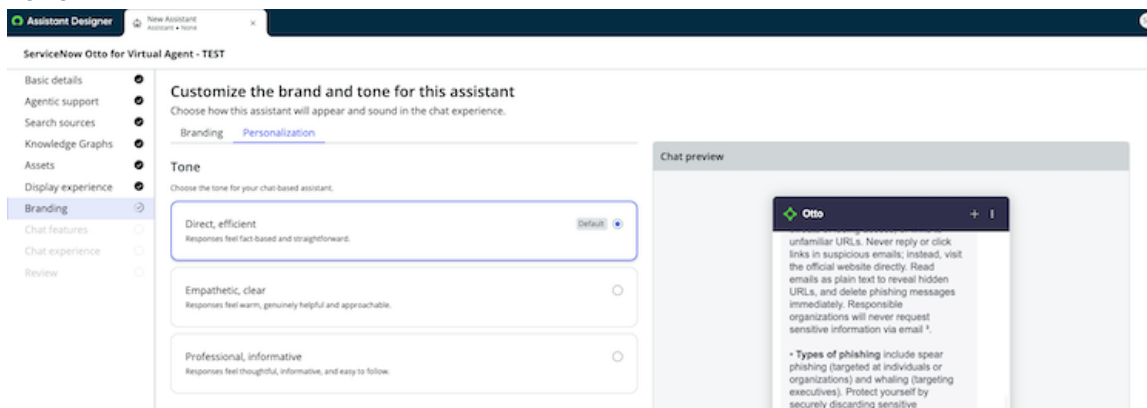
- [Configure branding for your ServiceNow Virtual Agent bot in Microsoft Teams](#)
- [Configure branding for your Virtual Agent bot in Slack](#)

Note: Branding selections must happen in the channel, and not in the platform.

2. In the **Personalization** section, customize the assistant's tone, response length, and personal details.

Note: The **Personalization** section is viewable by default. To hide personalization or its different settings, use the `sn_nowassist_va.assistant_personalization` system property. For more information, see [ServiceNow Otto for Virtual Agent system properties](#).

Tone



Each assistant can have its own tone, response length, and persona.

- a. Select a tone for your assistant.

- **Direct (default):** Responses feel fact-based and are straightforward.
- **Empathetic, clear:** Responses feel warm, genuinely helpful, and approachable.
- **Professional, informative:** Responses feel thoughtful, informative, and easy to follow.

- b. Choose a response length for your assistant.

Response

Succinct

Focused answers that are as succinct as possible.

Balanced

Focused answers, with added practical guidance.

Detailed

Comprehensive, in-depth answers with full context.

- **Succinct (default):** Focused answers that are as succinct as possible.
- **Balanced:** Focused answers with added practical guidance.
- **Detailed:** Comprehensive, in-depth answers with full context.

Responses prioritize clarity and completeness, using the selected response length as a guide. Results may vary based on the complexity of the user query.

- c. Add persona details to your assistant.

Persona

Persona details (Optional)

Assistant nickname ⓘ

Example: Henry the HR assistant

Characters left: 160

What subject matter does this assistant specialize in? ⓘ

Example: expertise in human resources (HR) or employee relations.

Characters left: 200

- Assistant nickname (160 character limit): If this assistant persona is referenced in text, voice, or chat conversations, it will go by this name. For example, if a user asks this assistant its name, it might say "Hi I'm Henry, your HR assistant."
- What subject matter does this assistant specialize in? (200 character limit): If this assistant persona is asked what it can do, it might say "I can help with any tasks or questions related to HR or employee relations."

Note: The preview pane changes depending on the tone and length selected. It is used for illustrative purposes only and doesn't reflect the actual conversation that the LLM would generate.

3. Select **Save and continue**.

What to do next

See [Enable additional chat features](#).

Manage an assistant chat experience

Manage the chat experience of your assistant.

Before you begin

See [Enable additional chat features](#).

Role required: virtual_agent_admin or admin

About this task

Define your greeting, closing messages, and fallback options.

Depending on your configuration, different options may appear. Legacy messages (chat messages) and legacy fallbacks (chat fallbacks) are shown when at least one display experience has standard chat or enhanced chat. Premium messages and premium fallbacks are shown when at least one display experience has premium chat.

Note: If you configured legacy messages and legacy fallbacks, your premium messages and premium fallbacks are prefilled with what you had in your legacy messages and legacy fallbacks. Review the settings to verify that everything was prefilled correctly. Adding or editing a premium fallback may take a few minutes to take effect after saving.

A standard chat preview pane is shown for the default greeting topic and the default closing topic. Selecting custom topics won't show a preview pane.

Fallbacks appear in the preview pane when you toggle individual or all fallbacks on.

Note: Fallbacks aren't supported for ServiceNow Otto - Developer assistant.

Procedure

1. Select the **Chat experience** page.
2. In the **Legacy messages** or the **Premium messages** section, set up your messages.

Set up legacy messages

ServiceNow Otto for Virtual Agent - TEST

- Basic details
- Agentic support
- Search sources
- Knowledge Graphs
- MCP servers
- Assets
- Display experience
- Branding
- Chat features
- Chat experience**
- Review

Customize your chat experience

Customize the types of messages that show to people in the chat experience.

Legacy messages Premium messages Legacy fallbacks Premium fallbacks

Customize the messages that display in **standard** and **enhanced** chat experiences.

Greeting message

Shows up when the user first opens the chat experience.

Greeting topic *

Greeting - requestor

Greeting message *

Hi, I'm your AI assistant. How can I help?

Remember to include a disclaimer to let users know they're interacting with AI.

Closing message

Shows up after the user confirms that they're done chatting.

Closing topic *

Closing

Closing message *

Thanks for chatting! I'll go ahead and close this conversation now. I'm here if you need anything else.

Error message

Error topic *

Error - requestor

Error message *

Sorry, there was a problem on my side trying to complete this request. Try asking again later.

Survey message

Survey topic *

Standard chat preview

Preview Closing

Hi, I'm your AI assistant. How can I help?

Reply...

Back Save and continue

- Selecting a default topic shows its corresponding default message. You can also create your own topic from **All > Assistant Designer > Asset Library**, and use it as the greeting or closing topic. When selecting a custom topic, the message field isn't shown in the preview pane.
- Closing message only appears if you have a display experience with standard chat.

For premium messages, select one of the greeting messages:

Set up premium messages

ServiceNow Otto for Virtual Agent - TEST

- Basic details
- Agentic support
- Search sources
- Knowledge Graphs
- MCP servers
- Assets
- Display experience
- Branding
- Chat features
- Chat experience**
- Review

Customize your chat experience

Customize the types of messages that show to people in the chat experience.

Legacy messages **Premium messages** Legacy fallbacks Premium fallbacks

Review the messages that display in **premium** chat experiences. (Examples: New employee center or Microsoft Teams).

Greeting message

Shows up when the user first opens the chat experience.

☒ **Default greeting message**

The assistant will generate a contextually-relevant greeting message.

Sample default greeting message:

Good afternoon [User]! How can I help you?

☐ **Static greeting message**

This message will display every time the assistant is accessed.

Greeting message *

Hi, I'm your AI assistant. How can I help?

☐ **Custom greeting topic**

Display a custom topic as the greeting message.

Greeting topic *

Greeting - requestor

- **Default greeting message:** The assistant generates a contextually-relevant greeting message.
- **Static greeting message:** The message displays every time the assistant is accessed. You can customize your text in the input box.
- **Custom greeting topic:** You can select any topic that you have created.

i Note: Configuration options differ between different assistant types and display experiences.

Message options for assistants

Field	Description	ServiceNow Otto for Virtual Agent assistant	Employee Slate assistant	ServiceNow Otto panel - Platform assistant	ServiceNow Otto panel - Developer assistant
Greeting topic	Greeting - requestor is the default greeting topic for ServiceNow Otto for	Yes	Choose between the default greeting message, the static	Yes	Yes

Field	Description	ServiceNow Otto for Virtual Agent assistant	Employee Slate assistant	ServiceNow Otto panel - Platform assistant	ServiceNow Otto panel - Developer assistant
	Virtual Agent assistants. Greeting - fulfiller is the default greeting topic for ServiceNow Otto panel assistants. Select a custom greeting if you want to replace the default greeting topic. For premium messages, choose between the default greeting message, the static greeting message, or use a custom greeting topic.		greeting message, or use a custom greeting topic.		
Greeting message	For legacy messages, if the default greeting topic is used, the default greeting message is shown. If a custom greeting topic is selected, the Greeting message field doesn't appear.	Yes	Yes	Yes	Yes

Field	Description	ServiceNow Otto for Virtual Agent assistant	Employee Slate assistant	ServiceNow Otto panel - Platform assistant	ServiceNow Otto panel - Developer assistant
	For premium messages, choose between the default greeting message, the static greeting message, or use a custom greeting topic.				
Closing topic	Closing is the default closing topic. To replace it, select a topic from the drop-down menu.	Yes (for standard, enhanced, and premium chat)	Yes	No	No
Closing message	Closing message field is shown and used if the default closing topic is selected. If a custom topic is selected, the Closing message field isn't shown.	Yes (for standard, enhanced, and premium chat)	Yes	No	No
Error topic	Error - requestor is the default topic for ServiceNow Otto for Virtual Agent assistants. Error - fulfiller is the default topic for ServiceNow	Yes	No	Yes	Yes

Field	Description	ServiceNow Otto for Virtual Agent assistant	Employee Slate assistant	ServiceNow Otto panel - Platform assistant	ServiceNow Otto panel - Developer assistant
	Otto panel assistants. To replace the default topic, select a custom topic from the drop-down menu.				
Error message	For legacy messages, if the default - Error topic is used, the default Error message is used. If a custom topic is used, the error message field isn't shown. For premium messages, the error message is LLM generated and it's not configurable.	Yes	The error message is LLM generated and it's not configurable.	Yes	Yes
Survey	You can optionally select a custom topic to use it as a survey topic. If you don't select any topic, the default survey experience is applied. Post chat feedback surveys are supported	Yes (for standard, enhanced, and premium chat)	No	No	No

Field	Description	ServiceNow Otto for Virtual Agent assistant	Employee Slate assistant	ServiceNow Otto panel - Platform assistant	ServiceNow Otto panel - Developer assistant
	in standard, enhanced, and premium chat experiences. When premium chat is enabled, the survey is automatically triggered when the user indicates that they are finished chatting, based on the assistant's survey configuration.				

3. In the **Legacy fallbacks** or **Premium fallbacks** sections, activate one or more fallback options.

Activate legacy fallback options

ServiceNow Otto for Virtual Agent - TEST

Basic details
Agentic support
Search sources
Knowledge Graphs
MCP servers
Assets
Display experience
Branding
Chat features
Chat experience
Review

Customize your chat experience

Customize the types of messages that show to people in the chat experience.

Legacy messages Premium messages **Legacy fallbacks** Premium fallbacks

Customize the fallback messages that display in **standard** and **enhanced** chat experiences.

Record producer ☒

Record producer catalog item
Create a generic ticket

Button label
Create a generic ticket

Live agent ☒

Live agent topic
Live agent

Button label
Request a live chat

Web search ☒

Certain API features that process data via third-party providers may route traffic to a datacenter outside of your region or location for these API features. See KB2596322 for a list of th...
[Show more](#)

Button label
Search the web

Custom fallback ☒

Custom fallback topic
Now Assist - Capabilities

Button label
Custom fallback button

Fallback preview

Otto

I am not satisfied with your response

I'm sorry to hear that you're not satisfied with my response. Is there anything I can do to help?

Create a generic ticket Request a live chat Search the web Custom fallback button

Reply...

Back Save and continue

Activate premium fallback options

ServiceNow Otto for Virtual Agent - TEST

Basic details
Agentic support
Search sources
Knowledge Graphs
MCP servers
Assets
Display experience
Branding
Chat features
Chat experience
Review

Customize your chat experience

Customize the types of messages that show to people in the chat experience.

Legacy messages Premium messages Legacy fallbacks **Premium fallbacks**

Customize the fallback messages that display in **premium** chat experiences. (Examples: New employee center or Microsoft Teams).

Record producer ☒

Record producer catalog item *

Create a generic ticket

Button label *

Create a generic ticket

Live agent ☒

Live agent topic *

Live agent

Button label *

Request a live chat

Web search ☒ [Configure the API](#) ☐

☐ Enable web search in additional chat features to enable the web search fallback.

☒ Certain API features that process data via third-party providers may route traffic to a datacenter outside of your region or location for these API features. See KB2596322 for a list of third-party... [Show more](#)

Custom fallback ☒

Custom fallback topic *

Now Assist - Capabilities

Button label *

Custom fallback button

Back Save and continue

For premium fallbacks, web search fallback is dependent on your web search mode setting in [Enable additional chat features](#). If web search mode is turned off, web search fallback is unavailable (grayed out). If web search mode is turned on, web search fallback is available where you can turn it on or off.

Note: For ServiceNow Otto panel - Platform assistant, web search, record producer, and custom fallback are available options. End this chat and survey are available for the standard chat experience.

Live agent is not an available option.

Examples for when you might want to select more than one fallback option:

- To transfer a user to a live agent while also creating an incident record.
- To end a conversation while creating an incident report.
- To use a custom topic while having the live agent transfer option.

For premium chat, you can select a topic for fallback options.

- Route the user to an available agent by turning on **Live agent**. Selecting the **Live agent topic** field displays a drop-down for topics, and the text input is used for the fallback button in the assistant. The default **Live agent topic** is **Live Agent**. The default button label is **Request a live chat**.

If your instance doesn't have Live Agent configured, the **Live Agent** fallback option is unavailable. To configure Live agent, select the **Configure** link and navigate to **CI Admin console > Settings > Agent chat** tab. Use the default ServiceNow Otto Live Agent topic or select a topic.

- Provide the user with web search results by turning on **Web search**. The web search option is useful when the synthesized response can't generate answers. The **Web search** check box displays a text input that is used for the name of the fallback button in the assistant. The default button label is **Search the web**. The default web search provider is Google Gemini.

Warning: Certain API features that process data via third-party providers may route traffic to a datacenter outside of your region or location for these API features. See [KB2596322](#) for a list of third-party APIs. Please consider your organization's data policies before using this feature.

If the instance is self-hosted or regulated, the warning message won't be shown.

Note: For the premium chat experience, web search fallback requires web search mode to be turned on. To ensure that web search mode is turned on, see [Enable additional chat features](#).

- c. Direct the user to a record producer catalog item to create an incident or a case by turning on **Record producer**.

A **Record producer catalog item** field check box displays a drop-down where you can select a catalog item. The default record producer catalog item is **Create a generic ticket**. The button label default is **Create a generic ticket**.

Note: By default, Create a generic ticket is enabled for record producer premium fallbacks. If you want to customize your own record producer fallback, select an agentic catalog item from the drop-down list.

- d. End the chat between the user and the assistant by turning on **End this chat**. End this chat is a fallback option for the standard chat experience. For the enhanced chat experience, conversations don't end. The text input is used for the fallback button in the assistant, and the default text input is **End this chat**. The button label default is **End this chat**.
- e. Select a topic from the **Custom fallback topic** field by turning on **Custom fallback**. There isn't a default topic. The text input is used for the fallback button in the assistant. The default text input is **Custom fallback button**.

For more information about fallback options, see [Enhanced chat](#).

4. Select **Save and continue**.

What to do next

See [Review chat assistant settings](#).

Enable additional chat features

Add chat features to your chat assistant.

Before you begin

See [Brand and personalize an assistant](#).

Role required: virtual_agent_admin or admin

About this task

By default, all chat features, except web search mode, are turned on.

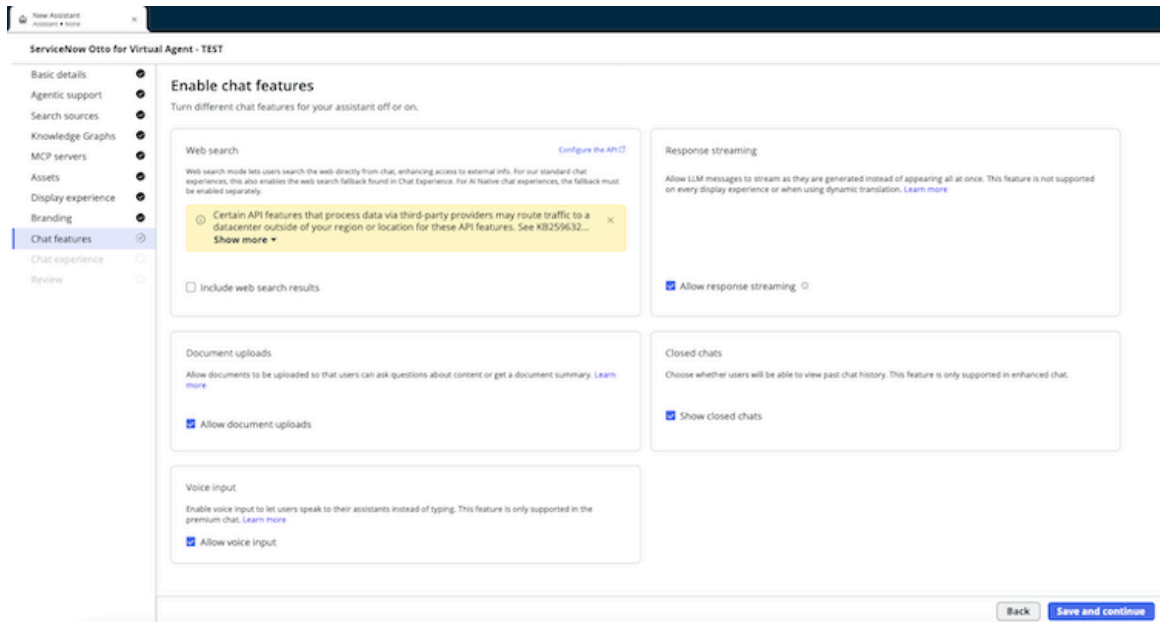
Note: For ServiceNow Otto panel - Developer assistant, only response streaming is available.

Procedure

1. **Allow web search** to let users switch to search the web directly from chat, enhancing access to external info.

Note: For premium chat, web search mode and web search fallback are dependent on one another. If web search mode is turned off, web search fallback is unavailable (grayed out). If web search mode is turned on, web search fallback is available, and can be turned on or off.

Additional chat features



Web search mode enables users to search the internet by selecting a globe icon within the chat window. The default web search provider, at the instance level, is Google Gemini.

Warning:

Certain API features that process data via third-party providers may route traffic to a data center outside of your region or location for these API features. See [KB2596322](#) for a list of third-party APIs. Please consider your organization's data policies before using this feature.

If the instance is self-hosted or regulated, the warning message won't be shown.

To change the web search provider, select **Configure the API** to bring you to the Admin LLM model-selection page.

- If you want to use AWS Anthropic as the web search provider, switch the instance-level LLM to Claude.
- If the instance LLM is selected as Now LLM Service, Azure OpenAI, or Google Gemini, Gemini will still be the web search provider.
- If you want to use Perplexity AI or Azure OpenAI as the web search provider, you'll need to perform a custom manual configuration. For more information, see [Manage model providers](#).

To change the LLM provider for ServiceNow Otto for Virtual Agent, select the AI agents skill group in AI Admin Hub. Navigate to **All > AI Admin Hub > Settings > Manage AI models > Manage model providers > Edit model provider > Customize**.

2. Allow response streaming for LLM messages to stream as they are generated instead of appearing all at once.

Response streaming is not supported on every display experience or when using Dynamic Translation. Streaming at the assistant level can be turned on regardless of whether Dynamic Translation is turned on or off. However, response streaming won't work when Dynamic Translation is turned on at the instance level.

Note: Dynamic Translation can be turned off in the AI Admin Hub. Turning off Dynamic Translation impacts the entire instance.

For more information, see [Chat streaming responses](#).

3. Allow document uploads so that users can ask questions about content or get a document summary.

For more information on file formats for uploading files to an assistant, see [Upload documents in a chat](#).

4. Show closed chats to allow users to view past chat history.

Closed chat is only supported in the enhanced chat experience.

5. Allow voice input so that users can speak to their assistant instead of typing.

- For ServiceNow Otto for Virtual Agent assistants, voice input is available for premium chat. For more information, see [Premium chat](#)
- For ServiceNow Otto panel – Platform assistant, voice input is available for standard, enhanced, and premium chat. Azure Speech Service is used for standard chat and enhanced chat and Cartesia for premium chat. For more information about voice input, see [Standard chat](#) , [Enhanced chat](#) , or [Premium chat](#) .

What to do next

See [Manage an assistant chat experience](#).

Review chat assistant settings

Review your chat assistant settings.

Before you begin

See [Manage an assistant chat experience](#).

Role required: virtual_agent_admin or admin

About this task

The configuration for each step is shown on the review page. You will need to **Save and activate** or **Save and close** your assistant to be able to test it.

Procedure

1. Review your assistant settings.

Note: Settings for ServiceNow Otto panel assistants differ from ServiceNow Otto for Virtual Agent assistants.

If a portal, messaging channel, or mobile app wasn't selected, the following alert appears at the top of the page.

Warning: Select at least one display experience in order to activate this assistant. You can still save the assistant and add a display experience later.

- a. Basic details** show the name of the assistant and the primary and secondary assistants that are linked.
- b. Search sources** show the search profile, the internal and external search sources, and any copied search configurations that have been added to the assistant.
- c. Knowledge Graphs** show the schemas that have been selected for the assistant.
- d. Assets** show the asset types that have been selected (topics, subflows and actions, AI agents, and custom skills).
- e. MCP servers** show which users can access Model Context Protocol (MCP)-provided capabilities through the assistant.
- f. Display experience** shows which portals, channels, or mobile apps are selected for your assistant.
- g. Branding** shows the type of branding that you have selected.
- h. Chat experience** shows your greeting, closing, and fallback options that are selected for your assistant.
- i. Additional chat features** show which chat features are turned on for your assistant.

2. Select **Save and activate** or **Save and close**.

What to do next

See [Test a chat assistant](#).

Test a chat assistant

Test your chat assistant.

Before you begin

See [Review chat assistant settings](#).

Role required: virtual_agent_admin or admin

About this task

It's important to test your assistant to simulate an end-to-end conversation before moving your experience into a production environment. Validate the user interface experience, agentic workflow results, and fallback options.

Procedure

Navigate to **All > Assistant Designer > Assistants** tab and select **Test** for the assistant you wish to test.

If selected portals only have the standard chat experience or only the enhanced chat experience enabled, the drop-down list doesn't appear. If both experience types are enabled, the drop-down list shows both of them.

Test a chat assistant from the Home page



The **Test** options reflect the assistant's configured display experiences. When multiple chat experience types are configured, a drop-down list appears with all available testing options. If only one chat experience type is configured, the drop-down list is not shown.

Testing a chat assistant can also be accessed when editing an assistant.

Test a chat assistant when editing an assistant



Note: If a display experience hasn't been configured, the test panel launches the enhanced chat experience.

Edit a chat assistant

Edit a chat assistant.

Before you begin

See [View assistants](#)

Role required: virtual_agent_admin or admin

About this task

When editing a chat assistant, actions may differ.

Actions that can be taken for default assistants

Default assistants	Activate	Deactivate	Edit	Test	Delete
ServiceNow Otto for Virtual Agent (default)	Yes	Yes	Yes	Yes	No
ServiceNow Otto - Platform (default)	Yes	Yes	Yes (except for name and description)	Yes	No
ServiceNow Otto panel - Developer	Yes	Yes	Yes (with limited configuration)	Yes	No
Employee Slate assistant (default)	Yes	Yes	Yes	Yes	No
ServiceNow Otto voice assistant (default)	Yes	Yes	Yes	No	No

Procedure

1. Navigate to **All > Assistant Designer**.
2. From the **Assistants** tab, select **Edit** for the assistant that you want to edit.

If you're only able to view an assistant and are unable to edit it, it's because you don't have permission to edit the assistant in a specific domain. For more information about assistants in different domains, see [View assistants](#).

Edit mode opens the assistant in a sub-tab where you can manage and test your chat assistant.

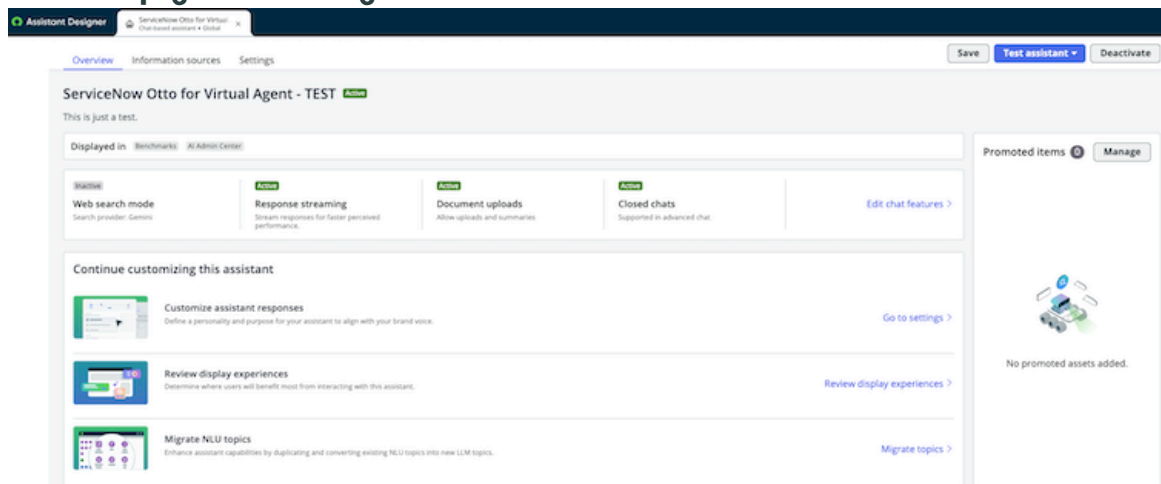
The sub-tab shows the assistant name and whether it's a chat or voice assistant.

The Overview page shows the following components:

- Assistant name
- Assistant status: active or inactive
- Assistant hierarchy: primary or secondary assistant. This section only appears if an assistant is set as a primary or secondary assistant.
- Assistant description
- Display experience
- Additional chat features: web search mode, response streaming, document uploads, closed chats, and voice input (for ServiceNow Otto panel - Platform assistant).

3. From the Overview page, select the appropriate button or link to make your edits.

Overview page when editing an assistant



The main action buttons include:

- **Save:** Saves updates made to the assistant configuration.
 - **Test assistant:** Test panel is an overlay. For more information about testing a chat assistant, see [Test a chat assistant](#).
 - **Activate/Deactivate:** Turn on or off an assistant. One or more display experiences must be selected to activate an assistant.
- To edit chat features, select the **Edit chat features** link. The **Settings > Additional chat features** page is displayed. For more information about web search mode, response streaming, document uploads, closed chats and voice input, see [Enable additional chat features](#).
 - Customize assistant settings by selecting **Go to settings** link. For more information, see [Create a chat assistant](#).
 - To add a display experience, select the **Go to display experiences** link. For more information, see [Display your assistant on a portal, channel, or mobile app](#). For ServiceNow Otto panel assistants, see [Display your assistant on Platform or ServiceNow Studio](#).

- d. To migrate NLU topics, select the **Migrate topics** link. The Topic Migration application opens a new browser tab. For more information, see [Migrate NLU topics to LLM topics](#).
 - e. To manage promoted assets, select the **Manage** button. The **Information sources > Promoted** page is displayed. All the assets that have been manually promoted for the assistant are shown.
4. From the **Information sources** tab, select the page that needs editing.

Edit information sources

Assign search sources

Use search sources to determine what the assistant looks at to answer user queries.

If this assistant will use the same search configuration as an existing assistant, you can copy it over instead of manually assigning information sources.

Restore default search sources Copy existing configuration

For portals or mobile experiences using enhanced chat, override portal/mobile search sources with these sources ☐

Search sources

Create or configure additional search sources in [External Content Connectors](#)

Manage knowledge articles in [Knowledge Center](#)

When "Include in AI responses" is marked true, search sources will be used to generate a direct answer instead of showing it as a link or card. Update this setting in [AI Search Admin Console](#)

Add search sources

Name	Indexed source	Conditions	Include in AI responses
Catalog items (default)	Catalog Item Table	Active = true .and. No search = true .and. Class = Wizard Launcher .and. Hide on Service Portal = ...	True
ESC Portal Catalogs	Catalog Item Table	Active = true .and. No search = true .and. Class = Wizard Launcher .and. Hide on Service Portal = ...	True
Knowledge base articles (default)	Knowledge Table	Knowledge base Active = true .and. Workflow = Published .and. Valid to >= 2026-07-22 .and. Active = ...	True

- In **Search sources**, assign search sources to a chat assistant. Search sources are used to determine what the assistant looks at to answer user queries. If there were any search configurations that were previously done, those configurations would remain. For more information, see [Assign search sources to a chat assistant](#).
- In **Knowledge Graphs**, edit your Knowledge Graph schema to represent semantic relationships in your data. For more information, see [Add a Knowledge Graph schema to a chat assistant](#).
- In **MCP servers**, manage the MCP servers that are assigned to an assistant. For more information, see .
- In **Suggestions**, view and edit your promoted items and prompts. Prompts help users ask better questions and get more accurate responses. Turn on the prompt library to allow users in the premium chat experience to create custom prompts and view and use predefined default prompts. Be sure to activate the ones that point people to useful actions and features they may otherwise miss. Activated prompts will appear in the prompt library modal.

Manage prompts

Prompt library

Create and manage prompts shown to end users in the premium chat experience.

Show the prompt tab in premium chat ☒

What is prompt library?

Search

Title	Prompt body	Created by	Categories	Department	Active
Summarize an event	What are the key highlights fr...	ServiceNow	Recap	General	☐
Compare pros and cons	Break down the pros and cons o...	ServiceNow	Explore	General	☐
Prepare for a meeting	Help me prepare for a meeting ...	ServiceNow	Plan	General	☐
Draft an agenda	Draft a simple agenda for a 30...	ServiceNow	Plan	General	☐
Explore trends	What are the latest developmen...	ServiceNow	Explore	General	☐
Explain a process	Explain how (Process) works in...	ServiceNow	Explore	General	☐

You can create, edit, or delete prompts in the prompt library. Default prompts are set to active and are shown as Created by ServiceNow. You can edit, delete, or set them to inactive. Default prompts are also added to newly created assistants.

- Title (optional): Give your prompt a short title that tells users what this prompt does at a glance. Having a short, scannable title will help them find and use your prompt.
- Description (optional): In your description, be sure to briefly explain when or why someone would use this prompt.
- Prompt body: Write the instruction the assistant will follow. Tips to consider:
 - Clear, specific prompts get better results.
 - Use [brackets] to add placeholders for variable inputs.
- Created by: The ServiceNow user who created the prompt record. Default prompts are shown as created by ServiceNow. They can be edited.
- Categories: Groups prompts by the task or use case they support (for example, explain a concept, find a policy, or write a summary). This field is currently read-only.
- Active: Toggle to turn each prompt on or off. Inactive prompts won't appear in the prompt library. Prompt library remains visible in Assistant Designer even if the feature toggle is turned off. Existing prompt records can still be managed.

For more information, see [Prompt library](#).

- In **Asset types**, add assets or migrate NLU topics. Assets are the building blocks of each assistant, providing them with instructions and functionality for helping users. They range from simple actions to complex AI agents. The **All assets** page shows the assets that are currently assigned to the assistant. For more information about the various assets such as topics, subflows, actions, custom skills, and AI agents, see [Add assets to a chat assistant](#).
- In **Asset visibility**, all assets that are assigned to the assistant are shown.
 - Discoverable: Discoverable assets can be found and used by your assistant when they match what a user says.
 - Visible: Visible assets appear when users select **Show me everything** in the assistant.
 - Promoted: Promoted assets give users quick access to your most helpful options. For ServiceNow Otto for Virtual Agent assistants, there is no limit to the number of assets that can be promoted.
 - The number of manually promoted assets is shown.
 - The assets that have been manually promoted are shown, including asset name, asset description, asset type, and the condition label.
 - The manually promoted assets can be reordered.
 - When a promoted asset is deleted by selecting the trash can icon, the asset is demoted from the assistant. The asset still exists within the assistant.
 - When you select **Add Assets** you can select an **Asset Type** from the drop-down menu and then select a specific existing asset. Select **Save** to promote the asset.

If an asset is promoted, and later it is set to inactive, the asset is not shown in the **Discoverable**, **Visible**, and **Promoted** lists.

5. From the **Settings** tab, select the page that needs editing.

Edit assistant settings

- In **Basic details**, you can edit the name and description of the assistant. Names can't be duplicative of another assistant. You can set your assistant as a primary assistant and link it to secondary assistants.

Note: For ServiceNow Otto panel Platform and Developer assistants, the basic details, such as name and description, can't be edited. For more information, see [Create a chat assistant](#).

- In **AI agent support**, you can prioritize AI agents during skills discovery. For more information, see [Use agentic support for a chat assistant](#).
- In **Display experiences**, you can select at least one portal, or integrate with your preferred messaging channels, to display your assistant. For more information, see [Display your assistant on a portal, channel, or mobile app](#).
- In **Branding**, configure branding for standard, enhanced, or premium chat experiences. For more information, see [Brand and personalize an assistant](#).
- In **Chat features**, by default, all chat experiences except web search, are turned on. For more information, see [Enable additional chat features](#).
- In **Chat experience**, you can edit your greeting and closing messages, and fallback options. When an instance is upgraded, your premium messages and premium fallbacks are pre-filled with your legacy messages and legacy fallbacks.

Note: Premium messages and premium fallbacks are only pre-filled with your legacy messages and legacy fallbacks upon an instance upgrade. After upgrading your instance, if you create an assistant that uses enhanced chat and later switch to premium chat, the legacy messages and legacy fallbacks from enhanced chat must be reconfigured in premium messages and premium fallbacks.

For more information, see [Manage an assistant chat experience](#).

- In **Response feedback**, when a user rates a response, a response feedback form appears. Configure the options so that users can share feedback regarding what worked about the response, or what needs improvement. For more information, see [Manage response feedback](#).

Manage response feedback

When a user rates a response, they may provide response feedback. Configure the options so that users can share feedback regarding what worked about the response, or what needs improvement. Managing response feedback is accessible when editing an assistant and not when creating a new assistant.

Before you begin

See [View assistants](#).

Role required: virtual_agent_admin or admin

About this task

Response feedback is available across all chat experiences except for ServiceNow Otto panel – Developer assistant.

Procedure

1. Navigate to **All > Assistant Designer > Assistants** tab.
2. Edit an assistant and select the **Settings** tab.
3. Select the **Response feedback** page.
By default, response feedback is turned off.
4. Turn on response feedback to configure the feedback form options.
Positive feedback and **Negative feedback** tabs are shown.

Positive feedback tab

The screenshot shows the 'Response feedback' settings for the 'Positive feedback' tab. The 'Enable response feedback' toggle is turned on. Below the toggle, there are five response options: 'It answered my question', 'It was easy to understand', 'The tone felt right', 'It was fast', and 'The images or media helped'. Each option has a pencil icon for editing and a trash icon for deletion. To the right, there is a 'Response feedback preview' section showing a preview of the feedback form with the same five options and a 'Submit Feedback' button.

Negative feedback tab

The screenshot shows the 'Response feedback' settings for the 'Negative feedback' tab. The 'Enable response feedback' toggle is turned on. Below the toggle, there are five response options: 'Missed important details', 'Included irrelevant details', 'Mixed up who said what', 'Put details in the wrong spot', and 'Made up things that didn't happen'. Each option has a pencil icon for editing and a trash icon for deletion. To the right, there is a 'Response feedback preview' section showing a preview of the feedback form with the same five options and a 'Submit Feedback' button.

- Use 2-5 response options in total. The **Other** option is excluded from the total count, and it is independent from the general comment field.
- The maximum character limit for each option is 70.
- Edit or delete an option using the pencil or trash icon.

The response feedback preview is dynamic, and all responses are reflected in the preview.

Create a voice assistant

Create an AI voice assistant to enable natural, conversational voice interactions between users and AI voice agents.

Before you begin

Role required: virtual_agent_admin or admin

Set up your preferred user identification and authentication methods to allow access to AI voice agents. See for more information.

About this task

An AI voice assistant enables natural, conversational voice interactions between users and AI voice agents. It uses speech-to-text (STT), large language model (LLM), and text-to-speech (TTS) to understand and respond to callers in real time. You can configure a voice assistant with personalized voice and welcome message, fallback options, and assign AI voice agents with specific AI instructions. The fallback options include live agent transfer and ticket creation, based on the origin of the call.

Procedure

- 1. Navigate to **All > Conversational Interfaces > Assistant Designer > Assistants** and select **Create assistant**.
- 2. Select **Voice-only** option in the Create an assistant window and select **Continue**.

Voice-only option in Create assistant

- 3. Add basic details of the assistant.

Basic details form

- a. On the form, fill in the fields.

Basic details form

Field	Description
Name	Name of the voice assistant. Provide a name according to the business outcome that the voice assistant targets. For example: HR Service Desk
Assistant instructions	Instructions that tell the assistant how to handle specific situations and topics during a call. These instructions apply to all AI voice agents within the assistant. AI turns your instructions into rules that the assistant follows. For example: "You are an HR assistant for . Your job is to help callers with PTO balance, timeoff requests, payroll queries."

Follow these guidelines for writing effective assistant instructions:

- Define the role:
 - State the assistant's role and department, and the topics it should help callers with.
 - Example: You are a [role] for [company/department]. Your job is to help callers with [topic/task].
- Set the voice pacing:
 - Describe how the assistant should pace its spoken responses.
 - Example: Speak in short, clear sentences. Pause between key points and avoid long strings of information.
- Define conditional scenarios:
 - Describe how the assistant should respond to specific situations.
 - Example: If a caller mentions a specific situation, for example, asks about a missing payment, describe what the assistant should do.

b. Select **Save and continue.**

You're directed to the Voice AI agents page.

4. Add one or more AI voice agents to the voice assistant by selecting **Add from library and select **Save and continue**.**

i Note: Adding AI agents is optional. If no AI agents are added, you can add them later by editing this assistant. The assistant will be inactive. Select **Add from library** to add an existing agent, or select **Create** to create a new one. See for more information.

5. Select language and voice persona.

Language and voice persona selection

a. Select the primary language your assistant will use for interacting with callers.

You can configure a primary language and any number of secondary languages. You can select from the following languages:

- English
- German
- Spanish
- Japanese
- Korean
- Dutch
- Brazilian Portuguese
- Italian
- Mandarin Simplified
- French

- Canadian French
- British English
- Mexican Spanish
- Thai
- Hindi
- Danish
- Russian
- Turkish
- Polish
- Swedish
- Norwegian
- Australian English
- Irish English
- Finnish
- Czech
- Slovakian
- Ukrainian
- Malay
- Canadian English

See [Multilingual support for voice assistants](#) for more information.

- b.** Enter an **Opening message** for callers to hear when the call starts.
The opening message always plays first, before any language selection. If you configure only one language, end the opening message with an intent question, for example, "Thank you for calling. How may I help you today?" because it's the only greeting callers hear. If you configure secondary languages, keep the opening message general instead, for example, "Thank you for calling. This call may be recorded for quality purposes."
- c.** On the **Welcome message** tab, add the message that plays immediately after the caller selects a language.
This tab only applies if you configure at least one secondary language. With a single language, no language selection occurs, and no welcome message plays. After secondary languages are configured, add a separate welcome message for each language. End each welcome message with an intent question, for example, "How may I help you today?"
- d. Optional:** In the **Language input selections** section, select how callers can choose a language during the call.

Language input selections section

Select **DTMF** (dual-tone multi-frequency) to allow callers to press a keypad number to select a language. Select **Voice** to allow callers to speak a language name. DTMF is the recommended option. You can only enable one option.

This section is available only when secondary languages are added. For additional settings such as defining retry and goodbye messages, select the **Advanced settings** hyperlink in this section.

- e. On the **Voice persona** tab, select a voice persona that best suits the conversational experience that you want to deliver through the voice assistant.

Voice persona tab

Preview the voice samples to determine the appropriate voice and tone. All AI voice agents connected to the voice assistants share the same voice.

- f. **Optional:** Select **+ Add language** to add secondary languages.
For each secondary language, select the corresponding voice persona on the **Voice persona** tab and add a welcome message on the **Welcome message** tab. When secondary languages are configured, callers are presented with a language selection prompt at the start of the call. The order of secondary languages determines the sequence in which options are presented to the caller during language selection.
- g. **Optional:** On the **Pronunciation dictionary** tab, add custom pronunciations for domain-specific or company-specific terms.

Pronunciation dictionary

Select **Add phoneme** and provide the word or phrase and its pronunciation in either phonetic spelling or phoneme format. Pronunciation entries are specific to the selected language and are applied during voice interactions.

- h. **Optional:** On the **Key term dictionary** tab, select **Add key term** and add a term that the STT engine might misinterpret, to help it transcribe more accurately.

Key term dictionary

Key terms improve STT accuracy for domain-specific vocabulary, such as product names or acronyms that the STT engine might otherwise mishear as a similar-sounding common word or phrase.

Results can vary based on audio quality, caller accent, and context.

Key term entries are specific to the selected language. You can add up to 30 key terms for each language.

Note: The key term dictionary is separate from the **Pronunciation dictionary**. Key terms improve STT recognition accuracy; pronunciation entries control TTS playback.

- i. Select **Save and continue**.
You're directed to the Communication channels page.

6. Set up communication channels for the user to interact with the assistant.

Select a **Provider application** to deploy this voice assistant to. This field is required for all communication channel types.

Configure at least one communication channel to activate the voice assistant.

Communication channels step

- a. Select the **Telephony provider** tab to connect the voice assistant to a phone network. Select a communication channel type from the **Communication channel** dropdown, then select a CCaaS provider and configure the required fields. For more information, see .
- b. Select the **Web Real-Time Communication (WebRTC)** tab to connect the voice assistant to mobile, web, and external applications.

Select **Mobile applications** to configure applications such as chat launcher functions, voice launcher functions, and prominent action button overrides. You can also configure external applications. For more information, see [Integrate voice assistant with mobile app voice launcher](#).

Select **Web applications** to configure the voice call widget on your Portal or . For more information, see .
- c. Select **Save and continue**.
You're directed to the Caller verification page.

7. Identify and authenticate the caller.

Authentication settings apply only to telephony provider communication channel. If you have selected only mobile communication channel, skip this step.

Caller identification and authentication method selection

Ensure the identification and authentication factors are configured at the platform level before you select them here. For more information, see .

To reload available factors from the platform-level configuration without leaving this page, select **Refresh configuration** at the top of the screen. If you have unsaved changes, a confirmation dialog appears before the refresh proceeds. Use this option when authentication factors or system properties have been updated outside Assistant Designer, as those changes are not reflected automatically.

- a. Select the method used to identify the caller when the call begins.

Caller identification determines who the caller is before any authentication occurs. The information provided by the caller is matched with system records to identify the caller. If you select the default phone number question, the system automatically matches the caller's registered phone number to the incoming caller ID from the telephony provider.

To change or remove an identification method, select **Remove** on the method card.

- b. **Optional:** Select the fallback method to identify the caller.
If the caller can't be uniquely identified through the primary method, the system automatically retries using the fallback method.
- c. Select the **First factor** and **Second factor** authentication methods to enable caller access to AI voice agents.

Caller authentication verifies the caller's identity before allowing access to AI voice agents that require authentication. Select a **First factor** and, when MFA is enabled, a **Second factor**. The option selected as the **First factor** is not available in the **Second factor** dropdown. To change or remove an authentication factor, select **Remove** on the factor card. The first and second factor can each be independently cleared.

Authentication factors

Factor	Description	Input method
Knowledge-based authentication (KBA)	Verifies the caller by asking security questions configured at the platform level. Supports both internal records and external sources. See for more information.	Voice or DTMF
Okta Verify push notification	Sends a push notification to the caller's registered Okta Verify app for approval. See for more information.	Approve on device
SMS verification code	Sends a one-time numeric code via SMS to the caller's registered phone number. See for more information.	Voice or DTMF
Authenticator app time-based One Time Password (TOTP)	The caller provides a time-based one-time password generated by an authenticator app. See for more information.	Voice or DTMF
Soft PIN	The caller provides a numeric PIN enrolled through . See for more information.	Voice or DTMF
Email one-time password (OTP)	Sends a one-time code to the caller's configured email address. See for more information.	Voice or DTMF

Numeric authentication factors such as SMS verification code, Authenticator app time-based One Time Password (TOTP), and Soft PIN support voice input. Callers can respond verbally instead of using the keypad. Voice input for each factor can be configured at platform level and scoped per voice service. See for more information.

- d. **Optional:** Enable the **Authenticate at the start of the call** option to prompt callers for authentication or identification details before the voice assistant responds to any request. When enabled, every caller is prompted to complete authentication or identification at the start of the call, regardless of which AI voice agent handles the interaction.
- e. In the **Advanced options** section, configure the authentication type and retry attempts.
 - **Authentication type:** Select **Multi-factor authentication (MFA)** to require callers to complete both a first and second factor before the system grants access. MFA is enabled by default. Select **Single factor** to require one verification method only. To enable single factor, set the `glide.voice.authenticate.mfa_mandatory` system property to `false`.
 - **Retry:** Set the number of authentication attempts callers get before the system routes them to a live agent. The default is 3 attempts.
- f. Select **Save and continue**.

If the configuration is incomplete or inconsistent, inline messages appear next to the relevant field.

You're directed to the Safeguards page.

8. Set up safeguards to create a secure and seamless experience for users interacting with the assistant.

Safeguards selection

- a. Set fallback options to route the call to a live agent or create a ticket.

When a voice agent cannot complete a user's request, the system determines the appropriate fallback behavior based on the call origin, for example, telephony provider or mobile channel.

- Telephony provider requires either connect to live agent or a record producer as fallback option.
- Mobile channel requires a record producer as fallback option.
- **Connect to live agent** option. When selected, this option redirects the caller to a live agent. You must set up live agent transfer for your telephony provider separately.

i Note: You can enable the **Capture details before live agent handoff** option, in which the voice agent prompts the caller to provide details in order to triage the call to the appropriate live agent.

- **Generate a ticket with record producer** option. When selected, this option creates a ticket for further tracking.

i Note: If you choose to use generating a ticket with record producer as the fallback option, you must keep the fields in the record producer simple and short to optimize the user experience for both the communication channels. For example, a short description, description, and an optional field for the callback number should suffice. You can also enable the **Require authentication** option, which restricts ticket creation to authenticated employees.

- b. Set the time limits for call duration and reprompting users after inactivity.

- Set Max call duration to trigger fallback behavior when the call reaches this limit. You can set up to 10 minutes.
- Set the duration of inactivity after which the user is reprompted for a response. If there's still no response, the call is disconnected. You can set up to 300 seconds. The default is 30 seconds.

- c. Select **Save and continue**.

You're directed to the Advanced settings page.

9. Configure advanced settings for the voice assistant.

Advanced settings let you configure supplementary features for the voice assistant.

- a. In the **Noise cancellation** section, select the level of background noise cancellation intensity.
Noise cancellation reduces background noise from the caller's side so the voice agent can better hear them. Select from the following levels:
- **Low:** Picks up even the quietest background noises. Use in quiet environments where background sounds such as TV or music may be present.
 - **Medium** (default): Picks up somewhat quiet background noises. Use in environments with moderate background noise, such as public places or areas with normal talking.
 - **High:** Picks up only the loudest background noises. Use in very noisy environments such as construction sites or areas with loud background speech.
- b. On the **Language and voice** tab, configure the messages played during language selection.

Language and voice settings

Field	Description
Retry message	Message played before each replay of the language selection prompt, up to three times.
Goodbye message	Message played after the maximum number of retry attempts is reached without a valid selection.

- c. Select **Save and continue**.
You're directed to the Review page.

10. Review your voice assistant configuration.

You can change the configuration later.

11. Select **Save and activate** to complete the configuration steps or review a previous step by selecting **Back**.
Activating the assistant also activates any inactive AI agents associated with it. The following conditions must be met in order to activate the assistant. If any of these conditions are not met, select **Save and close** to return later.
- At least one communication channel is selected (telephony provider or mobile channel)
 - At least one AI agent is associated with the assistant
 - If a telephony provider is enabled, authentication is set up and fallback is configured to either connect to a live agent or create a record producer.
 - If a mobile channel is enabled, fallback is configured to create a record producer.

What to do next

Test the execution of your AI voice agent by manually calling in the telephony number to see if the AI voice agent functions the way you defined it. Review the transcript and logs for troubleshooting and improving the conversational experience of users. See for information on the tables containing transcript and logs.

Test a voice assistant

Test your voice assistant and the AI voice agents assigned to the assistant from the Assistant Designer. You can make browser-based voice calls and view turn-by-turn analysis of AI voice agents invoked, tools executed, and tool execution latency during the conversation.

Before you begin

The following are required to access the voice testing experience:

- Conversational Studio v7 or later
- Zurich Patch 7 or later
- Microphone enabled on your device
- ServiceNow Otto for Virtual Agent version 20 or later

Roles required: sn_aia.admin and sn_voice_aia.admin

About this task

Use voice testing to evaluate how your voice assistant handles real conversations before deploying it.

- Voice mode: Initiate a call, speak to the assistant using your microphone. The assistant responds with synthesized speech.
- Chat mode: Type messages in a chat interface. This mode follows the same testing experience as chat assistants.

As the conversation progresses, the Analysis tab shows a turn-by-turn breakdown including timestamps, the agent or tool invoked for each utterance, tool execution latency, and tool status, helping you identify gaps and fine-tune behavior.

Procedure

1. Navigate to **All > Assistant Designer > Assistants** tab and select **Test** for the voice assistant you wish to test.

Note: You can test a voice assistant without activating it first. The **Test** button is disabled until at least one AI voice agent is added to the assistant. Hover over the button to see the reason it is disabled.

The voice testing interface opens in a new window. The window displays:

- Left panel: A drop down for testing mode with Voice and Chat options. Live transcription of the conversation along with the assistant greeting and input controls.
- Right panel: Assistant summary showing the assistant name, primary language and persona, secondary language and persona (if configured), and the Analysis tab.

Voice assistant test window

Testing mode: Voice



Start call



No active call

Transcript will appear here once a call starts

Employee Service Center

Restart

Primary language and persona
English (Southern Woman)

Secondary language and persona
German (Viktoria), Spanish (Fran)

Analysis



No analysis yet

An analysis of the conversation will appear soon.

2. Test your voice assistant.

- a. In voice mode, select **Start call** (green phone button) to begin voice-based testing. Your browser may prompt you to allow microphone access. Click **Allow** to proceed. The call connects using WebRTC (Web Real-Time Communication). A voice waveform animation indicates the connection is active.
- b. Speak to the assistant using your microphone. The assistant processes your speech and responds with synthesized voice output. The conversation transcript appears in the left panel.

Voice assistant testing in Voice mode

Testing mode: Voice

Transcript

Some answers generated by AI. Be sure to check for accuracy.

VA

Hi, I am your AI Assistant. How can I help you today? This call is recorded for quality purposes.

17:46:35

Hi. I'm unable to access the service portal. Can you help?

17:46:46

VA

Could you please specify what issue you are facing with accessing the service portal? For example, are you getting an error message or unable to log in?

17:46:48

unable to log in.

17:46:59

VA

Could you please tell me the name or describe the application for which you need

Some answers generated by AI. Be sure to check for accuracy.

Employee Service Center

Restart

Primary language and persona
English (Southern Woman)

Secondary language and persona
German (Viktoria) , Spanish (Fran)

Analysis

Voice Assistant

Ongoing

- Bot response 17:46:35
- Bot response 17:46:48 1.98 seconds
- Bot response 17:47:01 2.54 seconds
- Bot response 17:47:10 0.9 seconds

Password reset with voice AI agent

Ongoing

AI Voice Agent

- Bot response 17:47:18 8.23 seconds
- Tool - Get relevant knowledge articles 5.52 seconds
- Bot response 17:47:35 1.03 seconds
- Tool - Get relevant knowledge articles 0.47 seconds
- Bot response 17:47:37 2.15 seconds

c. Continue the conversation to test different scenarios and intents.

If the voice assistant is configured with multiple languages, test in each secondary language to verify that the assistant responds correctly and uses the expected voice persona for that language.

d. When finished, select **End call** (red phone button) to disconnect.

a. In chat mode, type your message in the **Reply** field at the bottom of the conversation panel. Text-based testing follows the same experience as testing chat assistants. You can view the chat transcription, AI agents invoked and tools executed.

b. Select the send button to submit your message. The assistant processes your text input and responds in the conversation panel.

Voice assistant testing in Chat mode

Testing mode: Chat

03:30

End

17:48:50

VA

Are you receiving any error messages when you try to access the service portal?

17:48:52

17:50:51

VA

Are you seeing any error messages when accessing the portal?

17:50:51

17:51:19

Unable to log in error. Please create a ticket.

17:51:19

17:51:22

VA

Please hold on while I get that sorted for you.

17:51:22

17:51:33

VA

Your issue with being unable to access the service portal and the "unable to log in" error has been logged in ticket number INC0010008. Is there anything else I can help you with today?

17:51:33

Some answers generated by AI. Be sure to check for accuracy.

Employee Service Center

Restart

Primary language and persona
English (Southern Woman)
Secondary language and persona
German (Viktoria), Spanish (Fran)

Switch to voice mode to measure voice response latency. Responses in chat mode may not reflect the delays of a voice call.

Analysis

Voice Assistant

Ongoing

Bot response 17:48:20
Bot response 17:48:35
Bot response 17:48:52
Bot response 17:50:51
Bot response 17:51:22

Create incident with voice AI agent

Ongoing

AI Voice Agent
Tool - Create incident flow action 8.52 seconds
Bot response 17:51:33

c. Continue the conversation to test different scenarios and intents.

3. Select the **Analysis** tab in the right panel to view real-time analysis.

The Analysis tab shows a turn-by-turn breakdown of the conversation. For each user utterance, the following details are displayed where applicable:

- **Timestamp** — the date and time of the utterance.
- **Agent name** — the name of the AI voice agent invoked, or voice assistant if no agent was invoked.
- **Response latency** — the time taken to generate the bot's response for that turn, including any tool calls made during the response.
- **Tool name** — the name of the tool invoked, where applicable. Expand a tool name to view:
 - **Tool inputs**
 - **Tool execution latency**
 - **Tool status** (success or failure)
 - **Tool response**

The Analysis tab displays a turn-by-turn breakdown of AI voice agents invoked, tools executed, and tool execution latency for the conversation.

4. Select **Restart** to start a new voice conversation or close the browser window to exit testing. Selecting **Restart** clears the current conversation and resets the testing session.

Result

You have tested your voice assistant using the voice testing interface. Use the analysis results to identify issues with agent routing, tool execution, or voice assistant performance, and refine your assistant configuration as needed.

Configure ServiceNow Otto in Conversational Catalog Request

Speed up and provide a conversational and streamlined experience based on generative AI while submitting a catalog item request in Virtual Agent. Your organization can increase self-service and reduce operating costs.

Before you begin

Role required: admin or catalog_admin, and flow_designer (to edit the subflow)

About this task

Generative AI capabilities are leveraged to provide a human-like and efficient catalog request experience over the Virtual Agent conversational interface. It reduces the turnaround time for the request submission.

When the generative AI experience is configured for catalog item request submission, the following experience is available for a requester:

- Contextual question prompts that enable a more human-like conversation based on answers to previous questions.
- Slot filling that recognizes answers to 1 or more questions on the requester's input. For example, if the search keyword is `I'd like to request for a Windows Virtual Machine with 1TB disk space` and if the catalog item has questions about operating system and hard disk space, then the requester doesn't have to answer these questions again.
- Ability to answer multiple catalog item questions at the same time.
- Multi-turn catalog ordering where requesters can change answers at any point. For example, while answering a question about a phone's memory size, the requester can mention about changing the phone model selected in the previous question.
- Validation of questions' answers.
- Ability to exit the request submission process at any point.

Note:

- Read-only questions, questions with pre-filled answers, and questions that are already answered in the requester's search keyword are skipped.
- Though the following catalog item question types are supported in the conversation mode, natural language responses aren't supported for them:
 - Attachment
 - Masked

Procedure

1. To configure the ServiceNow Otto for Virtual Agent application that installs the ServiceNow Otto in Conversational Catalog Request application, see [Assistants overview](#).
With this configuration, the `sn_now_assist_cr.llm.conversational.request.question.limit` system property value is set to 500 by default if that property wasn't edited earlier.
2. Enable the generative AI experience for a catalog item request submission in Virtual Agent.
 - a. Navigate to **All > Service Catalog > Catalog Definition > Maintain Items**.
 - b. Select a catalog item that must be requested in the conversation mode.
For information about catalog items that are supported in the conversation mode, see [Request catalog item through Now LLM](#) .

- c. On the catalog item form, confirm that the **Make the item non-conversational in VA** check box isn't selected.
- d. On the catalog item form, confirm that the **Turn off Now Assist (LLM)** check box isn't selected.
If you select this check box, LLM isn't used and the data isn't sent to LLM. The item might become non-conversational.

Note:

- If you want the catalog item non-conversational, then select the **Make the item non-conversational in VA** check box. But if the catalog item contains some sensitive information that you don't want to send to LLM, then select the **Turn off Now Assist (LLM)** check box.
- If you clear the **Make the item non-conversational in VA** check box, the item will become conversational only if all the conditions are met for making an item conversational. For more information about such conditions, see [Request catalog item through Now LLM](#).

- e. Select **Update**.

3. Confirm that the fallback record producer is configured in the **Fetch generic ticket producer for conversational catalog request subflow.**

In a few cases, when a requester is searching for a catalog item, AI Search might not be able to return any results. For example, when the catalog item isn't available or when the requester has no access to view the catalog item. In such cases, the fallback mechanism is activated for the Virtual Agent conversation. Virtual Agent tries to connect the requester to a live agent. If a live agent isn't available, then the **Create a generic ticket** record producer, which creates an incident to resolve the issue, is triggered.

- The **Fallback** topic controls the fallback mechanism. This topic triggers the record producer returned by the **Fetch generic ticket producer for conversational catalog request** subflow.
- This subflow returns the value of the `sn_nowassist_va.now.assist.generic.ticket.fallback.record.producer` property. By default, this property's value is the sys_id of the **Create a generic ticket** record producer.

Note: Both the `sn_nowassist_va.now.assist.generic.ticket.fallback.record.producer` property and the **Create a generic ticket** record producer are available in an instance when the ServiceNow Otto for Virtual Agent application is installed.

Additionally, you can customize the fallback process by configuring your own record producer or by building additional logic in a new subflow.

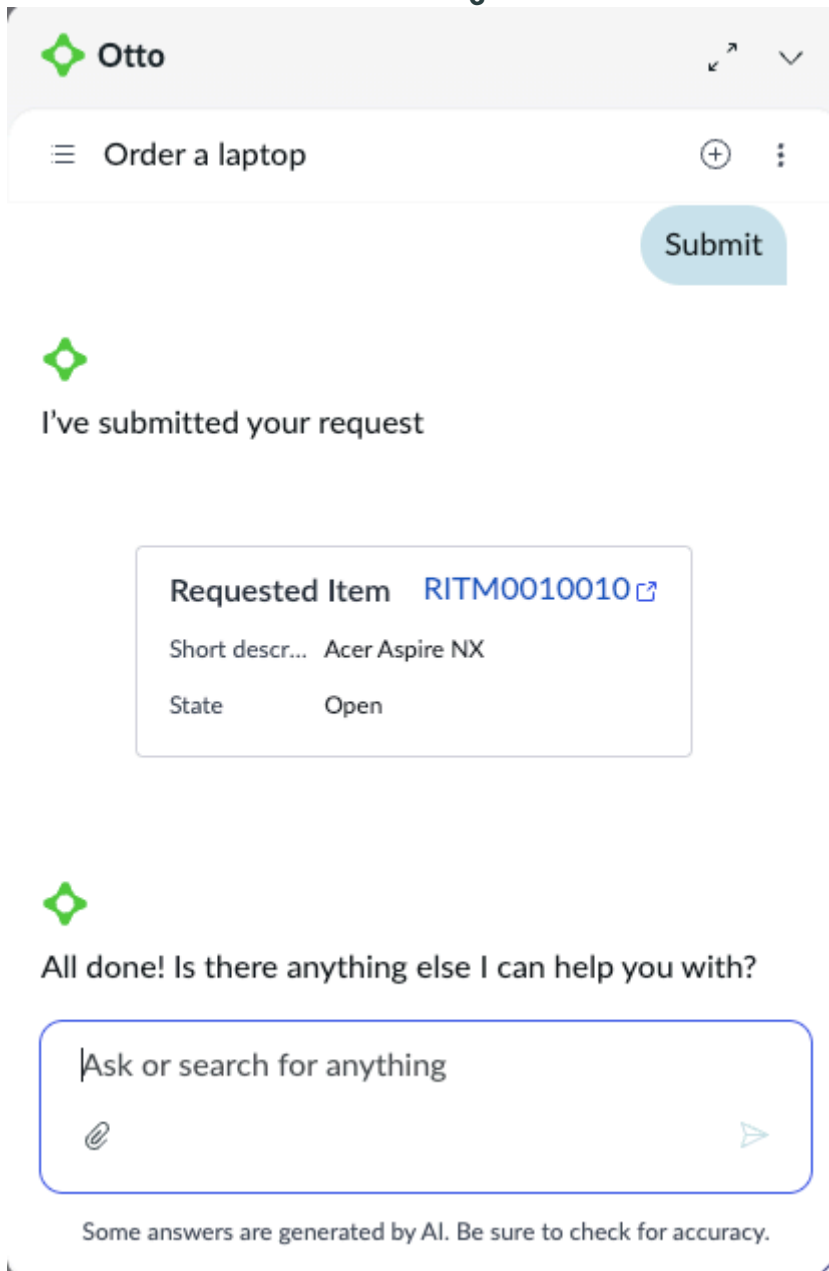
Option	Description
Configure your own record producer. For example, to change the inputs in a Virtual Agent conversation.	a. Navigate to sys_properties.list. b. Select the <code>sn_nowassist_va.now.assist.generic.ticket</code> property.

Option	Description
	c. In the Value field, enter the sys_id of the record producer that you want to refer to. d. Select Update.
Build additional logic in a new subflow. For example, to refer to a new record producer for each business.	a. Create a subflow to return the sys_id of a record producer. For information about Flow Designer subflows, see Building sub b. Navigate to sys_properties.list. c. Select the <code>sn_nowassist_va.now.assist.generic.ticket</code> property. d. In the Value field, enter the scope and internal name of the subflow. For example, global.subflow_name. Locate the Internal name field in the list of Flow Designer subflows. Note: By default, the value of this property is <code>sn_nowassist_va.fetch_generic_ticket_producer_for_conver</code> <code>sational_catalog_request</code>. e. Select Update.

4. Optional: Configure URL navigation settings to specify where the generated ticket link in the Virtual Agent chat opens, see [\(Legacy\) Configure URL navigation for chat links](#).

(Optional) For information about URL navigation in Virtual Agent, see [\(Legacy\) URL navigation in NLU](#). For information about Virtual Agent scripts, see [Virtual Agent scripts](#).

Generated ticket link in the Virtual Agent chat



The screenshot shows a chat window with the Otto logo. The input field contains the text "Order a laptop" and a "Submit" button. Below the input field, the Otto logo is displayed next to the text "I've submitted your request". A card displays the following information:

Requested Item	RITM0010010
Short descr...	Acer Aspire NX
State	Open

Below the card, the Otto logo is displayed next to the text "All done! Is there anything else I can help you with?". A text input field contains the placeholder text "Ask or search for anything" and a paperclip icon. Below the input field, the text "Some answers are generated by AI. Be sure to check for accuracy." is displayed.

Related topics

[Service Catalog topic blocks in Virtual Agent powered by NLU](#)

[Request catalog item through Now LLM](#)

Disable the org chart

Disable your organizational chart either for a particular deployment channel or for the instance.

Before you begin

Role required: admin

About this task

The org chart displays in the Virtual Agent's interactive view whenever you open a people citation's popover. You can disable the org chart so that it doesn't display as an option in the people citation's popover.

Procedure

1. Decide whether you want to disable the interactive view's org chart at the deployment level or instance level.
2. Choose one of the following scenario's and complete the steps.

Scenario	Steps
Disable the org chart at deployment channel level	a. Navigate to the M2M Canvas Configuration Deployment Channels table [m2m_canvas_configuration_deployment_channel.list]. b. Select New. c. Search and select the relevant deployment channel in the Deployment Channel field. d. Set the Canvas Configuration field to af3b113c3b0932102e3df80864e45a12. e. Clear the Active check box. f. Select Submit.
Disable the org chart at the instance level	a. Navigate to the Now Canvas Configuration table [sn_now_canvas_configuration.list]. b. Find the row with canvas ID set to sys_id=af3b113c3b0932102e3df80864e45a12, and then change the Active column from true to false.

Customize citation message

Inline citations are intended to show from which ServiceNow knowledge articles the response is generated. This can include information from attachments and knowledge blocks, or from external content such as Microsoft SharePoint and Confluence. Inline citations also appear when the user is presented with an action to perform, for example, within a Virtual Agent topic or a catalog item.

Before you begin

For more information about ServiceNow Otto for Virtual Agent citations, see [Using ServiceNow Otto for Virtual Agent](#).

Role required: admin

Procedure

1. To change the citation text within the **Sources** section of an LLM-generated message before auto-executing the first step in the action, navigate to **All > sys_cs_context_profile.list**.
2. Select an assistant.

3. In the **Custom Greetings and Setup Messages** tab, select **Starting "{0}"** to modify the LLM-generated message in the citation.

Customize the LLM-generated message in the citation

Help your users quickly find the topics they need by creating a chat experience that's tailored to a specific situation.

Name: Active: ☐ Order: Domain:

Model Type:

Provide the context:

Specify the situation where your user will get this chat experience.

Condition Mode:

Condition:

Behavior:

Update with Lens Update Delete

Setup Topics (0) Promoted Skills Search Mapping (0) Custom Greetings and Setup Messages (33)

Chat Experience - ServiceNow Otto for Virtual Agent - TEST

Message	Domain	Type
Custom fallback button	global	Custom fallback button
Request a live chat	global	AI live agent button
Unfortunately, I don't have an answer for...	global	User agent
Sorry, there was a problem on my side...	global	Error
OK, I'll go ahead and create a ticket for...	global	Record Production Feedback
Search the web	global	Web search button
Document Chat has started	global	Document Chat Start
Hi, I'm your AI assistant. How can I help?	global	Greeting guest
Thanks for chatting! I'll go ahead and...	global	Closing
Thank you for using our support chat.	global	AI closing
Hi, I'm your AI assistant. How can I help?	global	Greeting
Starting "{0}"	global	Self Start

4. Select **Update**.

Set up your ServiceNow Otto for Virtual Agent branding

Create different ServiceNow Otto for Virtual Agent branding configurations for the various organizations that use your instance. These configurations only apply to chat widget branding on portals.

Before you begin

For more information about ServiceNow Otto for Virtual Agent, see [Exploring Virtual Agent and Assistants overview](#).

Role required: virtual_agent_admin or admin

About this task

Create different chat widget branding configurations.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In the Display Options section, select **View All** next to **Branding**.
3. Select **New** to create a branding configuration or select **ServiceNow Otto for Virtual Agent** to update it.
4. To edit the settings, see [Set up your Virtual Agent bot's branding](#).

Theming for ServiceNow® Otto for Virtual Agent enhanced and premium chat

You can customize the look and feel of the ServiceNow® Otto for Virtual Agent enhanced and premium chat experience in your ServiceNow portal by updating the relevant Cascading Style Sheet (CSS) variables.

As a Virtual Agent admin or admin, you can customize the default enhanced and premium chat theming variables. Information on how to customize theming can be found in [Create a portal theme](#). Edit these variables in the following table within the CSS variables field (sp_theme) record. You can also configure these variables with a CSS Include associated with a portal's theme.

Note:

The chat header logo is shared between standard and enhanced chat, and it's determined by the selected standard chat branding profile. You can't configure a separate chat header logo for each experience. Updating the chat header logo in one experience updates it for the other. To view the branding profile, navigate to **Assistant Designer > Assistants > Branding**.

For the variables, `nass` refers to enhanced or premium chat.

For more information about enhanced chat, see [Enhanced chat](#). For more information about premium chat, see [Premium chat](#).

CSS variables for ServiceNow Otto for Virtual Agent enhanced chat

Variable	Description	Default Values
<code>\$now-sp-nass-agent-bubble-font-color</code>	Agent text message font color.	<code>\$text-color</code>
<code>\$now-sp-nass-chat-user-message-bubble-bg-color</code>	User text message bubble background color.	<code>\$brand-primary-lightest</code>
<code>\$now-sp-nass-user-bubble-font-color</code>	User text message font color.	<code>\$text-color</code>
<code>\$now-sp-nass-timestamp-color</code>	Timestamp text color.	<code>\$text-muted</code>
<code>\$now-sp-nass-secondary-text-color</code>	Secondary text color for example for Active.	<code>\$gray-dark</code>
<code>\$now-sp-nass-system-msg-text-color</code>	System message text color.	<code>\$text-muted</code>
<code>\$now-sp-nass-base-input-field-placeholder-and-highlight-text-color</code>	Input text color and with .45 opacity for placeholder.	<code>\$text-color</code>
<code>\$now-sp-nass-base-link-color</code>	Link color.	<code>\$brand-primary</code>
<code>\$now-sp-nass-color-secondary_2</code>	Now Design System secondary-2 color.	<code>\$brand-primary-darker</code>
<code>\$now-sp-nass-modeless-dialog-header-bg-color</code>	Background color for primary ServiceNow Otto header bar.	<code>#ffffff</code>
<code>\$now-sp-nass-modeless-dialog-header-text-color</code>	Text color for primary ServiceNow Otto header.	<code>\$text-color</code>
<code>\$now-sp-nass-base-toolbar-labels-and-icons-color</code>	Left-panel tool bar icons.	<code>\$gray-light</code>
<code>\$now-sp-nass-toolbar-icons-color--hover</code>	Left-panel tool bar icons in hover state.	<code>\$gray-dark</code>
<code>\$now-sp-nass-toolbar-icons-color--active</code>	Left-panel tool bar icons in active state.	<code>\$text-color</code>
<code>\$now-sp-nass-toolbar-icons-fullscreen-mode-color</code>	Left-panel tool bar icons in full-screen mode.	darken (<code>\$brand-primary-darker</code> , 15%)
<code>\$now-sp-nass-toolbar-icons-fullscreen-mode-color--active</code>	Left-panel tool bar icons in full-screen mode for active state.	<code>\$brand-primary-darker</code>
<code>\$now-sp-nass-window-control-icons-color</code>	Window controls icons.	<code>\$text-muted</code>

CSS variables for ServiceNow Otto for Virtual Agent enhanced chat (continued)

Variable	Description	Default Values
\$now-sp-nass-window-control-icons-color--hover	Window controls icons in hover state.	\$text-color
\$now-sp-nass-window-control-icons-color--active	Window controls icons in active state.	\$text-color
\$now-sp-nass-feedback-and-search-result-panel-color	Feedback panel and search result icon.	\$text-muted
\$now-sp-nass-feedback-and-search-result-panel-selected-color	Selected icon in feedback panel.	\$text-muted
\$now-sp-nass-action-and-kb-citation-color	Action and Knowledge Base link color	\$link-color
\$now-sp-nass-color-primary-0	Primary-0 for pills/primary buttons.	\$brand-primary-lightest
\$now-sp-nass-color-primary-2	Primary-2 for pills/primary buttons in active state.	\$brand-primary-darker
\$now-sp-nass-button-primary-bg-color	Submit button in choice picker control.	\$btn-primary-bg
\$now-sp-nass-button-primary-bg-active-color	Button primary active background color.	\$btn-primary-bg
\$now-sp-nass-button-selection-text-color	Now Design System secondary-1 color	\$brand-primary
\$now-sp-nass-tooltip-bg-color	Tooltip background color for input field icons.	\$tooltip-bg
\$now-sp-nass-tooltip-text-color	Tooltip text color for input field icons.	\$tooltip-color
\$now-sp-nass-alert-critical-color	Unread indicator color.	\$brand-danger
\$now-sp-nass-input-field-icon-color	Icon and attachment icon in the input field	\$text-muted
\$now-sp-nass-color-alert-moderate-3	Animated loading icon color.	#4345a6
\$now-sp-nass-body-bg	Body primary background color.	#ffffff
\$now-sp-nass-base-highlight-color	Background-color of matched text when searching emojis.	lighten (\$warning, 35%)
\$now-sp-nass-color-primary-3	Bare buttons color in active state.	darken (\$brand-primary-darker, 15%)
\$now-sp-nass-color-background-primary	Content background color.	#ffffff
\$now-sp-nass-header-panel-bg-color	Header panel background color.	#ffffff
\$now-sp-nass-button-bg-action-color	Image picker select button background color.	\$brand-primary

CSS variables for ServiceNow Otto for Virtual Agent enhanced chat (continued)

Variable	Description	Default Values
\$now-sp-nass-primary-button-action-text-color	Image picker select button color.	\$sp-btn-text-color
\$now-sp-nass-base-separator-color	Separator.	\$border-tertiary
\$now-sp-nass-chat-agent-message-bubble-bg-color	Agent message bubble background color.	\$gray-light
\$now-sp-nass-citation-badge-color	Citation badge color.	\$gray-lighter
\$now-sp-nass-divider-and-border-tertiary-color	Divider and border color of mid-topic switch in search results.	\$border-tertiary
\$now-sp-nass-highlight-value-tertiary-info-bg-color	Highlighted info value in the mid-topic card.	\$state-info-bg

CSS variables for ServiceNow Otto for Virtual Agent enhanced and premium chat

Variable	Description	Default Values
\$now-sp-nass-FAB-icon	Icon imagery that appears on the floating action button.	ai-sparkle-icon
\$now-sp-nass-FAB-gradient-color-1	First color of background gradient for chat floating action button icon.	\$now-actionable--primary-ai--background-color-gradient--start which is RGB (134, 246, 115)
\$now-sp-nass-FAB-gradient-color-2	Second color of background gradient for chat floating action button icon.	\$now-actionable--primary-ai--background-color-gradient--end which is RGB (113, 213, 254)
\$now-sp-nass-FAB-hover-bg-color	Solid background color for chat floating action button icon in hover state.	\$now-actionable--primary-ai--background-color-gradient--start which is RGB (134, 246, 115)
\$now-sp-nass-FAB-active-bg-color	Solid background color for chat floating action button icon in active state.	\$now-actionable--primary-ai--background-color-active which is RGB (125, 229, 107)
\$now-sp-nass-FAB-icon-color	Color of icon imagery that appears on the floating action button.	\$now-actionable_icon--primary-ai--color which is RGB (0, 79, 101)
\$now-sp-nass-FAB-focus-ring-color	Focus ring color around the chat floating action button in focus state.	\$now-color_focus-ring which is RGB (36, 138, 19)
\$now-sp-nass-FAB-icon-size-factor	Handles size of Image within the chat icon.	1

Build conversations in the Asset library in Assistant Designer

The Assistant Designer Asset library includes a diagram tool for creating and managing assets, which are blueprints for conversations between a Virtual Agent and a user. You can design topics that help your users resolve common work issues or guide them through self-service tasks.

Virtual Agent conversations are built using topics. When building an asset, there are various components (controls) that you can use to build the logic of a conversation, and the responses that the user sees.

Note: Depending on your license, you will have access to certain application features, generative AI skills, agentic workflows, and AI agents. For more information, see [ServiceNow product tiers](#).

You can also view and manage the following in Assistant Designer:

- Conversational subflows and actions for LLM-enabled conversations

Virtual Agent conversations can include subflows and actions if they were made conversational in Workflow Studio or topics that include subflows and actions through the Action utility node.

- Conversational subflows and actions are available in Assistant Designer only if ServiceNow Otto for Virtual Agent has been configured.
- Conversational subflows and actions are also shown in Assistant Designer Asset library if the ServiceNow Otto panel is available. For more information, see [ServiceNow Otto panel](#).
- Conversational subflows and actions only appear to users during a conversation if the subflows and actions skill is turned on in AI Admin Hub.

- Custom skills

You can view custom skills created in AI Skill Kit through Assistant Designer. For more information, see [Managing custom skills in Assistant Designer Asset library](#).

- AI agents

You can view AI agents created in AI Agent Studio through Assistant Designer. For more information, see [Managing AI agents in Assistant Designer](#).

Virtual Agent uses large language models (LLMs) to match the user's request with the appropriate conversation or topic.

With LLM topic discovery, you can use generative AI through ServiceNow Otto for Virtual Agent to match the user's request with the desired conversation or topic. With ServiceNow Otto for Virtual Agent, you can test and publish your models from within Assistant Designer. ServiceNow Otto for Virtual Agent uses LLMs and generative AI skills to improve deflection rates. For more information, see [LLM topic discovery in Virtual Agent](#).

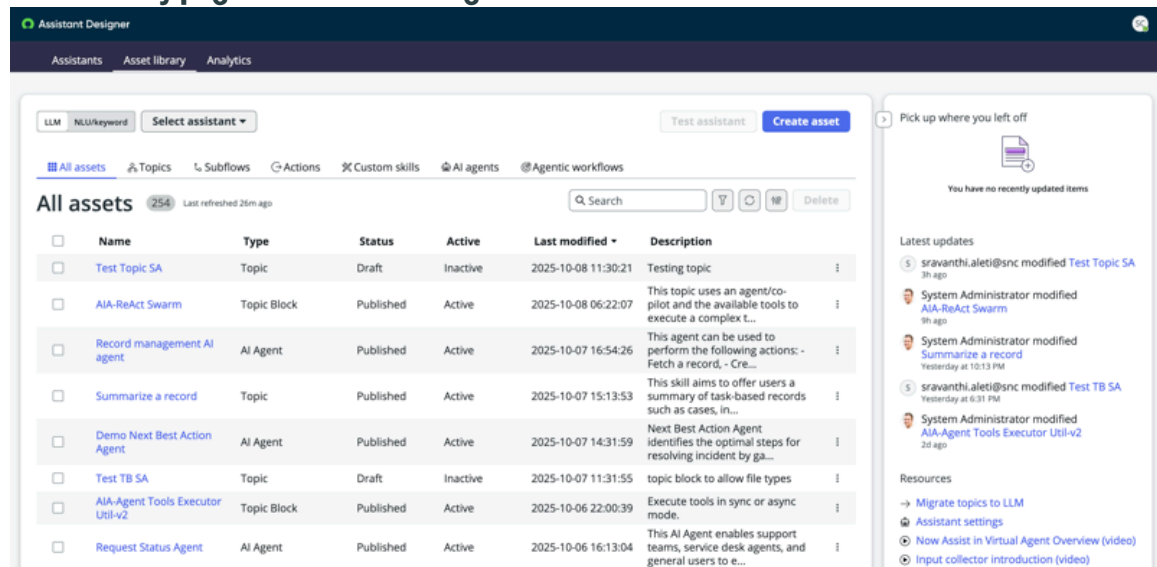
Using the Asset library

When you open Assistant Designer, the Asset library lists the assets in your instance. These assets include topics, topic blocks, setup topics, small talk topics, custom controls, subflows, actions, and AI agents.

Note: Along with small talk topics, you can also set small talk filters to redirect conversations based on unexpected user statements. For more information, see [Configure small talk filters](#).

In the Asset library, you can access and edit any of these assets, and create topics, topic blocks, setup topics, small talk topics, and custom controls.

Asset library page in Assistant Designer



Note:

- Conversational subflows and actions are available in Assistant Designer if ServiceNow Otto for Virtual Agent has been configured. Conversational subflows and actions are also shown in Assistant Designer if the ServiceNow Otto panel is available. For more information on the ServiceNow Otto panel, see [ServiceNow Otto panel](#).
- MCP Server capabilities that you add to an assistant are stored in the sys_gen_ai_skills table at run time, the same underlying table used for other conversational assets. But they don't appear as an asset in the Asset library. MCP Servers aren't treated as a conversational asset, so you can only view and manage them from within the Assistant create/edit flow, in their own dedicated section. Because they don't appear in the Asset library, you can't update their Discoverable, Visible, or Promoted status.

You can test and preview active topics to verify that they work as intended. You can also sort and search for topics. When you have many assets, use the search bar  and filter icon  to quickly organize and find your topics. For more information, see [Assistant Designer Asset library](#).

Each topic list entry identifies the asset and provides the following information by default:

Field	Description
Name	Name of the topic. Template topics also contain (Template) in the name.
Type	Topic types include Topic, Topic Block, Setup Topic, Small Talk, Custom Input Control, Custom Response Control, Subflows, and Actions.
Status	Status types include Draft, Modified (with unsaved changes), or Published.
Active	Whether the topic is active or inactive.
Last modified	Time (minutes, hours, days, or months) that the topic was last modified.

Field	Description
Description	Description of the topic. For topics, this field is created and updated on the Properties tab.

When you open a topic, a tab is displayed in the navigation header bar. The topic's name is shown on the tab, and a red dot appears if the topic has unsaved changes. Hover over the tab to view the scope in which the topic was created.



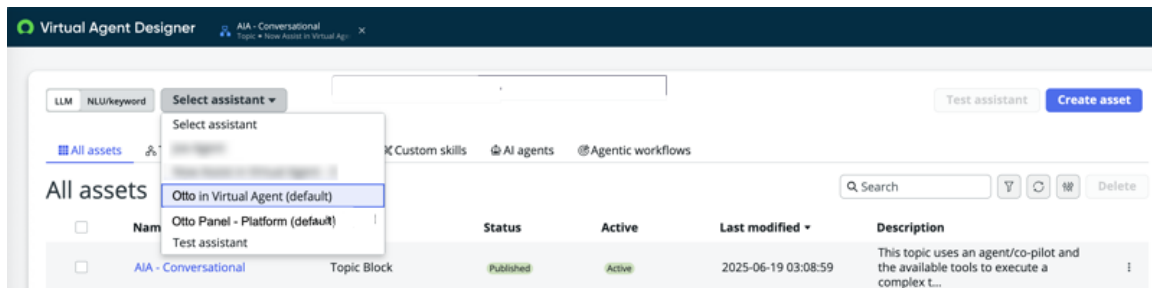
When you open a subflow or action, a tab is displayed in the navigation header bar. This tab opens the subflow or action in Workflow Studio within the Assistant Designer environment.

Assistants

For LLM topics, the **Select assistant** list enables you to filter the assets based on the LLM Virtual Agent (assistant) selected. By default the following assistants are available for Assistant Designer Asset library:

- ServiceNow Otto for Virtual Agent (default)
- ServiceNow Otto Panel - Platform (default)

For the ServiceNow Otto Panel - Platform (default) assistant, if you want AI agents to be Discoverable, Visible, or Promoted, set the **Value** field in the system property *sn_aia.enable_aiagents_discovery* to **True**. If the **Value** field is set to **False**, then AI agents can't be set as Discoverable, Visible, or Promoted.



You can create assistants from **Conversational interfaces > Assistants**. For more information about creating assistants, see [Create a chat assistant](#).

For more information about LLM assistants, see [Create LLM assistants](#).

Topic properties

Use the topic **Properties** tab to identify a Virtual Agent asset and how it's used.

Use the **Properties** tab to do the following:

- Specify the name and type of asset, such as [topic](#), [topic block](#), [custom control](#), and so on.
- Specify the purpose of the topic, and which assistants can run this topic for ServiceNow Otto customers.
- Control who uses the topic and [what channels it can run in](#).
- Associate [live agent variables](#) with a topic.

For more information, see [Topic Properties tab](#).

Topic flow

When you create or update a topic, topic block, or custom control, you build the conversation flow on the **Flow** tab. In the default view, the flow looks like a diagram. Use the controls for user inputs, bot responses, and utilities to define the flow. The status of the topic and NLU/Keyword model (if used) appears in the upper-right corner of the window.

The **Table View** option displays the nodes in your conversation flow as a table, rather than as a diagram. Each node is identified in a corresponding row in the table. You can add, change, or delete nodes using these table rows.

For example, instead of dragging controls and dropping them onto the canvas, you can select **Add new node** to insert a node into the appropriate row in the table. When you focus on a particular row (node), the corresponding property sheet for the node is displayed.

As you create or update your design, you might find it helpful to switch between the diagram view and the Table View using the **Table View** option. If your conversation contains many nodes, the Table View lets you review all the nodes in your conversation quickly. You can use the **Search table** option to quickly find a particular node or control.

Use the **Flow** tab to do the following:

- Design your topic flow. For more information, see [Design the flow of your topic](#).
- Add script variables. For more information, see [Define script variables for a topic](#).

For more information, see [Topic Flow tab](#).

Topic languages

The **Languages** tab displays the topic's translation status for languages that have been activated on the instance.

Use the **Languages** tab to do the following:

- View translation status for activated language plugins.
- Test your topic with a given language. For more information, see [View and test the topic in a specific language](#).

Designing a Virtual Agent topic

Walk through the design of an example Virtual Agent topic that enables users to view incidents they submitted. The example highlights the design controls that you can use to build the conversation flow.

Using Virtual Agent tools and features, you can develop conversations that address many issues that can be resolved without human intervention. After you become familiar with the product and its capabilities, your creativity is an important tool for developing conversations.

Create natural-language-based conversations with ServiceNow Otto. Virtual Agent uses large language models (LLMs) to improve conversation experience and self-service workflow success by using generative AI skills.

Getting started with conversation design

Use Assistant Designer topic creation controls and reusable conversational elements to create the dialogue for your conversations between Virtual Agent and the end user. Before you begin, make sure you do the following:

Identify the use case for a conversation.

Determine who uses a conversation topic and the goal, such as solving a user problem or assisting with a self-service task. Besides gathering key requirements for your topic, identify the information that you need from the user to complete the goal.

For example, you can review your support requests over time and other available metrics to determine common issues, use cases, and customer requests or goals. You can predict recurring requests or issues that a virtual agent could help with.

Determine the structure of a conversation.

As you think about your conversation flow, identify the direct path to resolution. Then consider alternative paths where the conversation might branch, depending on the information supplied by the user. Consider how to handle each branch and whether users might loop back to an earlier point in the conversation.

Conversations have a beginning (the greeting), a middle, and an end, which may include a survey or an incident number to follow up on. In the middle, consider how the user might need to switch topics, depending on the issue.

Consider whether to add or restrict any data collection from the user through means such as additional instructions to the LLM or customized slot-filling.

Consider setting small talk filters to redirect user statements in LLM conversations. For details on configuring small talk filters, see [Configure small talk filters](#) .

Understand the design process in Assistant Designer.

When you create a topic in Assistant Designer Asset library, the design process involves these basic steps:

1. Decide what use case the topic will address.
2. Create the topic and set properties that define the scope, the portal it will be published in, and the assistant to use. Add a detailed topic description to support discovery.
3. Build the conversation flow in Assistant Designer's Asset library topic flow tab.
4. Test and fine-tune the conversation flow.
5. Publish your topic.

The topic properties determine the different ways in which a topic is designed and used. For example, you can control who uses the topic and any conditions that affect how or when the topic is used. You can associate your topic with an LLM assistant to make the topic available to that assistant. You can also improve topic discovery for your LLM topic by using as much relevant detail as possible in the topic's description.

For details on the properties that you define for various assets, see [Creating a Virtual Agent topic](#), [Create a reusable topic block](#), and [Create a custom control](#).

Have knowledge in the following areas.

- General knowledge of the ServiceNow platform and application table structures.
- If you're using scripts in conversation design, an understanding of HTML, JavaScript, and REST integrations.

Plan the structure and purpose of a conversation

The first step in implementing a Virtual Agent topic is to decide what the topic covers. Consider the intended audience and what you want the audience to accomplish when using the conversation. The goal of this example topic is to create a flow that enables end users to see the status of incidents they submitted. The topic includes an option for the user to add a comment to the incident.

With this goal in mind, the topic requires the following elements:

- A prompt for the user to select an incident
- An output showing the status of the incident
- A prompt to ask if the user wants to leave a comment
- A utility control to branch the conversation on that answer
- A prompt for the user to enter a comment
- A utility control to add the user input as a comment in the incident

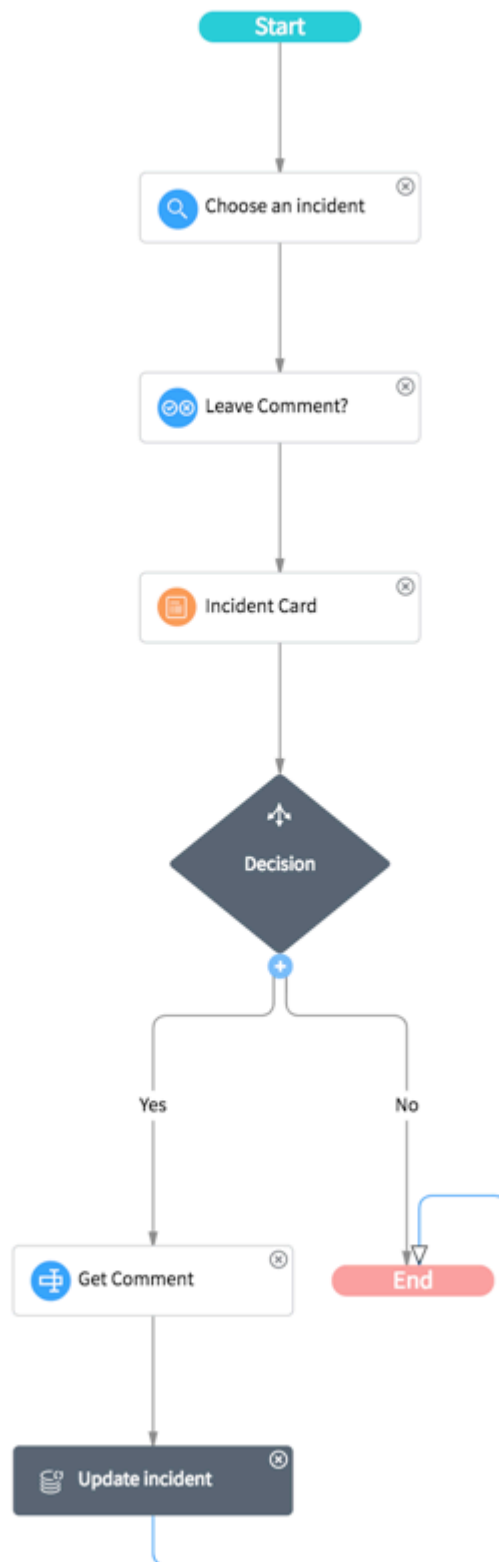
There are extra considerations when creating topics for LLM conversations. For guidelines on writing LLM instructions, see [LLM description and instruction guidelines for Virtual Agent topics](#) and [General guidelines for writing instructions for generative AI large language models \(LLMs\)](#) .

Build the conversation flow with Virtual Agent controls

The conversation looks similar to the following dialogue flow.

i Important: This flow is intended to give you a general idea of how a completed flow looks. Keep in mind that you build your topic incrementally and test it frequently, so it's not necessary to build the entire layout first. Make sure to consider both functionality and user experience in your testing.

Completed conversation flow



Configure controls within the conversation

This example begins with defining the conversation flow in Assistant Designer Asset library, after you set the topic properties. The conversation begins with a **Start** node and finishes with an **End** node.

1. In your Virtual Agent topic, add a **Dynamic Choice** control node to the conversation flow. Use this control to select the incident.
 - a. Enter `Choose an incident` for the **Node name** property. The variable name `choose_an_incident` is automatically generated for the control.
 - b. In the **Prompt** property, enter the text the user sees before selecting an incident. For example, `Please choose an incident record.`
 - c. In the **Populate choices by** property, select *Record*.
 - d. In the **Table** property, select *Incident* [*incident*].
 - e. In the **Filter choices** property, select the **Condition** option, and create a condition:
 - Active is true AND Assignment group is Hardware AND Category is Database
 - AND
 - State is New OR State is In Progress

Example condition builder

Assign Condition
✕

All of these conditions must be met

AND

OR

Active	is	☒	🗑️	⊖	or	and	
Assignment group	is	Hardware	✕	🗑️	⊖	or	and
Category	is	Database	✕	🗑️	⊖	or	and
and							
State	is	New	✕	🗑️	⊖	or	and
State	is	In Progress	✕	🗑️	⊖	or	and

or

New Criteria

Cancel

Save

2. Add a **Card** control to the flow. This control shows information from the record selected by the **Dynamic Choice** in the previous step.
 - a. Enter `Status Card` for the **Node name** property.
 - b. In the **Card type** property, select *Record*.
 - c. In the **Record** property, select *Choose an Incident*. This choice refers to the Dynamic Choice control created in the previous step, so the data displayed comes from the record chosen there.
 - d. In the **fields** control, select a field. The choices are the fields on the chosen record. In this case, you can see the fields on the incident table.
 - e. After you select a field, select the *Add Field* option to add more fields to the card. To delete fields from the card, select the delete icon for the field.
3. Add a **Boolean** control to the flow. Use this control to prompt the customer with a yes or no question. In this case, the control checks whether the user wants to leave a comment on the selected incident record.

- a. Enter `Leave Comment?` for the **Node name** property. The variable name `leave_comment_` is automatically generated for the control.
- b. In the **Prompt** property, enter the text the user sees before the prompt. For example, `Do you want to leave a comment for this incident?`
4. Add a *Decision* control to the flow. This control branches the conversation into two possible paths. The path the conversation follows depends on the choice the user made in the previous step.
 - a. There are no properties on the decision control; however, there are properties on the branches below the decision. By default, there is a single branch labeled *Always*. Select the plus icon at the bottom of the decision control. A second branch appears that is also labeled *Always*.
 - b. Select one of the branches to access the properties for this branch.
 - c. Change the name to `Leave Comment`.
 - d. In the condition property, select the **Condition** option and select the **Add Condition** button. Use the condition builder to create a condition as shown in the following screenshot.

If the value of the **Leave Comment?** variable is *true*, this condition is met. This variable comes from the Boolean control in the previous step. If the user selects *Yes* at that prompt, the conversation follows this branch.

- e. Select the other branch of the decision to access the properties for this branch.
- f. Change the name to `No Comment`.
- g. In the condition property, select the **Condition** option and select the **Add Condition** button. Use the condition builder to create a condition as shown in the following screenshot.

If the value of the **Leave Comment?** variable is *false*, this condition is met. This variable comes from the Boolean control in the previous step. If the user selects *No* at that prompt, the conversation follows this branch.

- h. One of the two branches you have created points to the **End** node of the conversation. The second branch should also lead to this node. Select the arrow at the bottom of that branch and drag it to the **End** node.
5. Add a **Text Input** control to the *Leave Comment* branch of the conversation. Use this control to request text input from the user.
 - a. Enter `Get Comment` for the **Node name** property. The variable name `get_comment` is automatically generated for the control.
 - b. In the **Prompt** property, enter the text the user sees before the prompt. For example, `Please enter your comment.`
 - c. Optionally, you can enter a value in the **Advanced > Confirmation messages > Input completion confirmation** property. This value appears after the user enters a comment.
 6. Add a **Record Action** control to the conversation below the *Get Comment* control. Use this control to add the text entered in the previous control as a comment on the selected incident.
 - a. Enter `Update Incident` for the **Node name** property.
 - b. In the **Action Type** property, select *Update a Record*.
 - c. In the **Record** property, select *Choose an Incident*. This choice refers to the *Dynamic Choice* control created in the previous step, so the record chosen there is the one that this Record Action control updates.
 - d. In the **Field** property, select *Add Field*. You can select and give values to fields from this record in the pop-up window that appears.

Field Values
✕

Additional comments ▼

+ Add Field Value

Input Variables → Get Comment ✕

🔍

⊖

Cancel

Save

- e. Select the *Additional Comments* field from the list.
- f. Select the data pill picker icon , and then select the *Get Comment* input variable from the list. This option refers to the value entered by the user in the **Text Input** control in the previous step.
- g. Select **Save**.

Test the conversation

Use the **Test** button to test the flow of the conversation. Preview topics often throughout the design process to find errors or unexpected behavior quickly. For further information on identifying and resolving issues with topics, see [Debug a Virtual Agent topic](#).

Creating a Virtual Agent topic

Use the Assistant Designer Asset library to create and modify Virtual Agent topics (conversations). Build your topic to meet a specific objective or goal, such as fulfilling a user's request or helping a user complete a task.

Before you begin

[https://player.vimeo.com/video/1011425825?](https://player.vimeo.com/video/1011425825?h=9a3dc725e1&badge=0&autoplay=0&player_id=0&app_id=58479)

[h=9a3dc725e1&badge=0&autoplay=0&player_id=0&app_id=58479](https://player.vimeo.com/video/1011425825?h=9a3dc725e1&badge=0&autoplay=0&player_id=0&app_id=58479)

Do the following:

- Review [Build conversations in the Asset library in Assistant Designer](#).
- Configure Virtual Agent settings. For example, if you're creating large language model (LLM) topics, turn on ServiceNow Otto for Virtual Agent. For more information, see [Assistants overview](#).
- Plan your conversation before you begin. For more information, see [Designing a Virtual Agent topic](#).
- Verify that you're in the appropriate application scope before you create or update a topic. For example, if you're creating ITSM topics, verify that you're in the **ITSM Virtual Agent Conversations** scope.

Role required: virtual_agent_admin or admin

About this task

The topic is in the Inactive state until you publish it. Publishing a topic changes the topic state to Active and automatically deploys the topic to your Virtual Agent clients.

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. Set the topic discovery toggle switch to **LLM**.
4. Select **Create asset**.

Assistant Designer

Assistants
Asset library
Testing
Analytics

LLM

NLU/keyword

Select assistant ▼

Test assistant

Create asset

All assets

Topics

Subflows

Actions

Custom skills

AI agents

More ▼

All assets
286
Last refreshed 1m ago

Q Search

Filter

Refresh

Reset

Delete

☐	Name ▼	Type	St...	A...	Last ...	Description
☐	Wrap-up and resolve incident	Agentic workflow	Published	Active	2026-05-13 02:24:10	This agentic workflow will wrap up the given incident and sets the incident stat...
☐	Web search fallback	Topic	Modified	Active	2026-07-14 11:58:26	Handle the fallback scenario where we call web search.
☐	Web search capability	Topic	Modified	Active	2026-07-14 08:53:05	Do web search for user queries

5. From the Create asset window, select **Topic**.

Important: Selecting any of the other topics in the window will open the create flow in the respective application.

Create asset



Each asset has its own creation workflow. After completing it, return to Assistant Studio to manage the asset and assign it to an assistant.

AI Agent

Uses prompts to LLMs to independently form thoughts and take actions on its own.

Examples *Categorize incidents* | *Notify users via Twilio* | *Generate post-incident reviews*

[AI Agent Studio](#)

Agentic workflow

Uses a group of AI agents that work together to independently solve problems.

Examples *Resolve a major incident* | *Generate resolution plans* | *Automate document Q&A*

[AI Agent Studio](#)

Custom skill

Uses prompts to large language models (LLMs) to interpret the language in users' requests and provide outputs when requested.

Examples *Summarize documents* | *Generate change request plans* | *Update ticket statuses*

[Now Assist Skill Kit](#)

Topic

Used to structure back and forth conversations between the virtual agent and the end user.

Examples *Check ticket status* | *Requesting a laptop* | *Fulfilling requests*

Subflow

Used for a limited set of steps that are part of a larger automated process.

Examples *Delegate roles* | *Verify user identity* | *Capture incident details*

Action

Used for a single, typically simple step or task.

6. On the form, fill in the fields.

For a description of the field values, see [Create a topic form](#).

7. After filling the topic creation form, select **Create**.

8. On the **Flow** tab, build the conversation flow.

Flow steps	Description
Add controls	To create the topic flow: - Select the controls for user inputs, bot responses, or utilities from the palette and drop them onto the canvas. When you add a control to the canvas, it becomes a node in the conversation flow. - For each node, complete the corresponding property sheet. In the topic header bar, select Save. The topic header bar displays a <i>Saving in progress...</i> message. The toast message <i>Successfully saved your topic</i> appears

Flow steps	Description
	in the lower-right corner afterward for 4 seconds, and can be closed by selecting the X in the message. For details about each control and the corresponding properties that you define, see User inputs, Bot responses, and Utilities. As you add controls, watch for a yellow warning badge or a red error badge in the corner of the control. The number on the badge indicates the number of issues in that control, such as missing mandatory information in the property sheet. (Highlighting a badge or the "Incomplete" banner at the top of the property sheet details the items in need of correction.)
Move a node	Select the node, drag it to the new location in the flow, and Select Save .
Delete a node	Select the X in the upper right corner of the node. In the topic header bar, select Save. The topic header bar displays a <code>Saving in progress . . .</code> message. The toast message <code>Successfully saved your topic</code> appears in the lower-right corner afterward for 4 seconds, and can be closed by selecting the X in the message. Note: You can't delete a node that has a script variable used by subsequent JavaScript expressions in the flow. Also, you can delete a decision node only when it has a single branch.

9. Select **Test in the header bar to test your topic in a chat window.**

You can review test results in the adjoining tabs. For detailed information, see [Testing LLM topics](#).

If the ServiceNow Otto panel, Microsoft Teams application, or Slack application is configured for your environment, preview options for those channels are displayed in the Test button list. Select **Preview in Otto panel** or **Preview in Microsoft Teams** in the list to test your topic in those environments. For more information, see [Integrating Virtual Agent with messaging apps](#).

10. When you're finished with the topic, select **Save in the topic header bar.**

The topic is in the Inactive state until you publish it.

The topic header bar displays a `Saving in progress . . .` message. The toast message `Successfully saved your topic` appears in the lower-right corner afterward for four seconds, and can be closed by selecting the **X** in the message.

What to do next

[Publish](#) the topic to deploy the topic to your Virtual Agent clients. The topic state changes to Active.

If you created a topic that might be frequently used in certain contexts (environments), consider promoting the topic as part of the [default or custom chat experience](#).

Branch a Virtual Agent conversation with a Decision utility

Your conversations may need to branch depending on end user input or choices. Use the Decision utility to branch the conversation when certain conditions are met.

Before you begin

For more information about the Decision utility, see [Decision utility](#).

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. Open a topic and view the **Flow** tab.
4. Drag the **Decision** utility onto the canvas.

The **Decision** utility node added to the canvas has a single branch named **Always** by default.

Note: If you insert a **Boolean** user input control, you're prompted to add a **Decision** utility directly after the Boolean node on the canvas. Selecting **Yes** on the Boolean node's Decision utility prompt automatically generates two branches named *True* and *False*. The two branches conditions are automatically set through the condition builder.

5. Select the plus sign (+) under the node.
A second branch named **Always** is added below the Decision utility node.
6. Select the plus sign (+) under the node to add additional branches.
7. Select a branch label, and then specify the branch properties in the form.

Field	Description
Name	Unique name for the branch.
Condition	Expression logic to specify a condition for following this branch in the conversation. The condition must evaluate to true. ○ Condition: Use the Condition builder to add or edit conditions. ○ Script: Use the script editor to create or edit a script that contains a condition statement.

8. Define the properties for each branch in the Decision utility.
9. When you're finished with the topic, Select **Save** in the topic header bar.

Insert a header card in a Static Choice or Dynamic Choice control

When you create a Virtual Agent topic, you can include images and YouTube videos on Static Choice and Dynamic Choice user input controls.

Before you begin

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. Open a topic or [create a new one](#).
4. On the Flow tab, drag a Static Choice or a Dynamic Choice user input control onto the canvas.
5. On the Properties sheet, go to **Advanced (optional)**, and then expand the **Header card** section.
6. Slide the **Insert** toggle switch to enable it.

Insert a header card

Advanced (optional)

Header card ^

Add cards which may include images or YouTube videos

Insert ?

☒

* Would you like help:

☒ Yes ☐ No, I will use Script

+ Add card

7. Under *Would you like help?*, select either **Yes** or **No, I will use a script**.

- If you selected **Yes**, select **Add card** and complete the following form fields.

Add card dialog box

Field	Description
Card type	Type of header card: ▪ Large image with text ▪ Small image with text ▪ Youtube Video Card The fields in the dialog box change according to your choice.
Title	Image or video title. You can enter it directly in the text field or use a data pill or script to provide the value.
Title Link	The URL to use for the video title hyperlink. You can enter it directly in the text field or use a data pill or script to provide the value. If this field is empty, the title displays as plain text. This field is only available for the YouTube video card option.
Description	Brief description of the image or video.
Image URL Link	URL link for the image. You can enter it directly in the text field or use a data pill or script to provide the value. You can also select Upload Image to upload the image. This field is only available for the large and small image card options.
Image alt text	Alternative, screen-readable text that describes the image. It's used for accessibility programs. This field is only available for the large and small image card options.
Youtube Video ID	The alphanumeric string at the end of the YouTube URL. For example, in the URL <code>https://www.youtube.com/watch?v=AacDp2mUQ1I</code> the YouTube video ID is <code>AacDp2mUQ1I</code> .

Field	Description
	This field is only available for the YouTube video card option.

- If you selected **No, I will use Script**, select **Add script** to input a script to display your desired media, following the example in the script dialog box.

```
function() {
    /*
        var cardName = "Large image with text";
        var cardData = {
            title: 'Choose color',
            description: 'choose the right color of the
flowers in the image',
            image:
'https://homepages.cae.wisc.edu/~ece533/images/tulips.png',
            imageAlt: 'Choose color'
        }
        var template = "";
        if (vaSystem.isAMBCClient(vaContext.deviceType))
            template =
vaSystem.fillTemplateFromData(cardName,
JSON.stringify(cardData));
        return {
            cardTemplate: template,
            cardName: cardName,
            cardData: JSON.stringify(cardData),
            renderStyle: "card"
        };
    */
}
```

8. Select **Save**.

Define script variables for a topic

Use the Variables sidebar to define script variables for a topic. Script variables can store information that is not found in ServiceNow tables. This information can then be shared elsewhere in a topic.

Before you begin

Role required: virtual_agent_admin or admin

About this task

For more information about writing scripts for Virtual Agent, see [Virtual Agent scripts](#).

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. On the home page, open an existing topic or create a new one.
The **Flow** tab displays the conversation flow.
4. In the sidebar, select the Variables tab, then select the **Script** plus icon .
5. On the form, fill in the fields.

Add Script Variable dialog box

Field	Description
Variable name	Name of the variable. The name is case-sensitive. Spaces in the name are replaced with an underscore character.
Default value	Default value for the variable. You can use either a static value or a script that specifies a dynamic value for this variable.

6. Select **Save.****Create a small talk topic**

Build small talk topics that let Virtual Agent engage in casual conversation with users. A small talk topic provides a response to a casual question that users might ask during a conversation, such as the time or date. A small talk topic can occur anytime within a conversation session and can be unrelated to the original conversation intent.

Before you begin

Familiarize yourself with LLM descriptions and instructions. For more information, see [LLM description and instruction guidelines for Virtual Agent topics](#).

Role required: virtual_agent_admin or admin

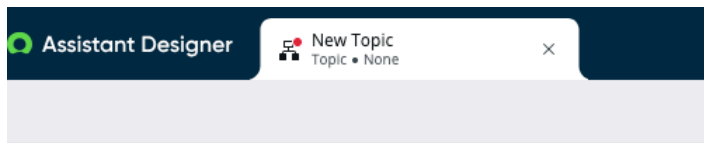
About this task

Small talk topics are conversations that diverge from the original bot conversation, usually to provide answers or information to casual questions that end users might ask. For example, you can create small talk topics that provide the current weather or time of day. When users engage with the bot through a small talk topic, they can return to the original conversation topic.

Note: If you have activated ServiceNow Otto for Virtual Agent, you can also create small talk filters to redirect the conversation if needed. For more information, see [Configure small talk filters](#).

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. In the Asset library, select **Create asset**.
4. In the create a topic form, select **Small Talk** from the **Type** drop-down menu.



Create a small talk topic

Enter properties. [Learn about designing topics.](#)

Basic properties

* Application scope ⓘ

Global



Model Type ⓘ

LLM



* Type

Small Talk



* Internal name ⓘ

Enter a unique name

* Display name ⓘ

Enter a unique name

5. Follow the steps for [creating a topic](#).

When you complete your small talk topic, remember to publish it when you're ready to deploy it to your Virtual Agent clients.

Control topic discovery and visibility

Administrators and topic authors can enable Virtual Agent to discover topics for use in chats, include a topic in the list users see, or both. The topics can be setup topics and small talk topics.

Before you begin

Role required: virtual_agent_admin or admin

About this task

Assistant Designer Asset library includes discovery and visibility options when you select the

Show actions for this row icon ⓘ next to each asset in the Asset library. You must select an assistant first.

Visibility

Promoted

Discoverable

Visible

✓ Active

Other actions

Conversational settings

Remove from assistant

Delete

Use these options to manage the active topics as follows:

- Include the topic in topic discovery.

If an asset is selected as **Discoverable**, it's invoked when matched with the user's utterance.

Note: If these methods don't generate search results, or Virtual Agent can't determine the appropriate conversation to display, use [AI Search](#) as a fall-back method.

- Include the topic in the list of topics available for use.

If an asset is selected as **Visible**, it appears whenever the **Show me everything** option is selected in the conversation.

The options you select automatically update the corresponding property in the Topics [sys_cs_topic] table. For example, if you have enabled **Discoverable**, the **Visible** property in the Topics [sys_cs_topic] table is set to true.

Topics							
Name		Search		Actions on selected rows...		New	
All							
☐	Name	Active	Applicability	Is Topic Discoverable	Is Topic Visible	CB Topic Id	Channels
Add Comments-Similar Incident		true	true	false	false	Add Comments-Similar Incident	

Note: If the fields aren't visible, you can [configure the form layout](#) to show them.

Procedure

1. [Create a Virtual Agent topic](#).

2. Set the topic to **Active** either in the topic properties header bar, or in the Show actions for this row icon () next to your topic in the Asset library.

Note: Selecting this option also publishes the topic.

3. Select the options you want to use, or accept the default settings.
Some options are enabled or disabled by default, based on the type of topic.

Default settings by topic

	Options	
	Discoverable	Visible
Topics	Enabled	Enabled
Setup topics	Disabled	Enabled
Small talk topics	Disabled	Enabled

- Optional:** Test the topic by selecting **Test** in the topic header bar, or using the **Test assistant** drop-down menu in the Asset library after associating your topic with an assistant.

Note: Associate your topic with one or more assistants before testing, under the **Conversational settings** option.

Related topics

[Conversational settings for assets in the Asset library](#)

Duplicating a Virtual Agent topic

Create a topic or topic block by copying an existing Virtual Agent topic or topic block and customize it.

Before you begin

Role required: virtual_agent_admin or admin

About this task

Consider duplicating topics in the following scenarios:

- When you want to use an existing topic, such as a prebuilt topic or topic block, as the basis for a new topic or topic block.
- When you want to modify an active topic while preserving the original topic for reference purposes or as a backup.

Procedure

- Navigate to **All > Conversational Interfaces > Assistant Designer**.
- Select the **Asset library** tab.
- Open the topic you want to duplicate.
- In the topic header bar, select the more actions on topics icon , then select **Duplicate**.
 - In the Duplicate window, enter the new name for the item.
 - Select **Save**.
- Update the properties on the **Properties** tab and on the **Flow** tab, change the conversation flow design as needed.

Note: Keep in mind the goal or purpose of your new topic as you set the properties and update the flow. For example, you might need to select one or more LLM assistants.

Topic and topic block duplication

If you're duplicating	See this section
Topics	See Creating a Virtual Agent topic for a description of the topic properties that you can change and how to add or change the nodes in the flow.
Topic blocks	See Create a reusable topic block for a description of the topic block properties that you set and the input and output parameters that you define for the block.

6. As you update your design, use the **Test** option to run your design in a chat test window, then fine-tune your design flow accordingly.

For more information, see [Testing LLM topics](#).

What to do next

If you've completed the topic or topic block, [publish](#) it to deploy it to your Virtual Agent clients.

Publish a Virtual Agent topic

Deploy an inactive topic or an updated topic to save it and make it available to users on Virtual Agent clients.

Before you begin

Role required: virtual_agent_admin or admin

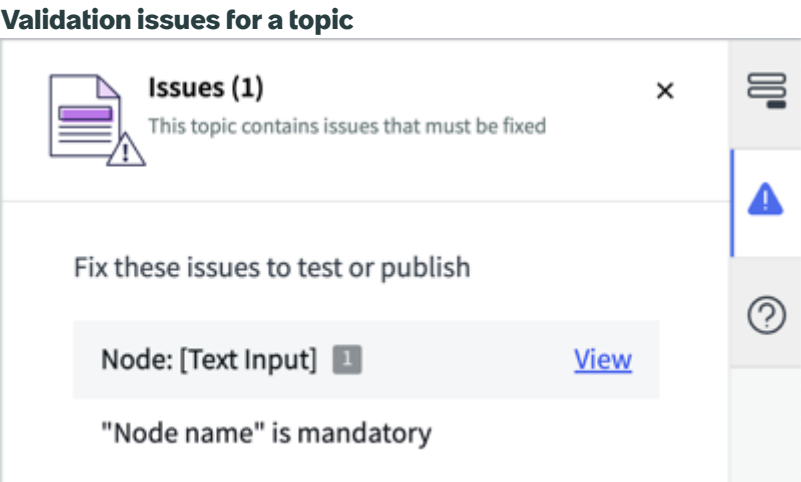
About this task

You can also publish topic blocks and custom controls to make them available for use in calling topics.

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. Select the topic, topic block, or custom control to publish or republish.
4. In the topic header bar, select **Publish**.

Selecting **Publish** when there are issues present opens a Validation Issues tab next to the property sheet, which counts up and details all issues needing correction. These details include a hyperlink for each incomplete item. If the issue is in a node, selecting the hyperlink opens the property sheet for that node. As each issue is resolved, the list on the shelf updates to show the remaining errors. Once there are no issues to resolve, the publishing dialog box opens.



The topic header bar displays a `Saving in progress...` message. The toast message `Successfully saved your topic` appears in the lower-right corner afterward for four seconds, and can be closed by selecting the **X** in the message.

For topics, the topic state is `Active` and the `Published` state changes to `Published just now`.

5. Verify that your topics work as expected by opening them in a test conversation window in one of the following ways.

Option	Description
Topic Flow or Properties tab	Select Test .
Asset library page	Under the Select assistant drop-down menu, choose the assistant associated with your topic, and then select Test assistant .

For more information about testing ServiceNow Otto LLM topics, see [Testing LLM topics](#).

Result

The topic blocks and custom controls are published and are available for use in calling topics.

Note: Active topics, including setup topics and small talk topics, can also be available for use after the topics are published. For more information, see [Control topic discovery and visibility](#).

Delete a Virtual Agent topic

Delete a Virtual Agent topic that is no longer needed.

Before you begin

Role required: `virtual_agent_admin` or `admin`

About this task

You can delete a topic using the **Delete** option in the Assistant Designer Asset library or in the header bar for the topic.

Note:

Sometimes, certain categories of topics can't be deleted, such as the Greeting, Survey, Live Agent, Error, Explore help, and Closing setup topics. Delete option is disabled for subflows, actions, and custom skills.

If you want to remove a topic from your Virtual Agent clients but don't want to delete it, consider making the topic inactive instead.

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. Use one of the following methods based on either a record on the home page or the header inside a topic.

Method	Description
Asset library - single topic	Select the show actions for this row icon  on the row for the topic that you want to delete, then select Delete .
Asset library - multiple topics	a. Select the topics that you want to delete. b. Select Delete. Note: If one or more of the selected assets are subflows or actions, the delete option is disabled.
Topic header bar	a. Select a Topic record to open the topic. b. Select the topic actions icon , then select Delete.

4. In the Confirm delete dialog box, select **Delete**.
The tab closes and returns you to the home page.

Result

A toast message also appears for 4 seconds, confirming the topic has been deleted. You can close the message by selecting the dismiss alert icon .

If the topic was active and is no longer listed in the home page, the topic is immediately removed from Virtual Agent clients.

Promote or demote LLM conversational subflows, actions, and topics in Assistant Designer

You can promote assets, including conversational subflows, conversational actions, and topics, after associating them with an assistant.

Before you begin

Associate a Virtual Agent topic, conversational subflow, or conversational action with an assistant. For more information, see the following:

- [Creating a Virtual Agent topic](#)
- [Managing conversational subflows in Assistant Designer](#)
- [Managing conversational actions in Assistant Designer](#)

Role required: virtual_agent_admin or admin

About this task

After you associate a conversational subflow, conversational action, or topic with an assistant, you can promote the asset so that the LLM assistant suggests it to users. Promoted assets can also be demoted to remove them from the list of suggested assets.

System topics, setup topics, topic blocks, custom controls, and small talk topics can't be promoted.

For promotion controls for AI assets, you can check the asset's **Promoted** status under the Show actions for this row icon . The *Promoted* status shows a check mark when the topic is promoted.

For more information about assistants, see [LLM assistants](#).

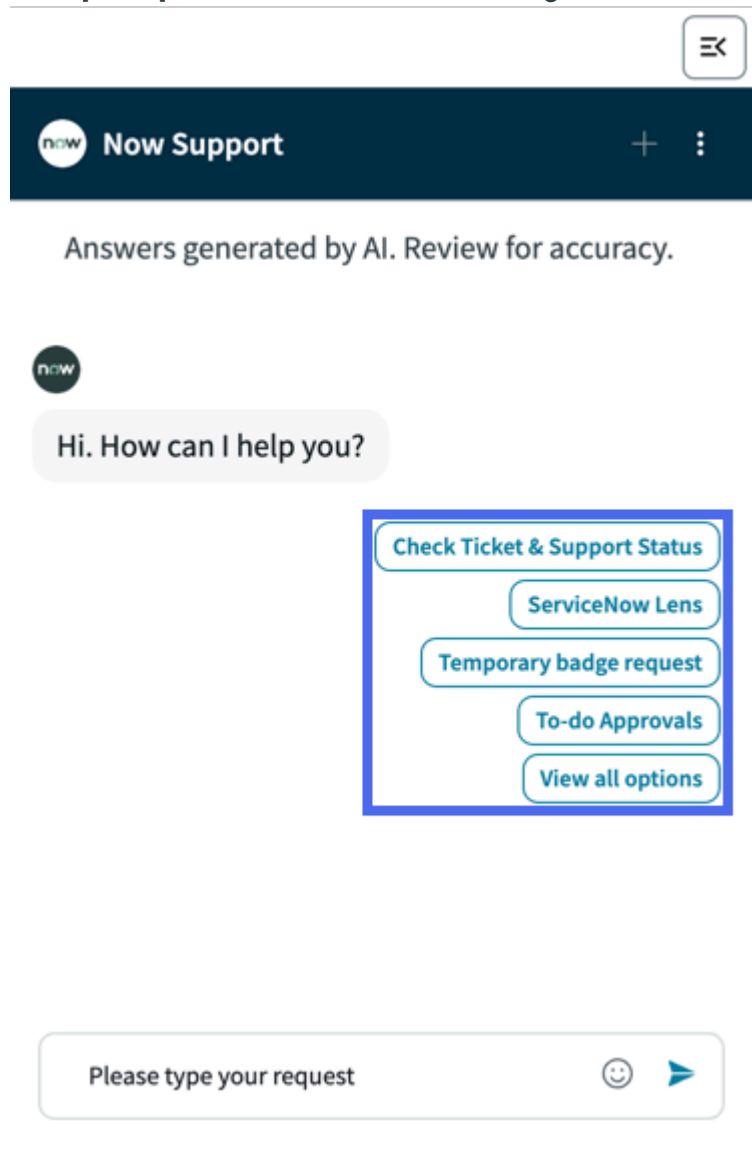
Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. From the **Select assistant** drop-down menu, select the LLM assistant that will promote the asset.
The list of assets reduces to AI assets associated with the LLM assistant.
4. Find the asset that you want to promote or demote.
5. Select the Show actions for this row icon , and then select **Promote** to toggle the asset's *Promoted* status.

If the asset is already promoted, the asset has a check mark next to the *Promoted* status. Demoting the asset removes the check mark.

Result

Example of promoted assets in a Virtual Agent chat



The asset is added to the list of assets promoted by the assistant, while a demoted asset is removed from the list.

A toast message also appears for four seconds, confirming that the asset has been promoted or demoted. You can close the message by selecting the Close icon ✕.

What to do next

Reorder promoted conversational subflows, actions, and topics in Virtual Agent. For more information, see [Reorder promoted conversational subflows, actions, and topics](#).

Reorder promoted conversational subflows, actions, and topics

Rearrange AI assets like conversational subflows, conversational actions, and Virtual Agent topics to the desired order after promoting them for recommendation by Virtual Agent.

Before you begin

Role required: virtual_agent_admin or admin

Promote the AI assets that you want to reorder in Assistant Designer. For more information about promoting assets, see [Promote or demote LLM conversational subflows, actions, and topics in Assistant Designer](#)

About this task

By default, promoted AI assets are presented in alphabetical order in the assistant. You can rearrange promoted assets in any desired order by editing their records from the Promoted Skills [sys_cs_context_profile_promoted_skill] table. When conditions are applied to a promoted asset, and when the asset meets the condition, then it is displayed first by the assistant, irrespective of its set order.

Procedure

1. Navigate to **All**, and then enter `sys_cs_context_profile_promoted_skill.list` in the filter.
2. For the Virtual Agent topic, conversational subflow, or conversational action that you want to reorder, select the **Order** value.

Condition	Condition Mode	Chat Experience	Order	Generative AI Skill	Domain
(empty)	Simple	Now Assist in Virtual Agent (default)	100	Check Ticket & Support Status	global
(empty)	Simple	Now Assist in Virtual Agent (default)	200	Employee Summary	global
(empty)	Simple	Now Assist in Virtual Agent (default)	300	Summarize a record	global
(empty)	Simple	Now Assist in Virtual Agent (default)	400	Temporary badge request	global

3. In the **Order** field, enter the new order and select **Update**.

servicenow All Favorites History Workspaces Admin Promoted Skill Search or ask Now Assist

Condition Mode: Simple Application: Global

Chat Experience: Now Assist in Virtual Agent (default) Order: 150

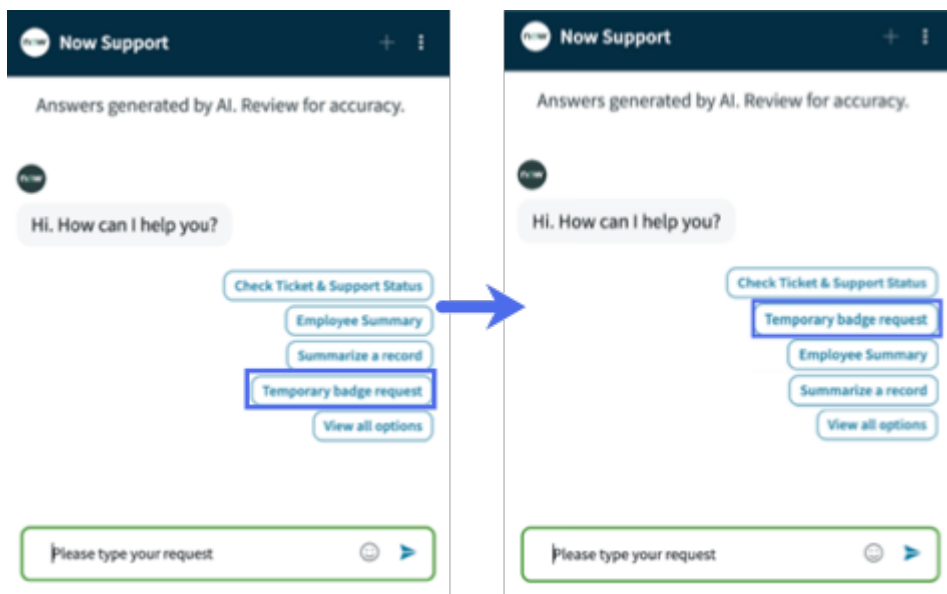
Generative AI Skill: Temporary badge request

Condition: Add Filter Condition Add OR Clause

Domain: global

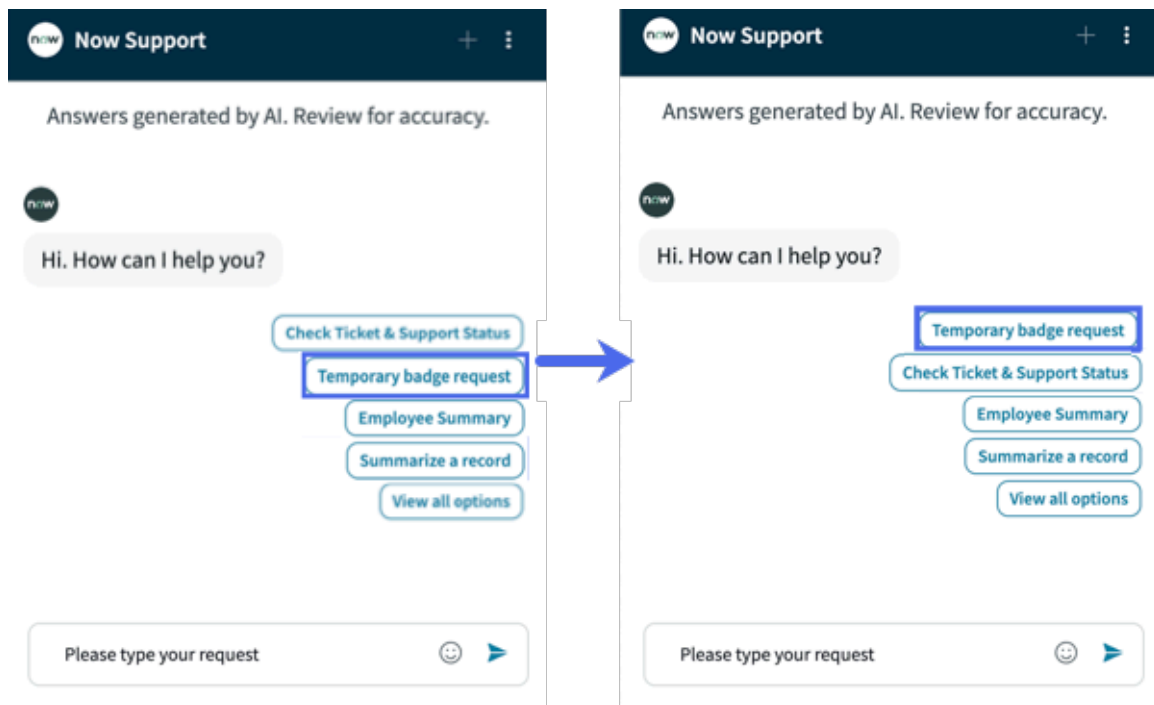
Update Delete

In the assistant, the promoted skills will appear in the set order.



4. To add a condition, in the **Condition** builder, enter the required parameters and select **Update**.

In the assistant, the conditionally promoted skill will appear before the other assets.



Result

The list of promoted assets is presented in a Virtual Agent conversation based on the Order value of each asset and the conditions applied.

What to do next

Repeat the previous steps to adjust any other promoted assets to sort them in a preferred order.

Add a condition builder to promoted assets

You can define a condition for a given promoted Virtual Agent asset to bring it higher up on the list of promoted assets in a panel conversation.

Before you begin

Role required: virtual_agent_admin or admin.

To define a condition for an asset, you must promote it first. For more information, see [Promote or demote LLM conversational subflows, actions, and topics in Assistant Designer](#).

About this task

Add a condition to a chosen Virtual Agent topic to have it displayed higher on the list of promoted assets in a panel conversation. This condition overrides the *Number* value on the Promoted Skills [sys_cs_context_profile_promoted_skill_list] table.

Procedure

1. Navigate to **All**, then enter `sys_cs_context_profile_promoted_skill.list` in the filter.
2. Select your chosen promoted asset from the list.
3. In the *Condition* field, set the chosen condition for your promoted asset.
For example, `URL > contains > conversation`.
4. In the *Condition mode* field, select your condition.

Note: In the current release, *Simple* is the only available condition mode.

5. Select **Update**.

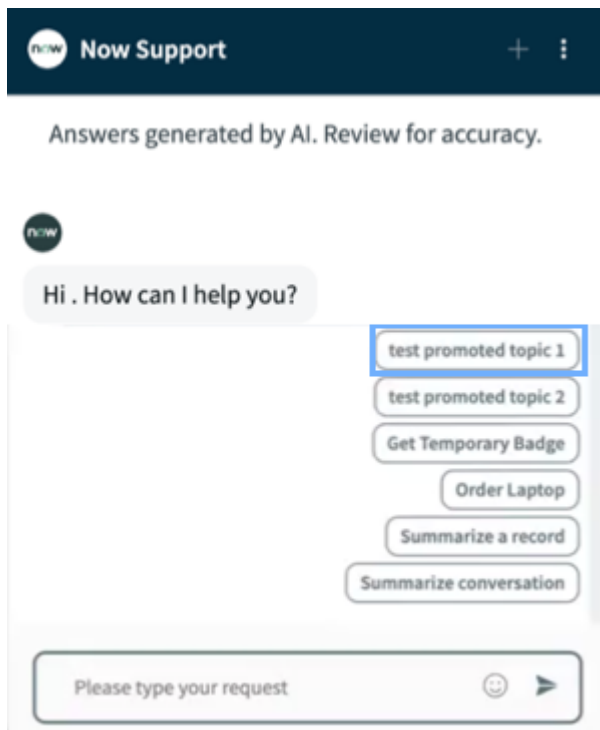
Result

The promoted asset's *Condition* on the Promoted Skills table shows the defined condition.

Condition	Condition Mode	Chat Experience	Order	Generative AI Skill	Domain
(empty)	Simple	ServiceNow Otto for Virtual Agent (default)	100	Loaner Laptop	global
context_table=change_request^EQ	Simple	ServiceNow Otto panel - Platform (default)	10	test promoted topic 1	global
(empty)	Simple	ServiceNow Otto panel - Developer (default)	100	test LLM	global
(empty)	Simple	ServiceNow Otto for Virtual Agent (default)	100	Book a meeting room	global
(empty)	Simple	ServiceNow Otto panel - Platform (default)	100	Loaner Laptop	global
(empty)		ServiceNow Otto panel - Platform (default)		Generate resolution notes	global
(empty)		ServiceNow Otto panel - Platform (default)		Change risk explanation	global

The promoted asset now shows *Condition defined* next to the *Promoted* checkmark.

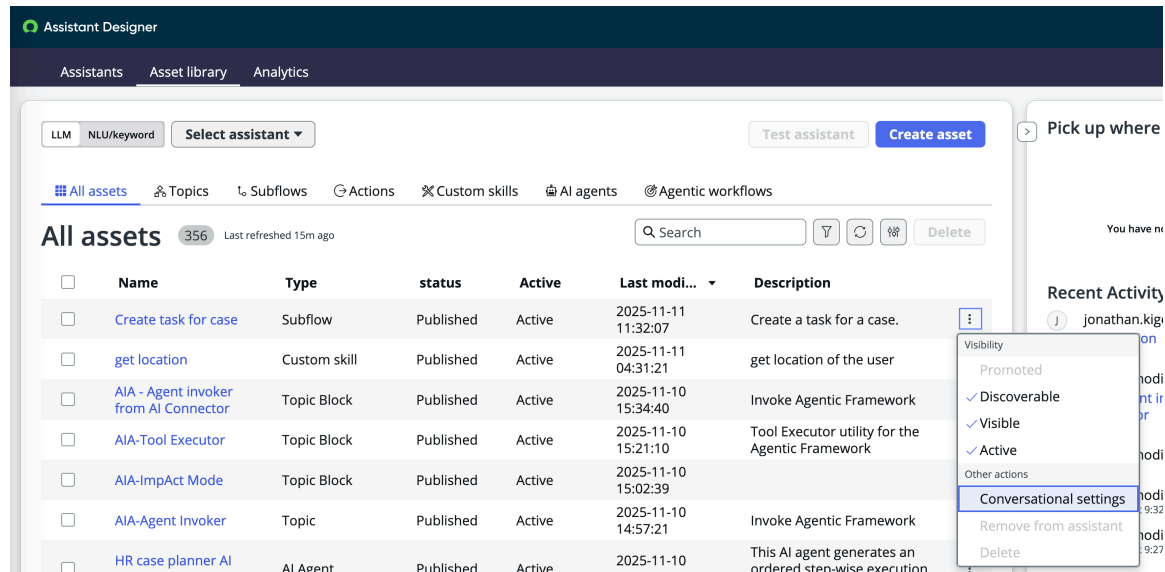
The promoted asset also displays at the top of the list of promoted assets in a Virtual Agent ServiceNow Otto panel chat window.



Conversational settings for assets in the Asset library

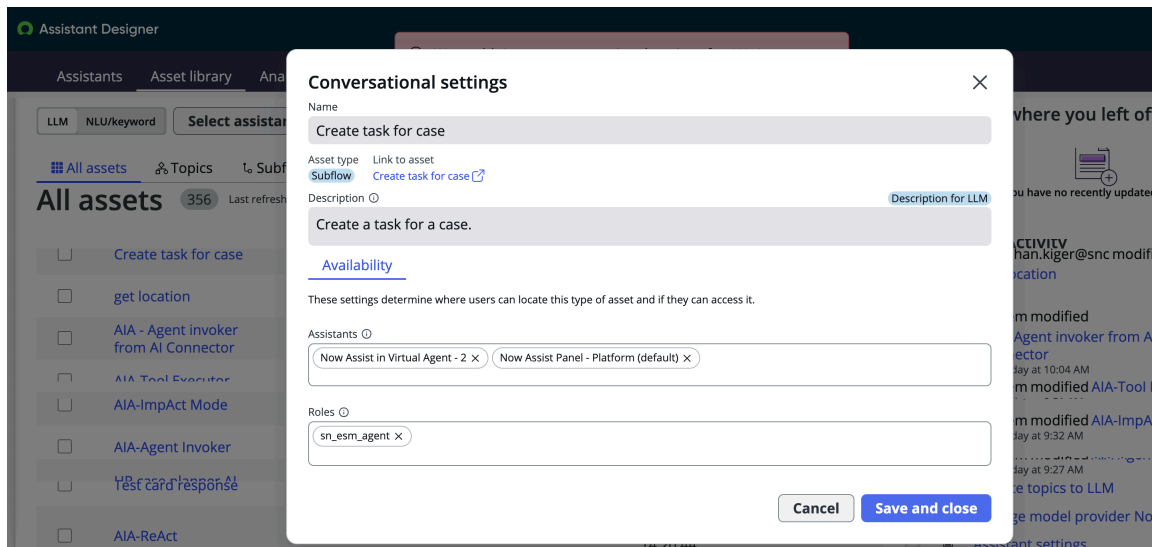
Manage asset settings from the Asset library for individual active assets.

To manage the settings for an asset directly from the Asset library page, select the **Show actions for this row** icon (⋮) and select **Conversational settings**.



Use the conversational settings module to edit the settings depending on your asset type. Asset settings vary depending on the asset type. The following table contains the editable settings for each asset type.

Asset type	Editable settings
Topics	Assistants, Roles, Discoverable (assistants), Visible (assistants)
Subflows	Assistants, Roles
Actions	Assistants, Roles
Custom skills	Assistants, Roles, Discoverable (assistants), Visible (assistants)
AI Agents	Assistants, Roles, Discoverable (assistants), Visible (assistants)



The following fields are available on the Conversational settings module. Depending on the asset type, you can update the various fields.

Field	Description
Name	Name of the asset given when creating or editing the asset.
Asset type	Type of the asset.
Link to asset	Select the link to open the asset.
Description	Description of the asset given when creating or editing the asset.
Availability	Availability settings allow you to select the assistants and roles that can access the asset. • Assistants: Select the assistants that can access the asset. If left empty, the asset can't be used by any assistants. Note: Inactive assistants can also be selected. • Roles: Select the roles end users must have to access the asset. If left empty, then the asset is available to all roles.
Findability	Findability settings determine whether you can invoke or look for the asset from the chat experience. • Discoverable: Select the assistants where the asset is discoverable. If an asset is selected as Discoverable, it's invoked when matched with the user's utterance. • Visible: Select the assistants where the asset is visible. If an asset is selected as Visible, it appears whenever the Show me everything option is selected in the conversation.

Managing asset library items

The Assistant Designer Asset library supports assets that are created in other tools. Admins must either have privileges to work with those tools, or they must work with team members who do.

The following tools are needed for some asset library assets:

- Conversational subflows and actions require Workflow Studio
- Custom skills require AI Skill Kit
- AI agents and workflows require AI Agent Studio

Managing conversational subflows in Assistant Designer

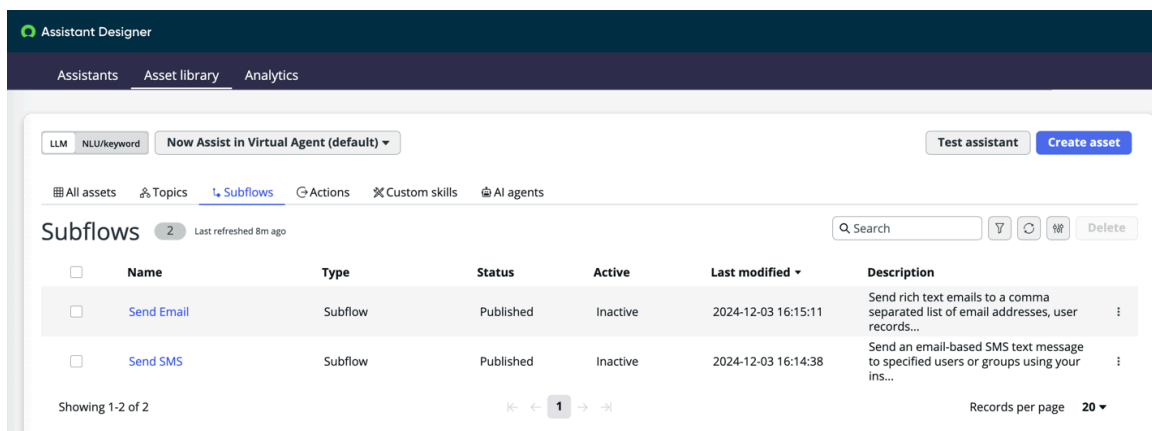
View and manage conversational subflows through Assistant Designer.

When you have the admin or virtual_agent_admin role, you can work with conversational subflows in Assistant Designer.

Conversational subflows currently can't be created in Assistant Designer. You can only view and edit them in Assistant Designer. Conversational subflows can be created, tested, and deleted only in Workflow Studio. For more details on creating subflows, see [Create a subflow in Workflow Studio](#).

When you open a subflow in Assistant Designer, a tab is displayed in the navigation header bar. This tab opens the subflow in Workflow Studio within the Assistant Designer environment. The following columns appear by default:

Column	Description
Name	Name of the subflow. Select the name of the subflow to work with that subflow directly in Assistant Designer.
Type	Subflow.
Status	Status type such as Published.
Active	Whether the asset is active or inactive.
Last modified	Time that the subflow was last modified.
Description	Description of the subflow.



The screenshot shows the Assistant Designer interface. The top navigation bar includes 'Assistants', 'Asset library', and 'Analytics'. The 'Asset library' tab is active. Below the navigation bar, there are tabs for 'LLM', 'NLU/keyword', and 'Now Assist in Virtual Agent (default)'. The 'Now Assist in Virtual Agent (default)' tab is selected. On the right, there are buttons for 'Test assistant' and 'Create asset'. Below these, there are filters for 'All assets', 'Topics', 'Subflows', 'Actions', 'Custom skills', and 'AI agents'. The 'Subflows' filter is selected. A search bar and a 'Delete' button are also present. The main content area displays a table of subflows with columns: Name, Type, Status, Active, Last modified, and Description. There are two subflows listed: 'Send Email' and 'Send SMS'. Both are of type 'Subflow', status 'Published', and are inactive. The 'Last modified' column shows timestamps. The 'Description' column provides details about the subflows. At the bottom, there is a pagination bar showing 'Showing 1-2 of 2' and a 'Records per page' dropdown set to '20'.

Name	Type	Status	Active	Last modified	Description
Send Email	Subflow	Published	Inactive	2024-12-03 16:15:11	Send rich text emails to a comma separated list of email addresses, user records...
Send SMS	Subflow	Published	Inactive	2024-12-03 16:14:38	Send an email-based SMS text message to specified users or groups using your ins...

Use the row actions icon  to work with visibility settings for **Promoted**, **Discoverable**, **Visible**, and **Active**.

Option	Description
Promoted	Option to toggle the subflow's <i>Promoted</i> status to show as a suggested conversational asset in the virtual assistant.
Discoverable	Option to toggle the subflow's <i>Discoverable</i> status. If discoverable, the subflow is invoked when matched with a user's utterance.
Visible	Option to toggle the subflow's visibility to users. If visible, the subflow appears whenever the Show me everything option is selected in the conversation.
Active	Option to toggle the subflow's active status. If active, the subflow is available within the conversation.
Delete	Option to delete the subflow is not applicable within Assistant Designer because subflows can only be deleted within Workflow Studio.

Related topics

[ServiceNow Otto panel](#) 

[Conversational subflows](#) 

[Integrating Virtual Agent with Workflow Studio workflows](#)

Managing conversational actions in Assistant Designer

View and manage conversational actions using Assistant Designer.

When you have the admin or virtual_agent_admin role, you can work with conversational actions in Assistant Designer.

Conversational actions currently can't be created in Assistant Designer. You can only view and edit them in Assistant Designer. Conversational actions can be created, tested, and deleted only in Workflow Studio. For more details about creating actions, see [Create an action in Workflow Studio](#) .

When you open an action, a tab is displayed in the navigation header bar. This tab opens the action in Workflow Studio within the Assistant Designer environment. The following columns appear by default:

Column	Description
Name	Name of the action. Select the name of the action to work with that action directly in Assistant Designer.
Type	Action.
Status	Status type, such as Published.
Active	Whether the asset is active or inactive.
Last modified	Time that the subflow was last modified.
Description	Description of the action.

Actions tab in the Asset library

Use the row actions icon to work with visibility settings for **Promoted**, **Discoverable**, **Visible**, and **Active**:

Option	Description
Promoted	Option to toggle the action's <i>Promoted</i> status to show as a suggested conversational asset in the virtual assistant.
Discoverable	Option to toggle the action's <i>Discoverable</i> status. If discoverable, the action is invoked when matched with a user's utterance.
Visible	Option to toggle the action's visibility to users. If visible, the action appears whenever the Show me everything option is selected in the conversation.
Active	Option to toggle the action's active status. If active, the action is available within the conversation.
Delete	Option to delete the action is not applicable within Assistant Designer because actions can only be deleted within Workflow Studio.

Related topics

[ServiceNow Otto panel](#)

[Conversational actions](#)

[Integrating Virtual Agent with Workflow Studio workflows](#)

Managing custom skills in Assistant Designer Asset library

View custom skills in the Assistant Designer Asset library.

Note: Depending on your license, you will have access to certain application features, generative AI skills, agentic workflows, and AI agents. For more information, see [ServiceNow product tiers](#) .

Role required: virtual_agent_admin

When you select a custom skill, it opens the skill in AI Skill Kit. Custom skills currently can't be created in Assistant Designer. You can only view them in Assistant Designer Asset library. The

skills can be created, tested, and deleted only in AI Skill Kit. For more details on creating skills, see [Create a skill](#).

Custom skills as viewed in the Assistant Designer Asset library

LLM NLU/keyword Select assistant

Test assistant Create asset

All assets Topics Subflows Actions Custom skills AI agents Agentic workflows

Custom skills 4 Last refreshed 1m ago

Search

Y Refresh Save Delete

	Name	Type	status	Active	Last modified	Description
☐	Web Search	Custom skill	Published	Active	2025-01-27 04:30:02	This capability is a wrapper around searching, scraping and returns synthesized ...
☐	App summarization generation	Custom skill	Published	Active	2024-10-17 12:46:02	This is the primary skill for generating an app summary
☐	Table summary provider	Custom skill	Published	Active	2024-09-27 10:23:58	This is a provider for table summary
☐	UIB Experience Generation	Custom skill	Published	Active	2024-09-25 10:34:25	This capability is to take initial utterance and extract experience details such ...

Showing 1-4 of 4

1

Records per page 20

Column	Description
Name	Name of the skill. Select the skill to open it in AI Skill Kit.
Type	Custom skill.
Status	Status type such as Published.
Active	Whether the skill is active or inactive.
Last modified	Time that the skill was last modified.
Description	Description of the custom skill.

Use the row actions icon  to work with visibility settings for **Promoted**, **Discoverable**, **Visible**, and **Active**:

Option	Description
Promoted	Option to toggle the skill's <i>Promoted</i> status to show as a suggested conversational asset in the virtual assistant.
Discoverable	Option to toggle the skill's <i>Discoverable</i> status. If discoverable, the skill is invoked when matched with a user's utterance.
Visible	Option to toggle the skill's visibility to users. If visible, the skill appears whenever the Show me everything option is selected in the conversation.
Active	Option to toggle the skill's active status. If active, the skill is available within the conversation.
Delete	Delete option for skills is inactive in the Assistant Designer Asset library. The skills can only be deleted from AI Skill Kit.

Custom skills become available in the Assistant Designer Asset library based on the deployment settings in AI Skill Kit.

1. Navigate to **AI Skill Kit > Home** and select the skill.
 2. Select **Skill settings > Deployment settings**.
 3. For the skill to become available in Assistant Designer Asset library, the following options should be selected:
 - Select **Platform skills** in the **Feature** list.
 - Select the **ServiceNow Otto panel** card to enable the skill in the ServiceNow Otto panel.
- For more information about the ServiceNow Otto Panel, see [ServiceNow Otto panel](#).
 - For more information about AI Skill Kit, see [AI Skill Kit](#).

Managing AI agents in Assistant Designer

View AI agents created in AI Agent Studio through Assistant Designer.

Note: Depending on your license, you will have access to certain application features, generative AI skills, agentic workflows, and AI agents. For more information, see [ServiceNow product tiers](#).

Role required: virtual_agent_admin

When you select an AI agent, it opens in AI Agent Studio. AI agents currently can't be created or edited in Assistant Designer. You can only view them in Assistant Designer. They can be created, edited, tested, and deleted only in AI Agent Studio. For more details, see [AI Agent Studio overview](#).

AI agents in Assistant Designer

Select the **AI agents** option to see all the AI agents activated for Assistant Designer.

The screenshot shows the Assistant Designer interface with the 'AI agents' tab selected. The interface displays a list of AI agents with the following columns: Name, Type, Status, Active, Last modified, and Description. The agents listed are:

Name	Type	Status	Active	Last modified	Description
Smart Documents Agent	AI Agent	Published	Active	2025-10-15 23:54:48	The Smart Documents Agent provides interactive document understanding capabilities...
Next action recommendation agent	AI Agent	Published	Active	2025-09-25 16:54:06	The Next best action recommender identifies the optimal steps for resolving task...
Search Q&A Agent	AI Agent	Published	Active	2025-06-04 16:34:25	Allows users to conduct a search
Create Incident AI Agent	AI Agent	Published	Active	2025-10-01 13:49:18	Responsible for managing the end-to-end process of formally logging IT support r...

Column	Description
Name	Name of the AI agent. Select the AI agent to open it in AI Agent Studio.
Type	AI agent.

Column	Description
Status	Status type such as Published.
Active	Whether the AI agent is active or inactive.
Last modified	Time when the AI agent was last modified.
Description	Description of the AI agent.

Use the row actions icon () to work with visibility settings for **Promoted**, **Discoverable**, **Visible**, and **Active**:

Option	Description
Promoted	Option to toggle the AI agent's <i>Promoted</i> status to show as a suggested conversational asset in the virtual assistant. You must first select an assistant to promote the AI agent.
Discoverable	Option to toggle the AI agent's <i>Discoverable</i> status. If discoverable, the AI agent is invoked when matched with a user's utterance.
Visible	Option to toggle the AI agent's visibility to users. If visible, the AI agent appears whenever the Show me everything option is selected in the conversation.
Active	Option to toggle the AI agent's active status. If active, the AI agent is available within the conversation.
Delete	Delete option for AI agent is inactive in Assistant Designer. The AI agent can only be deleted from AI Agent Studio.

AI agents become available in Assistant Designer based on the display settings in AI Agent Studio. To enable an AI agent to appear in Assistant Designer, perform the following:

1. Navigate to **All > AI Agent Studio > Create and manage**.
2. Select the **AI agents** tab, and open your chosen agent.
3. Select the **Select channels and status** tab.
4. In the **Engage via Virtual Agent assistants** card:

- Activate the **Allow** toggle switch.
- Under *Choose chat assistants*, select the assistants where the AI agent becomes discoverable.

For detailed information about creating AI agents, see [Create an AI agent](#).

Related topics

[Configuring agentic conversations in Virtual Agent](#)

Using AI agents in Virtual Agent topics

Use an AI agent custom skill to have it perform a task passed to it, such as compiling info on a KB article.

There might be AI agents installed on your instance that are not used in agentic workflows. To learn how to see all agents that are available to you, see [Find AI agents](#).

An AI agent performs a task that you pass to it inside the AI Connector utility in Assistant Designer. For more information on the AI Connector utility, see [AI Connector utility](#).

For example, you can use the AI Agent in the AI Connector utility to get all data on a Knowledge Base article. The AI Agent provides the article if it is available or notifies you if it can't find it. The agent also provides data on the consolidation itself by way of its output mappings.

To see which AI agents are installed on your instance, see [Find AI agents](#).

To use the AI agent, select it from the **Skill type** drop-down list in the AI Connector utility, then select the AI agent's type from the **Select AI agent** drop-down. For example, to have the AI agent consolidate a knowledge base article, select **KB content consolidation AI agent**.

Define the task for the AI agent by placing a value in the **Task** input mapping variable. You can define a condition, or enter a script or command. For example, enter `return KB00090;` to have the AI agent retrieve that knowledge base article and consolidate its information into a reply in the Virtual Agent chat.

The AI agent's output mapping properties are automatically defined when you select the AI agent type. All output mappings are returned in the chat when the AI agent completes the task.


AI Connector
✕

Trigger custom skills directly from a topic. [Learn more](#)

* Node name

Testing

* Select skill type

AI agent ✕ ▼

* Select AI agent

KB content consolidation AI agent ✕ ▼

Open in AI Agent Studio for details: [KB content consolidation AI agent](#)

Input mapping

* Task (String) ⓘ

[\(function execute\(\)\) /* Return a quoted str](#) ✕ 

Output mapping

Enable	Name	Variable Name ⓘ
☒	execution_plan_id	Execution_plan_id
☒	execution_state	Execution_state
☒	objective	Objective
☒	state_reason	State_reason
☒	messages	Messages
☒	execution_tasks	Execution_tasks
☒	execution_tools	Execution_tools

Advanced (optional)

Hide this node ▼

AI agent output mapping properties

Variable	Description
Execution plan ID	ID number of the execution plan.
Execution state	Current state of the execution plan.

AI agent output mapping properties (continued)

Variable	Description
Objective	Intended task for the execution plan.
State reason	Reason for the execution plan's current state.
Messages	List of messages sent through the execution plan.
Execution tasks	List of tasks in the execution plan.
Execution tools	List of tools in the execution plan.

When the AI agent performs its job, it generates the full plan showing the input and output mappings. Each plan shows the objective, all tasks performed for the objective, and any messages sent or tools used in the plan. All plans are listed in the Execution Plan [sn_aia_execution_plan_list] table.

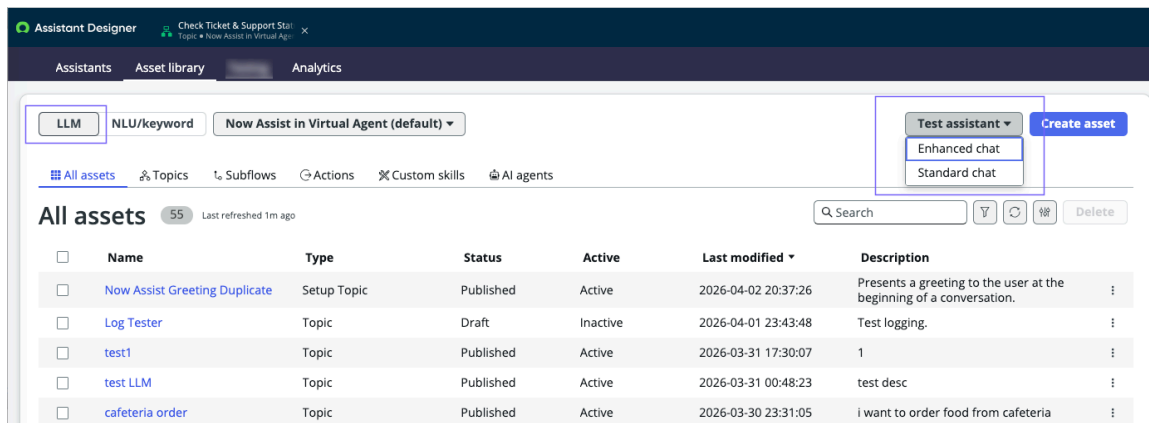
Testing assistants

Simulate and test assistant conversations from Asset library.

You can test assistants directly from the Asset library.

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. Select the **LLM** option.
4. From the Assistant list, select the assistant that you want to test. The assets available to the selected assistant is shown under All assets.
5. Select **Test assistant**.

Note: You can test both active and inactive assistants.



Depending on the chat experience set up for the assistant, you can test using [Standard chat](#) experience or [Enhanced chat](#) experience. For more information about setting up the chat experience for an assistant, see [Manage an assistant chat experience](#).

Note: The ServiceNow Otto Panel - Platform (default) assistant can also use the [Premium chat](#) experience. The premium experience is configured by default.

Note: Enhanced chat experience is the default for Assistant Designer test panels. To change the default experience to standard chat, set the value of the system property `sn_nowassist_va.standard_chat_enabled` to true.

For all the ServiceNow Otto assistants and the ServiceNow Otto Panel - Platform Assistant, when testing the assistant:

- If the assistant has the Standard Chat experience configured for any display location, you can choose between Standard Chat and Enhanced Chat.
- If the assistant only has the Enhanced Chat experience configured across all display locations, when you select **Test Assistant**, you're directed to test the Enhanced Chat experience.

For the ServiceNow Otto Panel - Developer Assistant, when testing the assistant by selecting **Test Assistant**, you're directed to test the Standard Chat experience.

Related topics

[Test details](#)

Testing LLM topics

Preview, test, and debug topics that use large language models (LLMs) in the Assistant Designer Asset library chat window.

About testing LLM topics

You can test your topic's functions by running your conversation in a chat test window as you work. The web (Service Portal) chat client is the default test window.

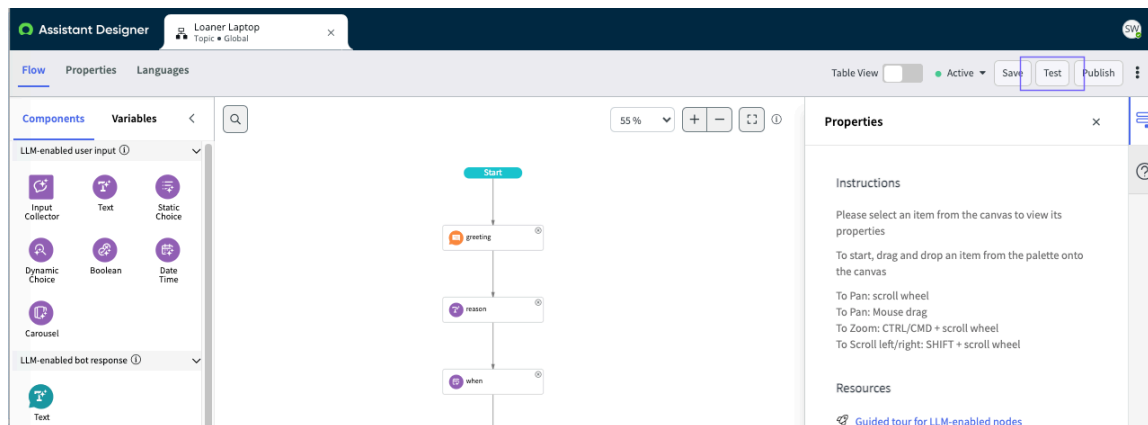
If you're using the [Virtual Agent integrations with third-party messaging apps](#), elements in your conversation might appear differently in third-party messaging applications. Test your conversations in any third-party applications where you want to deploy Virtual Agent.

Note: If the ServiceNow Otto panel, Microsoft Teams application, or Slack application is configured for your environment, preview options for those channels are displayed in the Test button list. Select **Preview in Otto panel** or **Preview in Microsoft Teams** in the list to test your topic in those environments.

Starting a test

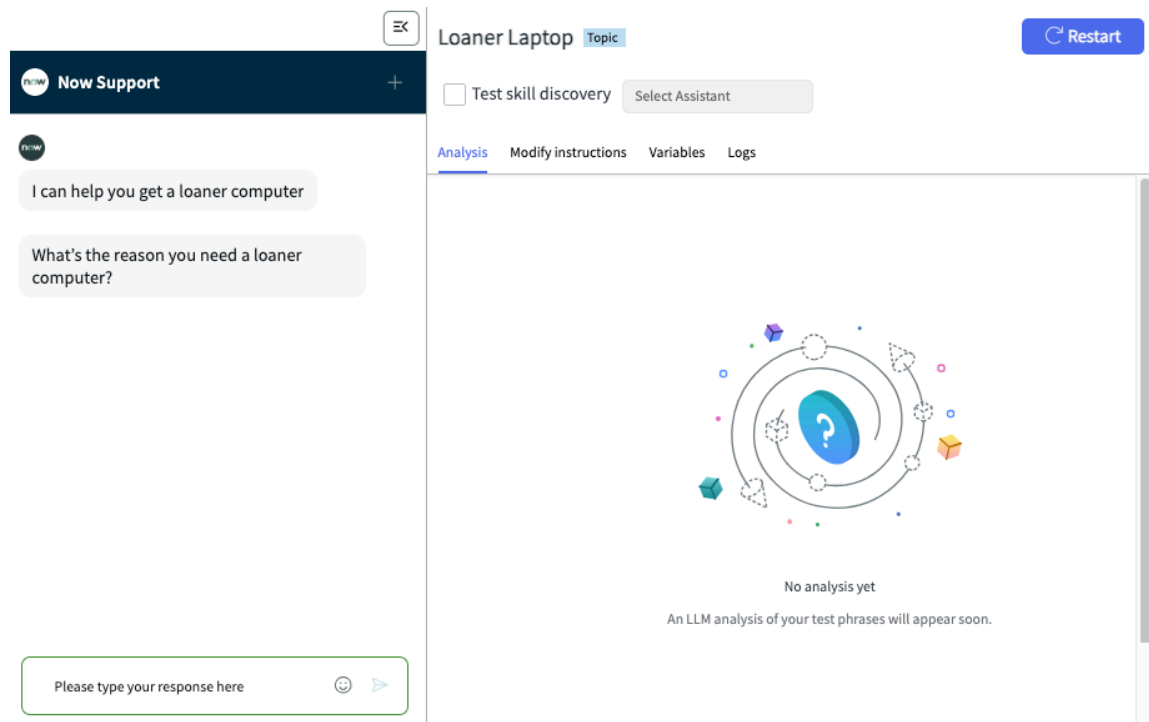
You can find the testing option on the Assistant Designer canvas.

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. Select the topic that you want to test.
4. Select **Test**.



The chat test window opens in the ServiceNow Otto for Virtual Agent chat widget.

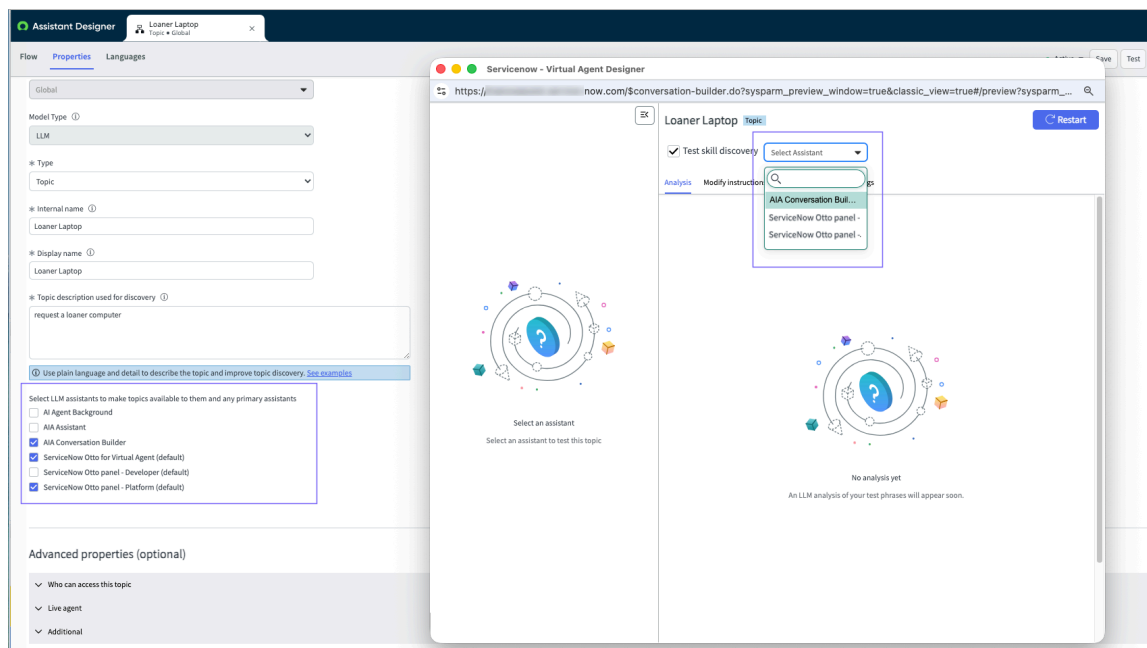
Chat test window



If the topic is associated with multiple LLM assistants, select the **Test skill discovery** check box, then open the Assistant drop-down list to select which assistant you want to test. For more information about LLM assistants, see [Create LLM assistants](#).

Note: The **Test in enhanced chat** option is available only from the Asset library list view. The **Test** button in the topic canvas adds options in a drop-down box if you configure Microsoft Teams or Slack for Virtual Agent.

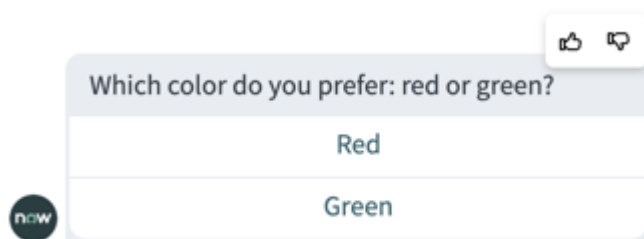
Select assistants in the test window



Note: If your topic is missing any necessary information, an incomplete badge appears in the corner of the flow diagram pane. A warning badge also appears next to each node. The incomplete badge lists the total number of issues, while the local warning badges show how many issues are found in each node. If you select **Test** when there are issues, an Issues window opens with the number of issues present along with the details of each issue. These details include a full description and a hyperlink to each incomplete item.

Feedback

You can provide feedback to each utterance made by the LLM by selecting from the like thumbs-up icon  or dislike thumbs-down icon  options that appear when you hover over an utterance. All LLM user inputs except the Input Collector have these feedback options.



If you run tests from the Topics page, the test window shows only the **Analyze test phrases**, **Variables**, **Context** (available by default, with no **Include topic discovery** option), and **Logs** tabs.

Next steps

When you're done testing your topic, close the test chat window. If necessary, use the test information to adjust your topic to perform more accurately. For example, the results on the **Analysis** tab may return low scores or **Unsure** or **Unknown** confidence ratings. Improve scores by updating the topic description or instructions in the LLM user input nodes.

Test details

The chat test window displays adjoining tabs that provide details about your topic as you test it.

The following tabs are available when testing LLM topics:

- **Analysis:** Results for topic discovery based on your input.
- **Modify instructions:** List of all the instructions in the topic that are sent to the LLM. This tab is only available when testing a single topic.
- **Variables:** List of all the variables used in the conversation, such as input and Live Agent variables.
- **Edit variables:** Options for editing the variables used in the topic.
- **Context:** Options for specifying the context (using context variables) in which a topic is run.
- **Logs:** List of the processing performed.

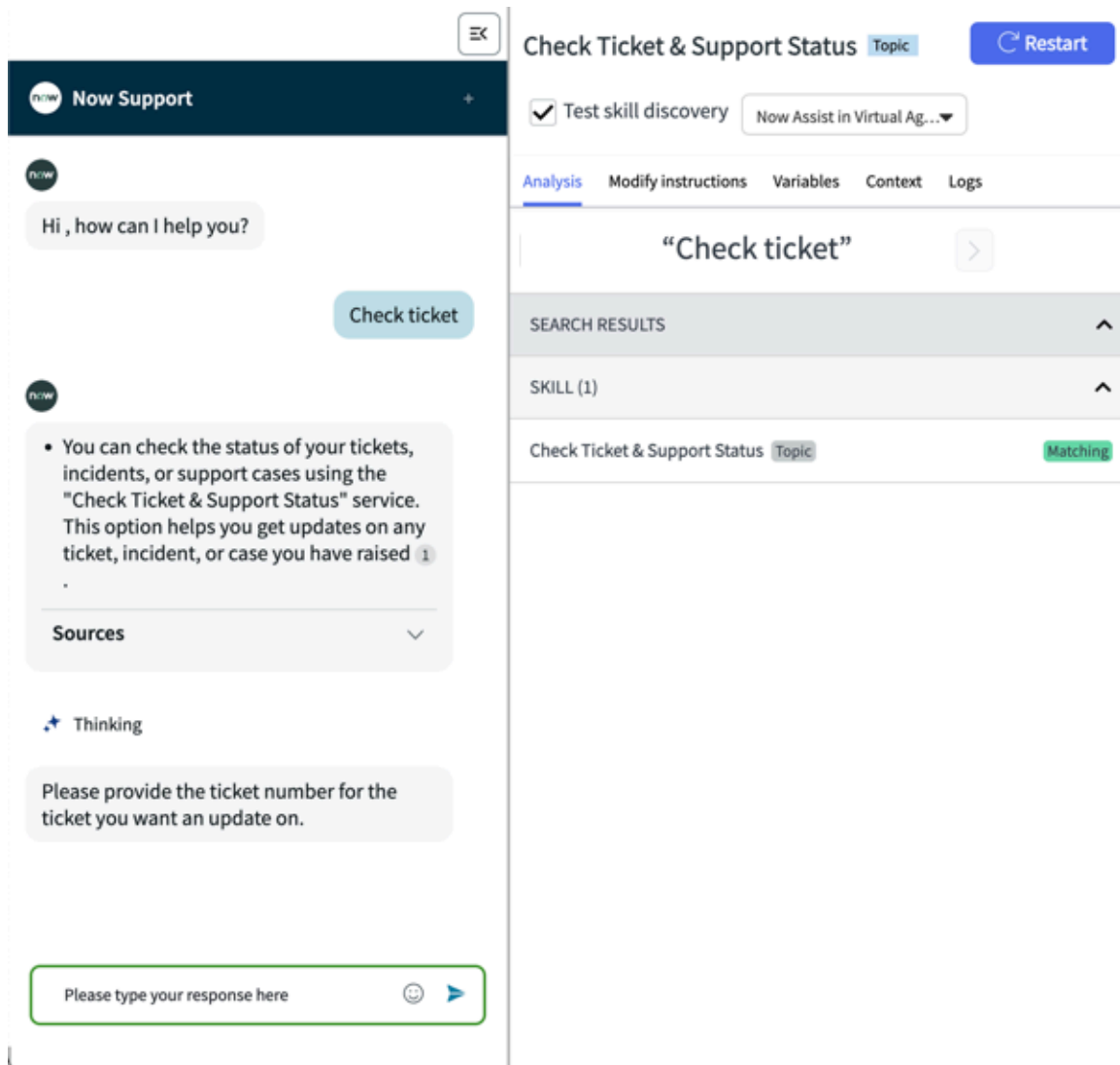
The following tabs appear when you test their related topic types on the Assistant Designer canvas:

- The **Analyze test phrases**, **Modify instructions**, **Variables**, and **Logs** tabs appear for all LLM topic types.
- The **Edit variables** tab appears for topic blocks and custom controls.
- The **Context** tab appears for topics, setup topics, or small talk topics when you select **Include topic discovery**.

Analysis tab

When you test LLM topics, results for topic discovery appear based on your input. When testing topics associated with a primary LLM assistant, only the primary assistant's promoted assets appear. When you input a test phrase, you can see a variety of search results when Genius Results are enabled including skill (topic) discovery, Knowledge Base (KB) articles, and catalog items. Under the skills search results, a *Matching* badge appears next to the skill discovered, while variables and values may also be listed (such as the variable *@laptop_make* and the value *macbook*), depending on the topic. These Genius Results only appear if you're testing a published topic and have selected the **Include topic discovery** option. If the **Include topic discovery** option appears inactive, publish the topic and select an LLM assistant on the Properties tab to work with topic discovery. A *Search indexing in progress* message might appear, but you can still test while the search indexing runs although topic discovery might not be updated. For more information about how Genius Results work, see [ServiceNow Otto for AI Search](#) .

Additionally, when testing active LLM assistant topics from the Topics page, you see skills results for Semantic search. Semantic search analyzes the meanings and context of your search terms and uses that information to find results with similar meanings. It improves search recall by interpreting natural language to more accurately reflect your search's intent. If semantic search is deactivated for topic discovery testing, those results are not displayed. For more information about semantic search, see [Semantic vector search in AI Search](#) .



Modify instructions tab

If your topic contains any instructions that are sent to the LLM, they're shown in the Nodes category. The Nodes category lists LLM user input nodes on the canvas, their field names, and their contents.

You can modify the content of any of the instructions to develop optimal instructions for the conversation. If a node has **Enforce user prompt** active, a blue check icon  and a User prompt enforced message appears. Deactivate **Enforce user prompt** to modify the node's instructions.

If any of your user inputs have **Allow automatic slot filling** activated, the input's Detail Description becomes a static field. If **Allow automatic slot filling** is inactive, you can define detail description using a script or data pill picker. For more information, see the Allow automatic slot filling table entry in [Text user input control](#) or any other LLM user input controls.

Each instruction's status starts at **Original**. If you alter an instruction's content, its status changes to **Modified** and a revert icon  appears next to it. The total number of instructions modified is listed at the bottom of the tab next to a **Save to topic** button. To test the modified instructions, select **Apply and restart**. To undo changes to an instruction, select the revert icon next to the instruction. Alternatively, undo all changes by selecting **Revert** that activates when you modify any instructions.

Note: If you select **Save to topic**, all changes are saved and all Modified messages reset to Original.

The following image shows the **Modify instructions** tab showing user information with LLM instruction guidelines link, and Nodes held within an Input collector, including a locked node with User prompt is enforced message.

The screenshot displays the ServiceNow interface for a chatbot. On the left, a chat window titled 'Now Support' shows a conversation about ordering coffee. The user asks for coffee, and the assistant provides details: 'Hot Coffee', 'Medium roast', and 'Large'. The assistant also asks for confirmation: 'Here's what I have for your coffee order: • Coffee type: **Hot Coffee** • Coffee strength: **Medium roast** • Coffee size: **Large** Does everything look correct, or would you like to make any changes?'. The user can respond with 'Looks good' or 'Make changes'.

On the right, the 'Modify instructions' tab is active. It shows the 'Order coffee' topic and a 'Restart' button. Below this, there's a 'Test skill discovery' checkbox and a dropdown menu for 'Now Assist in Virtual Ag...'. The 'Nodes' section lists the following nodes:

- Coffee order details** (Original)
 - Additional instruction for LLM** (Original)
- Coffee type** (Original)
 - Detail description** (Original): Ask the user which coffee type they want to order. Options include Hot coffee, Cold brew, Espresso, or
- Coffee strength** (Original)
 - Detail description** (Original): Ask the user which coffee strength they prefer.
- Coffee size** (Original)
 - Detail description** (Original): Ask the user what size coffee they would like

At the bottom of the 'Modify instructions' tab, there are 'Revert' and 'Apply and restart' buttons.

The following image shows the **Modify instructions** tab with Modified instruction and Save to Topic updates. The **Revert** and **Apply and Restart** options activate when you make any changes.

The screenshot displays the ServiceNow interface for a virtual agent conversation and its configuration. On the left, a chat window titled 'Now Support' shows a conversation about ordering coffee. The user asks for coffee type, strength, and size, with the virtual agent responding with 'Hot Coffee', 'Medium roast', and buttons for 'Small', 'Medium', and 'Large'. On the right, the 'Order coffee' topic configuration is shown in the 'Modify instructions' tab. It lists three instructions: 'Coffee type' (Modified), 'Coffee strength' (Original), and 'Coffee size' (Modified). Each instruction has a 'Detail description' box. A green banner at the bottom of the configuration panel states '2 instructions modified. New instruction(s) will be discarded after testing if unsaved' and includes 'Save to topic', 'Revert', and 'Apply and restart' buttons.

Variables tab

The **Variables** tab displays a list of all the variables used in the conversation and the associated values captured as the conversation progresses, so that you can follow along. A conversation can have these variable types:

- Input variables
- Script variables
- Live agent variables
- Variables passed between a calling topic and topic block

The list is separated into sections by variable types. The following example shows the Input variables section. Notice that for the static list control, both the display label and value are captured for the selected choice.

The screenshot displays a 'Now Support' chat interface on the left and a 'Variables' panel on the right for the 'Order coffee' topic.

Now Support Chat:

- Header: Now Support
- Message 1: Hello! Let's get your coffee order going.
- Message 2: Which coffee type would you like to order?
- User Input: Hot Coffee
- Message 3: How strong would you like your coffee?
- User Input: Light roast, Medium roast, Dark roast
- Footer: Please type your response here

Variables Panel (Order coffee):

- Test skill discovery: ☐ Select Assistant
- Analysis | Modify instructions | **Variables** | Logs
- Data Collector
- Input variables
 - coffee_type: Hot coffee (Label: Hot Coffee)
- Calling Topic: Order coffee
- Input variables
 - ai_data_collector_32e61c6c6c794677887889817bded0d4_output: Node: Coffee order details (Input Collector)
- Input Collector
 - Node: Coffee order details (Input Collector)
- coffee_size: Node: Coffee size (Static Choice)
- coffee_strength: Node: Coffee strength (Static Choice)
- coffee_type: Node: Coffee type (Static Choice) Hot coffee (Label: Hot Coffee)

The following example shows the Input variables section for the grouped list control. This variable information appears similar to the static list control, but the variables are separated by each group of the grouped choice.

The screenshot displays a flow diagram on the left and a 'Variables' panel on the right for the 'Order office supplies' topic.

Flow Diagram:

- Start
- Greeting
- Office supplies (highlighted with a red box)
- Confirm

Variables Panel (Order office supplies):

- Test skill discovery: ☐ Select Assistant
- Analysis | Modify instructions | **Variables** | Logs
- Topic: Order office supplies
- Input variables
 - ai_data_collector_8ea5216ebc784617834ae3589994f305_output: -
 - grouped_choice_d178b9e8ea714cdab421f840175e2ba0_output: -
 - office_supplies: - (labeled 'Group name' with a red arrow pointing to it)
- Clear | Submit

Edit Variables tab

When testing topic blocks and custom controls, you can edit the variables found in the nodes.

Context tab

The **Context** tab appears when you're testing topics, setup topics, or small talk topics, to specify a different context for the chat. Choose a context variable from the list. The variables contain contextual information that can be used to determine topic intent or control how chats are routed to live agents. For example, you could select **portal** from the list of variables and enter the portal name **IT Express**. The **Context** tab is unavailable when creating test cases.

For more information about defining context variables, see [Configure context variables for storing chat-related information](#). For more information about live agent variables that are included with Virtual Agent, see [Live agent chat context variables](#).

The **Logs** tab displays a running log of server events, user entries, and Virtual Agent responses in the chat. You can review the logs to look for any important data about the chat including potential errors.

Debug a Virtual Agent topic

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For information about topic discovery, see [LLM topic discovery in Virtual Agent](#).

Duplicate a live topic before debugging and changing it

Duplicate a topic rather than update a live topic. The unmodified original topic can serve as both a reference and a backup, and retaining the original enables you to restore the topic quickly. Remember to deactivate the original topic before publishing the duplicate.

Debug a topic while testing your conversations

As you create or update a topic in the Asset library, use the **Test** button in the topic header bar to preview the conversation. The chat test window shows the conversation as it appears within Service Portal. Elements in your conversation might appear differently in third-party messaging applications. Test your conversations in any third-party applications where you intend to deploy Virtual Agent.

The test chat window displays six tabs that provide detailed information for debugging and refining your topic: **Analysis**, **Modify instructions**, **Variables**, **Edit variables**, **Context**, and **Logs**. For details about these tabs, see [Test details](#). The following example shows the processing messages and errors logged during testing.

The screenshot displays the ServiceNow Virtual Agent test interface. On the left is a chat window titled "Now Support" with a sub-header "Answers generated by AI. Review for accuracy." A message bubble from the user says "Hi. How can I help you?". Below it, a status indicator shows a star and the text "Looking into your request". A "See tickets" button is visible. On the right is a panel titled "Test active topics" with a "Restart" button. It contains five tabs: "Analysis", "Variables", "Context", "Logs", and "Logs" (which is selected). The "Logs" tab shows two log entries. The first entry is a long string of escaped characters representing a JSON object. The second entry is a JSON object with specific values for conversation, type, event, thread, user, message, node, metric_key, and metric_value.

```

15:06:18.767:
conversation&#61;&#34;6e55c734873c3210acd1fe66cebb3588&#34;
type&#61;&#34;PERF&#34;
event&#61;&#34;80750374873c3210acd1fe66cebb3500&#34;
thread&#61;&#34;108&#34;
user&#61;&#34;ian.cannon&#64;snc&#34;
message&#61;&#34;cmh2jlx6q000f3b7yuh80d5zj&#34;
node&#61;&#34;bdc5b660adbe532b05a7295bd77dc9e3&#34;
metric_key&#61;&#34;VA_TOTAL_PROCESSING&#34;
metric_value&#61;&#34;862&#34;

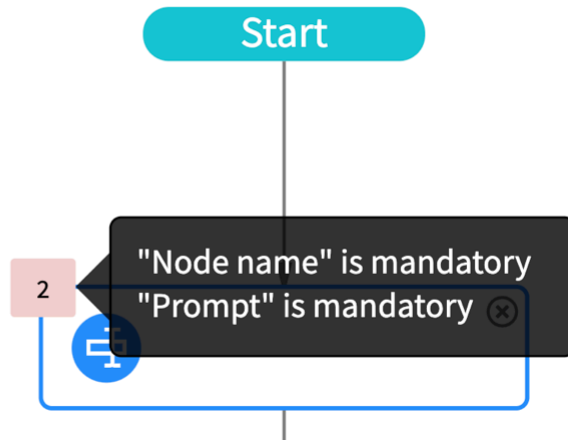
15:06:18.767
conversation="6e55c734873c3210acd1fe66cebb3588"
type="PERF" event="80750374873c3210acd1fe66cebb3500"
thread="108" user="ian.cannon@snc"
message="cmh2jlx6q000f3b7yuh80d5zj"
node="bdc5b660adbe532b05a7295bd77dc9e3"
metric_key="QUEUE_WAIT" metric_value="0"

```

Watch for warnings on controls within your topic

Warnings on a topic node in the Flow tab

2 incomplete



Controls that are missing necessary information show a red incomplete badge in the upper left corner of the control. The badge shows a number indicating the number of issues in that control. Select this badge to see a list of the issues in the control.

Another warning badge appears in the upper left corner of the canvas to indicate the number of issues within the entire topic.

Check for errors when a topic preview does not run

Topic preview errors on the canvas

**Issues (6)**×

This topic contains issues that must be fixed

Fix these issues to test or publish

Node: [Static Choice] 6[View](#)

"Node name" is mandatory

"Detail description" is mandatory

"Display name" cannot be empty

"Value" cannot be empty

"Display name" cannot be empty

"Value" cannot be empty



Additional information appears in a Validation Issues tab on the sidebar of the Assistant Designer canvas when an error prevents the topic from running. The total number of Issues are listed, along with details and a hyperlink for each node. Select a hyperlink to go to the node, and use the information provided to correct any errors in your conversation. You can close the tab without correcting the issues, but until the issues are corrected, the Validation Issues tab appears when you select **Publish**. The Validation Issues tab closes if you select **Publish** after correcting all issues.

Common Virtual Agent issues

Issue	Possible resolution
Can't see module designer under conversational interfaces	- User might not have the virtual_agent_admin role. - Virtual Agent plugin might not be activated.
Can't edit a topic	Logged-in user must be in the same application scope as the topic.
Can't preview topic	- Make sure that all required fields are filled in on the node properties. - Verify that your browser is configured to permit pop-ups from your instance.
Chat widget stuck at Connecting...	One or more of your topics might be missing. Verify that topics are present on the instance and in the Active state.

Review topics that run in a conversation flow

Each Virtual Agent (VA) conversation in an instance automatically generates an interaction record in the Interactions [interactions] table. The record logs the conversation between a requester and virtual and live agent. You can review the transcript of the conversation between the requester and virtual agent, including live agent transfers (if using Agent Chat). For details, see [Virtual Agent interaction records](#).

Other Virtual Agent features

After creating topics with the basic Assistant Designer controls and scripting, you can also enhance conversation functionality and topic maintenance by using additional Virtual Agent features.

After learning the basics, here are some other Virtual Agent features that may help you improve your authoring and end-user experience.

Deploy Virtual Agent in other channels

By default, Virtual Agent runs in a chat widget, but you can also run it in other channels. While some features may not be available in certain channels (such as the carousel user input control), you can customize your conversation flow to accommodate these differences.

Use link unfurling in Virtual Agent

Virtual Agent supports link unfurling on the chat widget, mobile devices, and various channels. Link unfurling generates a content-rich preview when a supported link is shared in a conversation with a user, a virtual agent, or in a text-based bot response.

Maximize code reuse with topic blocks

Rather than duplicate common functionality in multiple topics, you can create reusable topic blocks that you can reference in many topics. This allows you to maintain frequently used functionality in one central location.

Customize Virtual Agent with custom controls

If an Assistant Designer control doesn't quite work for what you want to achieve, create a custom control. You can create your own controls to accept input from the conversation, as well as custom response controls to handle the output. Use these controls within topics to handle specialized tasks.

Integrate Virtual Agent with Workflow Studio workflows

If your company is using Workflow Studio to create workflows, you can integrate them into Virtual Agent. You may need to do this if your conversations require you to pass secure inputs, such as a password. Workflow Studio actions and subflows support the password2 data type, which lets you pass the input securely.

Use Virtual Agent with Agent Chat

Customize Virtual Agent to hand off some conversations to a live agent when needed.

Integrate Virtual Agent with other portals and apps

Integrate and extend the capabilities of Virtual Agent by connecting to your employees and customers where they already are.

Use Virtual Agent REST API in a standalone or multi-bot environment

Integrate any chat interface or bot using this REST API that is available in the ServiceNow Store.

Additional resources

Visit the [Virtual Agent Academy](#)  for more resources.

Customizing Virtual Agent with custom controls

Custom controls are components that ServiceNow® developers can create for use in Virtual Agent topics or topic blocks. Such controls include sliders or video players. Custom controls complement the controls provided in Assistant Designer.

Assistant Designer provides a default set of controls that represent [user inputs](#), [bot responses](#), and [utilities](#) for building a Virtual Agent conversation. As a developer, you can use the Asset library in Assistant Designer to create additional controls (interface components) for specific inputs or output responses. For example, a slider is an example of a custom input control that enables end users to select a quantity.

Note: Custom controls do not work on Internet Explorer version 11. Custom controls are also not supported for Microsoft Teams.

Before building a custom control

Custom controls are based on customizable Next Experience Components that you can create by using the Next Experience Design System.

Before building a custom component, you must have the following:

- Basic knowledge of the ServiceNow AI Platform[®] and application table structures.
- General knowledge of web component concepts, development, and design.
- JavaScript knowledge to define component behavior and that of the custom control.
- Knowledge of the design process for creating custom components for use in Assistant Designer.

To learn more about developing custom components for Virtual Agent, see [Develop a component for Virtual Agent](#) .

How custom controls work

To add your custom control to Virtual Agent, follow these main steps:

1. Create a custom control definition.

After building the custom component to be used for the control, create a custom control definition that maps an input or response control to the custom component.

2. Create a custom control using Assistant Designer.

A custom control is an input or response control. Developers build a custom control in Assistant Designer by doing the following:

- Selecting a custom control definition.
- Defining the input parameters for using the control.
- Specifying the output parameters returned by the control.

An input control has callbacks that use input from the end user. A response control typically presents information to the end user and doesn't have callbacks.

3. Add a custom control to a topic or topic block.

Topic authors, virtual agent admins, or admins can add a custom control utility to a topic or topic block.

Secure inputs

Beginning with the San Diego release, you can create custom input controls that can accept secure inputs, such as passwords, to pass through to Integration Hub actions or subflows. To enable this, slide the **Make inputs secure** toggle switch when you create your custom input control. For more information, see [Create a Virtual Agent custom control](#).

Create a custom control definition

Define a custom input or response control definition that maps to a custom component.

Before you begin

A custom control definition needs a custom component. For example, a slider input control uses a custom slider component. To begin, create the customizable component that you will use for your control.

Role required: virtual_agent_admin or admin

About this task

For a given custom control, create a separate control definition for each channel in which the control will be used.

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Custom Control Definitions**.
2. Select **New**.
3. On the form, fill in the fields.

Custom Control form

Field	Description
Name	Name of the custom control to be created.
Type	Type of custom control. Choices are as follows: ○ Input ○ Response
Domain	Domain in which this control is used.

4. Select **Submit**.
5. Open the custom control record that you just created.
6. In the Custom Control Definitions related list, select **New**.
7. On the form, fill in the fields.

Custom Control Definition form

Field	Description
Channel	Channels in which your control can be used. The channel is a chat client, such as a chat widget or messaging app, that is supported in Virtual Agent. If your control can be used in more than one channel, create a Custom Control Definition for each channel. If channels are defined, then the custom control can only run in the specified channels.
Application	Scope that this control belongs to.
UX Component Definition	List of custom components that are created for use as custom controls in Virtual Agent. Choose an optional component for your custom control.
Domain	Domain where this control is used.

8. Select **Submit**.

Result

The custom control definition is available for use. You can specify it when you create the appropriate control in Assistant Designer.

What to do next

[Create the custom control](#) in Assistant Designer.

Create a Virtual Agent custom control

Build a custom input or response control that topic authors can use in topics or topic blocks. In Virtual Agent conversations, an input control gathers information from end users, while a response control displays information to end users.

Before you begin

Create the custom control definition.

Important: To implement secure (password2) inputs in your Virtual Agent custom control, you must adhere to the scoped application requirements in Workflow Studio. For details, see [Workflow Studio scoped application requirements for secure inputs](#).

Tip: Developers and topic authors may need to access custom controls created in other application scopes. To give them access, see [Configure cross-scope access privileges for topic blocks and custom controls](#).

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. In the Asset library, select **Create Asset**.
4. On the form, fill in the fields.

Properties form

Field	Description
Type	List of assets that you can create in Assistant Designer Asset library. Choose the type of custom control: ○ Custom Input Control ○ Custom Response Control
Name	Unique name for the custom control that reflects its purpose.
Description	Brief explanation of the purpose and functionality of the control.
Advanced properties (optional)	
Make inputs secure	
[Custom input controls only]	
Enable	Toggle switch that lets a custom input control pass secure inputs, such as passwords.
Available on the palette	
Enable	Toggle switch that determines whether the custom control appears as its own icon in the Utilities section of the palette on the Flow tab. This provides easy access to the control for other authors.
Additional	
Categories	List of categories. Categories identify and group related topics, topic blocks, or custom controls. If applicable, choose a category for your control.

5. Select **Create**.

The **Flow** tab opens and displays an initial flow that contains a custom control node.

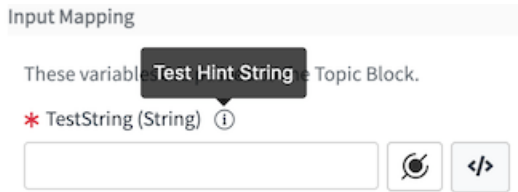
6. Select the **Start** node and define the input parameters to the control.

Topic authors will provide these input parameters and values from the calling topic.

a. Select **+ Add**.

b. On the form, fill in the fields.

Add input dialog box

Field	Description
Name	Name of the input variable that stores the input value.
Type	Type of data being passed to the topic block. For example, String , Boolean , and so on. The fields change according to your choice. For more information, see Input data types in Virtual Agent topics .
Required	Option to set the parameter as required.
Hint	Tooltip that is visible when authoring a calling topic. See the following example: 
Table	ServiceNow table that is used to query for input. This field is available only when Reference or Array.Reference is selected from the Type field.
Max Number of Rows	Maximum number of rows that the topic block is allowed to define. This field is available only when Array is selected from the Type field.
Default Value	Default value for the variable. This value can be used when previewing the block. Duplicate default values are not allowed for array data types.

c. Select **Save**.

d. Repeat these steps for additional parameters.

7. Select the **End** node and define the output parameters and values returned from the custom control.

Topic authors can use the output value in the calling topic.

- a. Select **+ Add New**.
 - b. Enter the name and value of the parameter.
 - c. Repeat these steps for additional parameters.
 - d. Select **Save**.
8. Select the custom control node and complete the property sheet as follows:
 - For a custom input control, fill in the [Custom input properties sheet](#).
 - For a secure custom input control, fill in the [Secure custom input properties sheet](#).
 - For a custom response control, fill in the [Custom output properties sheet](#).
 9. To create the control, select **Save** and then **Publish**.

Result

If you selected **Available on the palette** in the Properties page, the Custom Control icon displays as its own icon in the Utilities section of the palette. The control is listed on the Topics page, and you can use the Type menu to show only custom controls.

What to do next

[Add a custom control to a Virtual Agent topic or topic block.](#)

Add a custom control to a Virtual Agent topic or topic block

Add a custom control to a Virtual Agent topic or topic block. During the conversation, you can gather inputs from the user or display outputs to the user.

Before you begin

Do the following before you start this task:

- [Create and publish the custom input or response control.](#)
- Create a calling topic or topic block in which the custom control will be embedded.

Role required: virtual_agent_admin or admin

Procedure

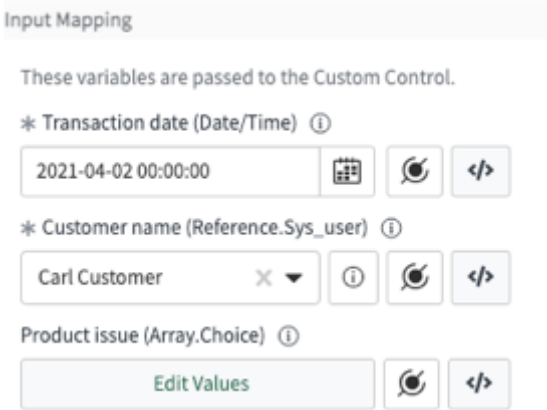
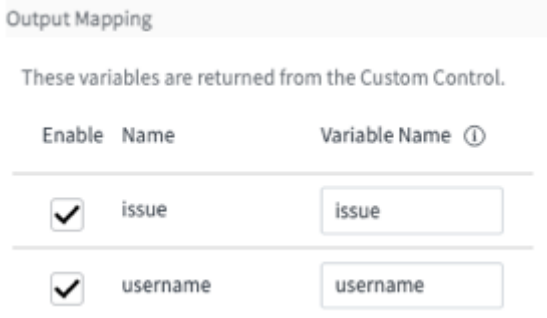
1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. In the Asset library, select the topic where you will add the custom control.
4. In the **Flow** tab, drag the Custom Control icon from the Utilities section of the palette to the appropriate position in the topic flow.

Note: If you selected **Available on the palette** in the custom control Properties page, the Custom Control displays as its own icon in the Utilities section of the palette.

5. Select the custom control node.
6. On the form, fill in the fields.

Custom control utility properties sheet

Property	Description
Custom control	The name of a custom control asset that has been published in the Assistant Designer Asset library.

Property	Description
Node name	The name of the custom control you selected.
Input mapping	The variables to be used as input to the selected custom control. For example, the following image has example variables:  The contents of this area change according to the custom control you selected. Options may include string input, referenced records, scripts, and so forth.
Output mapping	The variables to be output by the selected custom control. For example, the following image has example variables that are enabled:  The contents of this area change according to the custom control you selected.
Advanced	
Hide this node	
Conditionally use this node if	A no-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

7. Select **Save**.

8. To see how your custom control works in the topic, select **Test** in the header bar.
Your topic runs in a chat test window.

9. If no further changes are needed, select **Publish** in the header bar.

Result

The topic is active. You can deploy it to your Virtual Agent clients.

Custom input properties sheet

Use this sheet to define a custom input control in Virtual Agent.

Custom input properties sheet

Custom input property	Description
Custom Control Definition	List of custom control definitions for the controls. Select the definition that defines how the control is rendered for the channel in which it runs. If you need to add a custom control definition, click the Custom control definitions link.
Generate Control Data Function	Script function that provides the data used to render the custom control. For example, if you're creating a slider input control, you would define the values for the slider. These values include the slider minimum and maximum values, slide default values, icon used in the slider, and so on.
Transcript Function	Script function that provides the message recorded in the transcript. For example, a message for an input control could confirm that the control is rendered with specific data values.
Response Handler Function	Script function that defines how the input response is handled on the conversation server.
Response Transcript Function	Script function that provides the message for the input control response that is recorded in the conversation transcript.
Non-supported channel response message	Default fallback message that is displayed when a user is running the control on an unsupported channel.
Advanced (optional)	
Hide or skip this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script.

Secure custom input properties sheet

Use this sheet to specify secure inputs, such as a password, in a custom input control in Virtual Agent.

i Important: To implement secure (password2) inputs in your Virtual Agent custom control, you must adhere to the scoped application requirements in Workflow Studio. For details, see [Workflow Studio scoped application requirements for secure inputs](#).

Secure custom input properties sheet

Secure custom input property	Description
Custom Control Definition	List of custom control definitions for the controls. Select the definition that defines how the control is rendered for the channel in which it runs.
Generate Control Data Function	Script function that provides the data used to render the custom control. For example, if you're asking for one or more passwords, you would define the values for each password.
Transcript Function	Script function that provides the message recorded in the transcript. For example, a message for an input control could confirm that the control is rendered with specific data values.
Non-supported channel response message	Default fallback message that is displayed when a user is running the control on an unsupported channel.
Invoke Workflow Studio asset	The Workflow Studio action or subflow that secure inputs from the custom control can be passed into. For more information about Workflow Studio actions and subflows, see Actions and Subflows.
Spoke	Name of the scoped application that contains Workflow Studio content that is dedicated to a particular application or record type. For a list of default spokes, see Spokes.
Action / Subflow	The Workflow Studio action or subflow to be performed in the instance. The Input mapping and Output mapping areas change depending on your selection. For details about the action or subflow, click the link beneath your selection to view it in Workflow Studio.
Input mapping	Specifies the variables to be used as input to the selected action. The check boxes for secure fields (password2 type) are selected automatically, which makes them mandatory. If you select the check box for a String field, it will be mandatory, but not secure. Only fields that use the password2 data type are secure.

Secure custom input property	Description
	For each selected field, provide the corresponding input response variable name that is specified in the action or subflow. For example, a Workflow Studio action contains an <i>oldPassword</i> input and a <i>newPassword</i> input. The input response object looks like this: <pre>{ "old_password": "1234", "new_password": "5678" }</pre> In this example, enter <code>old_password</code> for the <i>oldPassword</i> property, and then enter <code>new_password</code> for the <i>newPassword</i> property.
Output mapping	Specifies the variables to be output by the selected action. The contents of this area change according to the action you selected.
Advanced (optional)	
Permissions	
Run as	Permissions to use for the action. Select one of the following options: • User who initiates session: When selected, the action runs using the same permissions that the current user has. • System User: When selected, the action runs using system privileges, some of which may be unavailable to the current user.
Hide or skip this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script.

Related topics

[Workflow Studio Actions](#)

[Workflow Studio Subflows](#)

[Password \(2 Way Encrypted\) design considerations](#)

Custom output properties sheet

Use this sheet to define a custom response control in Virtual Agent.

Custom output properties sheet

Custom response property	Description
Custom Control Definition	List of custom control definitions for the controls. Select the definition that defines how the control is rendered for the channel in which it runs.
Generate Control Data Function	Script function that provides the data used to render the custom control. For example, if you're creating a slider input control, you would define the values for the slider. These values include the slider minimum and maximum values, slide default values, icon used in the slider, and so on.
Transcript Function	Script function that provides the message recorded in the transcript. For example, a message for an input control could confirm that the control is rendered with specific data values.
Non-supported channel response message	Default fallback message that is displayed when a user is running the control on an unsupported channel.
Advanced (optional)	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Deploying Virtual Agent topics in other channels

When creating a topic or topic block, you can specify the chat channels in which the topic or topic block will run. Conversation design in Assistant Designer Asset library provides built-in guardrails to help you tailor your conversations to those channels.

In Virtual Agent, a channel is a chat interface or application in which Virtual Agent interacts with end users. Default channels are the chat applications natively supported by Virtual Agent, such as the Slack, Microsoft Teams, Workplace, and Facebook Messenger applications, and the web and mobile clients. Virtual Agent also supports custom channels created through the [conversational custom chat integrations](#) feature, which enables third-party applications (other chat providers) to work in Virtual Agent.

For example, admins can build a custom conversational chat integration for a specific messaging provider, such as Skype. Admins also define the controls that can be used in topics that run in these channels. For details about creating channels for chat providers and specifying the controls used in a channel, see [Creating conversational custom chat integrations in Virtual Agent](#).

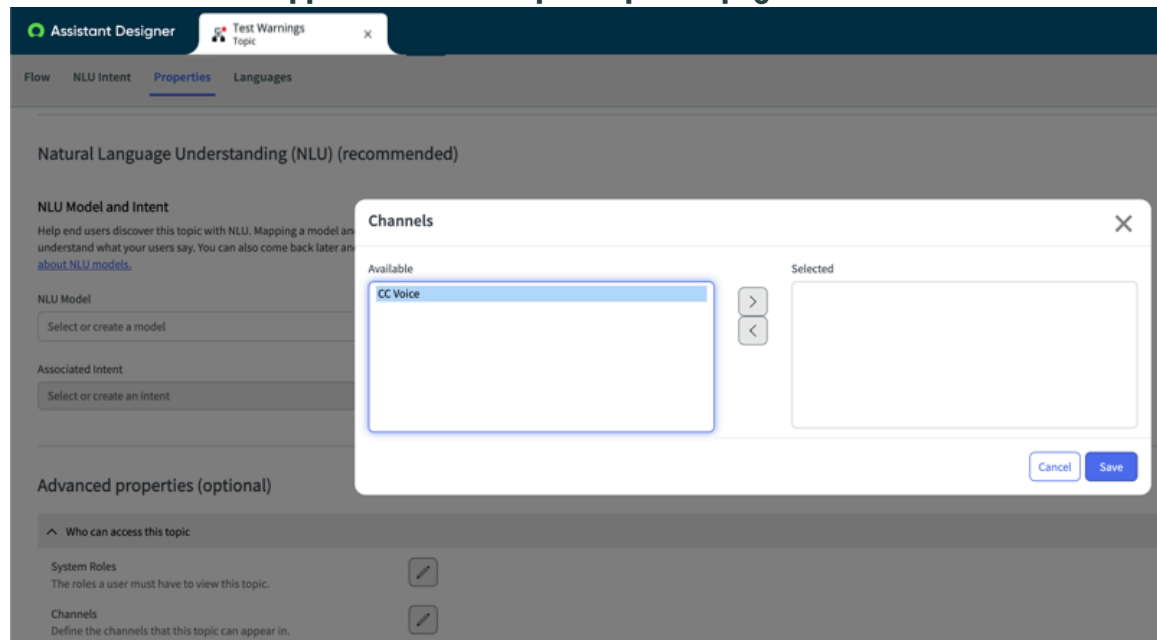
Specifying channels in your topics or topic blocks

When you create or edit a topic or topic block, you can specify the applicable channels in the **Channels** field under Advanced properties in the Topic Properties page. Applicable channels

are the custom channels created for your instance through the conversational custom chat integrations. Use this field to specify chat clients in which the topic or topic block will run.

Note: An updated Assistant Designer Asset library user interface is available when you install ServiceNow Otto for Virtual Agent. This content assumes that you can see the list view. If ServiceNow Otto for Virtual Agent is not installed, you see the legacy UI and topics page. For more information, see [Virtual Agent Designer legacy topics page](#).

Additional channel support field in the Topic Properties page



During conversation design, Virtual Agent checks the various controls used to build the conversation flow to confirm that the control is valid for the channels in which the topic or block will run.

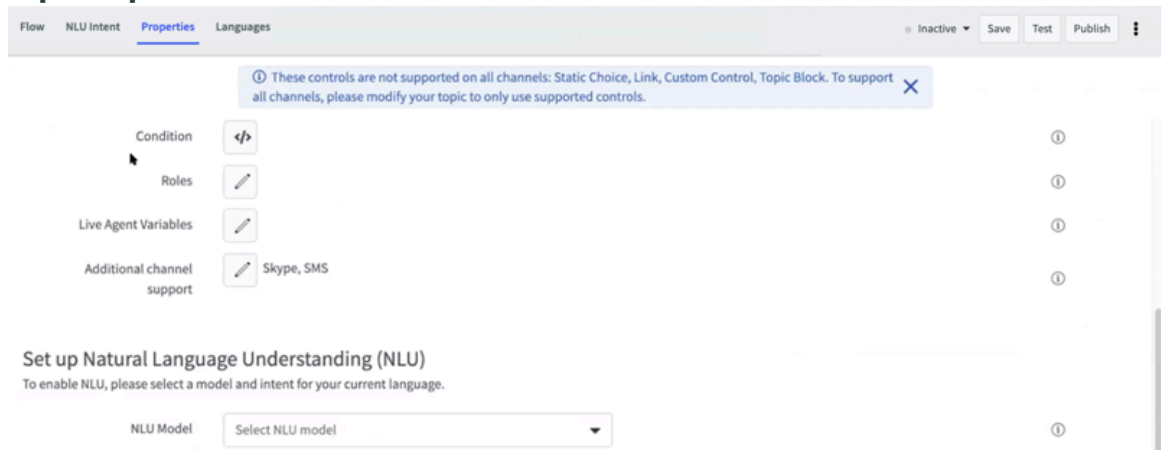
Design checks for specified channels during conversation design

When you're designing your conversation, built-in guardrails identify the Assistant Designer Asset library topic controls that aren't suited for the custom channels that you specified in the Topic Properties page. These messages are displayed in the following views:

- **Properties** tab (Topic Properties page)

In the following example, Skype and SMS are the additional channels in which the topic will run. The banner message identifies the controls that are not supported on the channels for the topic. As you develop the conversation flow, you can revise your conversation so that it does not use any of the specified controls for your selected channels.

Topic Properties tab with defined channels

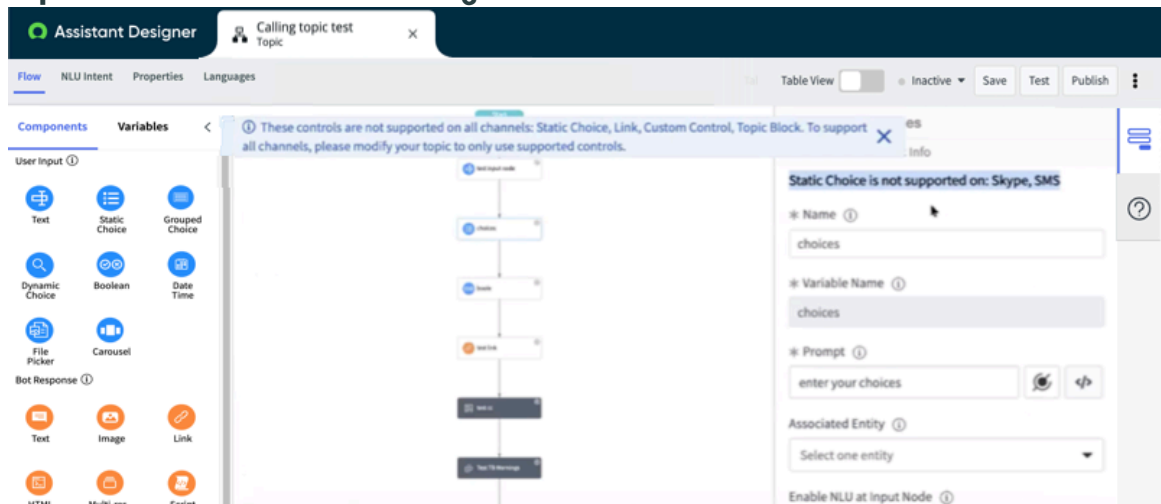


- **Flow** tab (Assistant Designer Asset library topic canvas)

In the following example flow, the banner message identifies the controls that aren't supported for the specified channels. The property sheet for the affected nodes also displays a message indicating that the control is not supported. For example, when you highlight a particular node (control) in the flow, the associated property sheet for the node indicates that the control is not supported in the Skype and SMS channels.

If you have controls that can't be used, you can branch the flow so that you can continue building the flow with the controls that are supported.

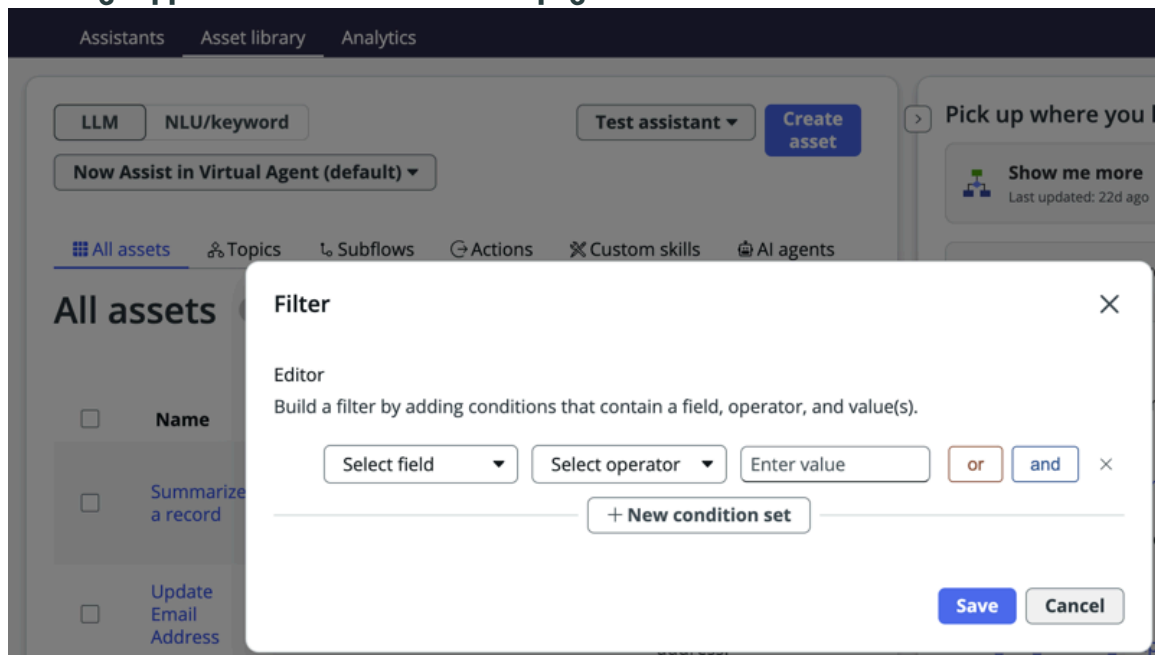
Topic Flow tab with channel warnings



Finding the channels available in your instance

To see a list of the available channels in your instance, use the filter icon (🔍) in the Assistant Designer Asset library (Navigate to **All** > **Conversational Interfaces** > **Assistant Designer**, then select the **Asset library** tab). The Messaging Channels [sys_cs_channel] table also shows the available channels.

Filtering supported channels in the home page



The default channels in Virtual Agent are the web chat and mobile clients and also the Virtual Agent messaging integrations for the Slack, Microsoft Teams, Workplace, and Facebook Messenger messaging applications. In the previous example, SMS is an available chat channel that was created for your instance through a conversational chat integration. When you choose a channel, the home page lists your topics (cards) by channel type. For more information, see [Creating conversational custom chat integrations in Virtual Agent](#).

Link unfurling in Virtual Agent

Virtual Agent supports link unfurling on the chat widget, mobile devices, and various channels. Link unfurling generates a content-rich preview when a supported link is shared in a conversation with a user, a virtual agent, or in a text-based bot response.

If the link is supported on the chat widget or channel, the generated content-rich previews can include text, images, and videos.

Note: Factors such as website availability, security policies, or response time of the link you want to unfurl are unpredictable. As a result, link unfurling may be delayed or unavailable. However, these performance-related issues don't impact the user and don't affect the conversation flow.

How to determine if a link is supported

The ServiceNow user interface currently supports link unfurling for OG tags only. A link is supported only if all the following conditions are met:

- The host or domain is included in the Hostname allow list table.
- The link uses standard, compliant [Open Graph \(OG\) tags](#) in the page header as metadata. For example, og:image.
- The link was shared in a conversation with a user, a virtual agent, or in a text-based bot response.

Note: These conditions apply only to the chat widget and mobile devices on the ServiceNow® platform. Support requirements and conditions for clients on other platforms can vary. For client-specific support and requirement conditions, see the documentation for the client you're using.

Tip: Admins can add OG tags to ServiceNow UI pages by following the instructions in the [Adding meta tags to ServiceNow UI Pages](#) Knowledge Base article.

When a link meets the specified criteria, the ServiceNow software does the following:

- Asynchronously fetches, if available, the OG tag at the provided link.
- Attaches a card-based, content-rich preview of the link based on the OG tag.

The time required to complete these and any other required tasks can vary, depending on your network configuration and system performance.

Supported OG tags

The ServiceNow user interface supports image, video, and text-based OG tags. When both an image OG tag and a video OG tag are fetched, the video is used instead of the image in the card-based, content-rich preview.

Note: The specific OG tags supported on channels can vary. For example, the OG tags supported on Slack may be different from the OG tags supported on Microsoft Teams, or Workplace from Facebook. For details about the OG tags supported on channels, see the documentation for the channel you're using.

Disabling link unfurling

Link unfurling is automatically enabled by default. To turn it off, admin users can change the `com.glide.cs.enable_link_unfurling` system property to `False`.

Configure link unfurling using the Hostname allow list table

Use the Hostname allow list [`sys_cs_hostname_allow_list`] table to identify the list of hosts and domains that can be unfurled.

Before you begin

For security reasons, only the hosts and domains in the Hostname allow list table can be unfurled.

The Hostname allow list table includes the following hosts and domains by default:

- Instance URL/hostname: `<instance>.service-now.com` or `<customURL>.com`
- Instance root domain: `*service-now.com` or `*.<yourdomain>.com`
- `servicenow.com`
- `*youtu.be`
- `*youtube.com`

Role required: admin

Procedure

1. Navigate to **All**, and then enter `sys_cs_hostname_allow_list` in the filter.
2. Click **New**.
3. On the form, fill in the fields.

Field	Description
Active	Select this option to enable the host or domain that can be unfurled.

Field	Description
Hostname	Name of the host or domain that can be unfurled. You can use an asterisk (*) to specify a wildcard in the host or domain name. For example, enter *.domain.com.
Domain	Domain group. The default is global.

4. Click **Submit**.

Maximizing code reuse with topic blocks

Topic blocks are reusable components that you can create to run common tasks and conversational elements in Virtual Agent conversations. Topic blocks simplify the topic authoring and maintenance process by enabling you to reuse standard procedures or actions across conversation topics.

How reusable topic blocks work

A topic block is basically a subflow that performs certain actions or conversational tasks in a topic. For example, you can build a topic block that creates or retrieves certain types of records. You create topic blocks with Assistant Designer, similar to the way that you build conversation topics. In the Assistant Designer Asset library, you can do the following:

- Set topic block properties.
- Define the controls (nodes) used in the block.
- Test or preview the block.
- Publish the block to make it available for use in topics or other topic blocks.

Unlike topics, topic blocks are not discoverable by a large language model (LLM). The topic block's functionality can only be accessed by a topic.

A conversation that uses (consumes) a topic block is referred to as the calling topic. A topic block can call another topic block, but it cannot call itself. You can "nest" topic blocks in this manner, even if the flow returns to the initial topic, as in this example:

Chain of nested topic blocks



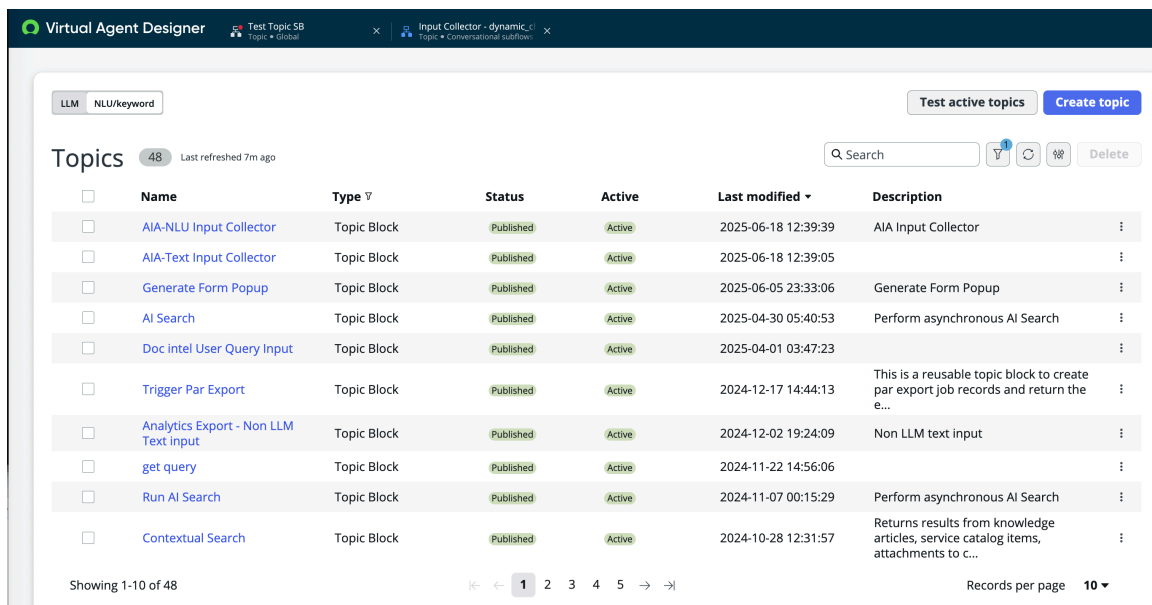
Note: If Virtual Agent detects an infinite loop, the conversation ends.

The Virtual Agent platform and applications provide prebuilt topic blocks for common tasks or subflows. You can use these prebuilt topic blocks in your conversation topics "as is" in the appropriate application scope by duplicating them. You can then customize these prebuilt topic blocks as needed. Some of the common topic blocks include the following.

Examples of prebuilt topic blocks

Prebuilt topic blocks	Application scope
• Live Agent: Transfers a bot conversation to a live agent. • Survey-LLM: Presents a survey for collecting feedback for an agent. • AIA Interrupt Handler: Stop AI agent execution.	Global. Provided with the Glide Virtual Agent plugin (com.glide.cs.chatbot).

On the home page, you can use the filter icon  to filter and view only the topic blocks.

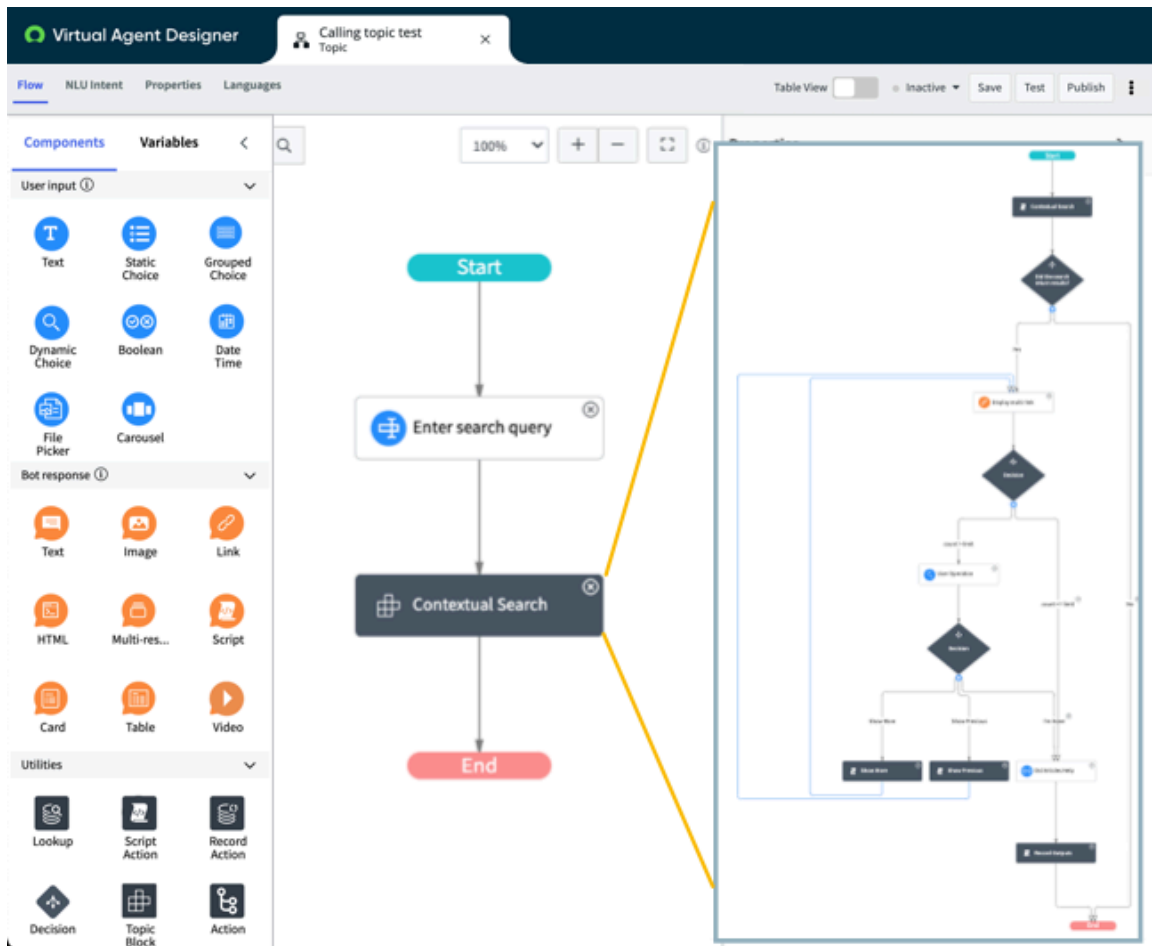


The screenshot shows the Virtual Agent Designer interface. At the top, there are tabs for 'LLM', 'NLU/keyword', 'Test active topics', and 'Create topic'. Below the tabs, there is a search bar and a filter icon. The main section is titled 'Topics' and shows a list of 48 topics. The list is filtered to show only 'Topic Block' utilities. The topics are listed in a table with columns: Name, Type, Status, Active, Last modified, and Description. The topics are:

Name	Type	Status	Active	Last modified	Description
AIA-NLU Input Collector	Topic Block	Published	Active	2025-06-18 12:39:39	AIA Input Collector
AIA-Text Input Collector	Topic Block	Published	Active	2025-06-18 12:39:05	
Generate Form Popup	Topic Block	Published	Active	2025-06-05 23:33:06	Generate Form Popup
AI Search	Topic Block	Published	Active	2025-04-30 05:40:53	Perform asynchronous AI Search
Doc intel User Query Input	Topic Block	Published	Active	2025-04-01 03:47:23	
Trigger Par Export	Topic Block	Published	Active	2024-12-17 14:44:13	This is a reusable topic block to create par export job records and return the e...
Analytics Export - Non LLM Text Input	Topic Block	Published	Active	2024-12-02 19:24:09	Non LLM text input
get query	Topic Block	Published	Active	2024-11-22 14:56:06	
Run AI Search	Topic Block	Published	Active	2024-11-07 00:15:29	Perform asynchronous AI Search
Contextual Search	Topic Block	Published	Active	2024-10-28 12:31:57	Returns results from knowledge articles, service catalog items, attachments to c...

Showing 1-10 of 48. Records per page: 10.

After you create and publish a topic block, the block is available for use as a Topic Block utility in the Asset library. You can add the topic block to a calling topic or to another topic block. In the following example, the calling topic uses the Contextual Search topic block. When a topic calls the Contextual Search topic block, the conversation flow contained in the topic block executes.



What to do next

Working with topic blocks involves the following steps:

1. Create a reusable topic block.

Build a conversation component that performs a common function that can be reused in Virtual Agent conversations.

2. Add a reusable topic block to a calling topic or topic block.

To run a specific subflow, add a reusable topic block to a calling (parent) topic or topic block. Specify the inputs that are used in the topic block and review outputs that are returned from the topic block.

3. Maintain topic blocks and associated calling topics (as needed).

When you update a published topic block, Assistant Designer performs certain checks. Displayed messages inform you of changes that you may want to make to calling topics that use the updated block.

Create a reusable topic block

Build a reusable component that performs a specific subflow of tasks and conversational elements in Virtual Agent conversations.

Before you begin

 **Tip:** Developers and topic authors may need to access topic blocks created in other application scopes. To give them access, see [Configure cross-scope access privileges for topic blocks and custom controls](#).

Role required: virtual_agent_admin or admin

About this task

Use topic blocks to run common steps, such as retrieving certain records.

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. In the Asset library, do one of the following:
 - To create a topic block from scratch, select **Create Asset**.
 - To create a topic block based on a pre-built topic block, open the topic block and do the following:
 - a. In the header bar, select **Duplicate**.
 - b. Enter the name of the new block and select **Save**.
4. On the sheet, fill in the fields.

Topic Block Properties sheet

Field	Description
Type	List of items that you can create in Assistant Designer. Select Topic Block and define the additional properties.  Note: Once you set this topic as a topic block, you cannot change it to a regular topic.
Name	Unique name for the topic block that reflects its functional purpose. This name appears in the list of topic blocks that topic authors can choose from when creating or updating a topic.
Description	Brief explanation of the purpose of the topic block. For example, to retrieve records.
Advanced properties (optional)	
Who can access this topic	
Channels	Chat clients in which the topic or topic block will run. These channels are different from the default channels that are natively supported by Virtual Agent. Your instance may have additional channels for custom chat integrations created for it. For more information about channels, see Deploying Virtual Agent topics in other channels.
Live agent	

Field	Description
Live agent context variables	Live agent context variables that are defined in the General Chat Settings. Select the variables that provide dynamic context, which means information from the Virtual Agent chat. This information is transferred from the bot conversation to the live agent. For information about the default list of live agent variables, see Live agent chat context variables.
Available for Agent Autopilot	Toggle switch that determines whether the topic block is available to a live agent. When enabled, an agent can search for the topic and invoke the topic. For details, see Conversation Autopilot.
Available on the palette	
Enable	Toggle switch that determines whether the topic block appears as its own icon in the Utilities section of the palette on the Flow tab. This provides easy access to the topic block for other authors.
Additional	
Categories	Category that contains this block. You can define custom topic categories for your topic blocks.

5. Select **Create**.

The **Flow** tab opens. The canvas displays a flow with a **Start** and **End** node.

6. To define an input to the block, do the following:

- a. Select the **Start** node in the canvas.
- b. In the Start Segment Properties sheet, select **+ Add**
- c. On the sheet, fill in the fields.

Add input dialog box

Field	Description
Name	Name of the input variable that stores the input value.
Type	Type of data being passed to the topic block. For example, String, Boolean, and so on. The fields change according to your choice. For more information, see Input data types in Virtual Agent topics.
Required	Option to set the parameter as required.
Hint	Tooltip that is visible when authoring a calling topic. See the following example:

Field	Description
	Input Mapping These variables are mapped to the Topic Block. * TestString (String) ⓘ  
Table	ServiceNow table that is used to query for input. This field is available only when Reference or Array.Reference is selected from the Type field.
Max Number of Rows	Maximum number of rows that the topic block is allowed to define. This field is available only when Array is selected from the Type field.
Default Value	Default value for the variable. This value can be used when previewing the block. Duplicate default values are not allowed for array data types.

Example

For example, the pre-built Contextual Search topic block provides the following input parameters:

Start Segment Properties

Greeting Response ⓘ

Input Parameters

Define the input to the Topic Block. Topic authors will provide these input values from the calling topic.

Name	Type	Required	
context	String	☒	
query	String	☒	
portal	String	☐	
kb_knowledg...	String	☐	

 Add

d. Select **Save**.

The calling topic or topic block passes input parameters to the topic block.

7. Drag Assistant Designer controls onto the canvas.

These controls include the input, bot responses, and utilities. Use them in combination to define the logic that is run in the topic block. For more information, see [Assistant Designer controls](#).

8. To define the output returned from the topic block, do the following:

- a. Select the **End** node in the canvas.
- b. In the End Segment Properties sheet, select **+ Add New**.
- c. On the sheet, fill in the following fields.
 - **Name:** Name of the value returned from the topic block.
 - **Value:** Either a string with variables or a script that can be used within the calling topic. The **Value** is presented as data pills for the input variables that you defined (the **Default Value** specified in the Input Parameters and the input values from the node in the topic block).

Example

For example, the pre-built Contextual Search topic block passes the following output parameters:

End Segment Properties

Confirmation Message ⓘ




Output Parameters

Define the output returned from the topic block. Topic authors can use these output values in the calling topic.

Name ⓘ	Value ⓘ
Results returned	Script Variables... 
Results Helpful	Script Variables... 

+ Add New

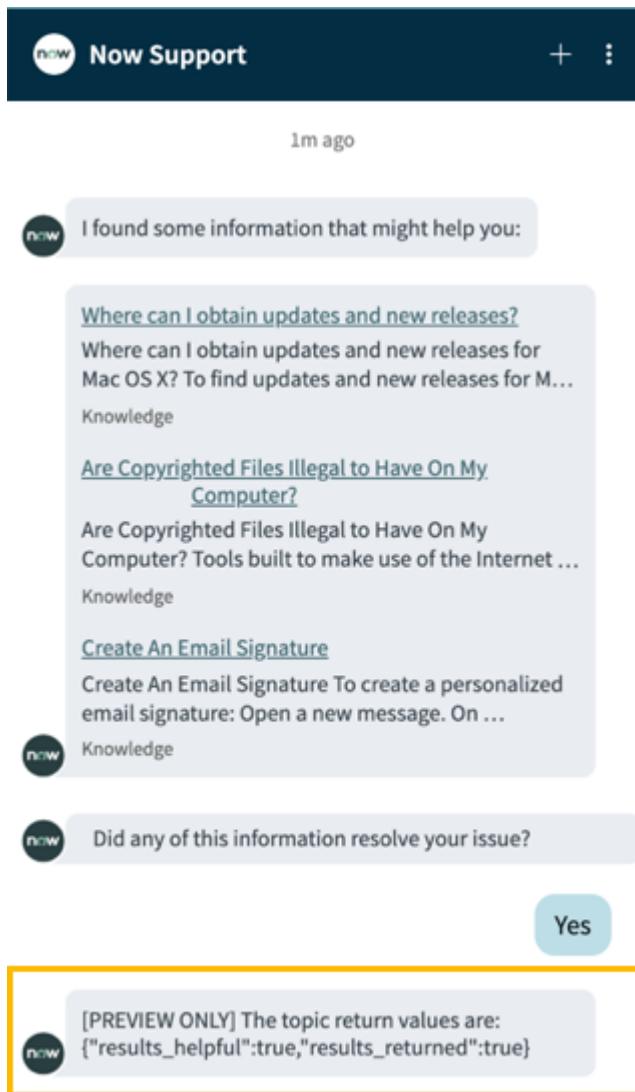
d. Select **Save**.

When the topic block finishes running in the calling topic, it can pass output variables to the calling topic.

9. To see how the topic block runs, select **Test**.

Example

For example, the Contextual Search topic block returned the following results, including a preview-only message with the output values. The preview message helps you verify expected outputs and is not viewable to your users.



10. If you're ready to make the topic block available for use in calling topics, then do the following:
 - a. Remove the default parameters that you used for testing.
 - b. Select **Save**, and then select **Publish**.
The topic block state changes to Active and is ready for use in calling topics.

What to do next

[Add a reusable topic block to a calling topic or topic block.](#)

Add a reusable topic block to a calling topic or topic block

Add a reusable topic block to a calling (parent) topic or topic block to run a specific function or task in the calling topic. You specify input parameters used in the topic block, and you specify output parameters that are used by the calling topic.

Before you begin

Review the topic blocks available on the home page in Virtual Agent. You can [create a new topic block](#). You can also use a pre-built topic block, duplicate it, and customize it. Pre-built topic blocks are installed automatically with the Glide Virtual Agent plugin, as well as the [Virtual Agent conversation plugins](#) for Customer Service Management, HR Service Delivery, and ITSM.

Verify that the topic block you want to use is published and active.

Role required: virtual_agent_admin or admin

About this task

You can specify the following types of variables:

- Input variables that are passed to the topic block.
- Output variables that are returned from the topic block to the calling topic.

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. In the Asset library, select the calling topic or topic block in which you will include the topic block.
The **Flow** tab displays the conversation flow.
4. Depending on the type of topic block you are adding, add the appropriate Virtual Agent controls (nodes) to the conversation.
For example, if you are adding the Contextual Search topic block, you could add the Text user input control to request an item from the user. Drag that control before the node for the Contextual Search topic block.
5. From the Utilities section of the palette, drag the Topic Block control onto the canvas at the appropriate location in the conversation flow.
6. In the Topic Block properties sheet, select the name of the topic block that you want to add.
The property sheet for the selected topic block displays the input and output parameters. The name of the selected topic block automatically pre-populates the **Node name** field. You can override the name if needed.
7. Set the required Input Mapping variables and, if applicable, the Output Mapping variables for the selected topic block.
8. In the header bar, select **Save**.
9. To preview your calling topic, select **Test** in the header bar.
You can see how the calling topic runs in the chat window.

If the ServiceNow Otto panel, Microsoft Teams application, or Slack application is configured for your environment, preview options for those channels are displayed in the Test button list. Select **Preview in Otto panel** or **Preview in Microsoft Teams** in the list to test your topic in those environments.
10. If no further changes are needed, select **Publish** in the header bar.

Maintain reusable topic blocks

When you update topic blocks, Assistant Designer provides built-in checks to help you identify changes to topic blocks that affect the calling topics that use them. Updates include changing input and output parameters, deleting topic blocks, and publishing inactive and active topic blocks and calling topics.

To help you maintain your topic blocks and associated calling topics, Assistant Designer provides alerts that serve as guardrails. These alerts have many functions, including the following:

- They warn you of topic block updates that affect associated calling topics.
- They help prevent you from making unintentional changes.
- They let you know that you may need to make changes in associated calling topics.

Changing the input or output parameters in a topic block that is used by calling topics

Assistant Designer helps prevent you from deleting output parameters that are being used in calling topics. It also informs you that the changes will affect calling topics that use the topic block.

For example, suppose you added a new input parameter and made an existing parameter required in the Acme Contextual Search topic block. You can review the affected topics from a link on the topic block's **Properties** tab. The **View published topics that use this topic block** link opens the Topic Library Usages [sys_cs_topic_library_usage] table. This table lists the published calling topics that use the topic block.

When you open an affected topic, Assistant Designer displays warnings and messages on the canvas indicating where you need to make changes. When you select the Topic Block node, warning messages are displayed in the properties sheet so that you can update parameters accordingly.

Messaging of input parameter changes

The screenshot illustrates the process of managing input parameter changes in a topic block. It shows three main components:

- Edit topic block properties panel:** Displays the 'Acme Contextual Search' topic block. A red box highlights the link 'View published topics that use this topic block'.
- Topic Library Usages table:** A table listing topics that use the 'Acme Contextual Search' block. A red arrow points to the 'Support search' entry.
- Workflow canvas:** Shows the 'Acme Contextual Search' topic block in the workflow. A red box highlights the 'Portal' input parameter in the properties sheet.

Integrating Virtual Agent with Workflow Studio workflows

The workflows of ServiceNow® Workflow Studio can be integrated within ServiceNow Virtual Agent topics. You can then use these workflows in Virtual Agent conversations.

Note: If you have turned on and set up ServiceNow Otto for Virtual Agent, you can use the base system conversational actions and subflows from the Assistant Designer Asset library. You currently can't create conversational subflows in Assistant Designer; you can only view and edit them. Conversational subflows can be created, tested, and deleted only in Workflow Studio. For more information on conversational actions and subflows, see [Conversational actions](#) and [Conversational subflows](#). You can still integrate actions and subflows that are not conversational from Workflow Studio into Virtual Agent topics through Assistant Designer Asset library. The following content is only relevant to actions or subflows that cannot be made conversational in Workflow Studio.

You can integrate Workflow Studio actions and subflows as follows:

- Add the actions or subflows to Virtual Agent conversations.
- Use actions created for another product in Virtual Agent conversations.
- Create conversations that call workflows directly in the conversation. For example, users can place catalog requests, create incidents, or input information securely.

In Virtual Agent conversations, you can use actions to trigger workflows that are custom built in an application (such as Workflow Studio) or workflows of the third-party applications and products available in the Integration Hub. Integrations built using Workflow Studio and Integration Hub help to ensure a high level of resiliency and performance.

If an action in the workflow is slow to respond or appears to be waiting, topic authors see a relevant error message.

By default, a scheduled job checks the conversation flow every 120 seconds. For more information about scheduled jobs, see [Scheduled jobs](#) .

You can change this interval as needed. To change the interval, see [Specify the action workflow timeout](#).

Integrate workflows of third-party products available on the Integration Hub

You can use the Integration Hub to create end-to-end digital workflows and automate processes that integrate the ServiceNow AI Platform[®] with any third-party application, platform, or data.

For example, you can use one of the 100 prebuilt spokes available on the [ServiceNow Store](#) . These prebuilt spokes include popular applications, such as Microsoft Azure, Workday, and Okta.

For more information about the ServiceNow Integration Hub, see [ServiceNow IntegrationHub – natively integrate ServiceNow with anything](#) .

Add actions or subflows to Virtual Agent topics

Use the Action utility to integrate ServiceNow Workflow Studio workflows in Virtual Agent topics. The Action utility node triggers the required Workflow Studio workflows used in the Virtual Agent conversation.

Before you begin

If you don't already have a Virtual Agent topic, create one. For more information, see [Creating a Virtual Agent topic](#).

Become familiar with the following features:

- Workflow Studio concepts and tasks. For more information, see [Workflow Studio](#) .
- Assistant Designer utilities, such as the Lookup utility, and the Script Action utility.

Use these utilities to control the actions within the Virtual Agent conversation. For more information about these utilities, see [Assistant Designer utilities](#).

- Virtual Agent controls. You may be asked to enter any of the following:
 - Text strings
 - Data pills

- Strings with embedded data pills
- Scripts that return strings

For more information, see [Assistant Designer controls](#).

Note: If you have turned on and set up ServiceNow Otto for Virtual Agent, you can work with conversational actions and subflows from the home page. For more information on conversational actions and subflows, see [Conversational actions](#) and [Conversational subflows](#). You can still integrate actions and subflows that are not conversational from Workflow Studio into Virtual Agent topics via Assistant Designer Asset library. The following content is only relevant to actions or subflows that can't be made conversational in Workflow Studio.

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. In the Asset library, select the topic that you want to use.
4. In the **Flow** tab, drag the Action utility icon  from the Utilities section of the palette onto the canvas at the appropriate location on the conversation flow.
The Action utility is now a node in the conversation flow, and the Action utility properties panel appears.
5. On the properties sheet, fill in the fields.

Action utility properties sheet

Property	Description
Node name	The name of this Action node.
Invoke Workflow Studio asset	Select one of the following Workflow Studio components: ○ Action: A reusable operation. ○ Subflow: An automated process that consists of a sequence of reusable actions, data inputs, and outputs.
Spoke	Name of the scoped application that contains Workflow Studio content that is dedicated to a particular application or record type. For a list of default spokes, see Spokes .
Action/Subflow	The Workflow Studio action or subflow to be performed in the instance. The Input mapping and Output mapping areas change depending on your selection. For details about the action, select the link beneath your selection to view it in Workflow Studio.
Wait for response?	Toggle switch that determines whether Virtual Agent waits for a response from the specified action before continuing.

Property	Description
Input mapping	Specifies the variables to be used as input to the selected action. The contents of this area change according to the action that you selected. Options may include string input, referenced records, scripts, and so on. For options that require a password, enable the Include a password input toggle switch to prompt the user for a password. Secure inputs must use the password2 data type. Input is securely masked and not viewable by others. Note: The <i>Array . Reference</i> input data type in Assistant Designer corresponds to the <i>List . [Table]</i> input data type in Workflow Studio. For more information, see Action input and output data types.
Output mapping	Specifies the variables to be output by the selected action. The contents of this area change according to the action that you selected.
Advanced (optional)	
Permissions	
Run as	Permissions to use for the action. Select one of the following options: User who initiates session: When selected, the action runs using the same permissions that the current user has. System User: When selected, the action runs using system privileges, some of which may be unavailable to the current user.
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

6. Select **Save**.

Virtual Agent secure password inputs

The **Include a password input** toggle switch on the Action utility properties sheet lets you enter passwords securely for use in Virtual Agent conversations.

If the workflow discovers a password2 type as an input, the Action utility properties sheet displays the **Include a password input** toggle switch.

Note: In previous releases, inputs with a string data type would also display this toggle switch. Starting with the San Diego release, only password2 data types are supported. If you have existing actions that use password inputs, update them to use password2.

Input mapping

Input mapping

Include a password input ⓘ



If you enable this toggle switch, you see messages about clients that are supported, along with fields that let you do the following:

- Designate the field you want to make secure
- Enter the text you want to use for the password-related prompt

- Enter the text for a confirmation prompt
- Enter the text to use for messages about channels that aren't secure

i Important: To implement secure (password2) inputs in your Virtual Agent custom control, you must adhere to the scoped application requirements in Workflow Studio. For details, see [Workflow Studio scoped application requirements for secure inputs](#).

Password detail fields

Input mapping

Include a password input ⓘ

☒

Password inputs are not supported on: android, ios, Slack, Teams

* Select a field for your password input

new_password X ▼

* Prompt

Type in a new password. 🔍 </>

Confirmation prompt

🔍 </>

* Non-secure channel response message ⓘ

This action is not supported on this channel.

B I 🔗 ☰ 😊 🔍 </>

password_reset_process_id (string)

🔍 </>

new_password (password2) - defined above

Selected data pills will be shown here 🔍 </>

These password input type fields are dynamic in the sense that the fields you see map to the fields set for the action when it was created in Workflow Studio. Some of the password2 fields may also be read-only.

For password-related design considerations in Workflow Studio, see [Password \(2 Way Encrypted\) design considerations](#) .

Note the following points about how password-related inputs are handled securely:

- Only users can see the passwords. No one else can.
- The passwords are held in memory on the server and are passed securely to the Workflow Studio Action or Subflow.
- When users enter a password on a channel, users can toggle the Hide text icon 🔍 to show or hide the password.
- ServiceNow admins can mark a specific channel as secure. If topic authors attempt to include a channel that isn't marked as secure, a warning message appears.

For more information about creating secure channels, see [Create a Virtual Agent conversational custom chat integration](#).

- Passwords are masked (not readable) in queues, tables, and logs.

Workflow Studio scoped application requirements for secure inputs

Adhere to the following scoped application requirements to implement secure (password2) inputs in your Virtual Agent topics.

You can add secure inputs to Virtual Agent topics in two ways:

- [Create a secure custom input control](#) that uses a Workflow Studio action or subflow with secure (password2 type) inputs.
- Add an [Action utility node](#) to a topic that refers to a Workflow Studio action or subflow that has a single password2 field as an input.

The [Key Management Framework](#) (KMF) must be installed and configured for your instance. The scoped application that uses the secure fields must also have the following:

- A `sys_kmf_crypto_module` record, with a related Symmetric Key Wrapping/Unwrapping `sys_kmf_module_crypto_spec` record
- A `sys_kmf_crypto_caller_policy` record with the following properties:
 - Policy name: <modify the auto-generated name>
 - Crypto module: `com_glide_cs_glideencrypter`
 - Type: `Scope`
 - Target Scope: <your application's scope>
 - Application: <the name of your scoped application>
 - Active: `true`
 - Result: `Track`
- A Workflow Studio action or subflow that accepts one or more password2 input fields
- A [Script step](#) in the Workflow Studio action that unwraps the password2/KMF passwords as follows:

```
var op = new
sn_kmf_ns.KMFCryptoOperation("global.com_glide_cs_glideencrypter", "SYMMETRIC_UNWRAPPING").withAlgorithm("AES").withOutputFormat("KMFNONE");
var old_pw_clear_data = op.doOperation(inputs.old_pw);
var new_pw_clear_data = op.doOperation(inputs.new_pw);
var new_pw_confirmed_clear_data =
op.doOperation(inputs.new_pw_confirmed);
```

For more information about password2 encryption with KMF, see [Password2 encryption with KMF](#).

Test the Action utility

Test the Action utility to make sure that the integrated action works as intended in the conversation.

Before you begin

Role required: virtual_agent_admin or admin

About this task

When you test the subflow or action associated with the Action utility, you see a test results preview pane that includes preview-only messages. These messages include a link called **View in Workflow Studio**. This link takes you to the execution details. You can use the execution details to do the following:

- Verify what is being returned to Virtual Agent.

Note: Only topic authors have access to the **View in Workflow Studio** link. In non-production environments, this link is available by default. In production environments, topic authors must enable access to this link by creating a record in the [sys_flow_execution_setting] table for each Workflow Studio asset. This link is not available in conversations where password2 input is used.

- View the subflow or action execution details.

Topic authors can also see the test results in the Conversation Task FDIH Invocations [sys_cs_fdi_h_invocation_list] table.

Note: If you have turned on and set up ServiceNow Otto for Virtual Agent, you can work with conversational actions and subflows from the Assistant Designer Asset library. For each assistant, you can test topics, subflows, and actions by using the Assistant Designer Asset library **Test Assistant** button. Assistant Designer Asset library opens a Workflow Studio tab where you can test subflows and actions. For more information on conversational actions and subflows, see [Conversational actions](#) and [Conversational subflows](#). You can still integrate actions and subflows that are not conversational from Workflow Studio into Virtual Agent topics via Assistant Designer Asset library. The following content is only relevant to actions or subflows that can't be made conversational in Workflow Studio.

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.

2. Select the **Asset library** tab.

3. In the Asset library page, open the topic with the Action utility that you want to test.

4. Select **Test**.

If an action or subflow in the test window is slow to respond or appears to be waiting, you see a relevant error message.

By default, a scheduled job checks the conversation flow every 120 seconds. For more information about scheduled jobs, see [Scheduled jobs](#).

You can change this interval, as needed. To change the interval, see [Specify the action workflow timeout](#).

5. Troubleshoot the Action utility node:

- View the execution details.
- Look at the Conversation Task FDIH Invocations [sys_cs_fdi_h_invocation_list] table.

6. Select **Save** when you're finished.

Specify the action workflow timeout

Set the length of time before the Workflow Studio Integration Hub action workflow times out.

Before you begin

Role required: admin

Procedure

1. Navigate to **All**.
2. Enter `sys_properties.list` in the filter.
3. Select **New** to add the `com.glide.cs.fdi.interactive.timeout` property.
 - a. On the form, fill in the fields.

Field	Value
Name	Enter the system property name: <code>com.glide.cs.fdi.interactive.timeout</code> .
Description	Enter an explanation for this property, such as: <i>Virtual Agent Workflow Studio</i> IntegrationHub workflow timeout (in seconds).
Type	Enter integer.
Value	Enter the number of seconds before the workflow action times out. The default value is 120 seconds. This value should not exceed the value set in the <code>com.glide.cs.convesation_idle_timeout</code> system property. The <code>com.glide.cs.convesation_idle_timeout</code> property's default timeout value is 7,200 seconds.

- b. Select **Submit**.

Login to transfer guest chat history to an authenticated Virtual Agent session

Elevate guest users to an authenticated session by logging in, and without losing chat context or history.

Before you begin

Role required: virtual_agent_admin or admin

Ensure you've installed the Glide conversation server (`com.glide.cs`) plugin.

About this task

If you change your chat to another portal without logging in, your conversation is reset in the new context. By logging in, you can elevate chat sessions and preserve history and context. The login option is available in Australia, Patch 4, but you must activate the `com.glide.cs` plugin, and place the login topic block in your topic, to use it in your Virtual Agent chat. You can then use the login feature in Virtual Agent and Live Agent chat sessions, and in Virtual Agent API

The login feature is wrapped in the *Glide Authentication* block, which you must place in a topic. The topic block is then called when an action requires authentication, when you enter an utterance such as **I want to sign in**, or when a live agent sends you a login link.

This topic block is automatically added to your instance as part of the `com.glide.cs` plugin.

When you login during a guest chat, you sign on using your own user credentials. The guest user elevation feature then retrieves all the records from your active guest chats, and updates them to be associated with your logged in user.

Procedure

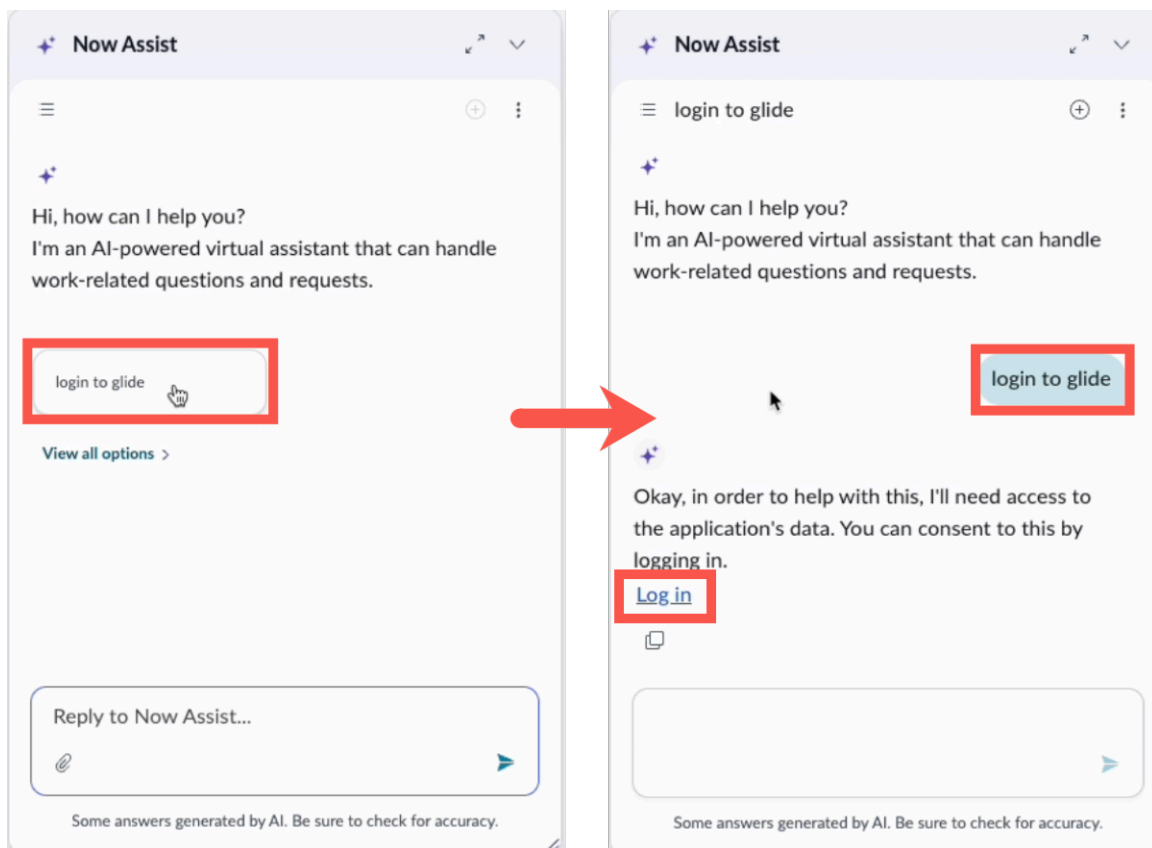
1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. In the Asset library, select **+Create** to create a new topic, or open a topic you've created, where you want to put the login option.
4. Add the *glide_authentication* topic block to your topic.
5. Select **Save**.

Result

The login control is added to your chat, and a guest user can sign in as an authenticated customer.

What to do next

When you start a Virtual Agent session, use the login link that appears in the chat window to sign in with your account info, or a single sign-in via OAuth.



The left screenshot shows the login form with the following fields and buttons:

- User name: [Text input field]
- Password: [Text input field with toggle icon]
- Language: [Dropdown menu showing 'English']
- Log in: [Blue button]
- Forgot Password?: [Text link]

The right screenshot shows the 'Verify your identity' screen with the following elements:

- Verify your identity: [Section header]
- Enter the code displayed on your authenticator app: [Text instruction]
- 6-digit verification code: [Text input field]
- Do not challenge for MFA on this browser for the next 8 hours: [Checkbox]
- Mobile: Set up Biometric authentication or FIDO2 Security key: [Checkbox]
- Verify: [Blue button]
- Try another way to verify: [Text link]

The dashboard includes the following sections:

- Quick links:** System status, Request Standing Desk.
- My active items:** Tasks (0), Requests (2), Surveys (0).
- Popular topics:** Accessories, Software, Developer services, Computers, Phone and mobility, Technology services, IT for IT, Hardware.
- My favorites:** You haven't favorited anything yet.
- Now Assist chat window:**
 - login to glide
 - Just now
 - Okay, in order to help with this, I'll need access to the application's data. You can consent to this by logging in.
 - Great, now that you've allowed access, we can continue.
 - Reply to Now Assist...
 - Some answers generated by AI. Be sure to check for accuracy.

Note: Depending on the instance, the buttons may have a different name such as **Sign in**.

Migrating NLU/keyword Virtual Agent topics to LLM topics

The topic migration workflow enables you to migrate your existing Natural Language Understanding (NLU)/keyword topics into new large language model (LLM) topics.

Starting with the Brazil release, Virtual Agent for NLU and Virtual Agent Lite are being prepared for future deprecation. It will eventually be hidden and no longer activated on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support Knowledge Base.

ServiceNow Otto capabilities bring generative AI to Virtual Agent using LLM topics. With topic migration, there's no need to manually recreate all your NLU and keyword topics to be LLM topics. You can select the topics that you want to migrate into LLM topics from your existing NLU and keyword topics. Migrating NLU and keyword topics doesn't change the original NLU or keyword topics. A copy of the existing topic is created during topic migration, but the new topic's **Model Type** field is set to LLM and includes LLM-compatible nodes and descriptions.

All types of topics can be migrated from the NLU/Keyword model type to the LLM model type during topic migration, including the following asset types:

- Topic
- Topic block
- Setup topic
- Small talk
- Custom input control
- Custom response control

If no migration issues occur, the preceding asset types can all optionally be published except the topic block. Although dynamic topic blocks can be optionally published, the topic block type is automatically published after it's been migrated.

Roles and accessibility

Users with the `virtual_agent_admin` role or `sn_vad_genai.topic_migration_admin` role can work with topic migration. Topic migration is accessible through Virtual Agent Assistant Designer in the **Migrate Topics to LLM** option.

Migrate Topics to LLM option in Virtual Agent Assistant Designer

Resources

→ [Migrate topics to LLM](#)

☆ [Topic recommendations](#)

📁 [Explore additional topics](#)

💬 [Manage languages](#)

🧪 [Manage test cases](#)

📄 [Product documentation](#)

System properties

Use the system property **`sn_vad_genai.utterances.count.for.topic.description`** to set the maximum number of NLU utterances that can be given to the LLM to generate the topic description for an NLU topic migrated to an LLM topic.

Topic descriptions

When migrating NLU topics to LLM topics, you can choose whether you want to have generative AI create your LLM topic descriptions. When on the Settings step of the topic migration workflow, you can choose to **Keep current topic descriptions?**. The **Keep current topic descriptions?** option is off by default. When this setting is off, generative AI pulls either NLU intent utterances or keywords from topics to create LLM topic descriptions during the migration process. If the topic is associated with an intent, a maximum of 10 utterances are pulled into the LLM topic's **Detail description** field under an `Additional instructions` value. When this setting is on, generative AI doesn't create LLM topic descriptions and your existing NLU and keyword topic descriptions migrate into your new LLM topics. Migrating existing topic descriptions can result in issues if the existing topic doesn't have a description.

The **Detail description** field is required for LLM topics but not for NLU/keyword topics. If a new LLM topic is migrated over with an empty description, you must add a description prior to that topic being published. Regardless of how topic descriptions migrate, you can edit topic descriptions during the Review descriptions step of the topic migration workflow. You can also test your topic descriptions against the original NLU topic's utterances, if applicable, to improve relevance and topic description strength.

Note: NLU utterances themselves are not effective if you use them as topic descriptions for LLM topics. Avoid using NLU utterances for LLM topic descriptions. LLM topic descriptions require more specific detailed information.

For more information on editing topic descriptions, see [Migrate NLU topics to LLM topics](#). For examples of strong topic descriptions, see [LLM description and instruction guidelines for Virtual Agent topics](#).

Node descriptions

Although NLU topics' node names migrate exactly as-is during migration, the node descriptions can vary. NLU input nodes use the **Prompt** field. LLM input nodes use the **Detail description** field. During topic migration, the value in the **Prompt** field migrates into the **Detail description** field's value. How the value migrates can vary depending on if that value included text-only, scripts, or data pills. Refer to the following table to view how the values migrate differently and compare examples.

How the Prompt field's value migrates to the Detail description field's value

NLU Prompt field value	LLM Detail description field value
Contains text	Migrates text as-is. For example, if the NLU Prompt field's value is <code>Enter the incident number</code>, then the LLM Detail description field's value is also <code>Enter the incident number</code>.
Contains script or data pill	Migrates using the following template: <code>Collect + Node name</code>. For example, if you have an NLU node named <code>Get incident number</code> and the Prompt field's value contains a script or data pill, then the migrated LLM node's Detail description field's value is <code>Collect Get incident number</code>.

If the topics that you plan to migrate include scripts or data pills in their existing **Prompt** field, review and update the LLM **Detail description** field after migration for each affected topic. A warning message of `Add relevant detail description` appears for LLM topics on the Virtual Agent Designer canvas for each node that migrated with the template of `Collect + Node name`. Updating the description to something more accurate and descriptive improves your users' experience of interacting with the Virtual Agent. For an example of a strong node description, see [LLM description and instruction guidelines for Virtual Agent topics](#).

The following entities can be migrated from NLU nodes to LLM nodes:

- simple
- mapped

- pattern
- system-derived

If an NLU node is mapped to an entity, those utterances' entities are added to the LLM node's **Detail description** field under an `Additional instructions: make-shift` header value. The `Additional instructions: content` differs slightly depending on the type of entity that is migrated. The layout of the **Detail description** field value resembles something like the following:

- `[Prior NLU Prompt field value]` if the value was text-only and not a script or data pill.
- `[Additional instructions: For this input, the data should be extracted from the user input if it has a value from this list of words: [simple entity word list].`

Example of an NLU node with associated entities migrating to an LLM node

The diagram illustrates the migration of an NLU node configuration to an LLM node configuration. A red arrow points from the NLU node configuration on the left to the LLM node configuration on the right.

NLU Node Configuration:

- Node name:** Fruits - simple
- Variable name:** fruits_simple
- Prompt:** Enter fruit name
- Input format:** Text

LLM Node Configuration:

- Node name:** Fruits - simple
- Variable name:** fruits_simple
- Allow automatic slot filling:** ☒
- Detail description:** Enter fruit name. Additional instructions: From this input the data should be extracted from the user input if it has a value from this list of words: Apple, banana, mango, pineapple, watermelon
- Input format:** Text

If you had vocabulary sources established in your NLU topic's text nodes, the list and table vocabulary sources migrate into LLM nodes. Text nodes with list vocabulary sources are migrated into static choice nodes. The vocab source selections appear in the LLM static choice node's **Detail description** field under an `Additional instructions: make-shift` header value. Text nodes with table vocabulary sources are migrated into dynamic choice nodes. The vocabulary source's table is migrated into the LLM dynamic choice node's **Table** field. The vocabulary source selections are migrated into a script and appear in the LLM dynamic choice node's **Detail description** field under an `Additional instructions: make-shift` header value.

Migration issues

You can access migration issue data either by searching for `topic_migration_execution_item.list` in the Navigation pane or downloading the .CSV file version of the table. After you've migrated topics, the downloadable .CSV file is accessible through the **Review migration log** option in the topic migration's Migrate topics step. For more information about migration issues, see [NLU to LLM migration log](#).

Migrate NLU topics to LLM topics

Migrate one or more of your existing Natural Language Understanding (NLU) or keyword topics into new large language model (LLM) topics while maintaining your original NLU/keyword topics. After migration is complete, choose whether to publish your new LLM topics.

Before you begin

Role required: virtual_agent_admin or sn_vad_genai.topic_migration_admin

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**.
2. Select **Migrate Topics to LLM**.

Resources

→ [Migrate topics to LLM](#)

☆ [Topic recommendations](#)

📁 [Explore additional topics](#)

💬 [Manage languages](#)

🧪 [Manage test cases](#)

📄 [Product documentation](#)

The Topic Migration workflow opens in a new browser tab.

3. Review and determine which NLU and keyword topics you want to migrate into LLM topics on the Select topics step.

Select topics step

Migrate topics to LLM

Select topics

Review connections

Settings

Migrate topics

Review descriptions

Publish (optional)

Select NLU and keyword topics to migrate

Choose NLU and keyword topics to migrate as LLM topics. This won't change the original NLU topics. [Learn more](#)

All NLU and keyword topics 168

	Name	Type	Updated	Description
☐	Account Link User Validation(Template)	Topic	2022-09-01 04:32:11	The topic is used to collect the information and validate if user is identified in the system. This is a template topic. The topic author to clone this and modify this as p
☐	Add Comment To Incident	Topic	2024-08-21 20:10:06	Conversation for adding comment an incident. This topic is used for actionable notifications.
☐	Add Comments-Similar Incident	Topic Block	2023-10-02 22:16:10	Finds a similar incident record for user and provides an option to up that incident
☐	AE text input wrapper	Topic Block	2024-05-23 09:55:24	AE text input wrapper

💡 **Tip:** Select the link in the Name column to review the topic in the Virtual Agent Designer canvas in a new browser tab. Migrate fewer than 50 topics at one time to give yourself enough time to review the topics.

4. Select which NLU and keyword topics you want to migrate, and then select **Next** on the Select topics step.

i Important: If you leave the topic migration workflow, you're unable to return to where you left off and you must restart the process.

5. Review the affected topic blocks, Virtual Agent notifications, and Proactive Triggers, and then select **Next** on the Review connections step.

On the Topic blocks tab, only topic blocks and topic blocks connected with the selected topics are displayed in this list. Dynamic topic blocks must be manually selected for migration. You can select the link in the Topic Block column to view the topic block in the Virtual Agent Assistant Designer canvas in a new browser tab. Although dynamic topic blocks can be optionally published, topic blocks are automatically published after migration. The Virtual Agent Notifications and Proactive Triggers tabs only appear if the topics you've selected for migration have notifications or Proactive Triggers associated with the original NLU topic. You can select the link in the Topic Name column on their respective tabs to view the NLU topic in the Virtual Agent Designer canvas in a new browser tab. The LLM-compatible Virtual Agent notifications and Proactive Triggers are created and connected to the new LLM topics only after those topics are published through the last Publish step in the topic migration workflow.

i Note: The Proactive Triggers tab is only applicable if you've installed the Proactive Triggers [sn_pt] app version 3.0.1 or later and have turned on this feature. If you'd prefer to manually migrate your actions for Virtual Agent notifications and Proactive Triggers rather than them automatically migrating after the Publish step, set the `com.glide.cs.notification.create_llm_actions_after_topic_migration` and `com.glide.cs.proactive_trigger.create_llm_actions_after_topic_migration` system properties to `false` in **All > System Properties > All Properties**.

Example of the Review connections step with the Topic blocks and Notifications tabs

Migrate topics to LLM

- Select topics ☒
- Review connections** ☒
- Settings ☐
- Migrate topics ☐
- Review descriptions ☐
- Publish (optional) ☐

Review connected topic blocks and actions

Selected topics may be connected to topic blocks, notifications, or proactive triggers. Topics connected to notifications or proactive triggers must be published after migration for those connections to work with LLM topics. Their original connection to NLU topics won't change.

Notifications

Topic Name	Used in Actions
Resolve Incident	Resolve Incident, Resolve Incident, Resolve Incident

i Note: If no topic blocks, notifications, or Proactive Triggers were selected or connected to the selected topics, their respective tabs don't appear.

6. Choose which settings to apply to all topics migrating to LLM, and then select **Next** on the Settings step.

Settings field description

Field	Description
Select assistant(s) for migrated topics	Migrated LLM topics are associated with these assistants. Associating topics to an assistant makes those topics discoverable

Field	Description
	with that assistant. For topic discovery results, associate LLM topics with an assistant. When you select an assistant, you can view whether that assistant is a primary or secondary assistant. When testing a primary assistant, topics from secondary assistants are included in topic discovery. When testing a secondary assistant, topics from primary assistants aren't included in topic discovery.
Choose how migrated topics are named	Newly migrated topics include the value entered in the Add to internal topic name field as either a prefix or suffix (default). This option only affects the migrated topics' Internal name value and not the topics' Display name value. The original NLU topic name is used as the Display name to customers interacting with LLM topics in Virtual Agent.
Keep current topic descriptions?	Current topic descriptions are used as the LLM topic descriptions rather than using generative AI to create topic descriptions for migrated LLM topics. This field is turned off by default. If this field is turned on, and there was no topic description in the original NLU topic, a topic description must be manually added to the new LLM topic before publication.

Settings step

Migrate topics to LLM

Select topics

Review connections

Settings

Migrate topics

Review descriptions

Publish (optional)

Settings

Choose settings to apply to all topics migrated to LLM.

Select assistant(s) for migrated topics ⓘ

☒ ServiceNow Otto in Virtual Agent (default)

Choose how migrated topics are named

A prefix or suffix will be added to newly migrated internal topic names to easily identify them. We'll use the original NLU topic names to display to customers interacting with LLM topics in Virtual Agent.

If we detect duplicate topics, we'll automatically include a suffix or add a number to the internal topic name.

Preview: My HR Topic - LLM

Add to topic name * ⓘ

☐ Prefix
☒ Suffix

Advanced settings

Keep current topic descriptions?

Turn on to prevent blank or existing topics descriptions from being created or recreated using LLM.

☐

- Review the topics for migration on the Migrate topics step, and then select **Next** to begin migration.

Note: Leave the browser window open until the migration process is complete.

Example of an in-progress topic migration

Migrate topics to LLM

Migration in progress. Keep this window open until the process is complete.

Select topics
Review connections
Settings
Migrate topics
Review descriptions
Publish (optional)

Migrate topics to LLM

Confirm topics, topic blocks, and begin migration. Click Next to begin the migration.

NLU/Keyword topics and topic blocks 1
Last refreshed just now.

NLU Topic	Type	Migration status	LLM Topic	Issues
Resolve Incident	Topic	Not started	(empty)	

Showing 1-1 of 1

100 rows per page

Example of a completed topic migration

Migrate topics to LLM

Selected topics were successfully migrated to LLM.

Select topics
Review connections
Settings
Migrate topics
Review descriptions
Publish (optional)

Migrate topics to LLM

LLM topics will appear once they've been migrated.

Migration complete (100% complete) [Review migration log](#)

NLU/Keyword topics and topic blocks 1
Last refreshed 1m ago.

NLU Topic	Type	Migration status	LLM Topic	Issues
Resolve Incident	Topic	Complete	Resolve Incident-LLM 2	

Showing 1-1 of 1

100 rows per page

The migration complete progression bar appears and displays a dynamic percentage of completeness. During migration, the Migration status column updates dynamically with the values changing from Not started to either Failed or Complete. After migration is complete, any topic blocks selected, or those associated with the selected topics, are automatically published. You can choose to select **Download migration log** or **Next**. Selecting **Download migration log** downloads a .CSV file of the Topic Migration Execution Items [topic_migration_execution_item.list] table data. For more information on this table data, see [NLU to LLM migration log](#). Selecting **Next** continues the workflow to the Review descriptions step.

- Continue to the Review descriptions step by selecting **Next**.
The new LLM topics that you've migrated appear, along with their migrated topic descriptions, and any available NLU utterances that were associated with the migrated topics' original NLU topics.
- Choose one of the following scenarios.

Note: The display name, not the internal name, of the new LLM topics appears. The display name of the new LLM topics matches the existing NLU topic's display name. If you select the LLM topic link, you are redirected to that topic in Virtual Agent Designer through a new browser tab or window. For additional information about strong LLM topic descriptions, see [LLM description and instruction guidelines for Virtual Agent topics](#).

Option	Description
Edit topic description	a. Review the topic description of the new LLM topic. All topic descriptions, either migrated from the existing NLU topic description or created by generative AI, are available for review. Topics that are missing topic descriptions must be updated before publishing. b. Edit the topic description, as needed. c. Select Save description. d. Repeat this process until all topic descriptions are reviewed and edited.
Edit topic description and test utterances	This scenario is only applicable if there were NLU utterances connected to the original NLU topics. a. Review the topic description of the new LLM topic. All topic descriptions, either migrated from the existing NLU topic description or created by generative AI, are available for review. Topics that are missing topic descriptions must be updated before publishing. b. Edit the topic description, as needed. c. Select Save and test with utterances. The original NLU topic's utterances are compared against the new LLM topic description. An overall percentage of matches appears along with an individual result by each utterance. These statuses are either Matching or No match. Use these statuses to adjust your topic description so that you more closely match your prior NLU utterances and retest. The LLM topic description doesn't have to use the exact NLU utterance wording for a match to occur. The context of the NLU utterance is referenced to determine the matching status. d. Repeat this process until all topic descriptions are reviewed and edited.

Example of reviewing a topic description without NLU utterances

Migrate topics to LLM

Select topics

Review connections

Settings

Migrate topics

Review descriptions

Publish (optional)

Review descriptions

Review each topic description for accuracy. Use NLU utterances, if available, to test for topic discovery.

Resolve Incident

Resolve Incident

Topic Description

Topic description generated by Now Assist

This topic is designed to assist users in resolving incidents by identifying and addressing issues, providing troubleshooting steps, and ensuring proper resolution through the ServiceNow platform.

Revert to original

Save description

NLU utterances (0)

Test with available utterances

No available utterances

There aren't any available utterances to test with, but you can still update the topic description.

Example of reviewing a topic description with NLU utterances

Migrate topics to LLM

Select topics

Review connections

Settings

Migrate topics

Review descriptions

Publish (optional)

Review descriptions

Review each topic description for accuracy. Use NLU utterances, if available, to test for topic discovery.

VPN Connectivity ...

VPN Connectivity (Template)

Topic description generated by Now Assist

The topic addresses issues related to VPN connectivity, including problems with VPN connections, troubleshooting requests, and device-specific issues (e.g., iPhone, Android) experiencing

Revert to original

Save and test with utterances

NLU utterances (16)

my vpn is broken

I have a problem with my remote connection

I face some VPN connection problems

my VPN is not working

can you troubleshoot my VPN connection

My iPhone has a vpn connection issue

my android phone has a VPN connection problem

my VPN connectivity is faulty

the vpn connection is sluggish

I have issues with my VPN connection

My VPN is slow

Test with available utterances

Ready for testing

Test topic discovery using utterances from the original NLU topic.

10. Optional: Continue to the Publish step by selecting **Next**.

11. Optional: Select each LLM Topic check box that you want to publish, and then select **Publish topics**.

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Migrate topics to LLM

Select topics

Review connections

Settings

Migrate topics

Review descriptions

Publish (optional)

Publish LLM topics (optional)

Choose any or all listed topics to publish now or select individual topics to make changes and publish from within Virtual Agent Designer.

Publish topics

LLM Topics 1

Last refreshed just now.

LLM Topic	Type	Migration status	Status	Description
☒ VPN Connectivity (Template)-LLM	Topic	Complete	Draft	The topic addresses issues related to VPN connectivity, including problem with VPN connections, troubleshooting requests, and device specific issues (e.g., iPhone, Android)

Showing 1-1 of 1

1

100 rows per page

Tip: If you select the LLM topic link, you're redirected to that topic in Virtual Agent through a new browser tab or window. Any edits that you make in Virtual Agent Designer are reflected in the topic migration's Publish step. You must publish LLM topics through this step for any connected notifications or Proactive Triggers to work.

You receive a `Selected topics were successfully published` output message. The topics that you migrated, but didn't select to publish, continue to appear on this step until you navigate away from the topic migration workflow.

- Optional:** Exit the topic migration workflow by selecting **Close**. You're redirected to the Virtual Agent Designer Topics step.

What to do next

After you navigate away from the topic migration workflow, the topics that you migrated, but didn't publish, can be managed and published from the Virtual Agent Designer canvas. If you choose to migrate other topics in the future, the topic migration workflow restarts from the beginning.

NLU to LLM migration log

The Topic Migration Execution Items [topic_migration_execution_item.list] table includes data when migrating Natural Language Understanding (NLU) topics to large language model (LLM) topics such as the migration status, migration issues, and migrated or published topic information.

You can access this topic migration data either by searching for `topic_migration_execution_item.list` in the Navigation pane or downloading the .CSV file version of the table. After you've migrated topics, the downloadable .CSV file is accessible through the **Review migration log** option in the topic migration workflow's Migrate topics step.

Example of the Review migration log option

Selected topics were successfully migrated to LLM.

Migrate topics to LLM

LLM topics will appear once they've been migrated.

Migration complete (100% complete) [Review migration log](#)

NLU/Keyword topics and topic blocks 5

Last refreshed just now

NLU Topic	Type	Migration status	LLM Topic	Issues
Troubleshoot Microsoft Teams	Topic Block	Complete	Troubleshoot Microsoft Teams-LLM	
VPN Connectivity (Template)	Topic	Complete	VPN Connectivity (Template)-LLM 2	
Test topic 10	Topic	Complete	Test topic 10-LLM	Some topics generated

The Topic Migration Execution Items [topic_migration_execution_item.list] table defaults to include the following columns:

- Description
- Issues
- LLM Topic
- Migration Execution

Note: The **Migration Execution** column includes the unique ID that is generated for each migration batch. For example, when 10 topics are migrated at the same time, the table contains 10 topic rows with each row containing the same migration execution value.

- Migration status
- NLU Topic
- Status
- Type

Example of the Topic Migration Execution Items table data

Topic Migration Execution Items								
Issues		Search		Actions on selected rows...		New		
All								
☐	Description	Issues	LLM Topic	Migration Execution	Migration status	NLU Topic	Status	Type
☐	Finds a similar incident record for the ...	We were unable to generate some node pro...	Add Comments-Similar Incident-LLM 2	7f994ea01b254210e88ea646b04bcbcd	Complete	Add Comments-Similar Incident	Published	TOPIC_BLOCK
☐	This topic is about creating new IT tick...	We were unable to generate some node pro...	Open IT Ticket (Deprecated)-LLM	3a4da0681bed021083533377d34bcb12	Complete	Open IT Ticket (Deprecated)	Published	STANDARD
☐	A topic block for fetching a user's geol...	We were unable to generate some node pro...	Geolocation-LLM 2	ebf938281b21421083533377d34bcb0	Complete	Geolocation	Draft	TOPIC_BLOCK
☐	This topic handles user requests for log...	We were unable to generate some node pro...	_logout_-LLM	3a4da0681bed021083533377d34bcb12	Complete	_logout_	Published	STANDARD
☐	This topic handles user requests for add...	The topic contains one or more dynamic t...	LLM Anything Else Topic.	71a770a41b21421083533377d34bcb89	Complete	Anything Else Topic.	Draft	SETUP_TOPIC

Generic issues may occur during the topic migration process. The following table includes specific, common issues that you may encounter in the Issues column and whether the issue blocks the topic from being published.

Issues column details

Issues column value	Types of issues	Can the topic be published?
Some topic properties couldn't be generated. To publish, manually review and edit the following nodes: [list of node names]	Node-level issues: These issues are validation error messages that can include missing fields such as name, description, and so on.	No. The issue must be corrected before the topic can be published.
Some topic properties couldn't be generated because the topic used a script. To publish, manually review and edit the following nodes: [list of node names]	Script-level issues: These issues occur whenever an NLU input node has a script or data pill in the Prompt field.	Yes. Topics with this issue can be published because Collect [Node Name] populates in the Detailed description field, but the value of the Detailed description field value should be revised and improved.
Some topic properties couldn't be generated. Edit them before publishing the topic.	Topic-level issues: These issues are validation errors at the topic level such as a missing description, keywords, or any other required field.	No. The issue must be corrected before the topic can be published.
The topic description couldn't be generated. Edit the description field on the Publish page or from the topic properties page in Virtual Agent Designer before publishing.	LLM-generated description issues: These issues occur whenever LLM is unable to generate a valid topic description.	Yes. Topics with this issue can be published because the [Topic name] populates the Topic description field, but the Topic description field value should be revised and improved.
The topic description couldn't be generated because the mapped intent wasn't found. Edit the description field on the Publish page or from the topic properties page in Virtual Agent Designer before publishing.	LLM-generated description issues related to NLU intent complications: These issues occur whenever an NLU model and intent is mapped to a topic but is missing from the sys_nlu_model or sys_nlu_intent table or if these values are incorrectly mapped to the topic.	Yes. Topics with this issue can be published because the [Topic name] populates the Topic description field, but the Topic description field value should be revised and improved.
The topic description couldn't be generated because both the intent and keywords are	LLM-generated description issues related to NLU intent complications: These issues occur whenever an NLU	Yes. Topics with this issue can be published because the [Topic name] populates the Topic description field,

Issues column details (continued)

Issues column value	Types of issues	Can the topic be published?
missing. Edit the description field on the Publish page or from the topic properties page in Virtual Agent Designer before publishing.	model's intent and keywords aren't mapped to the topic.	but the Topic description field value should be revised and improved.
The migration tool couldn't convert one or more dynamic topic block nodes from this topic. The topic blocks used inside the dynamic topic blocks must be manually migrated. The following nodes use these dynamic topic blocks: [list of node names]	Dynamic topic block issues: These issues occur whenever there's a node that has a dynamic topic block that wasn't migrated.	Yes. Topics with this issue can be published because the topic block names use a script for dynamic topic blocks and continue to operate as expected, using the NLU topic block. If you encounter this issue, select these topic blocks for migration from the Select topics step and update the topic block names in the script.
The migration tool couldn't convert one or more switch topic scripts from this topic. The topics used inside the switch topic script need to be manually migrated. The following nodes use these switch topic scripts: [list of node names]	Switch topic script issues: These issues occur whenever a node has a switch topic function that wasn't migrated.	Yes. Topics with this issue can be published because the topic script continues to use the NLU topic until migration. If you encounter this issue, select these topics for migration from the Select topics step.
This topic couldn't be migrated. Contact <i>ServiceNow</i> support for assistance.	Process failure issues: These issues occur whenever there's an error during a particular migration process.	No. The issue must be corrected by a ServiceNow employee before the topic can be published.
This topic couldn't be migrated because the transformation of <i>NLU</i> nodes to <i>LLM</i> nodes failed. Contact <i>ServiceNow</i> support for assistance.	Process failure issues: These issues occur whenever there's an error during the transformation of <i>NLU</i> nodes to <i>LLM</i> nodes.	No. The issue must be corrected by a ServiceNow employee before the topic can be published.

Issues column details (continued)

Issues column value	Types of issues	Can the topic be published?
This topic couldn't be migrated because the publish payload failed to generate. Contact <i>ServiceNow</i> support for assistance.	Process failure issues: These issues occur whenever there's an error during a particular migration process.	No. The issue must be corrected by a ServiceNow employee before the topic can be published.
This topic can't be published until a topic description is added.	Process failure issues: These issues occur whenever there's an error during a particular migration process.	No. The issue must be corrected before the topic can be published. Edit the description field on the Publish step or from the topic properties page in an Virtual Agent Designer topic before publishing.

Analyzing assistants

Monitor, evaluate, and optimize the performance of your AI-powered assistants from the Analytics tab of the Assistant Designer.

Assistant analytics overview

Assistant analytics is a centralized dashboard experience within the Analytics tab of Assistant Designer. It's designed to help assistant administrators gain visibility into the performance of their AI-powered assistants across channels and workflows. It provides actionable insights into how assistants are being used, how effectively they are resolving user issues, and where improvements can be made to enhance the self-service experience.

By surfacing key metrics such as assistant usage trends, adoption and engagement, user sentiment, and assist consumption, Assistant analytics enables data-driven decisions that improve assistant configuration, asset design, and overall user satisfaction.

Assistant analytics users

Accessing the Analytics tab in the Assistant Designer requires you to have the `virtual_agent_admin` role.

Assistant analytics benefits

Assistant analytics dashboard helps you in the following ways.

- Accelerate decision-making through real-time insights into assistant adoption and engagement, enabling you to respond quickly to trends, optimize assistant deployment, and scale your conversational AI footprint.
- Improve discoverability and transparency of assistant assets and performance, making it easier to identify which assistants and conversational assets are driving value.
- Quantify the impact of automation by tracking the number of user intents resolved without human intervention, reducing support costs and increasing operational efficiency.

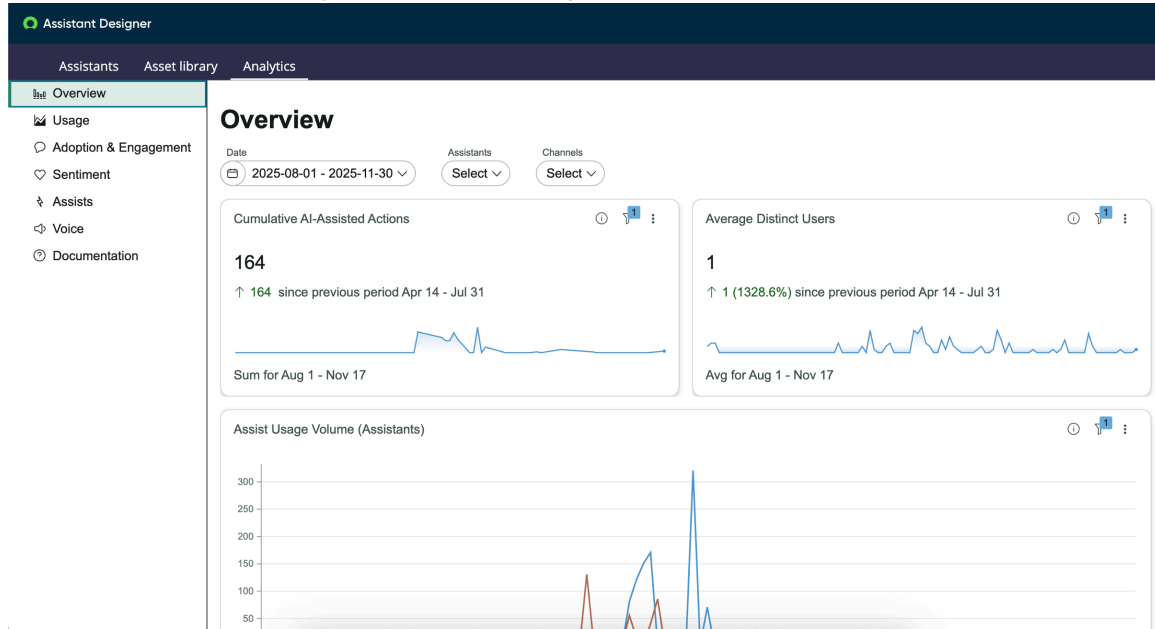
See [Assistant analytics dashboard indicator details](#) for information on the indicators and calculations behind the metrics.

Overview page in Assistant analytics

View high-level summary of assistant activity, assist usage, user engagement and overall customer satisfaction (CSAT) score.

The Overview dashboard page aggregates key metrics across all active assistants and channels, presenting total actions, user engagement, assist usage volume, and overall CSAT score.

Overview dashboard page in Assistant analytics



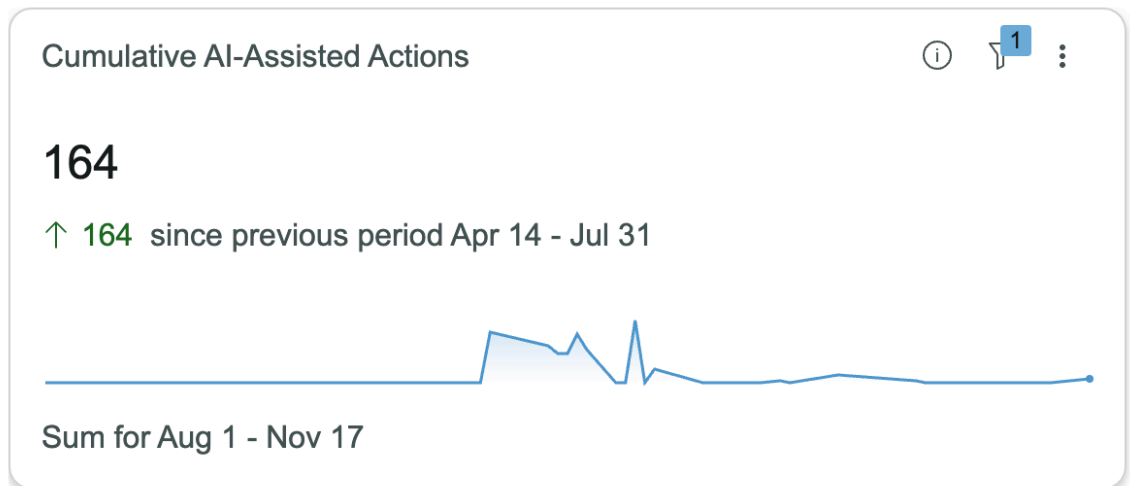
The visualizations on the Overview page provide the following insights.

- Overall CSAT score, which is an indicator of user sentiment, enables you to monitor assistant quality and make targeted improvements.
- Assist usage volume reveals assist consumption patterns across assistants.
- Average distinct users reveals user adoption across assistants.

Cumulative AI-assisted Actions

This area of the dashboard shows the total number of actions completed by AI assistants, aggregated over the selected date range. This metric helps you understand the volume of AI-driven interactions and track growth in AI adoption.

Cumulative AI-Assisted Actions



Average Distinct Users

This area of the dashboard shows the average number of unique users interacting with assistants in the selected date range. This metric helps you identify periods of increasing or decreasing user engagement to take necessary action.

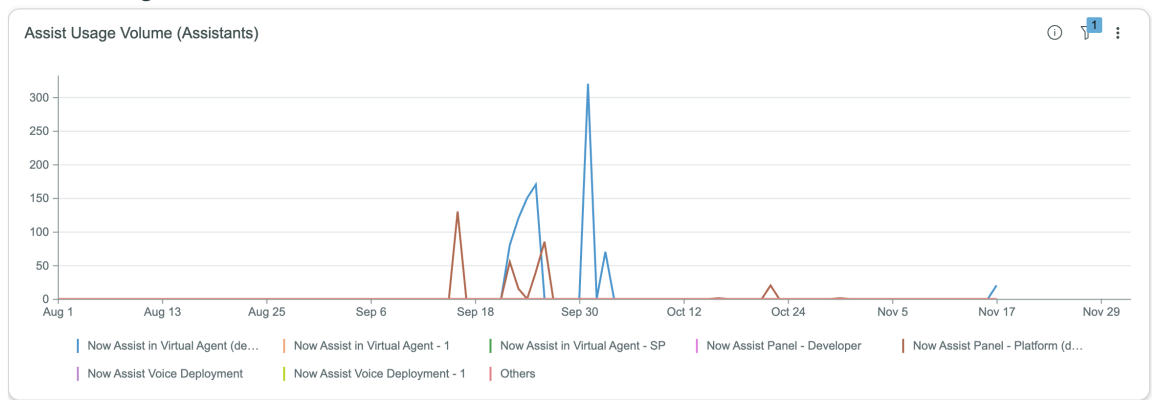
Average Distinct Users



Assist Usage Volume

This area of the dashboard shows the trend of assists consumed via AI assistants within the selected date range. The assists are determined by the AI actions executed. This metric reveals the assistants that are lowest and highest consumers of assists.

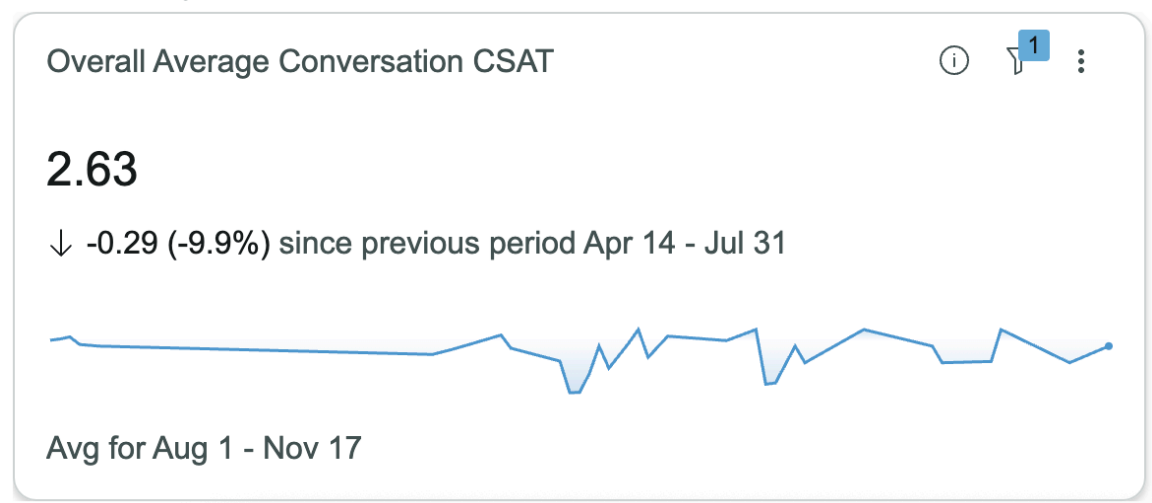
Assist Usage Volume (Assistants)



Overall Average Conversation CSAT

This area of the dashboard shows the average inferred CSAT score for conversations handled by assistants in the selected date range. This metric measures the user sentiment and satisfaction with assistant interactions. Use the CSAT trends to identify areas for improvement in assistant responses or workflows.

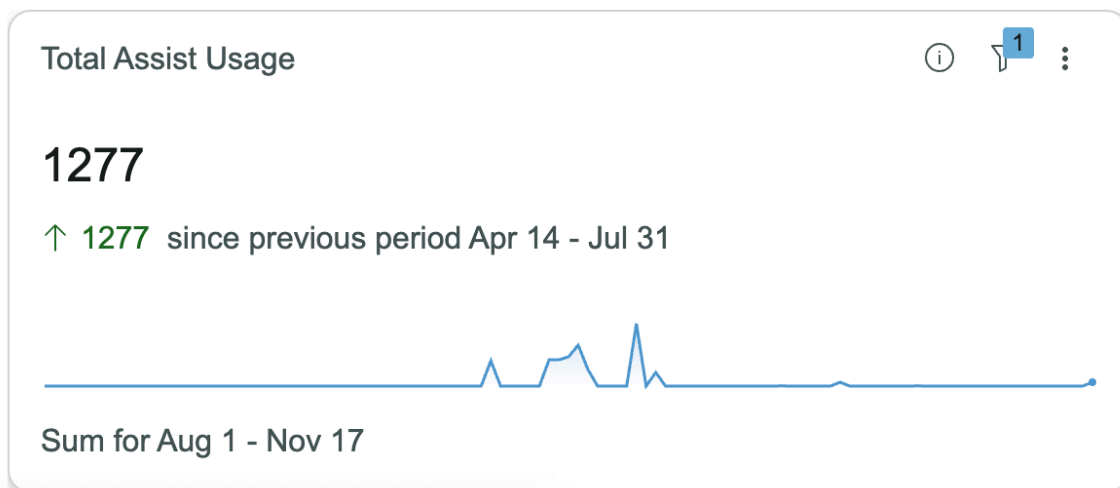
Overall Average Conversation CSAT



Total Assist Usage

This area of the dashboard shows the total number of assists consumed by the assistants in the selected date range. The assists are determined by the AI actions executed. Use this metric to optimize assist usage and track progress towards usage goals.

Total Assist Usage

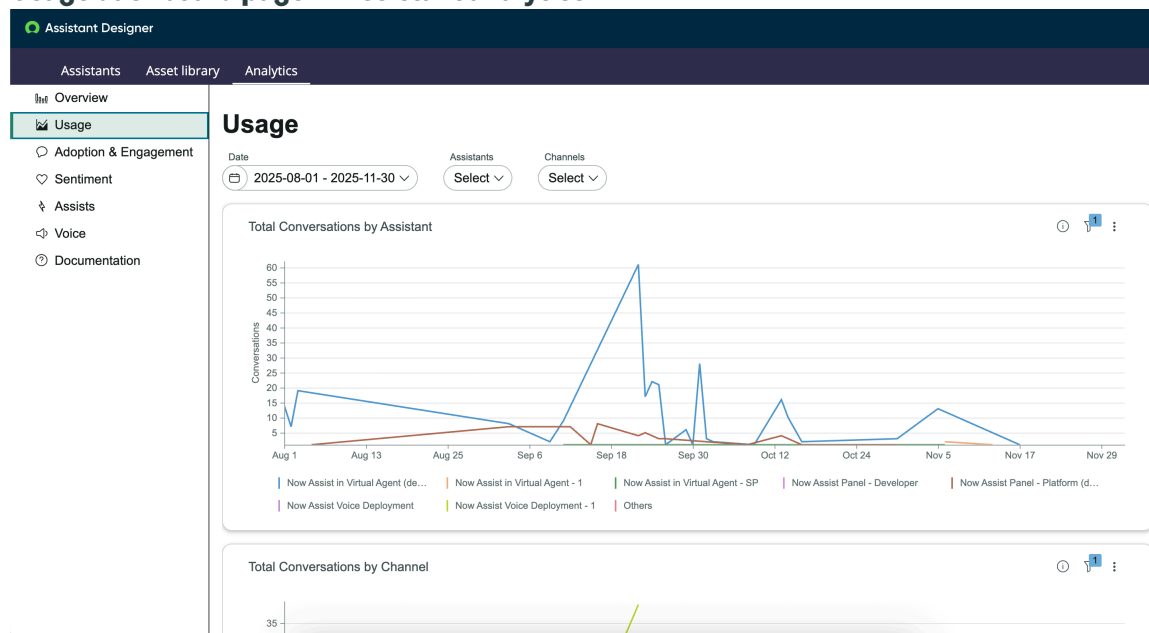


Usage page in Assistant analytics

View assistant activity, highlighting conversation volumes, channel distribution, and conversation outcomes.

The Usage dashboard page aggregates key metrics related to assistant usage, including the total number of conversations by assistant, conversations by channel, citations associated with the results, and the flow of conversation states.

Usage dashboard page in Assistant analytics



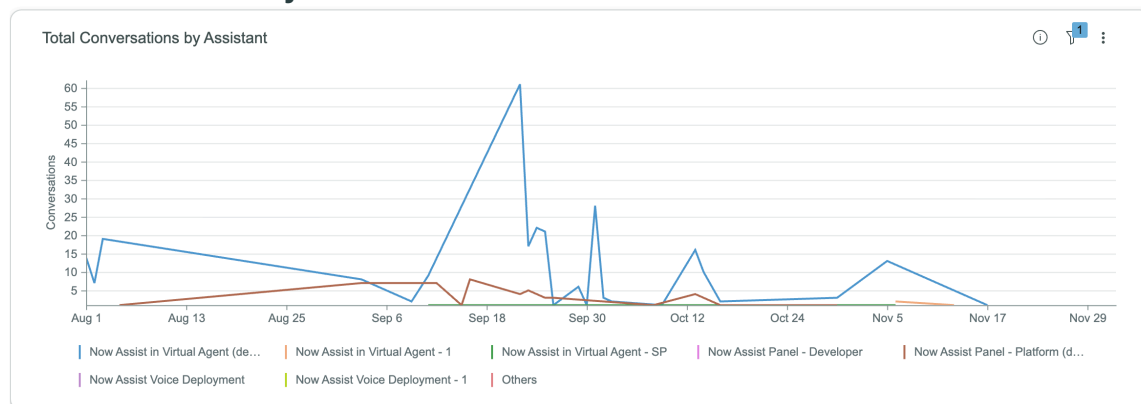
The visualizations on the Usage page help you with the following.

- Conversations by assistant tracks assistant engagement by visualizing conversation volumes over time and across different assistants.
- Conversations by channel identifies channel preferences and usage patterns, helping you optimize assistant deployment and support.
- Result types help you understand the diversity and relevance of responses provided by assistants.

Total Conversations by Assistant

This area of the dashboard shows the number of conversations handled by each assistant over the selected date range. This metric enables comparison of activity and identification of high- and low-performing assistants in the selected period. Use this data to focus optimization efforts on assistants with lower engagement or to replicate best practices from high-performing assistants.

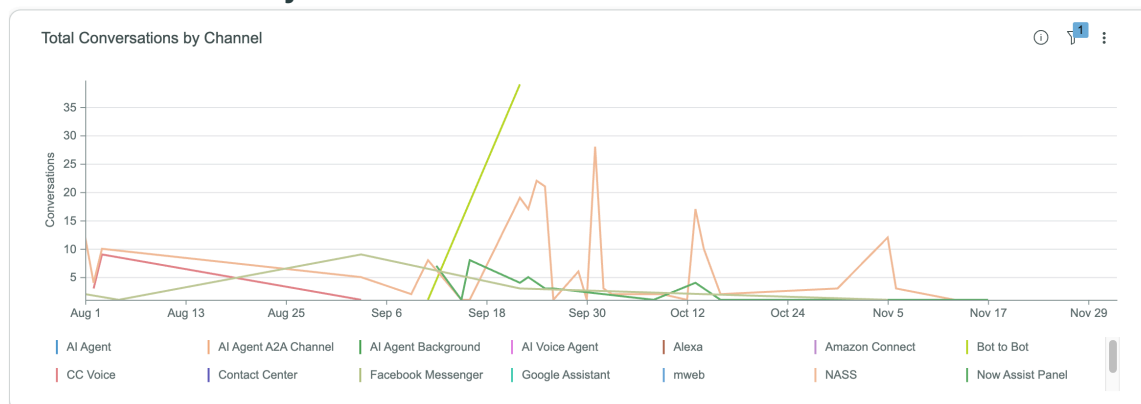
Total Conversations by Assistant



Total Conversations by Channel

This area of the dashboard shows the distribution of conversations across different channels, for example, Teams, Slack, and so on. This metric shows which channels are most popular for assistant interactions, helping you adjust channel support, and maximize reach and effectiveness.

Total Conversations by Channel

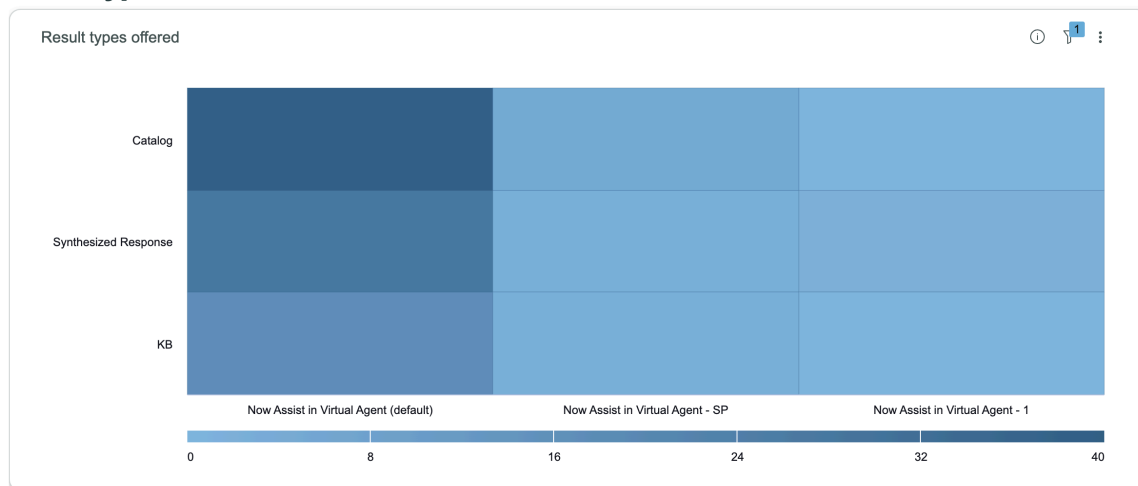


Result Types Offered

This area of the dashboard shows the types of results, for example, catalog items, knowledge articles, and so on, offered in response to user queries, categorized by assistants.

The chart displays a horizontal bar for each result type. The color intensity within each bar indicates frequency—darker shades represent higher counts, while lighter shades represent lower counts. Hover over a bar segment to view the exact count, percentage, and associated assistant. Use this visualization to identify which result types are most frequently delivered by assistants.

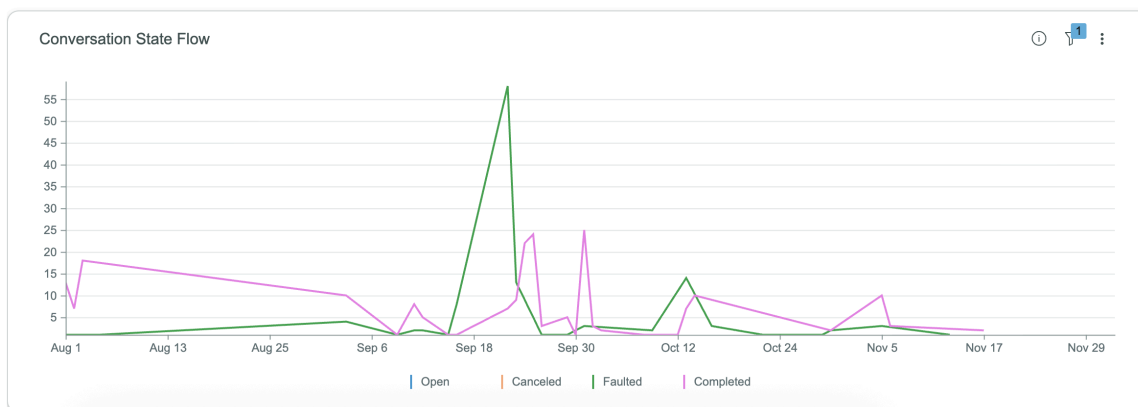
Result Types Offered



Conversation State Flow

This area of the dashboard shows the trend of conversations by the states they are in, for example, Open, Completed, Faulted, and Canceled. This visualization provides insight into how conversations are progressing and where they encounter issues, helping you target improvements to the conversation flow.

Conversations State Flow

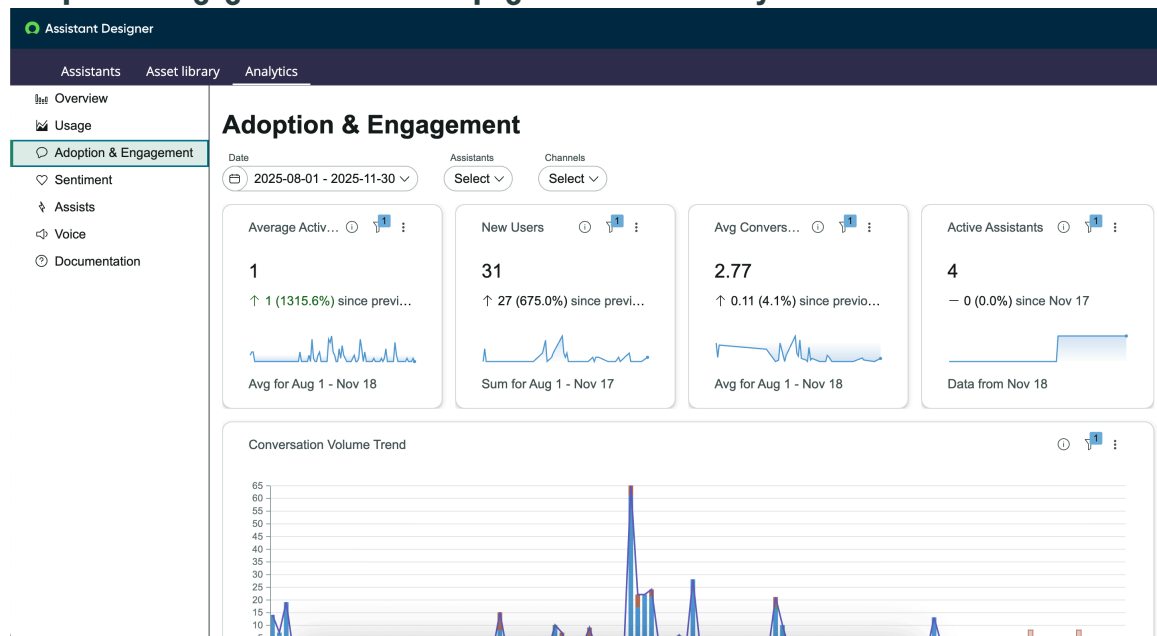


Adoption and Engagement page in Assistant analytics

View how users are adopting assistants and engaging with them over time, helping you track growth, activity, and interaction patterns.

The Adoption & Engagement dashboard page aggregates metrics related to user adoption and engagement, including average active users, new user growth, conversation volume trends, assist-to-execution trend, and channel distribution. The visual widgets enable administrators to monitor how assistants are being adopted, how frequently they are used, and how engagement evolves across different channels and time periods. These insights support targeted strategies to drive adoption and improve user engagement.

Adoption & Engagement dashboard page in Assistant analytics



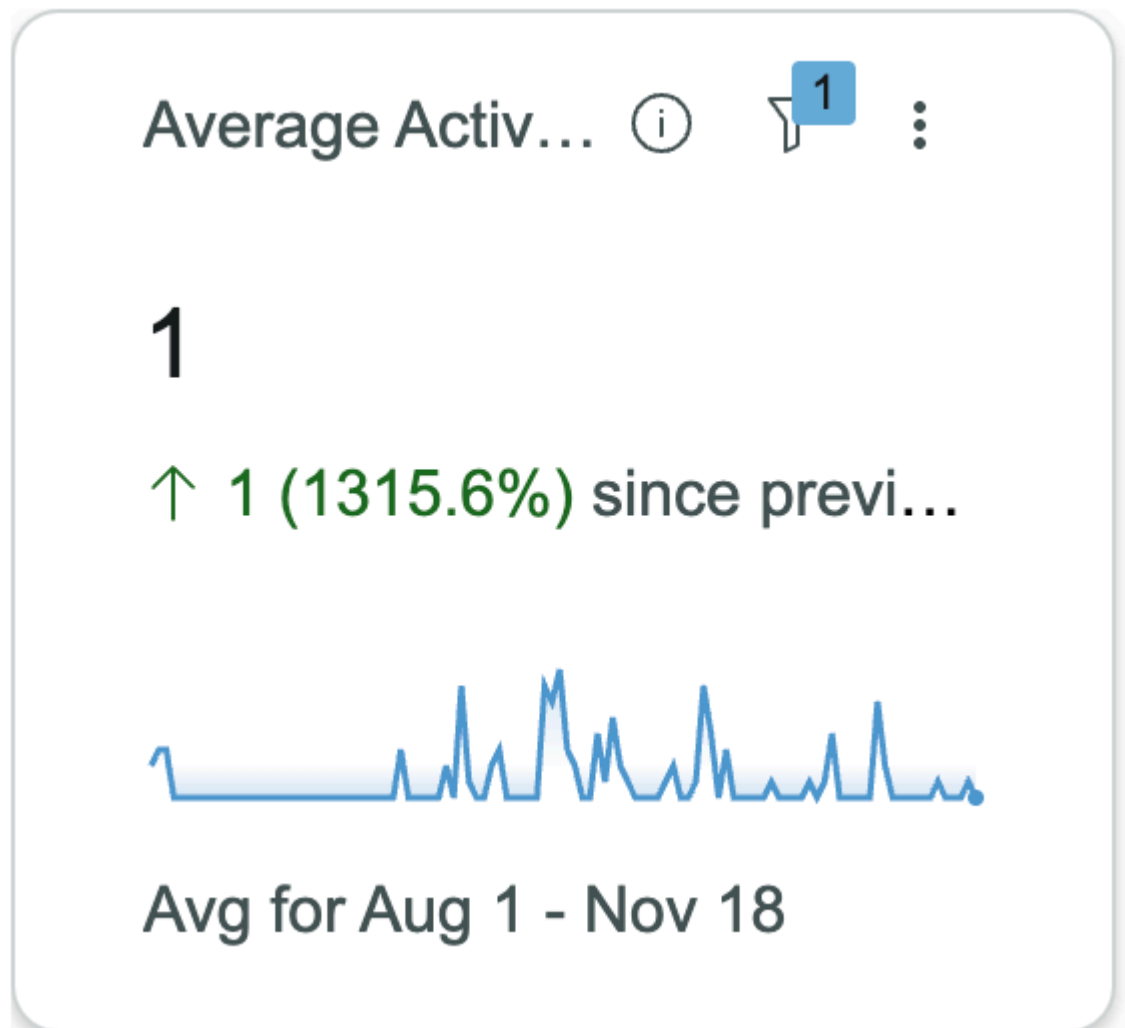
The visualizations on the Adoption & Engagement page help you with the following.

- Track user growth and engagement trends to inform strategies for increasing assistant adoption and user retention.
- Identify patterns in conversation volume and channel usage, enabling you to optimize assistant deployment.
- Monitor assist-to-execution trends to assess how effectively assistants are using assists to deliver desired outcomes.

Average Active Users

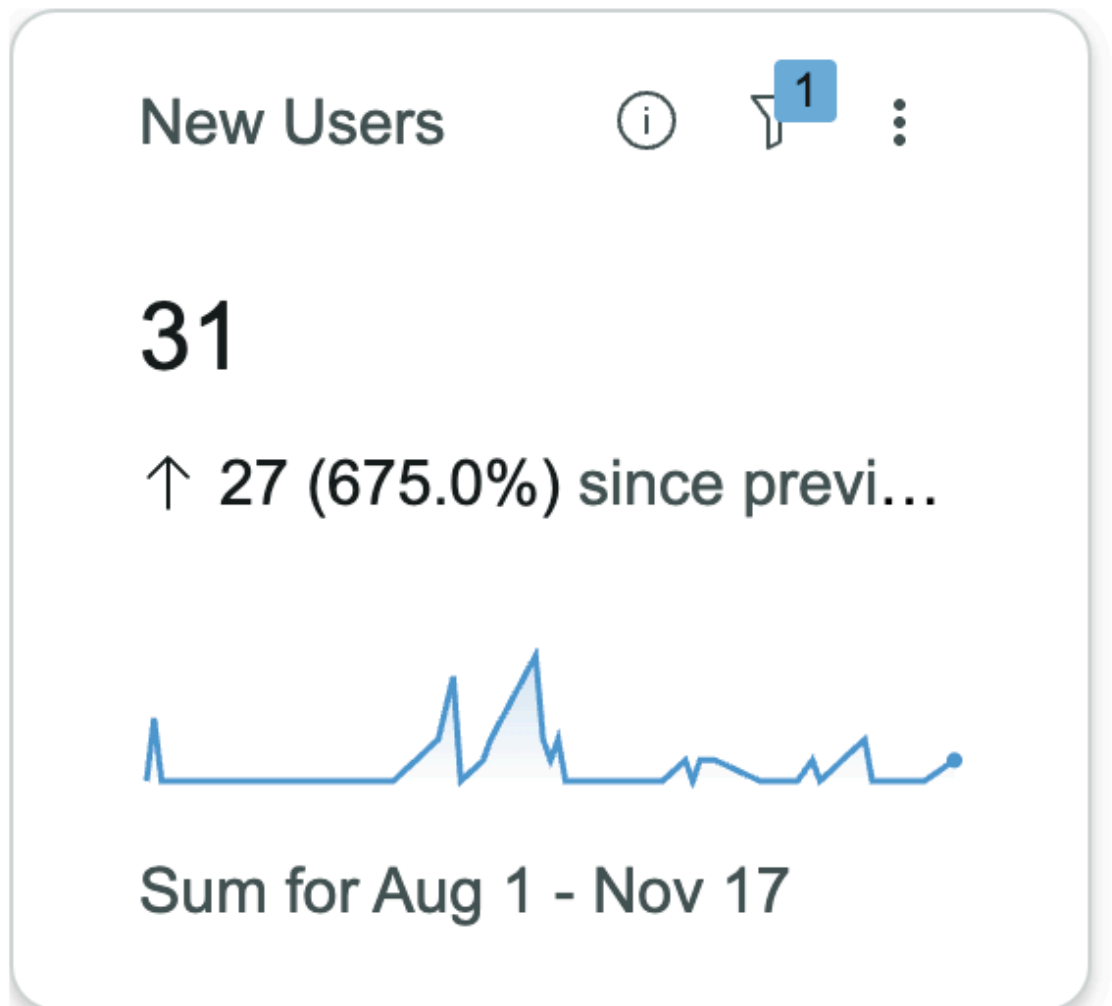
This area of the dashboard shows the average number of users actively engaging with at least one assistant in the selected period. This metric indicates the level of ongoing engagement and helps track the effectiveness of adoption initiatives.

Average Active Users

**New Users**

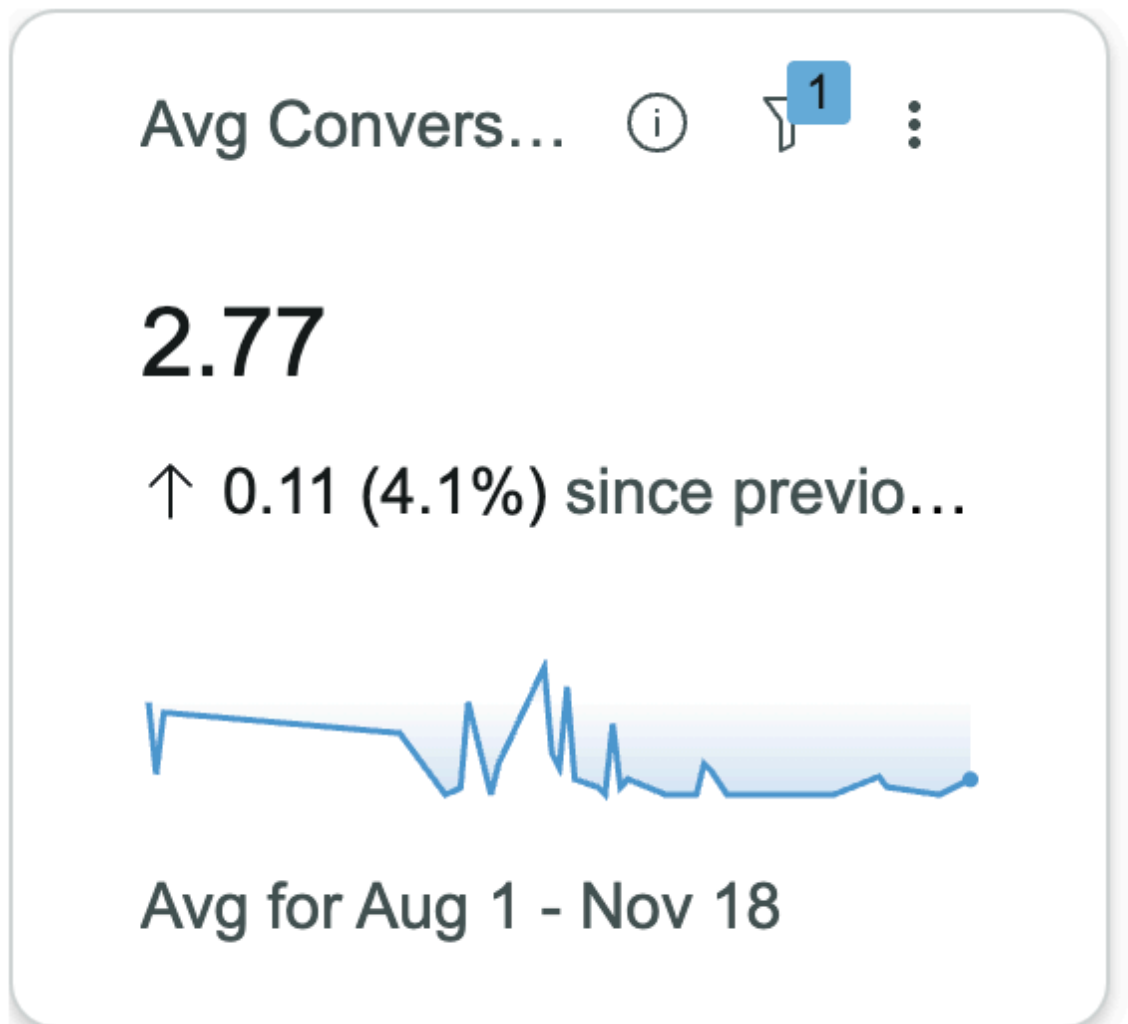
This area of the dashboard shows the number of new users interacting with assistants for the first time in the selected date range. This metric highlights the growth in user base and helps you assess the effectiveness of adoption initiatives.

New Users

**Avg Conversations/User**

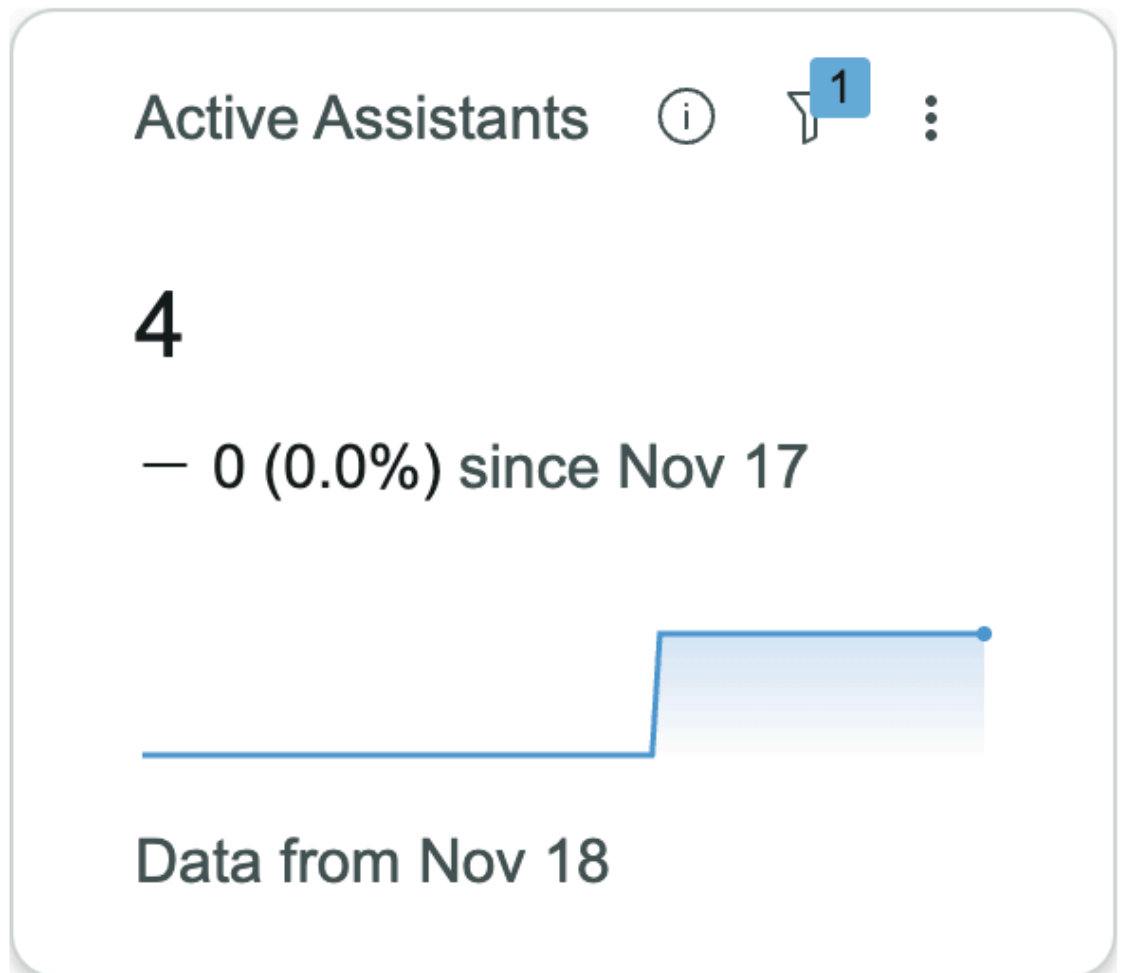
This area of the dashboard shows the average number of conversations per unique user in the selected date range. It's calculated using the following formula: $(\text{Total AI assistant conversations}) / (\text{Number of unique users})$. This metric reveals how frequently users are interacting with assistants.

Avg Conversations/User

**Active Assistants**

This area of the dashboard shows the number of active assistants as on the last date of the selected date range. This metric helps you in identifying the assistants which are currently driving engagement and contributing to adoption.

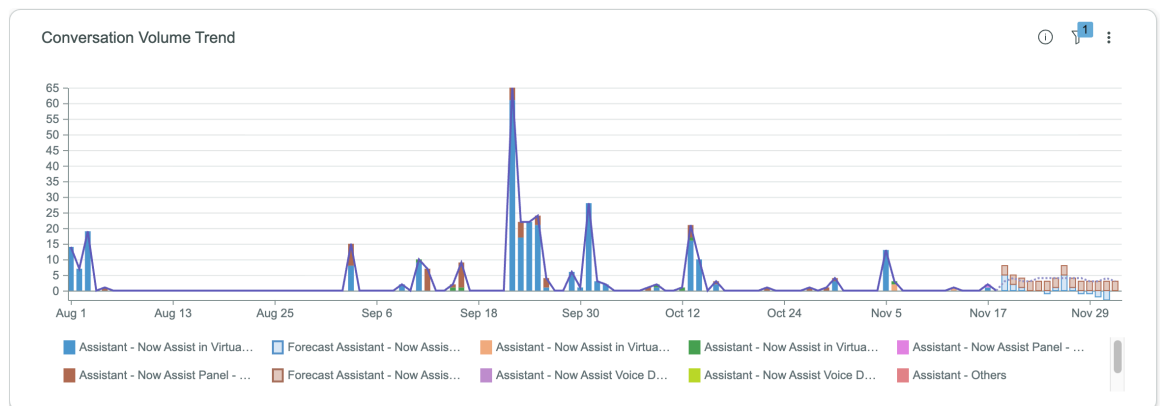
Active Assistants



Conversation Volume Trend

This area of the dashboard shows the trend of conversation volumes over time, broken down by assistant. Hover over the chart to see total conversations by assistants and to view the % of conversations on that day relative to the total number of conversations in the selected date range. This metric helps you investigate periods of high or low activity to understand underlying causes and adjust engagement strategies.

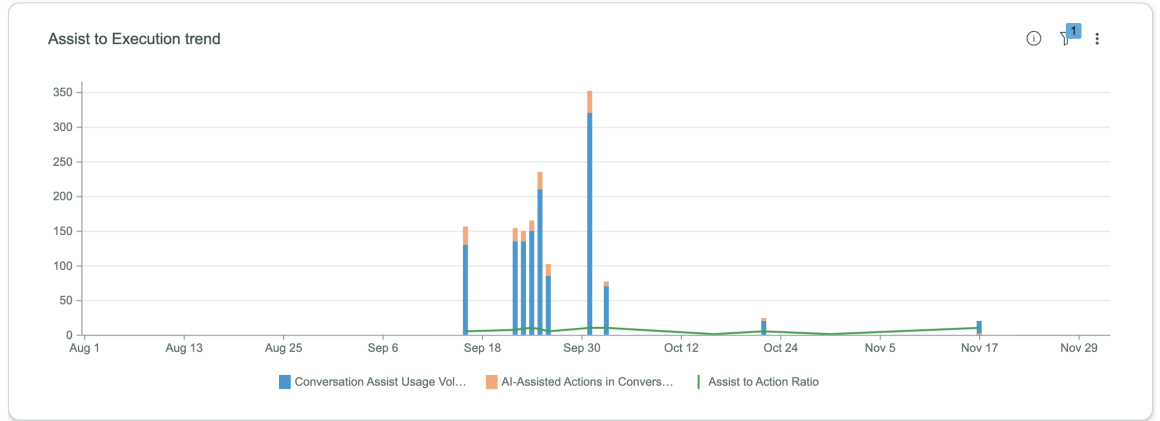
Conversation Volume Trend



Assist to Execution Trend

This area of the dashboard shows the average number of assists consumed per execution or action on a given day. For example, if 100 assists were consumed to complete 50 executions, the assist to execution ratio is 2:1. This metric helps you assess how effectively assistants are using assists to deliver desired outcomes.

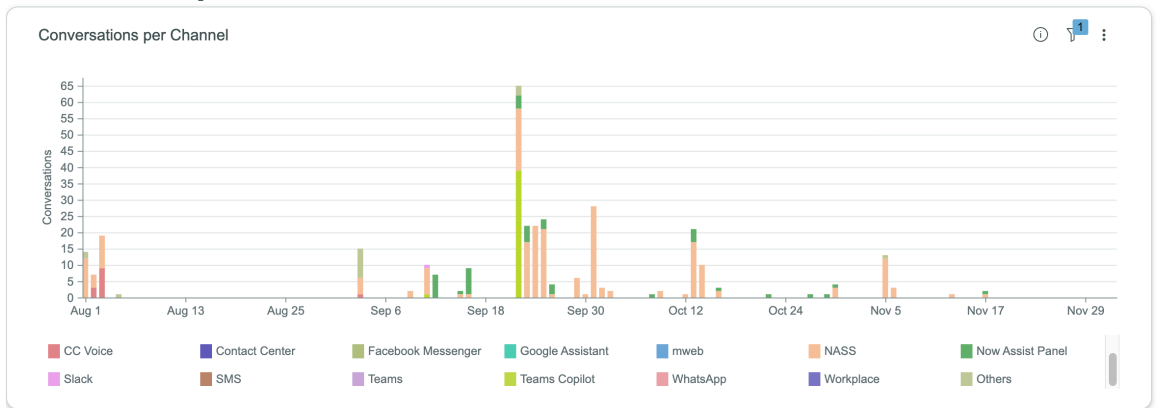
Assist to Execution Trend



Conversations per Channel

This area of the dashboard shows the distribution of conversations across different channels such as Teams, Slack, and so on.

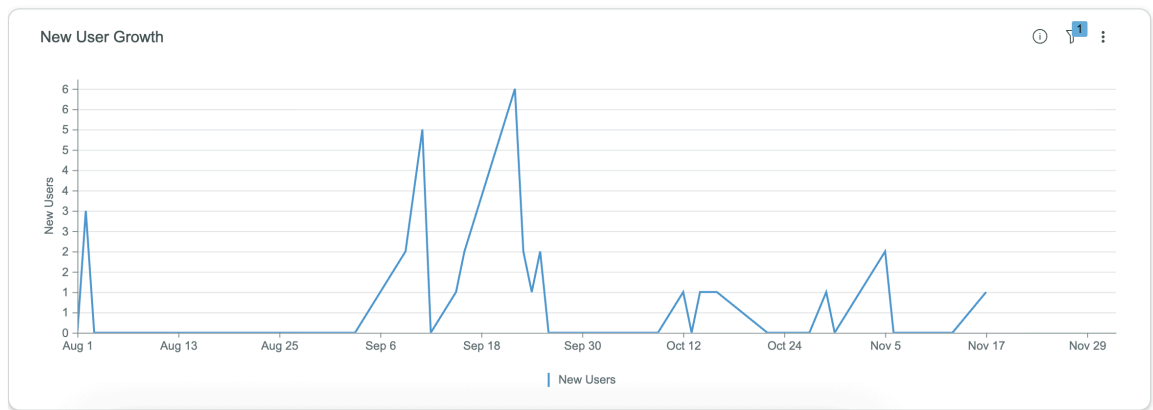
Conversations per Channel



New User Growth

This area of the dashboard shows the growth of new users in a selected date range. A new user is a user who has had their first conversation with an assistant in the selected date range. Track new user growth to evaluate the success of onboarding and adoption efforts.

New User Growth

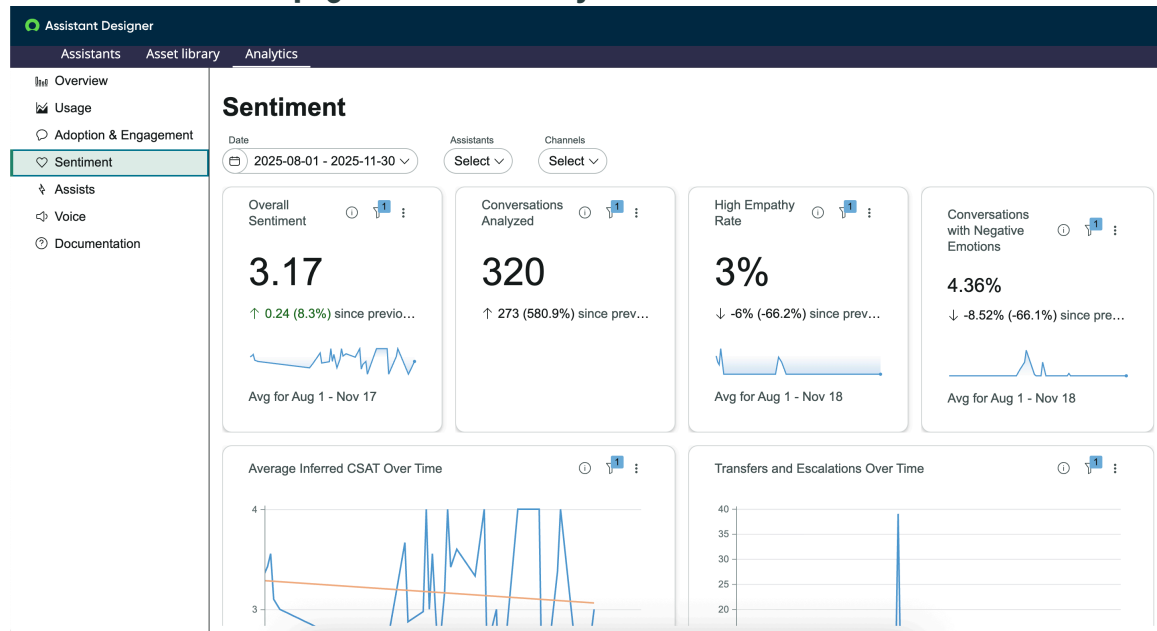


Sentiment page in Assistant analytics

Analyze user sentiment through customer satisfaction (inferred CSAT) score and CSAT factors such as empathy, frustration and confusion, transfers and escalations from conversations with assistants to improve the quality of user interactions.

The Sentiment dashboard page aggregates metrics related to user satisfaction, emotional feedback, empathy levels, and conversation outcomes. These metrics enable you to monitor inferred CSAT, track transfers and escalations, analyze empathy distribution, and review negative emotion trends. The insights from these metrics support targeted improvements to assistant behavior, response quality, and overall user experience.

Sentiment dashboard page in Assistant analytics



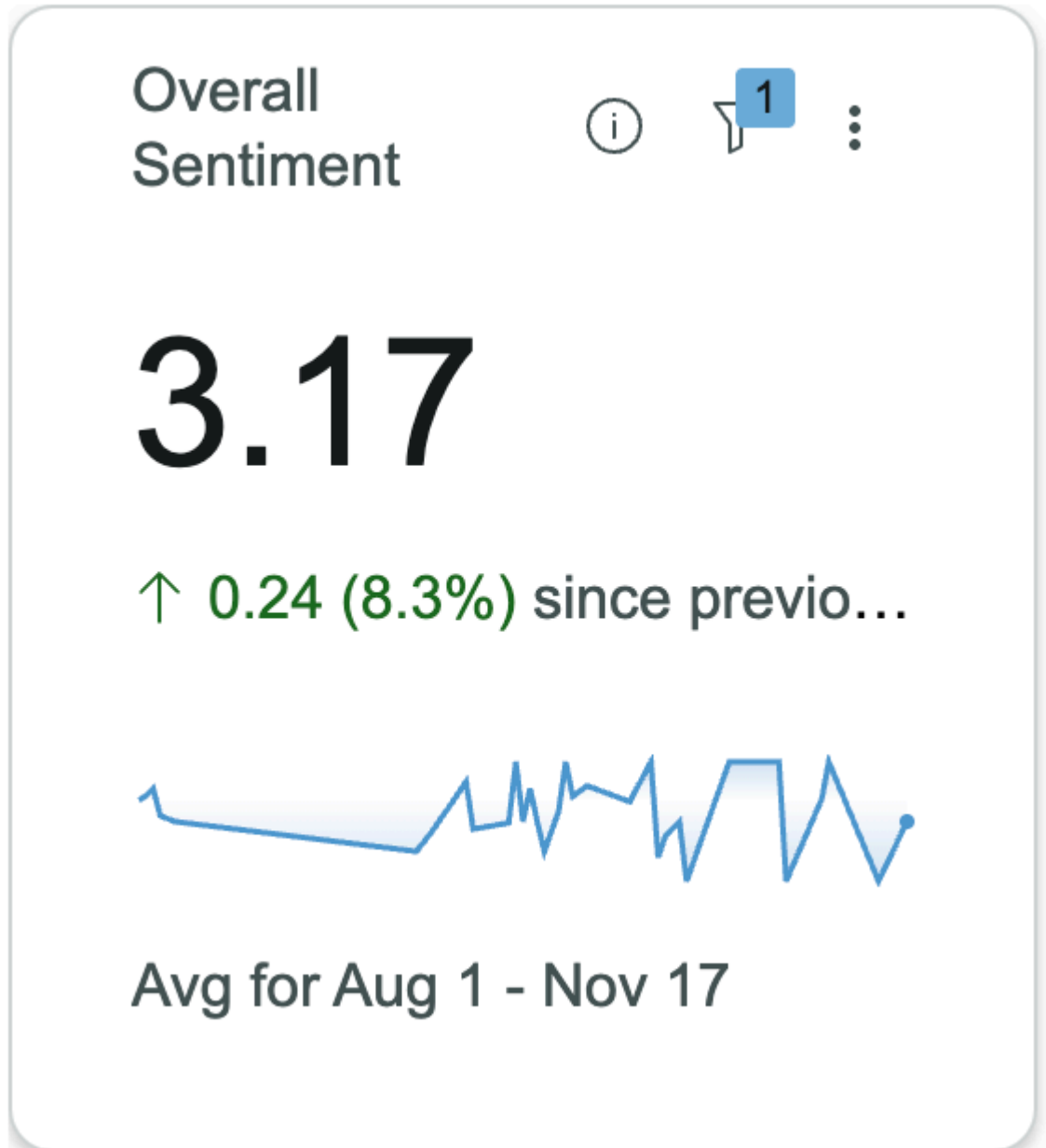
The visualizations on the Sentiment page help you with the following.

- Monitor user satisfaction and sentiment trends to identify strengths and areas for improvement in assistant interactions.
- Track emotional feedback and empathy levels, enabling you to address frustration, confusion, and other negative emotions.
- Analyze conversation outcomes and recommended next steps to guide assistant optimization and enhance resolution rates.

Overall Sentiment

This area of the dashboard shows the overall average inferred CSAT score for analyzed conversations in the selected date range. The CSAT score is measured on a scale from 0 to 5, where 0 represents the lowest satisfaction and 5 represents the highest. Use this metric to track changes in sentiment over time and evaluate the impact of assistant updates.

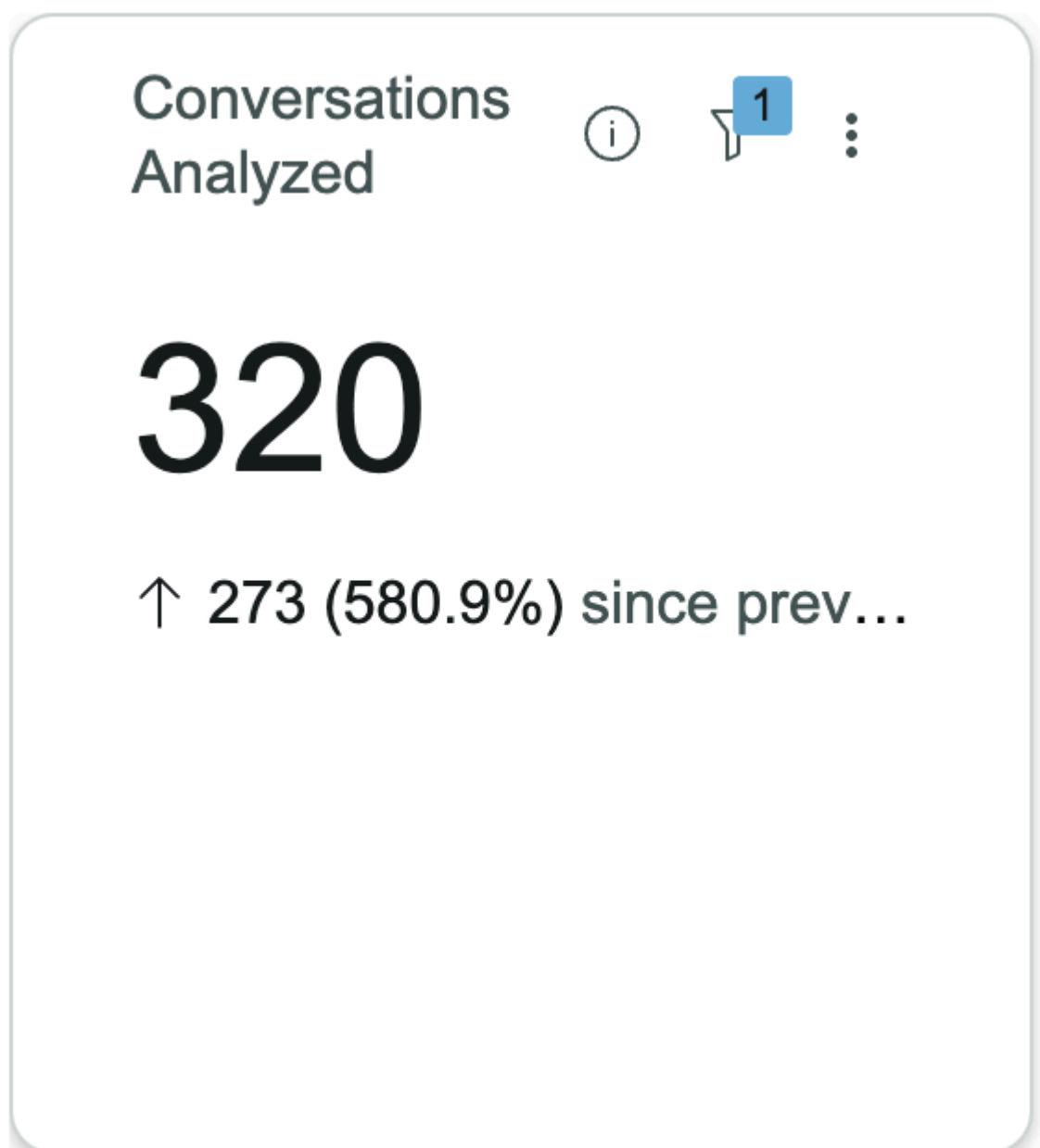
Overall Sentiment



Conversations Analyzed

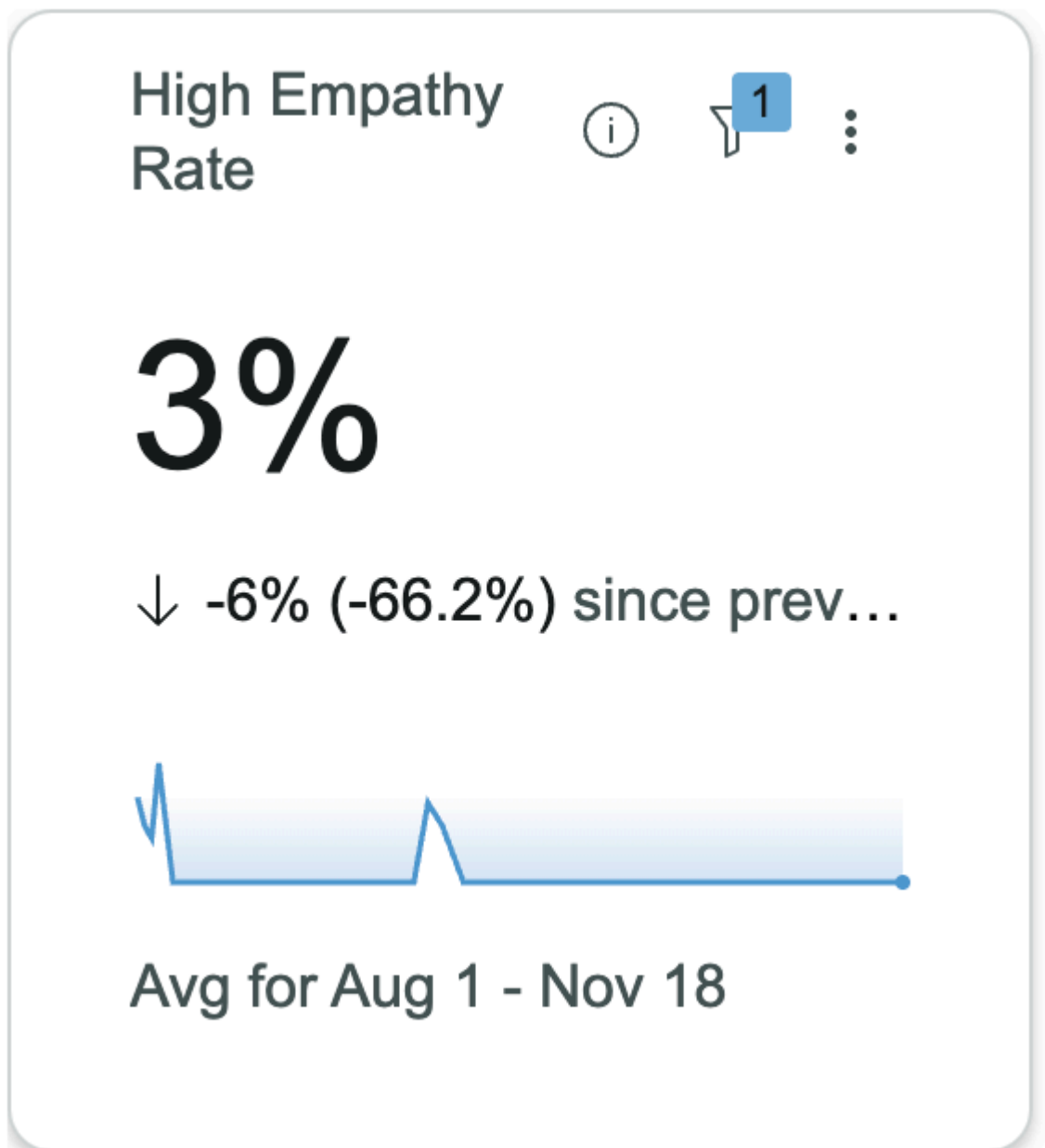
This area of the dashboard shows the total number of conversations analyzed for sentiment in the selected date range. This number indicates the breadth of data supporting CSAT scores.

Conversations Analyzed

**High Empathy Rate**

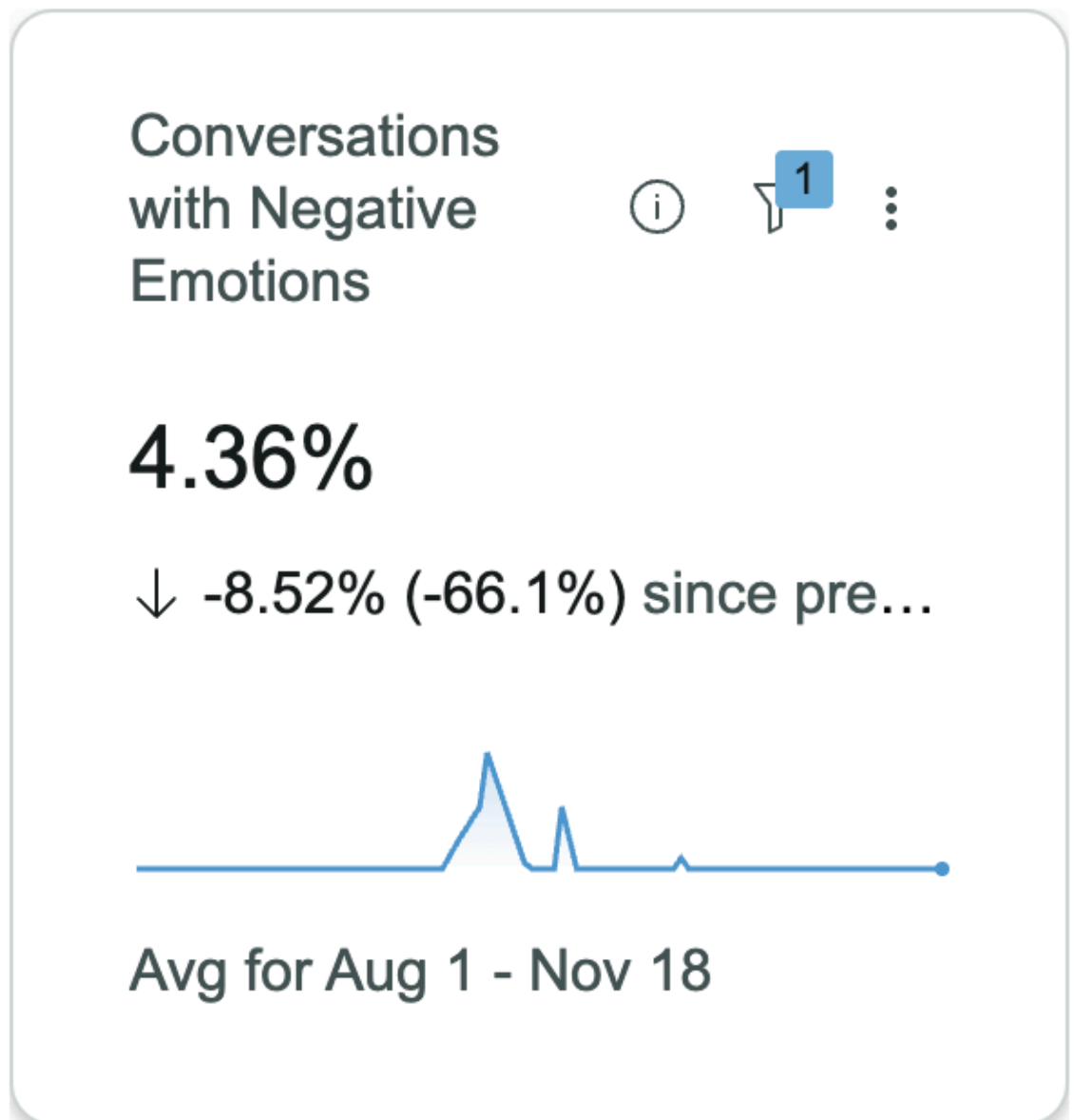
This area of the dashboard shows the percentage of conversations where high empathy was detected in assistant responses. It's calculated as $((\text{Number of conversations with high empathy}) / (\text{Total number of conversations analyzed})) \times 100$. High empathy rate is an indication of the assistant's ability to respond with empathy to users queries.

High Empathy Rate

**Conversations with Negative Emotions**

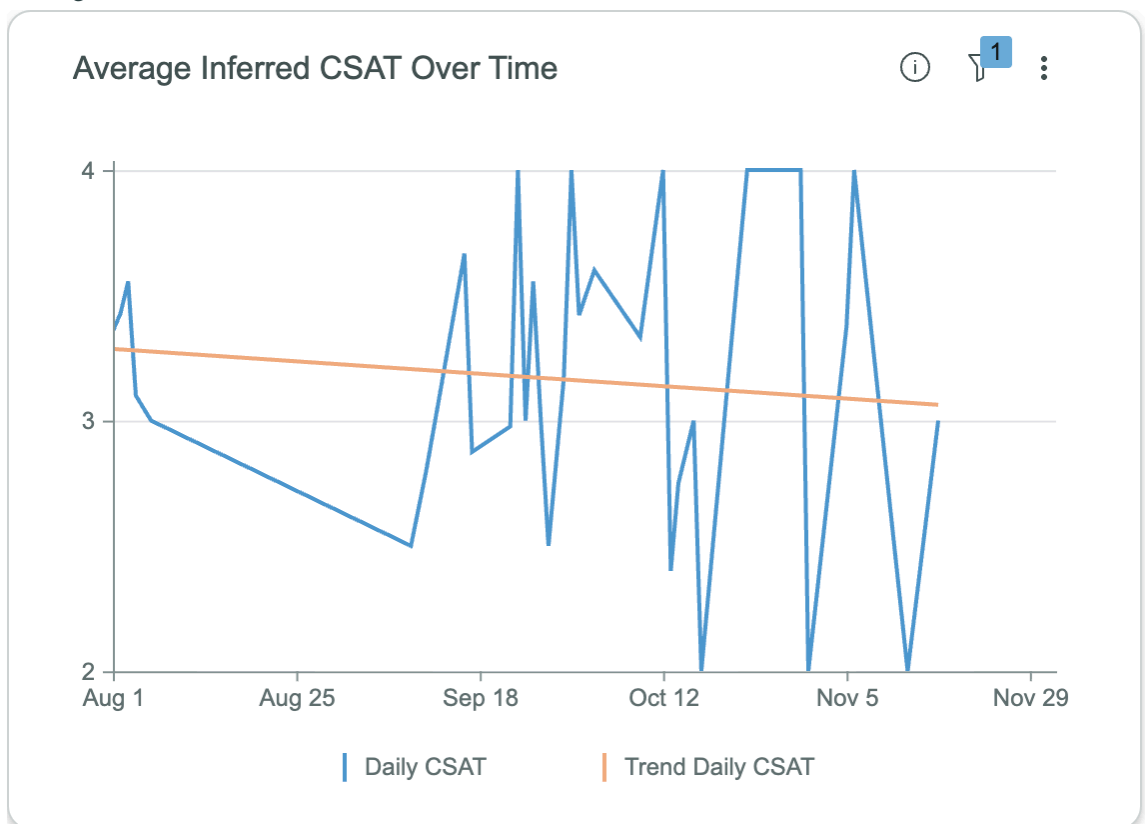
This area of the dashboard shows the percentage of conversations where negative emotional feedback in terms of confusion or frustration was detected. It's calculated as $((\text{Number of conversations with Frustration or Confusion}) / (\text{Total number of conversations analyzed})) \times 100$. This metric highlights the prevalence of negative experiences in assistant interactions. Use the metric to monitor and reduce negative emotion rates through targeted assistant improvements.

Conversations with Negative Emotions

**Average Inferred CSAT Over Time**

This area of the dashboard shows daily average of inferred CSAT scores in the selected data range. The CSAT scores are measured on a scale from 0 to 5, where 0 represents the lowest satisfaction and 5 represents the highest. This chart highlights periods of improvement or decline in user sentiment.

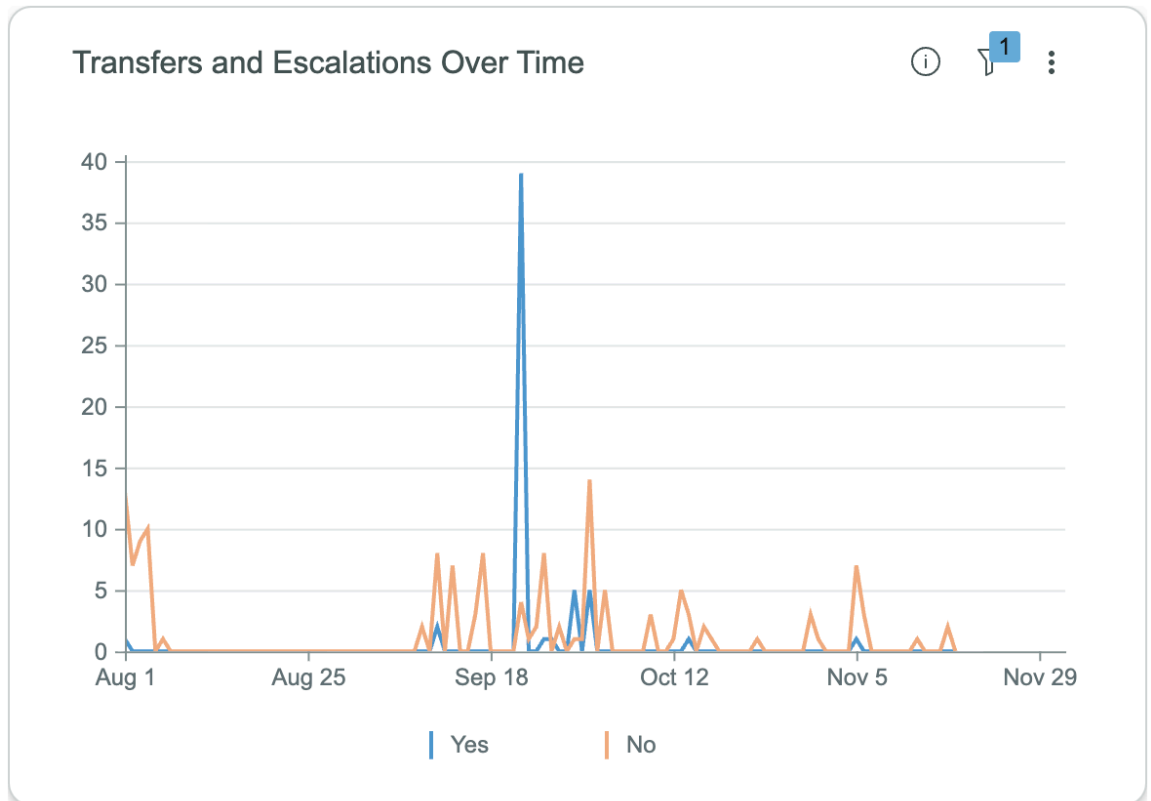
Average Inferred CSAT Over Time



Transfers and Escalations Over Time

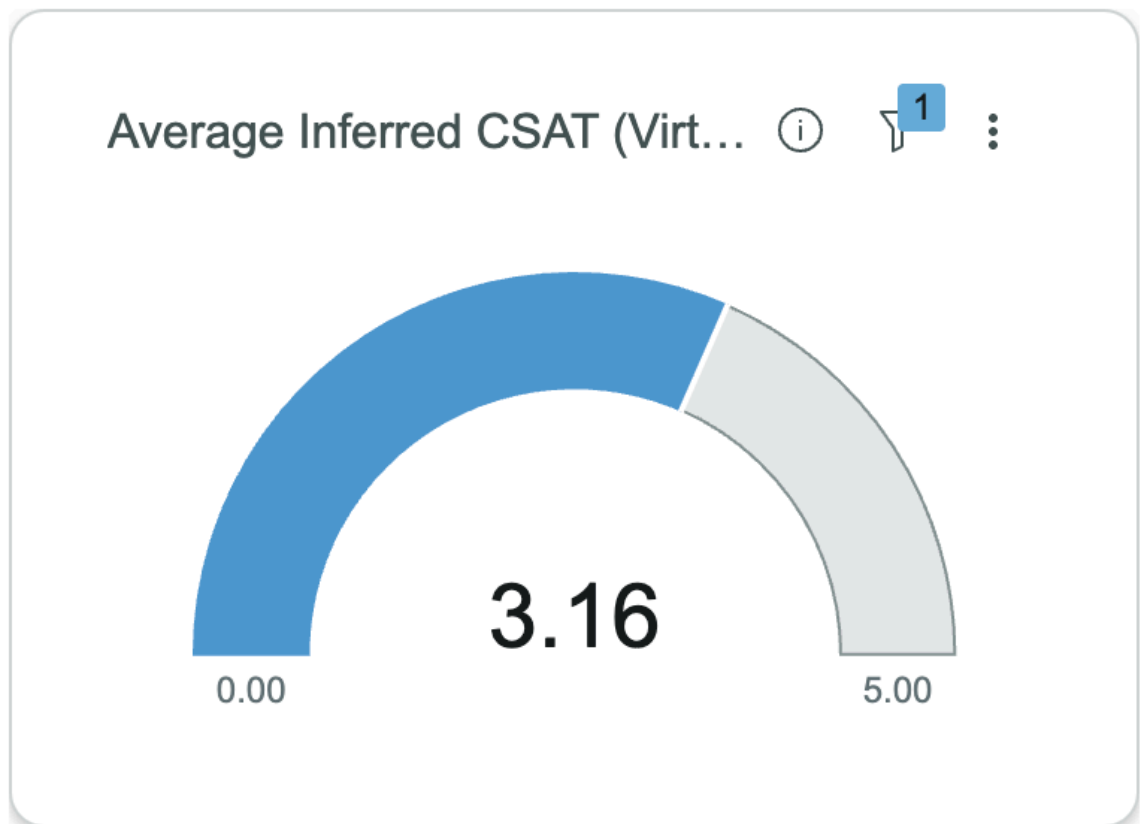
This area of the dashboard tracks the number of conversations transferred or escalated to live agent. Hover over the trend line to view the number of conversations transferred or escalated to live agent on a given day. This chart helps you with how often assistants require human intervention.

Transfers and Escalations Over Time

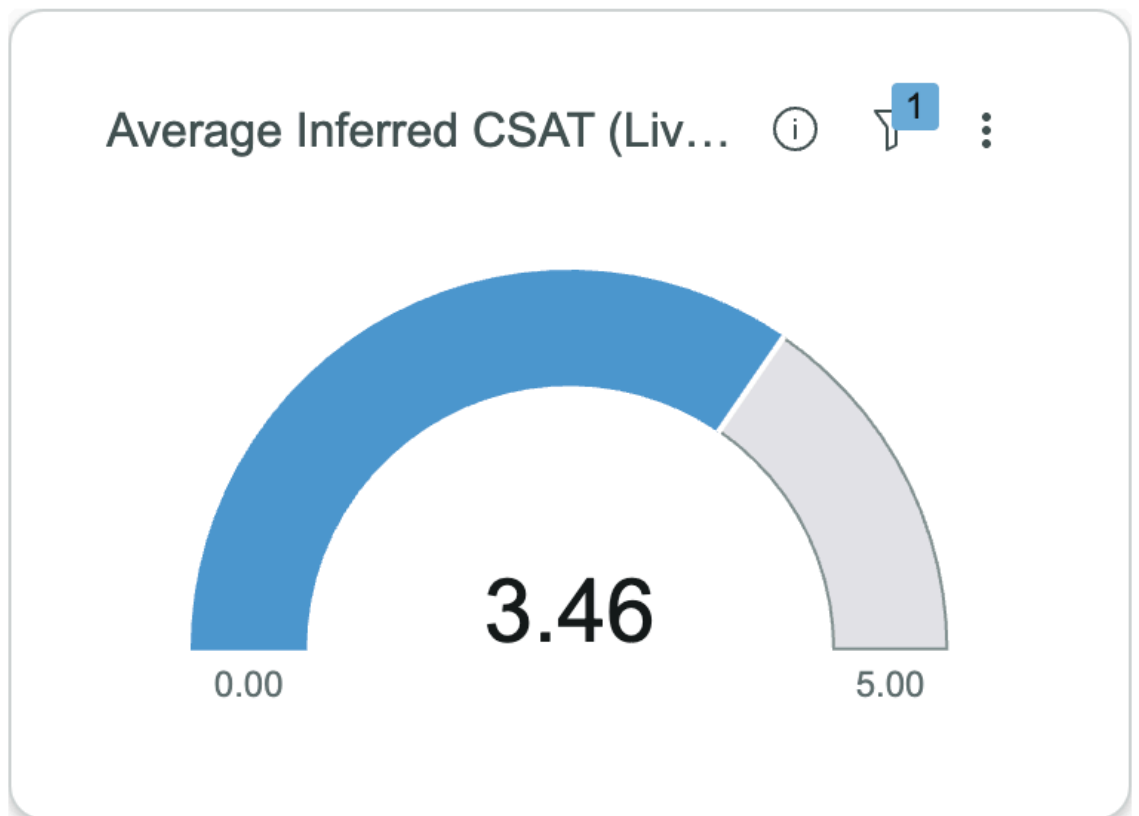


Average Inferred CSAT (Virtual Agent)

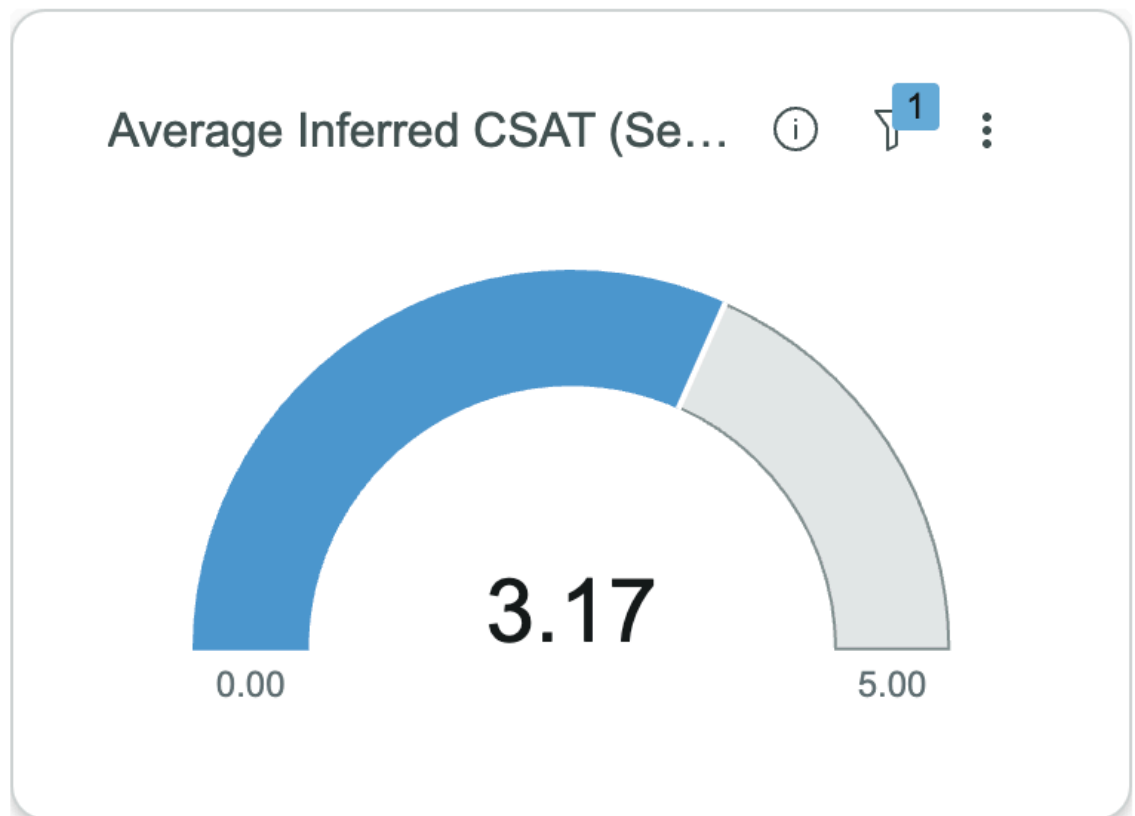
This area of the dashboard shows the average Inferred CSAT score for Virtual Agent interactions in the selected period. For conversations involving both Virtual Agent and live agent, this score reflects only the Virtual Agent CSAT. Scored on a 5-point scale, 0 = least satisfied and 5 = most satisfied. Use this metric to benchmark assistant performance and prioritize improvements where satisfaction is lowest.

Average Inferred CSAT (Virtual Agent)**Average Inferred CSAT (Live Agent)**

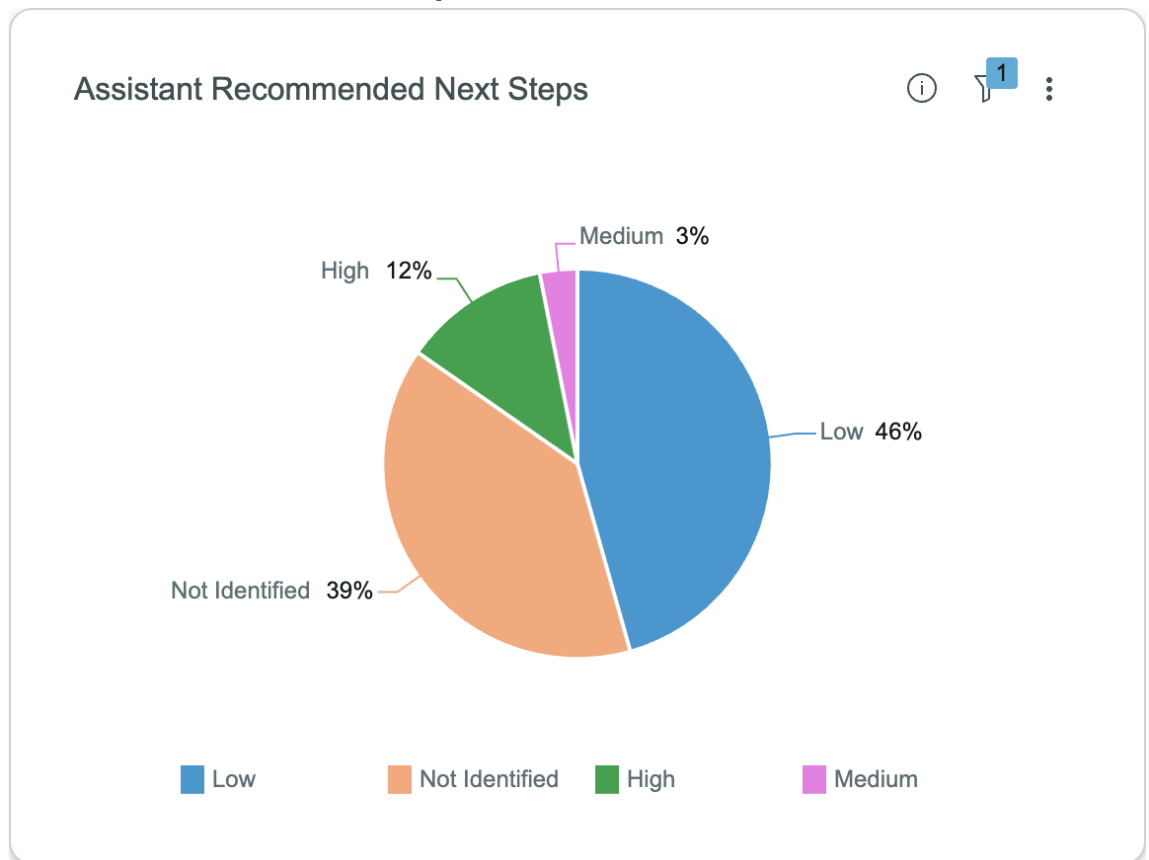
This area of the dashboard shows the average Inferred CSAT score for live agent interactions in the selected period. For conversations involving both Virtual Agent and live agent, this score reflects only the live agent CSAT. Scored on a 5-point scale, 0 = least satisfied and 5 = most satisfied. Use this metric to benchmark assistant performance and prioritize improvements where satisfaction is lowest.

Average Inferred CSAT (Live Agent)**Average Inferred CSAT (Session)**

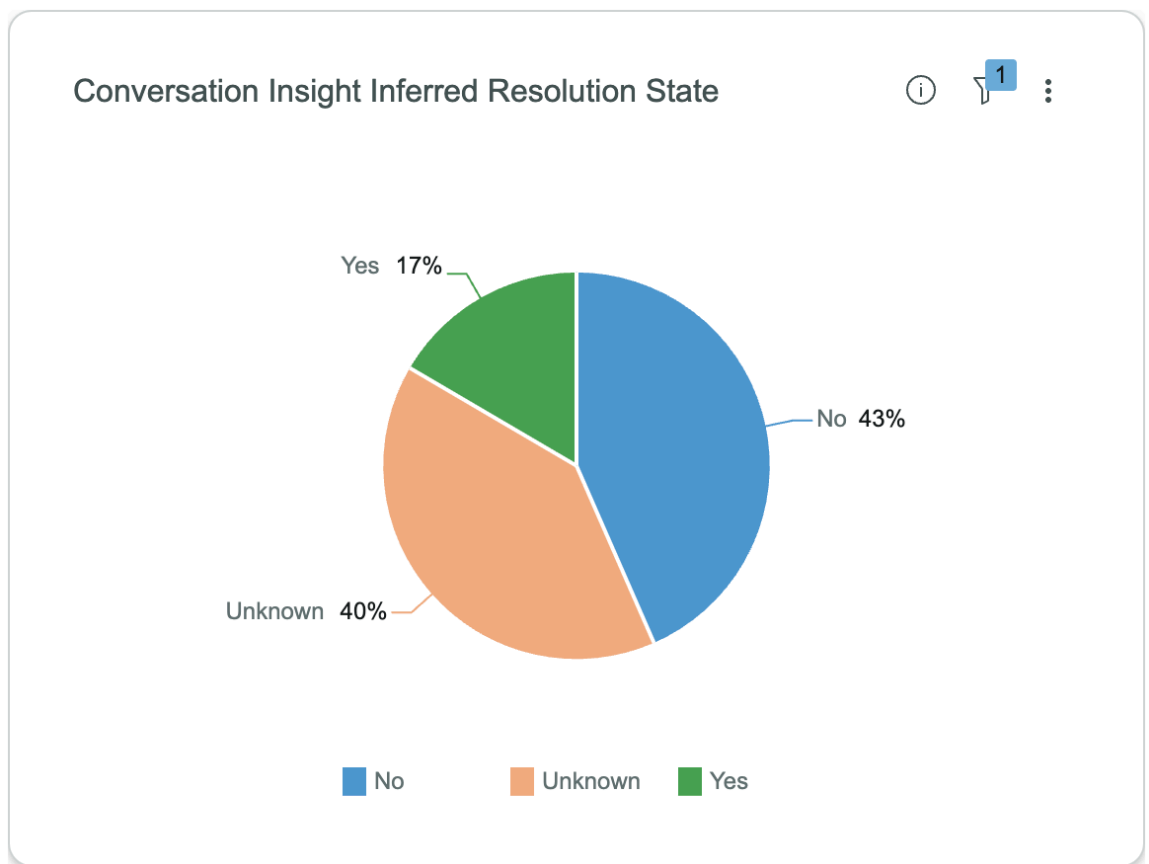
This area of the dashboard shows the average Inferred CSAT score for all interactions handled by Virtual Agent or a combination of Virtual Agent and live agent in the selected period. Scored on a 5-point scale, 0 = least satisfied and 5 = most satisfied.

Average Inferred CSAT (Session)**Assistant Recommended Next Steps**

This area of the dashboard shows how clearly the assistant explained what happens next or what the user should do. Low: Conversations where no clear guidance was provided. Medium: Conversations where some guidance was provided. High: Conversations where clear and complete guidance was provided.

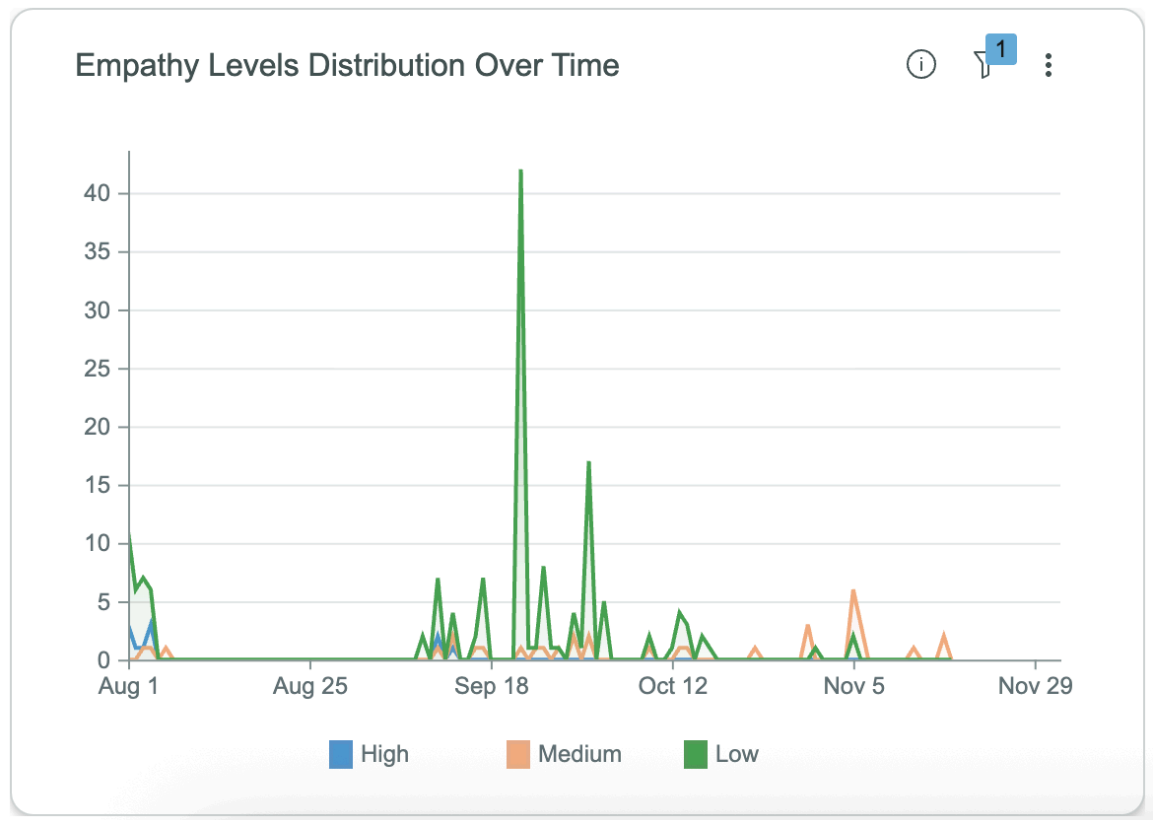
Assistant Recommended Next Steps**Conversation Insight Inferred Resolution State**

This area of the dashboard shows the conversations where the user's issue was resolved. Yes: conversations where the assistant met the user's needs. No: conversations where the assistant didn't meet the user's needs. Unknown: conversations where the resolution state couldn't be determined.

Conversation Insight Inferred Resolution State**Empathy Levels Distribution Over Time**

This area of the dashboard shows the distribution of empathy levels (High, Medium, Low) in assistant responses in the selected date range. Use this chart to assess the emotional intelligence of assistant interactions and target improvements.

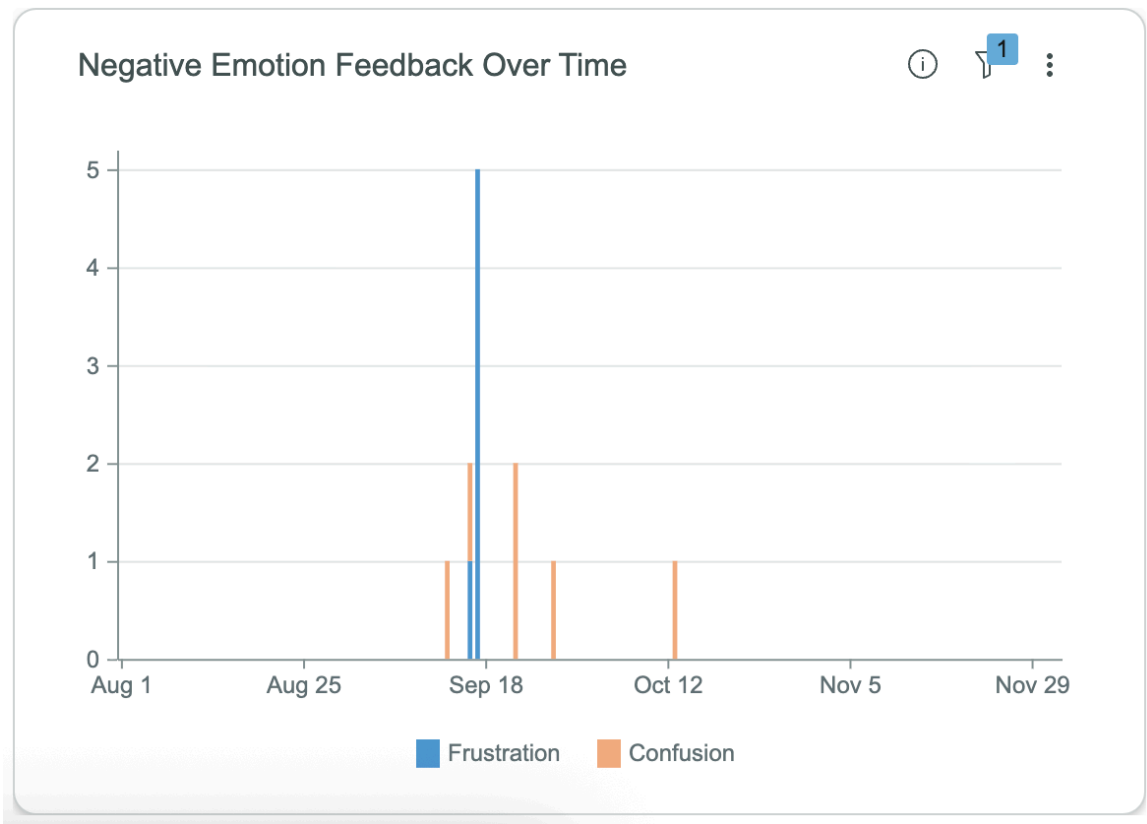
Empathy Levels Distribution Over Time



Negative Emotion Feedback Over Time

This area of the dashboard tracks the feedback related to negative emotions: frustration and confusion in conversations with assistants. This chart helps you identify trends in negative user experiences and take necessary steps to reduce the negative feedback.

Negative Emotion Feedback Over Time

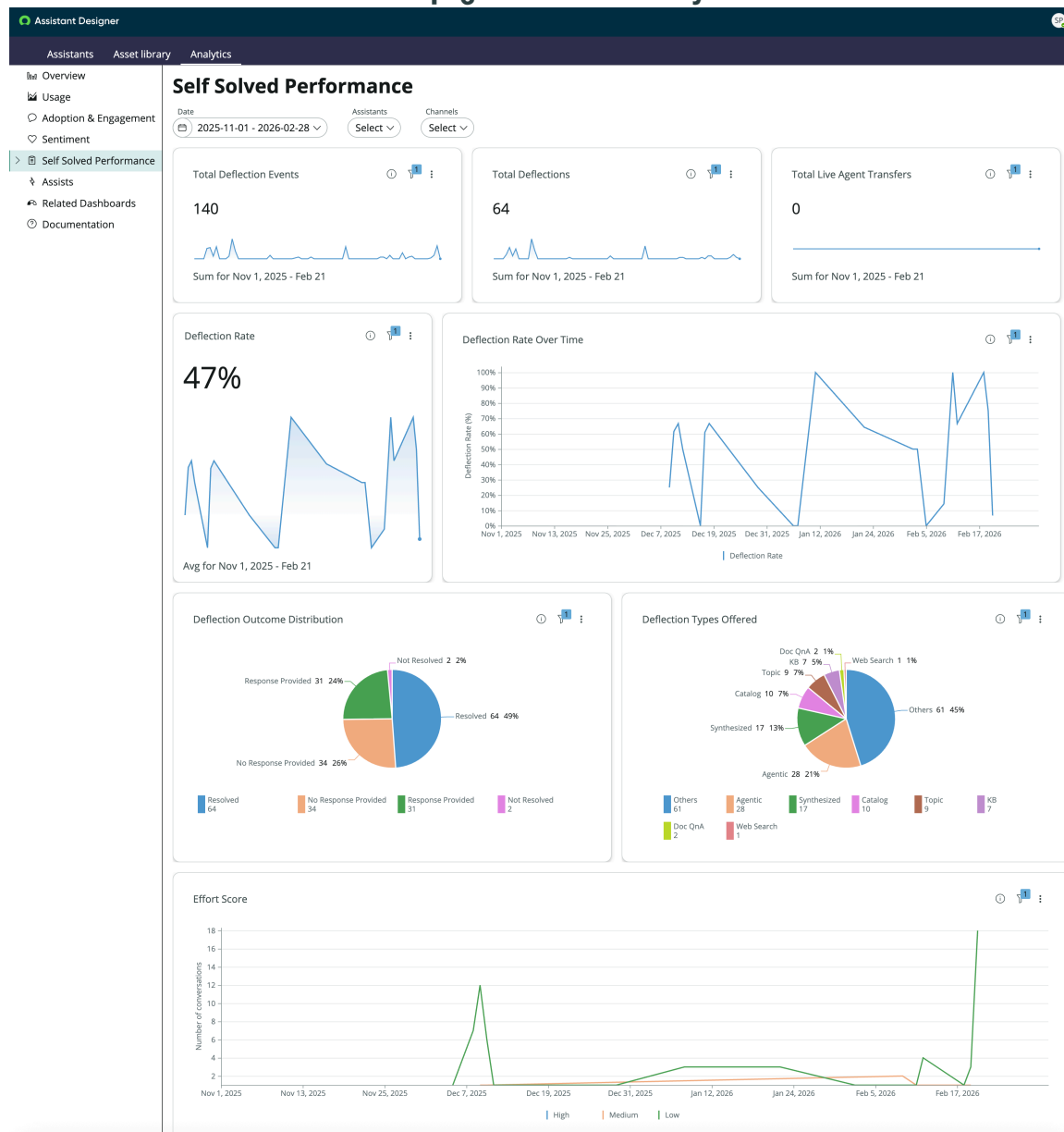


Self-Solve Performance page in Assistant analytics

Analyze self-solve and deflection metrics to measure how effectively assistants help users resolve issues without live agent intervention.

The Self-Solve Performance dashboard page aggregates metrics related to self-solved events (instances where assistants resolved user queries), deflection rates, live agent transfers, and user effort. These metrics enable you to monitor resolution success, track deflection trends over time, and analyze the distribution of deflection outcomes. The insights from these metrics support targeted improvements to assistant behavior and help reduce the need for live agent support.

Self-Solve Performance dashboard page in Assistant analytics

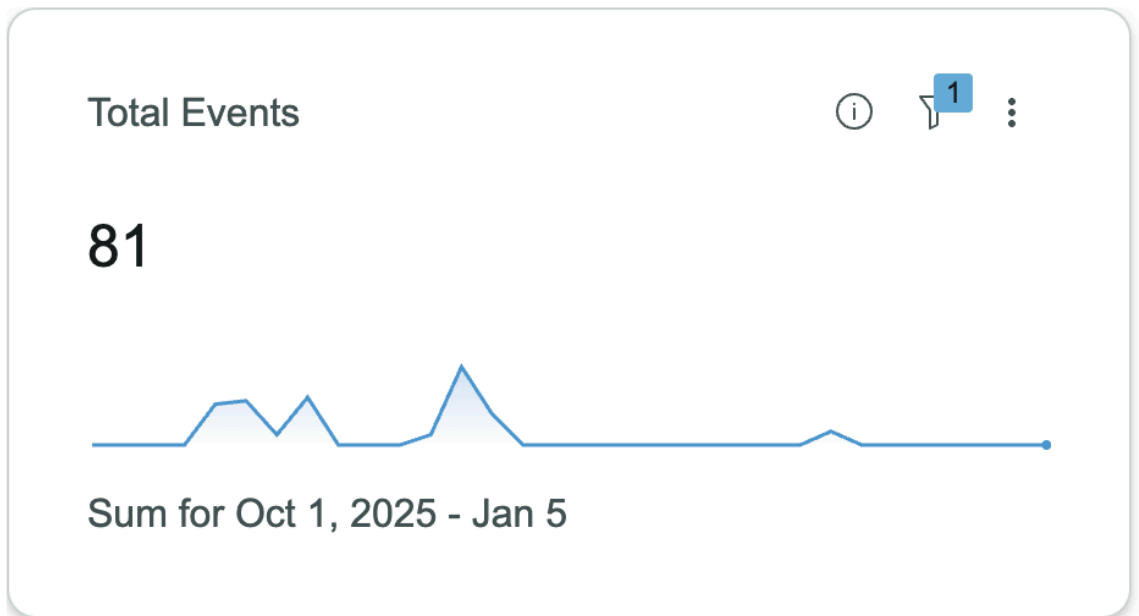


The visualizations on the Self-Solve Performance page help you with the following.

- Monitor self-solve deflection rates to identify how often users resolve issues without live agent assistance.
- Track deflection trends over time to evaluate the impact of assistant updates and optimizations.
- Analyze user effort scores and deflection outcome distributions to guide improvements in user experience.

Total Deflection Events

This area of the dashboard shows the total number of user queries in the selected date range that have the potential of being deflected. Use this metric to understand the overall volume of queries where deflection was attempted.

Total Deflection Events**Total Deflections**

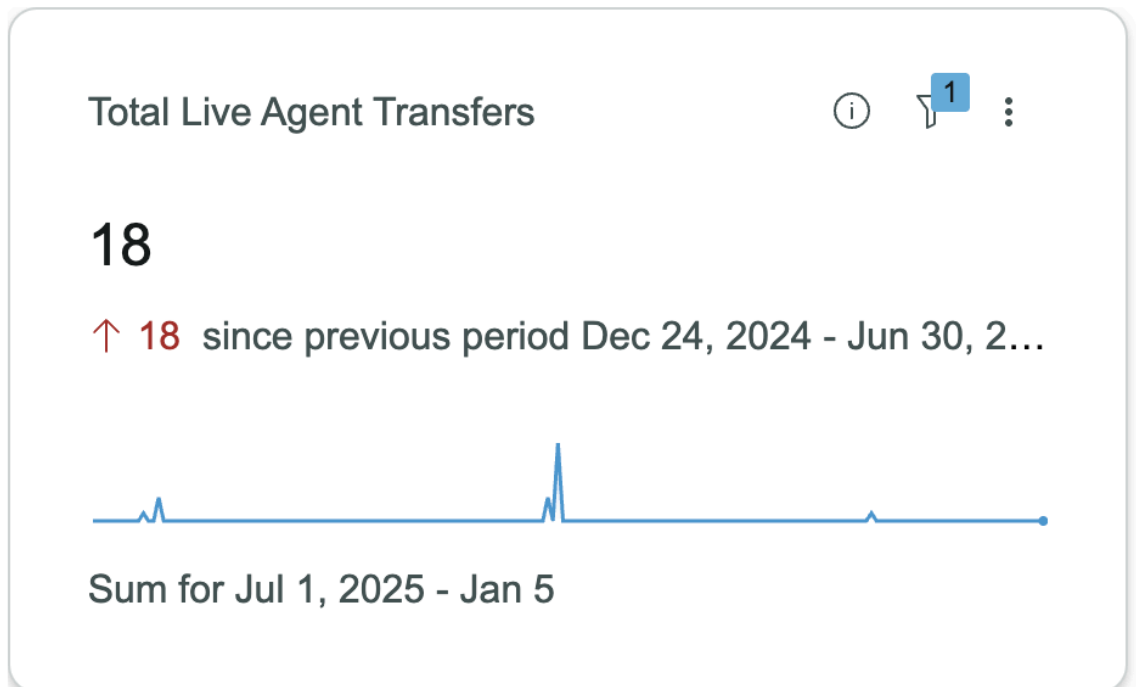
This area of the dashboard shows the number of user queries successfully deflected by the assistant. This count indicates the number of interactions where deflection outcome was Resolved. The deflection can be attributed to AI agent, skill, topic execution or a positive feedback provided by the user.

Total Deflections**Total Live Agent Transfers**

This area of the dashboard shows the number of conversations transferred to a live agent during the selected period. The percentage change from the previous period helps you track whether transfers are increasing or decreasing over time. Use this

metric to identify opportunities to improve assistant capabilities and reduce the need for human intervention.

Total Live Agent Transfers

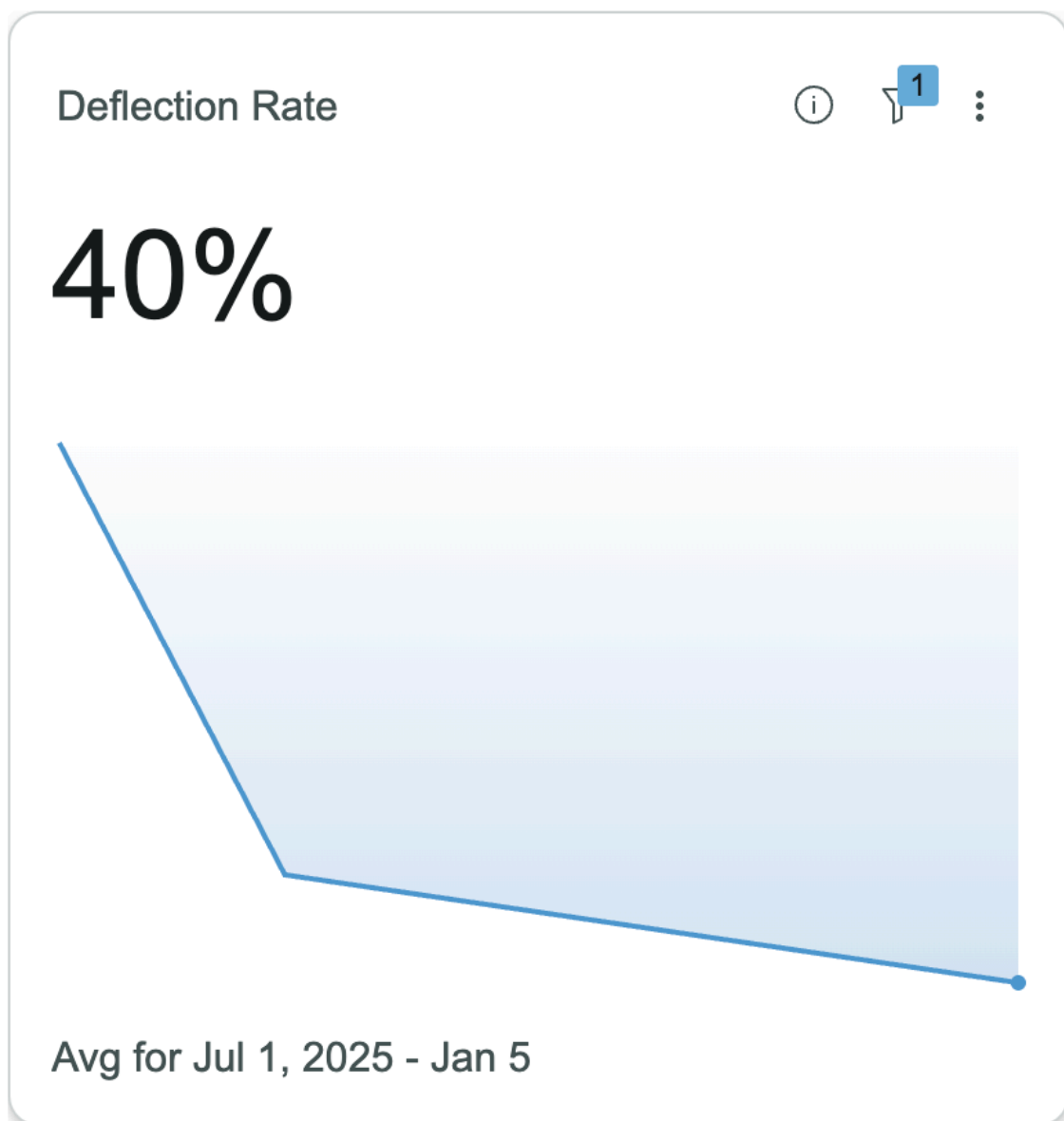


Deflection Rate

This area of the dashboard shows the overall percentage of interactions where users were successfully deflected from contacting a live agent. This is calculated using: $((\text{Total number of self-solved events}) / (\text{Total number of events})) \times 100$.

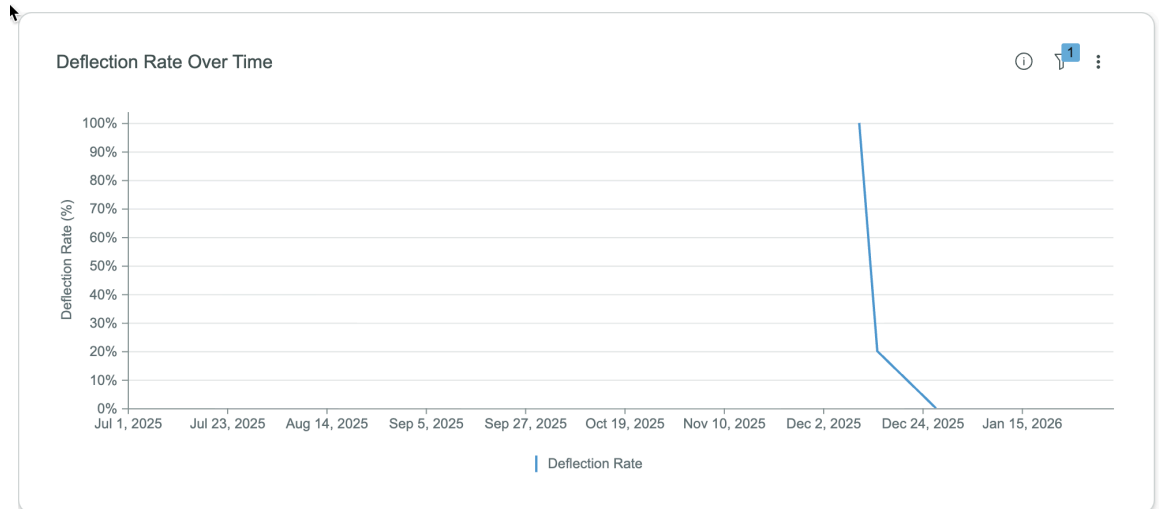
A higher deflection rate indicates that the assistant is effectively helping users find solutions independently. Use this metric to benchmark assistant performance and track improvements over time.

Deflection Rate

**Deflection Rate Over Time**

This area of the dashboard tracks the deflection rate as a trend line across the selected date range. Hover over the trend line to view the deflection rate on a given day. This chart helps you identify periods of improvement or decline in deflection performance and correlate changes with assistant updates or external factors.

Deflection Rate Over Time



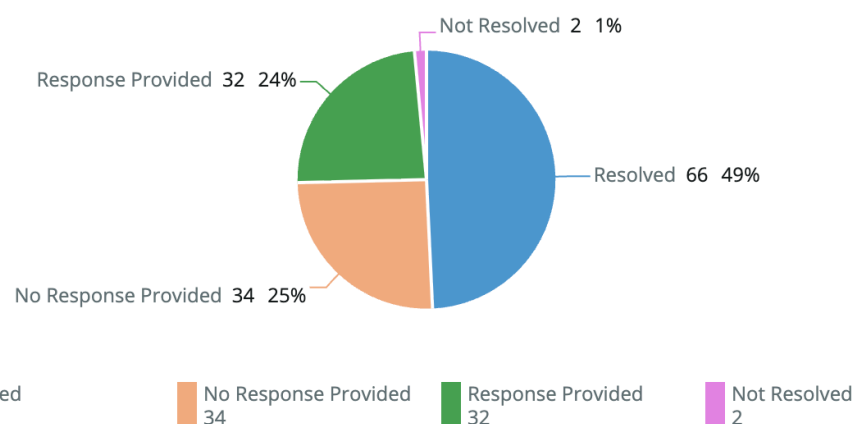
Deflection Outcome Distribution

This area of the dashboard shows the distribution of outcomes for deflection attempts. The chart displays breakdown of Resolved, Response Provided, No Response Provided events, helping you understand how often deflection attempts lead to successful resolution.

- **Resolved:** conversations where at least one AI asset, for example, AI agent, skill, topic was executed or a positive feedback was provided by the user
- **Response Provided:** conversations involving small talk or where the assistant provided a synthesized response with no further action from the user
- **No Response Provided:** conversations where no response was provided by the assistant
- **Not Resolved:** conversations where negative feedback was provided by the user or the query was escalated to a live agent

Deflection Outcome Distribution

Deflection Outcome Distribution



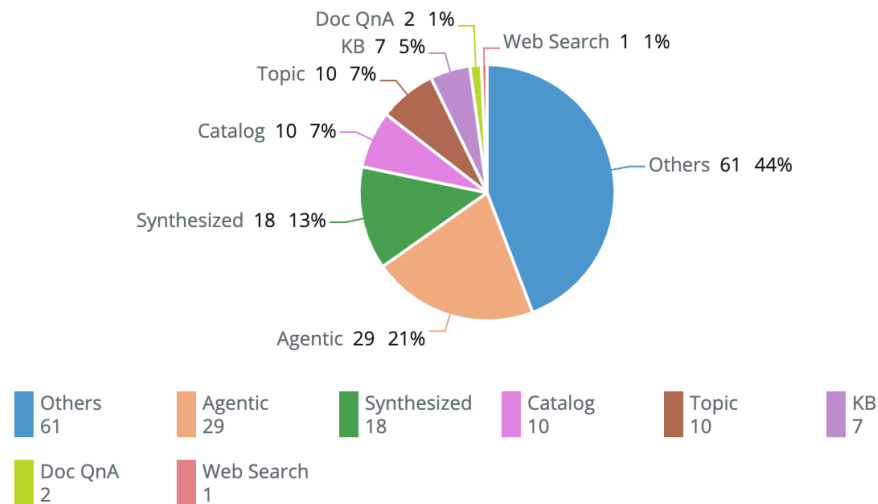
Select a segment in the pie chart to drill down to the Deflection Details page and view conversations associated with that outcome. See [Deflection details page in Assistant analytics](#) for more information.

Deflection Types Offered

This area of the dashboard shows the distribution of AI assets offered as deflection methods to users. For example, catalog item, synthesized response, knowledge article, and so on. Use this chart to understand which deflection methods are being employed and evaluate their relative usage.

Deflection Types Offered

Deflection Types Offered

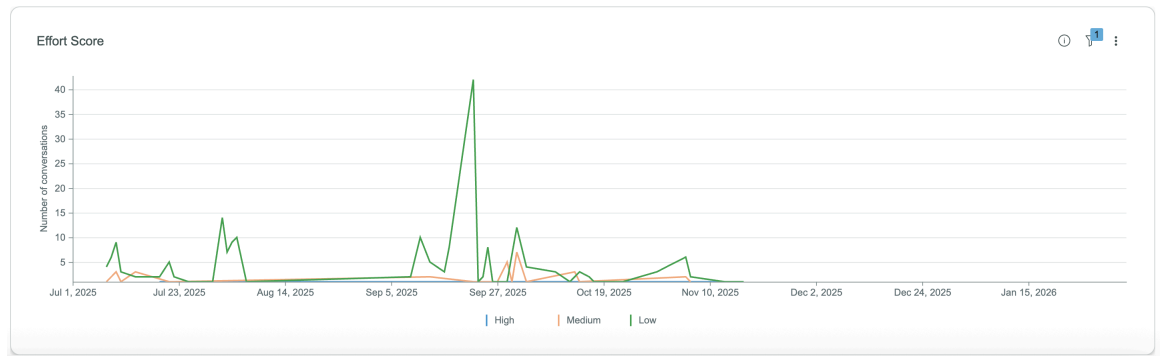


Select a segment in the pie chart to drill down to the Deflection Details page and view conversations associated with that deflection type. See [Deflection details page in Assistant analytics](#) for more information.

Effort Score

This area of the dashboard tracks user effort levels across conversations in the selected date range. Effort is categorized as High, Medium, or Low, indicating how much time and energy users needed to invest during the conversation to resolve their issues. Lower effort scores suggest a smoother self-service experience. Use this chart to help identify trends in user effort over time and prioritize improvements that reduce friction in the self-solve process. Effort score is based on the inferred Effort CSAT (customer satisfaction) factor. See [Conversation Insights](#) for more information.

Effort Score

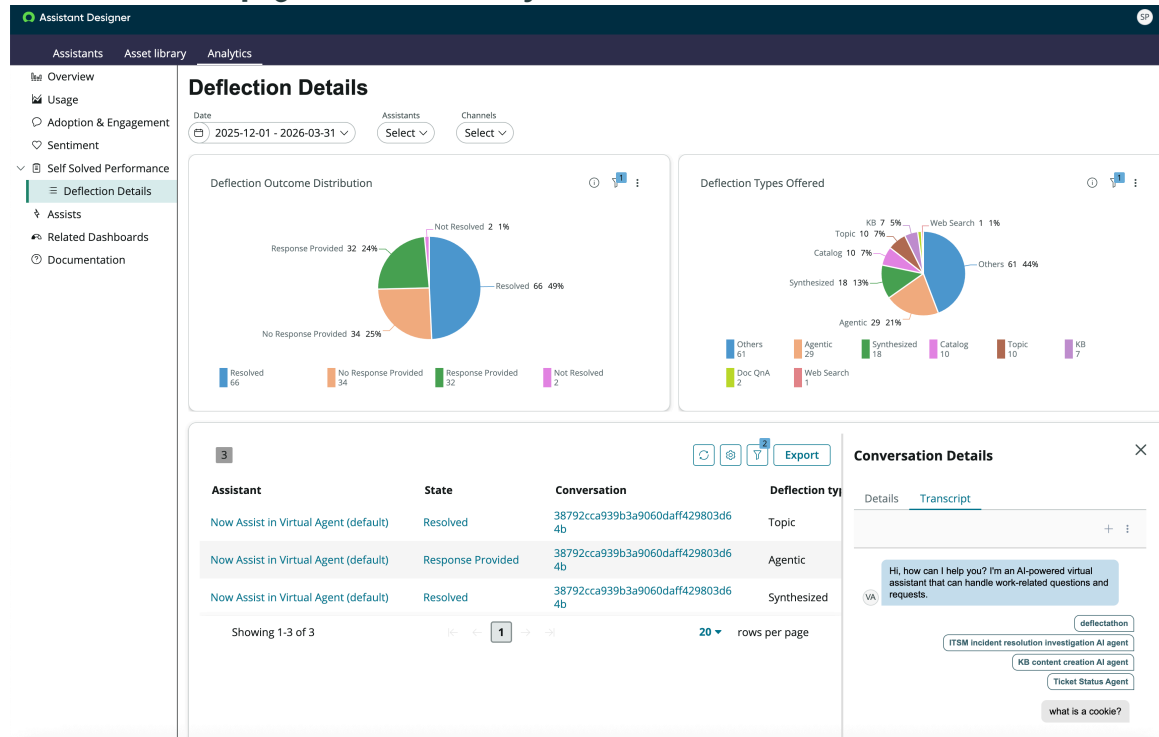


Deflection details page in Assistant analytics

View detailed insights into how your assistants resolve user queries, including deflection outcomes and the types of deflection methods used.

The Deflection Details page provides a granular view of how your assistants handle user queries and the methods used to resolve them. Access this page by navigating to **Assistant Designer > Analytics > Self Solved Performance > Deflection Details**.

Deflection details page in Assistant analytics



The visualizations on the Deflection Details page help you with the following.

- Understand the distribution of deflection outcomes to assess how effectively your assistants resolve user queries.
- Identify the deflection methods that contribute most to successful resolutions.
- Drill down into individual conversations to analyze deflection patterns and identify areas for improvement.

You can filter the dashboard data using the following options:

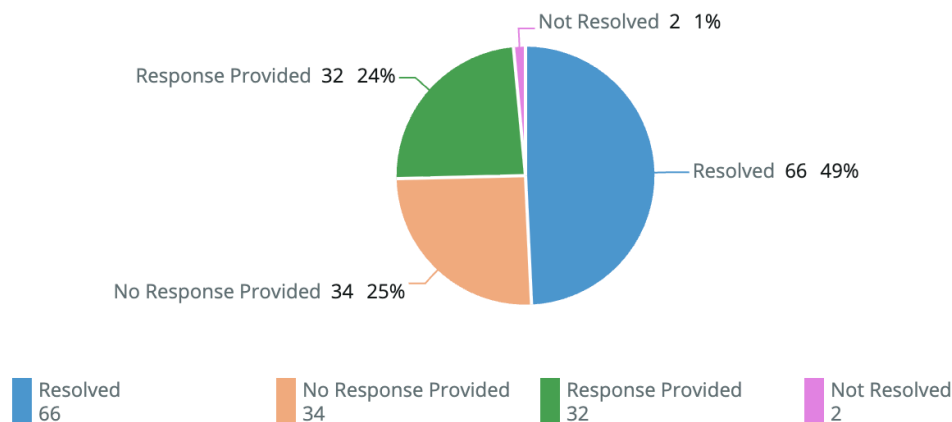
- **Date:** View metrics for a specific date range.
- **Assistants:** View metrics for specific assistants.
- **Channels:** View metrics by communication channel, for example, Teams, Slack.

Deflection Outcome Distribution

This area of the dashboard shows the distribution of outcomes for deflection attempts. The chart displays breakdown of Resolved, Not Resolved, Response Provided, No Response Provided outcomes across conversations, helping you understand how often deflection attempts lead to successful resolution.

Deflection Outcome Distribution

Deflection Outcome Distribution



The following are the deflection outcomes:

- **Resolved:** conversations where at least one AI asset, for example, AI agent, skill, topic was executed or a positive feedback was provided by the user
- **Response Provided:** conversations involving small talk or where the assistant provided a synthesized response with no further action from the user
- **No Response Provided:** conversations where no response was provided by the assistant
- **Not Resolved:** conversations where negative feedback was provided by the user or the query was escalated to a live agent

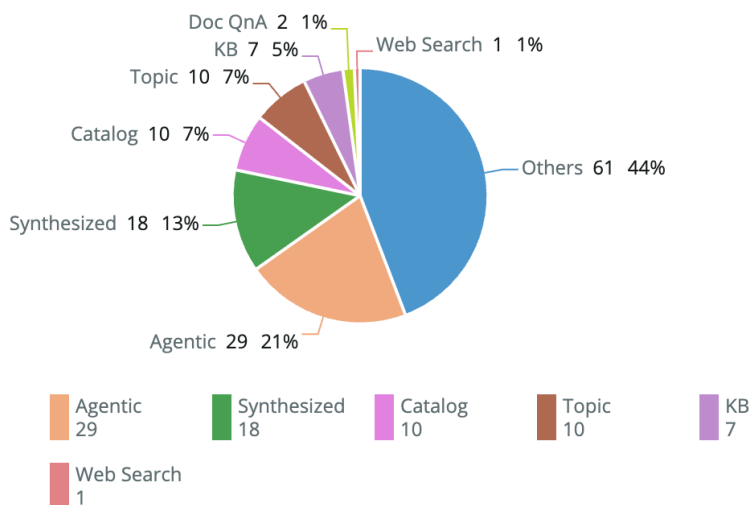
For more information on how deflection events are logged and deflection outcomes are attributed, see [KB2822316](#).

Deflection Types Offered

This area of the dashboard shows the distribution of AI assets offered as deflection methods to users. For example, catalog item, synthesized response, knowledge article, and so on. Use this chart to help you understand which deflection methods are being employed and evaluate their relative usage.

Deflection Types Offered

Deflection Types Offered



The following are the deflection types offered by the assistant:

- **Agentic:** Resolutions handled by AI agents.
- **Synthesized:** Responses generated by synthesizing information from multiple sources.
- **Catalog:** Resolutions that directed users to catalog items.
- **Topic:** Resolutions handled by predefined conversation topics.
- **KB:** Resolutions that provided knowledge base articles.
- **Doc QnA:** Resolutions from document-based question and answer.
- **Web Search:** Resolutions that used web search results.
- **Others:** Other deflection methods not categorized above.

Use this visualization to help you understand which deflection methods are most effective and optimize your assistant configuration accordingly.

Conversation details

This area of the dashboard displays a list of individual conversations based on the drill downs you select in either of the charts.

Conversation details section in Deflection details page

Assistant	State	Conversation	Deflection type
Now Assist in Virtual Agent (default)	Resolved	38792cca939b3a9060daff429803d64b	Topic
Now Assist in Virtual Agent (default)	Response Provided	38792cca939b3a9060daff429803d64b	Agentic
Now Assist in Virtual Agent (default)	Resolved	38792cca939b3a9060daff429803d64b	Synthesized

Showing 1-3 of 3

1 rows per page

Conversation Details

Details Transcript

VA: Hi, how can I help you? I'm an AI-powered virtual assistant that can handle work-related questions and requests.

deflection

ITSM incident resolution investigation AI agent

KB content creation AI agent

Ticket Status Agent

what is a cookie?

The conversations list contains the following details:

- **Assistant:** The assistant that handled the conversation.
- **State:** The deflection outcome of the conversation.
- **Conversation:** A unique identifier for the conversation. Select the link to view the full conversation details, including the transcript.
- **Deflection type:** The deflection method used to resolve the query.
- **Created:** The date and time when the conversation was created.

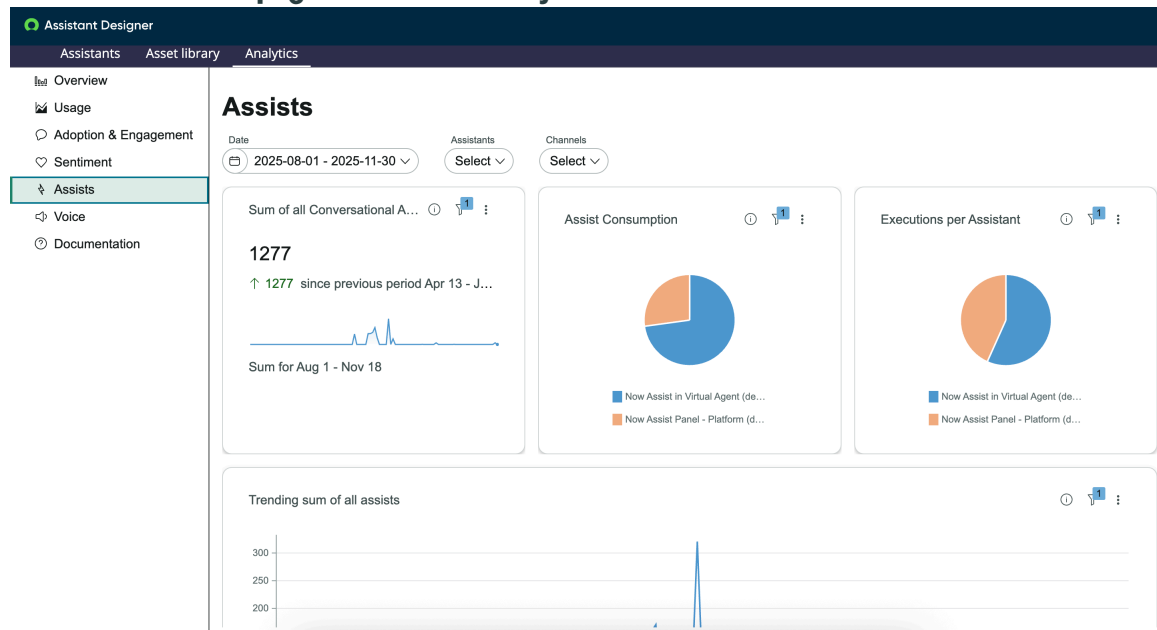
Use the **Export** button to download the conversation data for further analysis.

Assists page in Assistant analytics

View usage of assists across assistants and optimize their consumption for improved outcomes.

The Assists dashboard page aggregates metrics related to conversational assists, including total assists consumed, usage breakdown by assistant, usage trends, and features which used the most number of assists.

Assists dashboard page in Assistant analytics



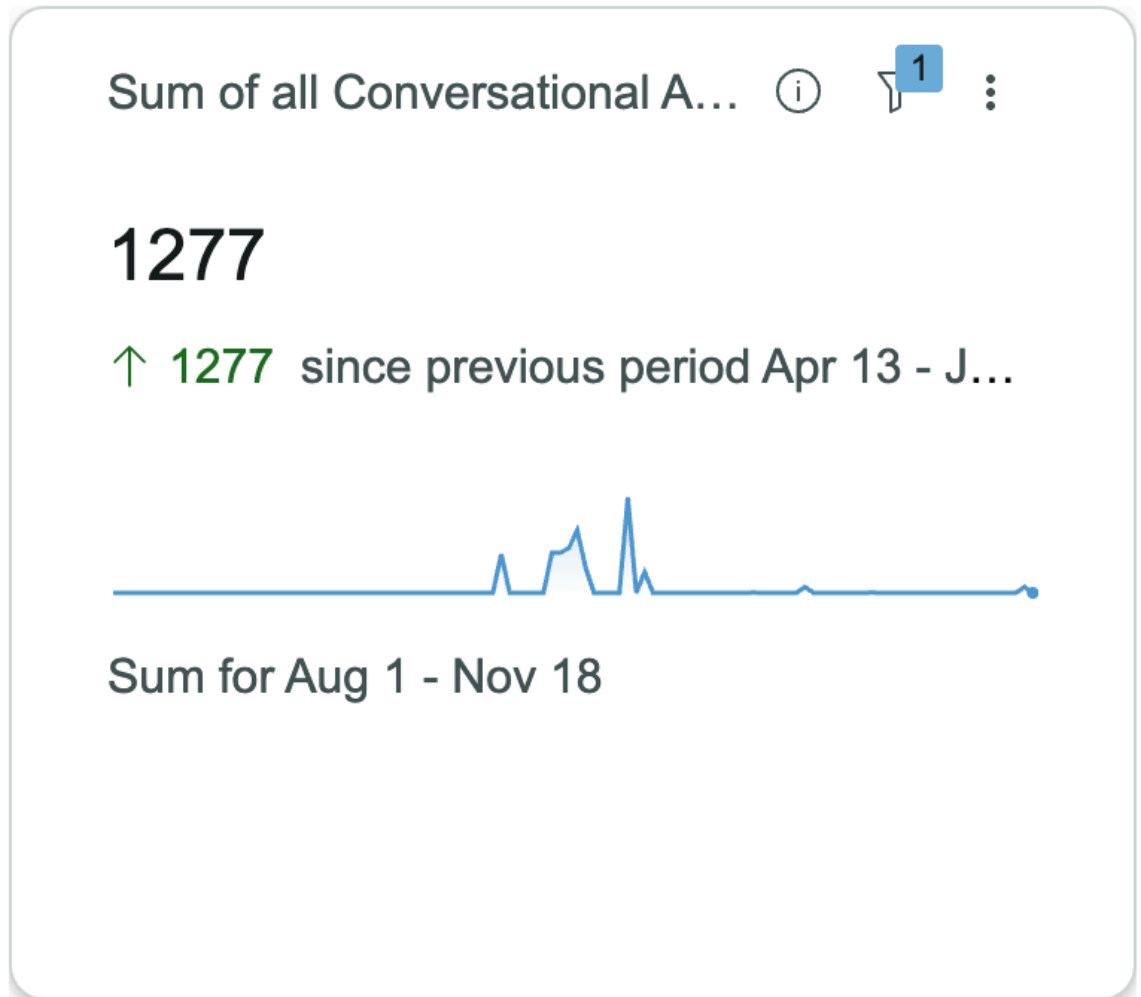
The visualizations on the Assists page help you with the following.

- Track overall consumption of assists and the usage breakdown by assistants.
- Identify the most popular AI features and usage patterns across assistants.

Sum of all Conversational Assists

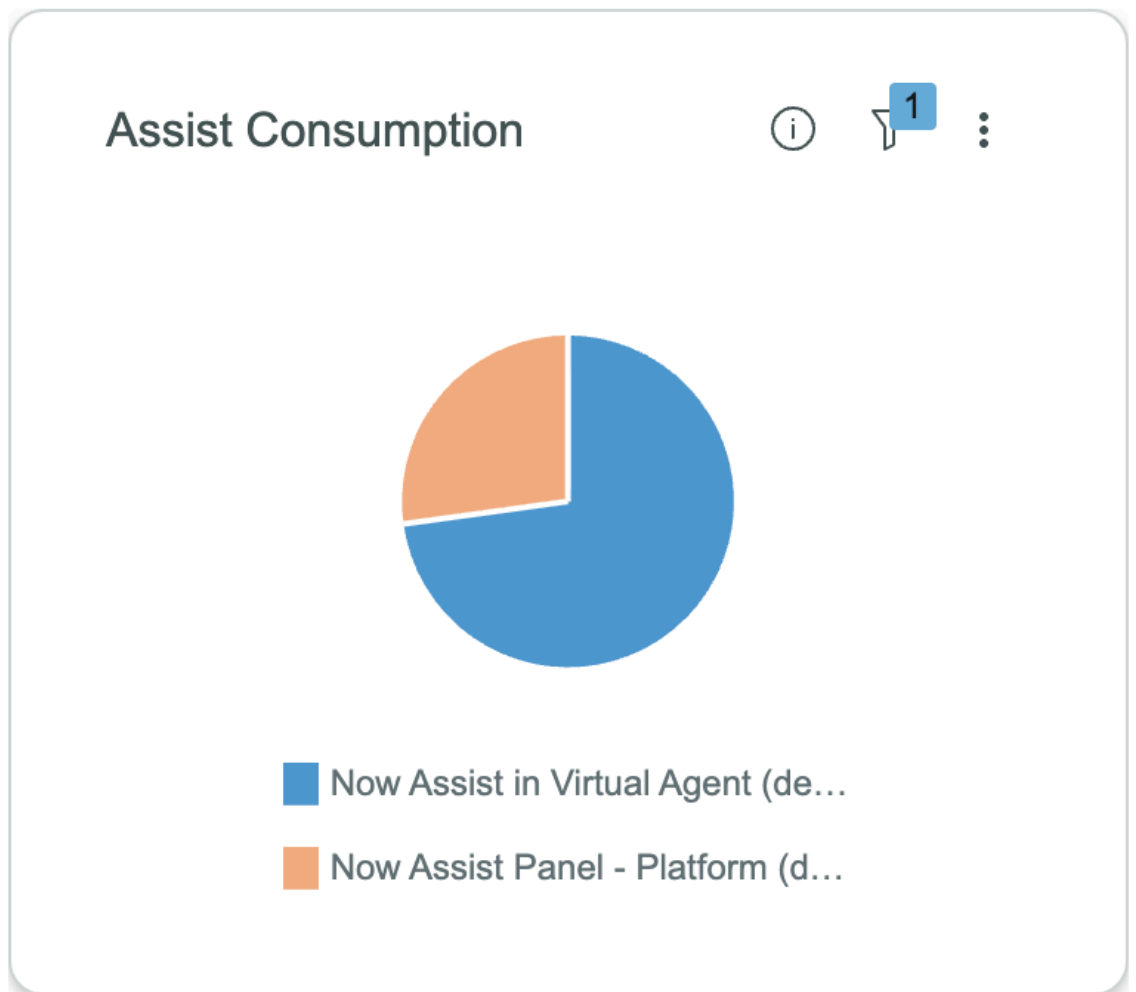
This area of the dashboard shows the total number of assists consumed across all assistants in the selected date range. Use this metric to track growth in conversational assist usage from time to time.

Sum of all Conversational Assists



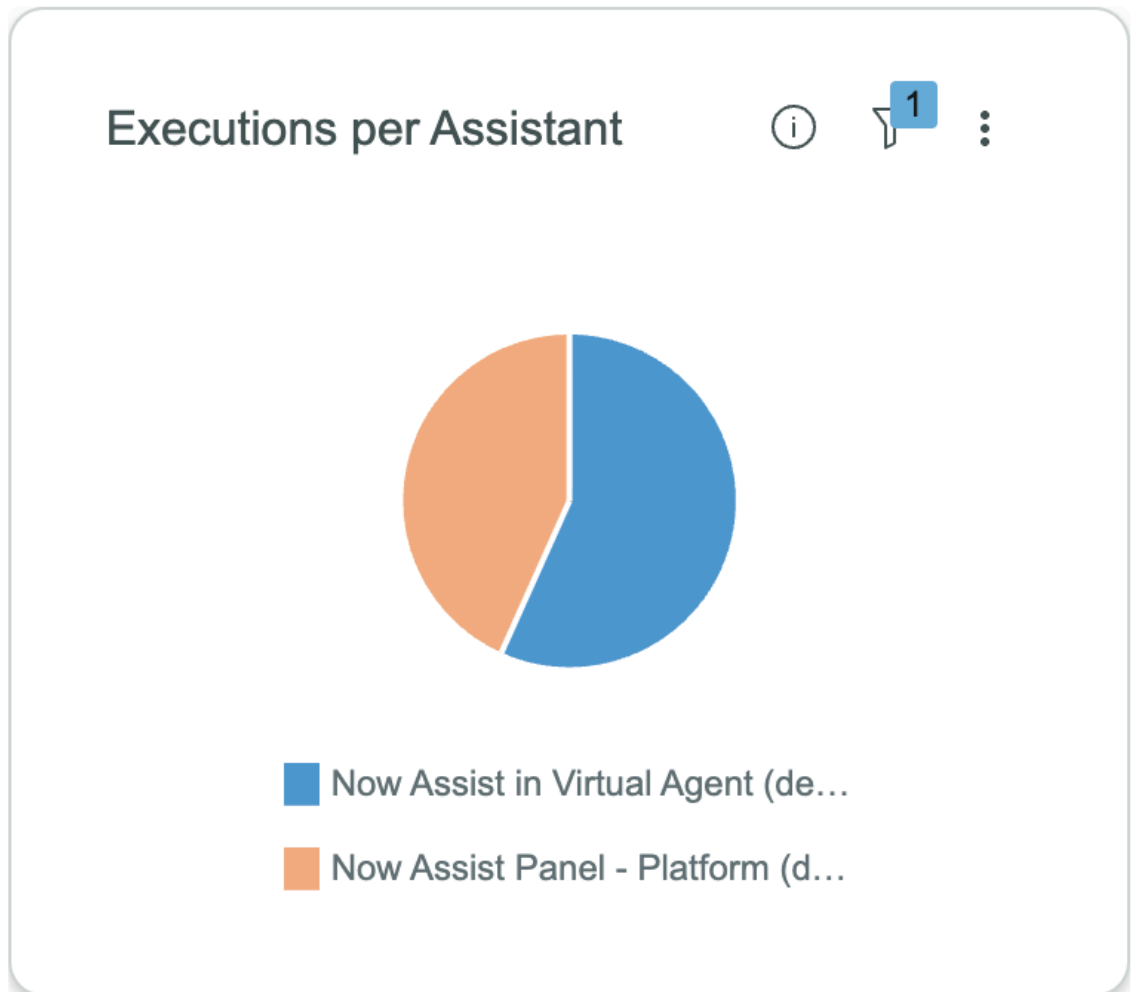
Assist Consumption

This area of the dashboard shows the distribution of assist usage across different assistants. Reveals which assistants are driving most usage.

Assist Consumption**Executions per Assistant**

This area of the dashboard shows the number of executions broken down by assistants.

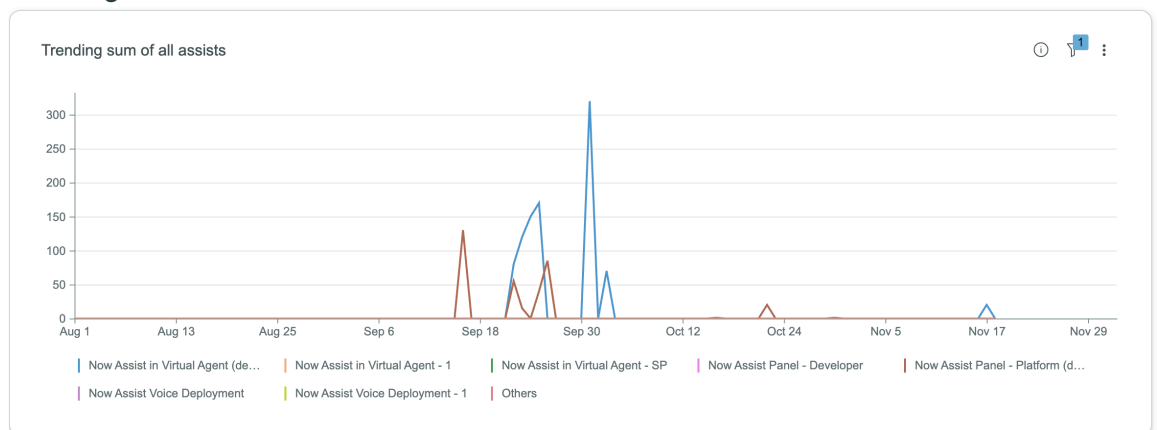
Executions per Assistant



Trending sum of all assists

This area of the dashboard shows the trend of assist usage over time, broken down by assistant. Use this metric to spot spikes or drops in assist usage for different assistants to understand underlying causes.

Trending sum of all assists



Top 10 used AI Features

This area of the dashboard lists the top ten AI features, for example, skills, agentic workflows, AI agents, in decreasing order of assists consumed.

Top 10 used AI Features

Top 10 most used AI Features

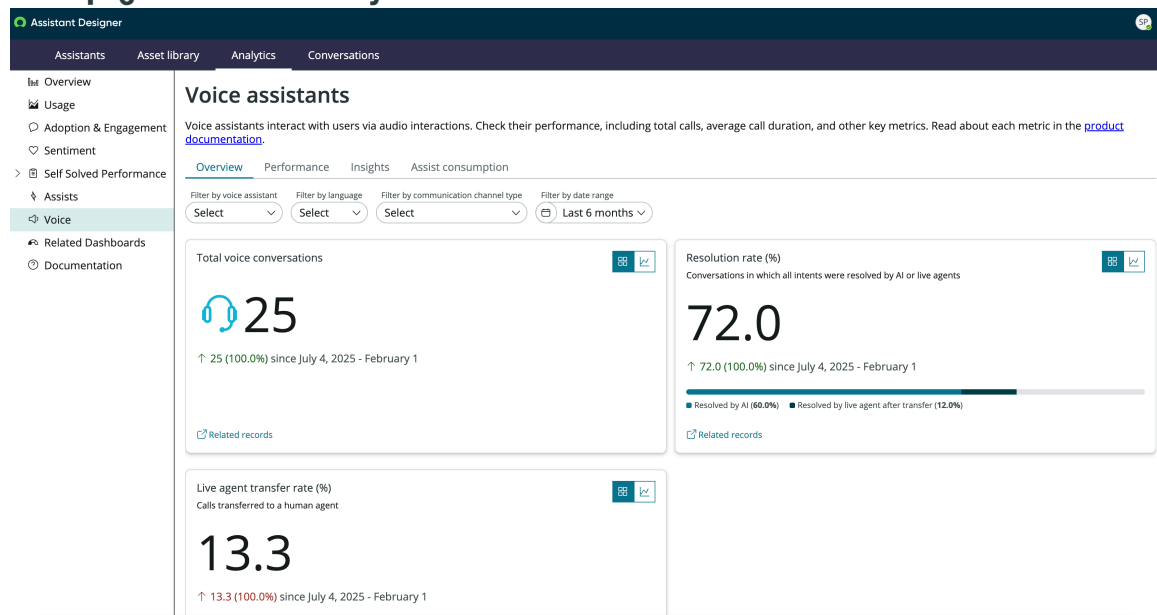
Feature	Executions ▼	Assists Used
Custom Call	6,536	6,536
Multi-context Synthesized Answer Generat	218	0
Virtual Agent Conversation	76	760
Now Assist Panel Conversation	42	210
Now Assist AI Agents	4	0
Record Sentiment Analysis	4	0
Analytics Generation	3	0
Email Response	3	0
Web search	3	0
Record summarization	2	0
Total	6,891	7,506

Voice page in assistant analytics

Monitor the performance of voice assistants from the Voice page of Assistant analytics in Assistant Designer.

The Voice page shows performance metrics for your voice assistants, organised across four tabs: **Overview**, **Performance**, **Insights**, and **Assist consumption**. Use these tabs to monitor conversation volume, resolution rates, tool execution, authentication performance, conversation quality signals, and AI agent assist usage.

Voice page in Assistant analytics



You can filter the data on all tabs using the following options:

- **Filter by voice assistant:** View metrics for specific voice assistants.
- **Filter by language:** View metrics by conversation language, such as English, German, Spanish, and so on.

- Filter by communication channel type: View metrics by channel, such as phone, mobile app - iOS, mobile app - Android, or web browser.
- Filter by date range: View metrics for a predefined period, such as last 7 days or last 30 days, or select a custom start and end date using the date picker.

Scorecard widgets display a trend indicator below the metric value, showing the change in value compared to the equivalent previous period. The indicator includes the absolute change, the percentage change, and the comparison date range.

Note: Metrics marked with the **AI Inferred** tag are calculated through large language model (LLM) transcript analysis. Results may vary and may not be fully accurate. Review AI Inferred metrics before acting on them.

Overview tab

The **Overview** tab shows high-level conversation volume, resolution performance, and AI voice agent activity for the selected date range.

Total voice conversations

This area of the dashboard shows the total number of voice conversations in the selected date range. Only sessions where at least one intent was detected are included in this count. Sessions where no intent was detected are excluded. Select the chart view to see how conversation volume has changed over the selected date range. Use this metric to track growth in voice interactions and set benchmarks for assistant performance. Select **Related records** to view the underlying records.

Total voice conversations

Total voice conversations



 25

↑ 25 (100.0%) since July 4, 2025 - February 1

[Related records](#)

Resolution rate (%)

This area of the dashboard shows the resolution rate for voice conversations. Only conversations with at least one detected intent are included. Conversations with no detected intent are not counted. A conversation is counted as resolved only when every intent in it was completed. If even one intent is not completed, the entire conversation is counted as unresolved. The dashboard shows a breakdown of resolved conversations in two categories:

- **Resolved by AI:** conversations resolved entirely by the AI voice agent, with no human involvement.
- **Resolved by live agent after transfer:** conversations that required a live agent to complete at least one intent.

These two categories are mutually exclusive and together account for all resolved conversations. Select the chart view to see how the resolution rate has changed over the selected date range. Select **Related records** to view the underlying records.

Resolution rate (%)

Resolution rate (%)

Conversations in which all intents were resolved by AI or live agents



72.0

↑ 72.0 (100.0%) since July 4, 2025 - February 1



[Related records](#)

Live agent transfer rate (%)

This area of the dashboard shows the percentage of conversations transferred from the voice assistant to a live agent in the selected date range. Use this metric to identify common escalation triggers and optimise assistant workflows to reduce unnecessary transfers. Select the chart view to see how the transfer rate has changed over the selected date range. Select **Related records** to view the underlying records.

Live agent transfer rate (%)

Live agent transfer rate (%)

Calls transferred to a human agent



13.3

↑ 13.3 (100.0%) since July 4, 2025 - February 1

[Related records](#)

Additional conversation outcomes

This area of the dashboard shows conversation outcomes beyond resolution and live agent transfer. Immediate outcomes refer to events occurring within the first 30 seconds of the call.

The table includes the following columns: **Outcome**, **Conversation count**, **Conversation change**, and **Percent of total conversations**.

Outcomes tracked include:

- **Immediate live transfers:** conversations where the caller requested transfer to a live agent within the first 30 seconds.
- **Immediate disconnects:** conversations that disconnected within the first 30 seconds.
- **Session expiration:** conversations that ended due to session timeout.
- **Ticket created:** conversations that resulted in a ticket created for follow-up. Only incidents and service requests are included.

Additional conversation outcomes

The **Conversation mechanics** widgets show how voice conversations unfold during the selected date range.

Average handle duration (with voice assistant)

This area of the dashboard shows the average duration of the AI-handled portion of voice conversations, excluding time spent with a live agent after transfer. Duration is measured using a single call duration event per call. Use this metric to identify opportunities to streamline conversations and reduce resolution time.

Average handle duration (with voice assistant)

Average handle duration (with voice assistant) ⓘ

Seconds

225.0

↑ 225.0 (100.0%) since July 4, 2025 - February 1

Average turns

This area of the dashboard shows the average number of turns taken by the voice assistant per voice conversation in the selected date range. A turn is counted each time the voice assistant speaks. Use this metric to assess how efficiently the assistant resolves user requests.

Average turns

Average turns



1

↑ 1 (100.0%) since July 4, 2025 - February 1

Average CSAT score

This area of the dashboard shows the average customer satisfaction (CSAT) score for voice conversations in the selected date range. CSAT scores are captured through your own post-conversation survey solution. Conversations with no score are excluded from the average. Select **Related records** to view the underlying records.

Average CSAT score

Average CSAT score



3.0

↑ 3.0 (100.0%) since April 3, 2025 - October 31, 2025

[Related records](#)

AI voice agent performance

This area of the dashboard shows a breakdown of conversation count, resolution rate, and AI resolution rate by invoked AI agents. Use this table to identify high-performing agents and improve underperforming ones.

The table includes the following columns:

- **Voice AI agent:** name of the AI voice agent.
- **Conversations:** total number of conversations the agent took part in.
- **Conversation change:** change in conversation count compared to the previous period.

- **Resolution rate (%)**: percentage of the agent's conversations where all detected intents were completed.
- **Resolved by AI (%)**: percentage of the agent's conversations that were fully resolved with no human involvement.

Note: Resolution rate in this table uses the same intent-based calculation as the Resolution rate scorecard. Only conversations with at least one detected intent are included. If a call involved more than one AI agent, it appears in each agent's row.

AI voice agent performance

AI voice agent performance

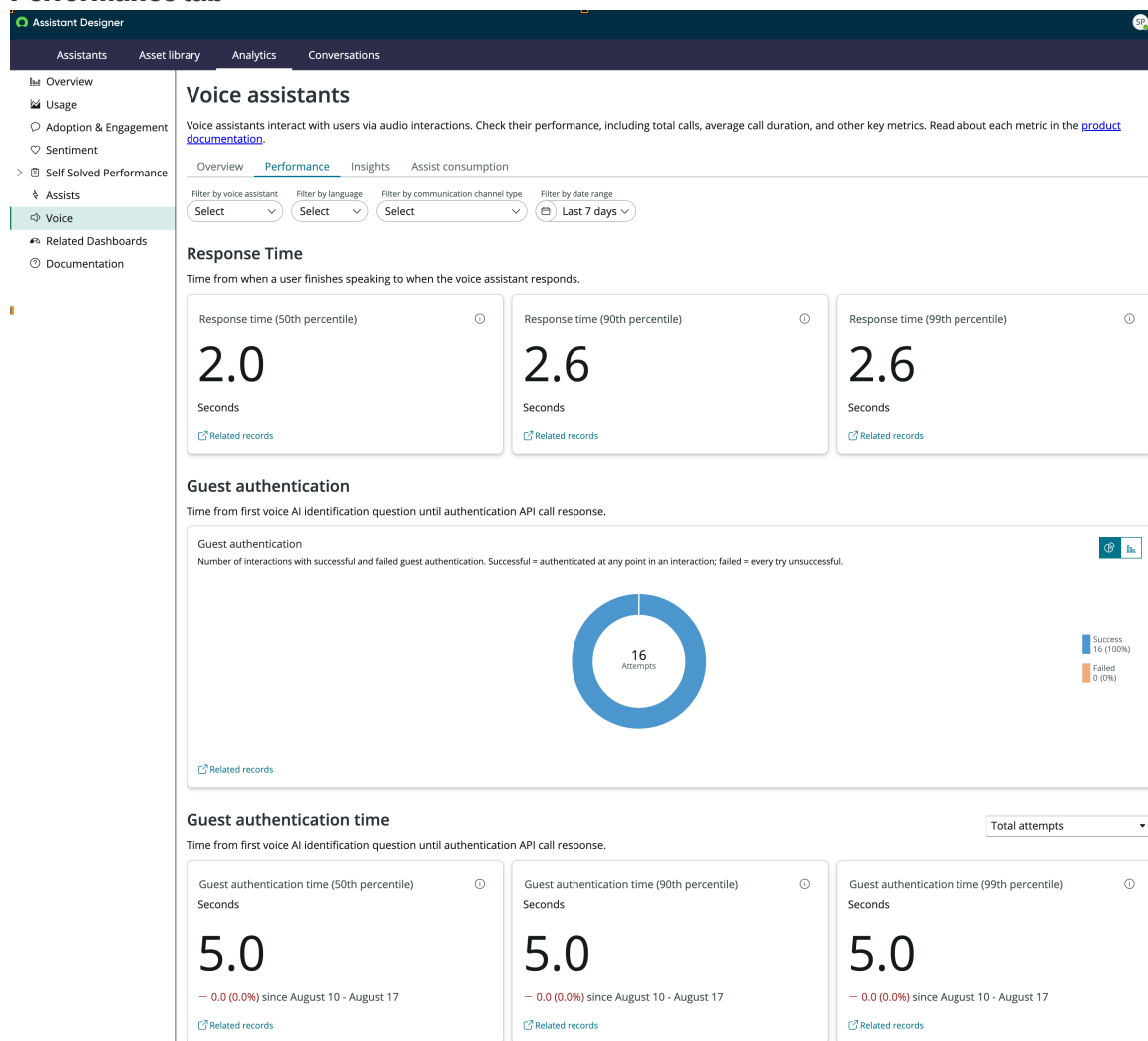
Breakdown of conversation count, resolution rate and AI resolution rate by invoked AI agents.

Voice AI agent	Conversations	Conversation change	Resolution rate	Resolved by AI
Action Agent	30	↑ +30 (+100%)	60%	50%

Performance tab

The **Performance** tab shows response time, authentication performance, and tool execution metrics for the selected date range.

Performance tab



Response Time

Time from when a user finishes speaking to when the voice assistant responds.

Response time scorecards

Response Time

Time from when a user finishes speaking to when the voice assistant responds.



Response time (50th percentile)

Response time within which 50% of voice assistant responses were completed. This is measured from when the user finishes speaking to when the voice assistant responds. Only 50% of responses took longer than this time. Select **Related records** to view the underlying records.

Response time (90th percentile)

This area of the dashboard shows the response time within which 90% of voice assistant responses were completed. Only 10% of responses took longer than this time. Select **Related records** to view the underlying records.

Response time (99th percentile)

This area of the dashboard shows the response time within which 99% of voice assistant responses were completed. Only 1% of responses took longer than this time. Select **Related records** to view the underlying records.

Guest authentication

Number of interactions with successful and failed guest authentication. Successful means the caller was authenticated at any point in the interaction. Failed means every authentication attempt was unsuccessful.

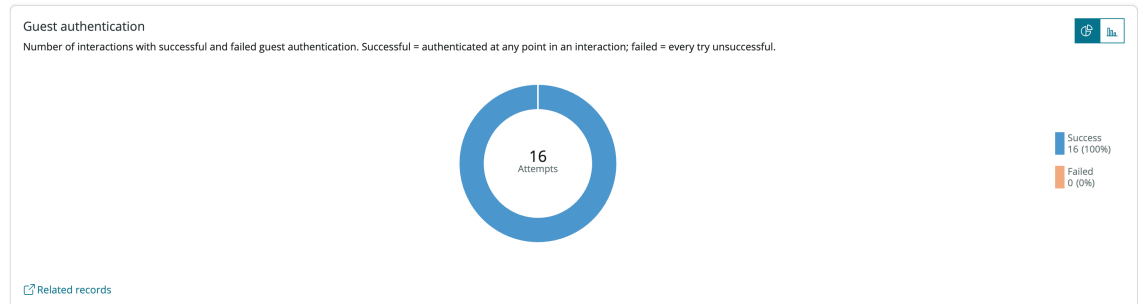
Guest authentication

This area of the dashboard shows guest authentication outcomes as a donut chart. A daily bar chart shows how successful and failed authentication attempts trended over the selected date range. Select **Related records** to view the underlying records.

Guest authentication

Guest authentication

Time from first voice AI identification question until authentication API call response.



Guest authentication time

Time from the first voice AI identification question until the authentication API call response. Use the outcome selector to filter results by all attempts, successful, or failed.

Guest authentication time scorecards

Guest authentication time

Time from first voice AI identification question until authentication API call response.

Total attempts ▼



Guest authentication time (50th percentile)

This area of the dashboard shows the time within which 50% of guest authentication sequences were completed. Use the outcome selector to filter results by Successful, Failed, or all authentication attempts. Select **Related records** to view the underlying records.

Guest authentication time (90th percentile)

This area of the dashboard shows the time within which 90% of guest authentication sequences were completed. Only 10% took longer than this time. Use the outcome selector to filter results by Successful, Failed, or all authentication attempts. Select **Related records** to view the underlying records.

Guest authentication time (99th percentile)

This area of the dashboard shows the time within which 99% of guest authentication sequences were completed. Only 1% took longer than this time. Use the outcome selector to filter results by Successful, Failed, or all authentication attempts. Select **Related records** to view the underlying records.

Tool executions

How many times each type of tool was used.

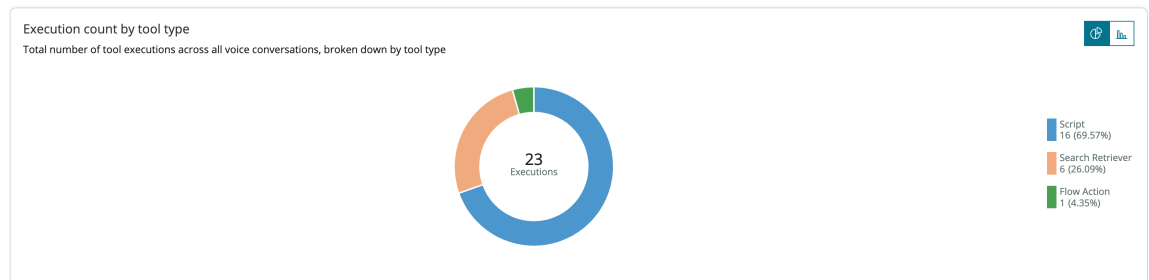
Execution count by tool type

This area of the dashboard shows the total number of tool executions across voice conversations, broken down by tool type. Select the chart view to see how execution counts have changed over the selected date range. Use this metric to understand which tools are most frequently invoked during voice conversations. See [Add tools and information to an AI agent](#) for information on tool types.

Execution count by tool type

Tool executions

How many times each type of tool was used.



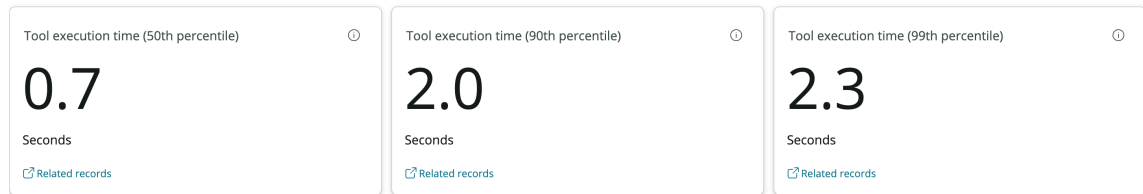
Tool time

Time required for the voice assistant to complete actions using tools.

Tool time scorecards

Tool time

Time required for the voice assistant to complete actions using tools.



Tool execution time (50th percentile)

This area of the dashboard shows the tool execution time within which 50% of tool executions were completed. Select **Related records** to view the underlying records.

Tool execution time (90th percentile)

This area of the dashboard shows the tool execution time within which 90% of tool executions were completed. Only 10% of executions took longer than this time. Select **Related records** to view the underlying records.

Tool execution time (99th percentile)

This area of the dashboard shows the tool execution time within which 99% of tool executions were completed. Only 1% of executions took longer than this time. Select **Related records** to view the underlying records.

Tool Performance

This area of the dashboard shows performance broken down by individual tool. Success % reflects the share of executions that completed without error. P50, P90, and P99 represent execution time percentiles in seconds.

The table includes the following columns:

- **Type:** the tool type. Supported types are Flow actions, Scripts, Subflows, and RAG-based search.
- **Tool:** the name of the specific tool invoked.
- **Success rate:** the percentage of executions that completed without error.
- **P50 Time (s):** median execution time in seconds.
- **P90 Time (s):** 90th percentile execution time in seconds.
- **P99 Time (s):** 99th percentile execution time in seconds.

Tool Performance

Tool Performance

Performance broken down by tool. Success % reflects the share of executions that completed without error. P50, P90, and P99 represent execution time percentiles.

Type	Tool	Success rate	P50 Time (s)	P90 Time (s)	P99 Time (s)
Flow actions	Get all active tickets	100%	0.4	0.4	0.4
Scripts	Condition Generator	100%	1.8	2.2	2.2
	Context Fetcher	100%	0.2	0.2	0.2
	Fetch KG widget from AIX API	100%	0.6	0.8	0.9
	Get Most Used Email Layout	100%	0.6	0.8	0.8
	Mail Script Resolver	100%	1	1	1
	Preload data sources	100%	1.2	2	2.1
	SubFlow Action Executor	100%	0.4	0.6	0.6
RAG-based search	Get relevant Catalog Items	100%	1.1	1.2	1.2
	Get relevant knowledge articles	100%	1	2.1	2.3

Insights tab

The **Insights** tab shows intent tracking data and conversation quality signals measured through large language model (LLM) transcript analysis.

Intents

What customers are calling about and how each intent performs. Displayed metrics are tracked per intent, not per conversation. A single conversation can include several intents.

Intent breakdown

This area of the dashboard shows how often each intent was detected and how well it was resolved in the selected date range. Use this table to identify intents with low resolution rates or high live agent transfer counts and focus assistant improvement efforts on those areas.

The table includes the following columns:

- **Intent name:** the intent detected during the conversation. Select **View source records** to view the underlying records for a specific intent.
- **Detected count:** the number of times this intent was detected.
- **Intent resolution rate:** the percentage of detections where this intent was resolved.
- **% Resolved by AI:** the percentage of detections resolved by the AI agent with no human involvement. This percentage uses total detections as the denominator, not resolved detections. It is always less than or equal to the intent resolution rate for the same intent.
- **Live Agent Transfer:** the percentage of detections that resulted in a transfer to a live agent.

You can search the table by intent name and sort by any column. Detections with no matching intent reference are grouped into a single row labelled **No intent detected**.

Note: Resolution rate in this table is measured at the intent level. A session with two intents where only one was resolved counts as unresolved on the **Resolution rate** scorecard on the Overview tab, but contributes to the resolution rate for the completed intent in this table.

Intent breakdown

Intents

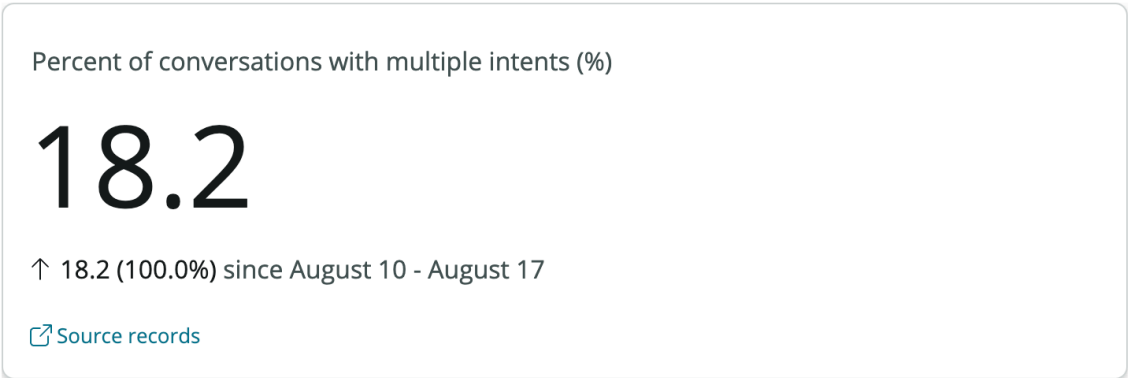
What customers are calling about and how each intent performs. Displayed metrics are tracked per intent, not per conversation - a single conversation can include several intents.

Intent breakdown					View source records
Intent name	Detected count	Intent resolution rate	% Resolved by AI	Live Agent Transfer	
Book appointment	4	50%	25%	25%	
Reset password	3	67%	67%	0%	
Update billing	3	67%	67%	0%	
Report outage	2	100%	100%	0%	
Check order status	1	100%	100%	0%	

Percent of conversations with multiple intents (%)

This area of the dashboard shows the percentage of voice conversations in which more than one intent was detected. Use this metric to understand how often callers raise multiple issues in a single call and whether your assistant handles multi-intent conversations effectively. Select **Source records** to view the underlying records.

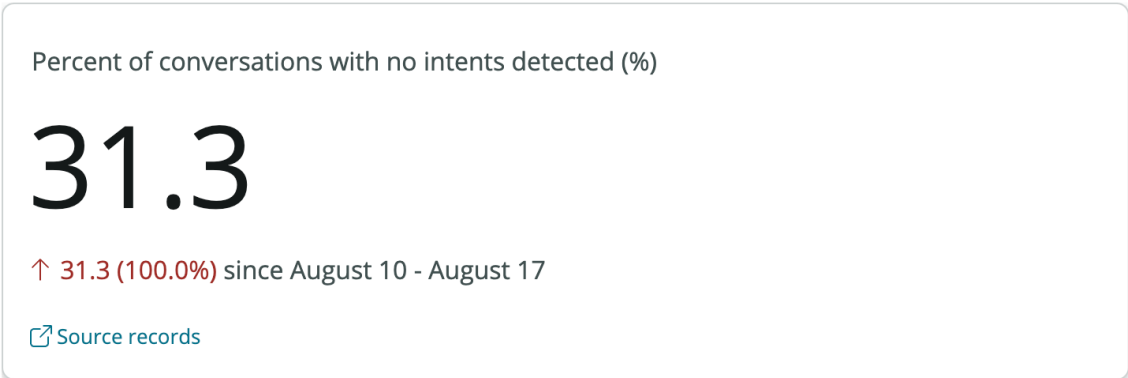
Percent of conversations with multiple intents (%)



Percent of conversations with no intents detected (%)

This area of the dashboard shows the percentage of voice conversations in which no intent was detected. These sessions are excluded from resolution rate calculations. Use this metric to identify whether callers are reaching the assistant without a recognised intent, which may indicate gaps in intent coverage or issues with intent detection. Select **Source records** to view the underlying records.

Percent of conversations with no intents detected (%)



Conversation insights

Key sentiment signals from voice conversations, measured through large language model (LLM) transcript analysis. Metrics in this section are marked with the **AI Inferred** tag. Select the chart view on any widget to see how each signal has changed over the selected date range.

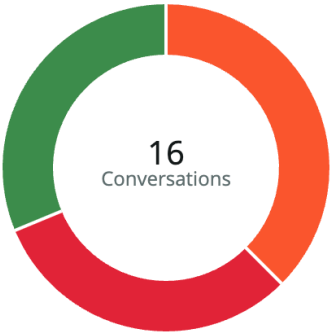
User effort required with AI agents

This area of the dashboard tracks how much effort a user had to put in during a conversation, based on signals like transfers, wait times, and escalations. Scored as Low, Medium, or High. This is measured through large language model (LLM) transcript analysis. Select **Related records** to view the underlying records.

User effort required with AI agents

User effort required with AI agents

Tracks how much effort a user had to put in during a conversation, based on signals like transfers, wait times, and escalations.



- Medium 6 (37.5%)
- High 5 (31.25%)
- Low 5 (31.25%)

[Related records](#)

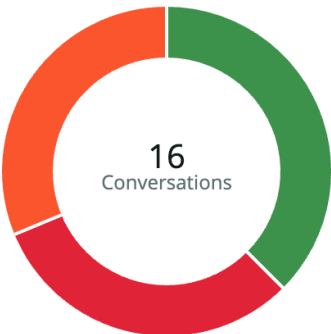
AI agent empathy

This area of the dashboard measures how politely and attentively the agent acknowledged the user's needs and concerns throughout the conversation. Scored as Low, Medium, or High. This is measured through large language model (LLM) transcript analysis. Select **Related records** to view the underlying records.

AI agent empathy

AI agent empathy

Measures how politely and attentively the agent acknowledged the user's needs and concerns throughout the conversation.



- Low 6 (37.5%)
- High 5 (31.25%)
- Medium 5 (31.25%)

[Related records](#)

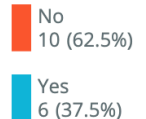
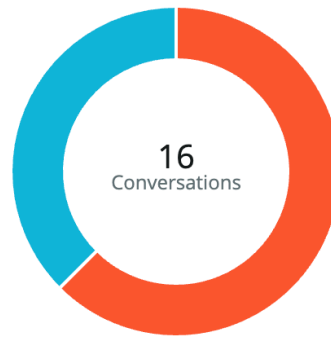
User / AI agent confusion

This area of the dashboard indicates whether the agent misunderstood or failed to interpret the user's intent at any point in the conversation. Scored as Yes or No. This is measured through large language model (LLM) transcript analysis. Select **Related records** to view the underlying records.

User / AI agent confusion

User / AI agent confusion

Indicates whether the agent misunderstood or failed to interpret the user's intent at any point in the conversation.



[Related records](#)

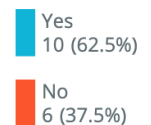
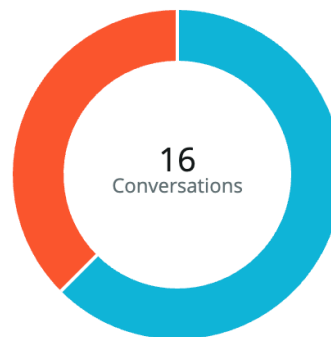
User frustration with AI agents

This area of the dashboard indicates whether the user expressed frustration, through complaints, sarcasm, or dissatisfaction, during the conversation. Scored as Yes or No. This is measured through large language model (LLM) transcript analysis. Select **Related records** to view the underlying records.

User frustration with AI agents

User frustration with AI agents

Indicates whether the user expressed frustration, through complaints, sarcasm, or dissatisfaction, during the conversation.



[Related records](#)

Assist consumption tab

Note: The data on this tab is for informational purposes only and should not be relied upon as a definitive statement of your AI usage for billing purposes.

The **Assist consumption** tab shows AI agent assist usage metrics for the selected date range. An assist is recorded each time an AI voice agent completes an action during a conversation. Assists are categorised into three tiers based on the number of actions taken by the voice agent: Small, Medium, and Large.

Total assists consumed

This area of the dashboard shows the total number of assists consumed by AI voice agents in the selected date range. A daily chart alongside the scorecard shows how assist consumption has changed over time. Select **Related records** to view the underlying records.

Total assists consumed

Total assists consumed



34

↑ 8 (31.0%) since August 10 - August 17

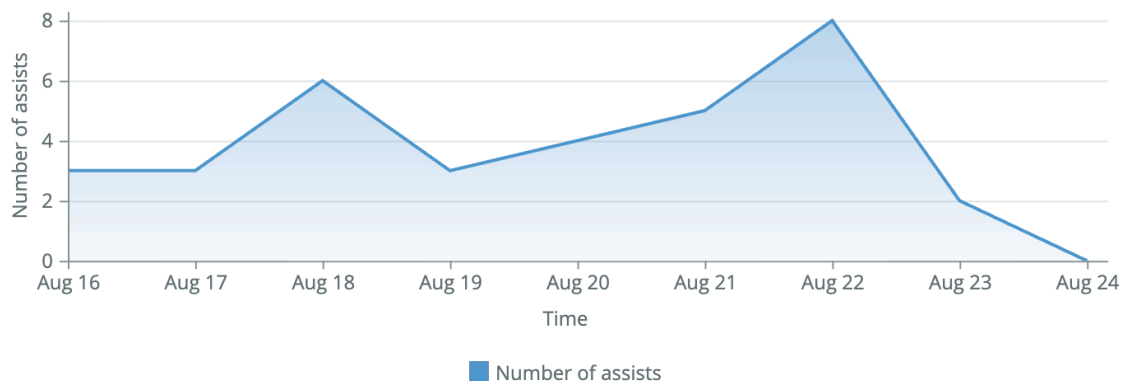
[Related records](#)

Total assists consumed over time

This area of the dashboard shows how the total number of assists consumed by AI voice agents has changed over the selected date range. Hover over a date to view the number of assists consumed for that date.

Total assists consumed over time

Total assists consumed over time



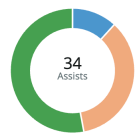
Total assists consumed by tier

This area of the dashboard shows the total assists consumed, broken down by tier: Small, Medium, and Large. Assists consumed outside these three tiers are included in the total but do not appear as a separate tier in the chart.

Total assists consumed by tier

Total assists consumed by tier

1



Small	4 (11.76%)
Medium	12 (35.29%)
Large	18 (52.94%)

Assist consumption by agent

This area of the dashboard shows the average actions per call and total assists consumed, broken down by AI voice agent. Assist tier is based on the number of actions the voice agent took per call. Actions counted per call include tool executions and one additional action for each call that included an authentication event.

The table includes the following columns:

- **AI voice agent:** name of the AI voice agent.
- **Average actions per call:** average number of actions the agent took per conversation.
- **Assists Consumed:** total number of assists consumed by the agent.

Assist consumption by agent

Assist consumption by agent

Average actions per call and total assists consumed, broken down by voice agent. Assist tier (small, medium, large) is based on the number of actions taken by the voice agent.

AI voice agent	Average actions per call	Assists Consumed
Action Agent	1	34

Related dashboards page

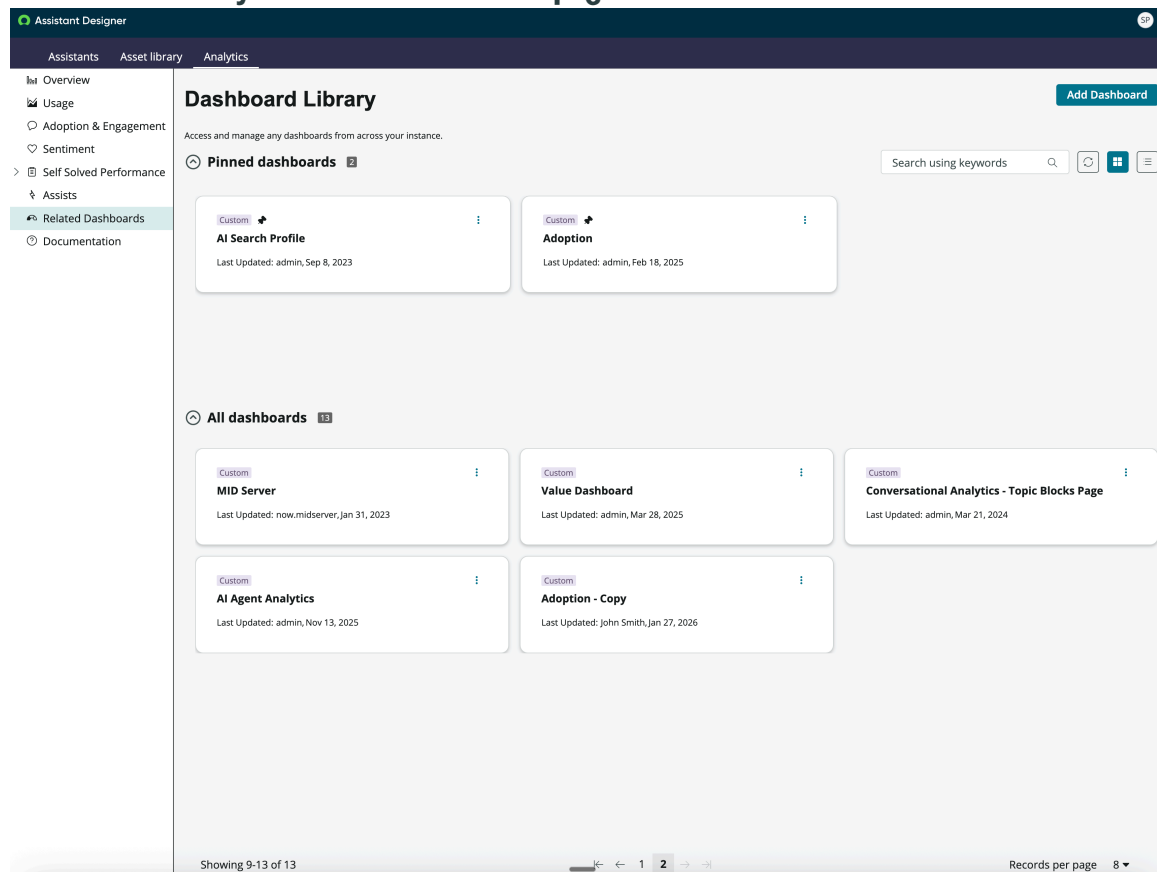
The Related Dashboards page in Assistant analytics dashboard provides a centralized location to view and manage dashboards created in the Platform Analytics experience and shared across your organization.

Overview of Related Dashboards page

The dashboard library in the Related Dashboards page includes dashboards that have been added by default or custom dashboards contributed by admins, making them available to users with appropriate permissions. You can pin favorite dashboards for quick access, search and filter the library, view, add, edit, and remove dashboards from the dashboard library.

To access the dashboard library, navigate to **All > Assistant Designer > Analytics** and select Related Dashboards in the left navigation. The dashboard is accessible to the Virtual Agent admin (virtual_agent_admin) role.

Dashboard Library in Related Dashboards page



Dashboard cards

Each dashboard in the library displays as a card with the following information:

- **Name:** Display name of the dashboard as it appears on the card.
- **Description:** A brief summary of the dashboard purpose.
- **Category:** Tags indicating the dashboard type. For example, Default or Custom.
- **Last Updated:** The user who last updated the dashboard and the date it was updated.

Search and filter dashboards

Use the following options to find dashboards in the library:

- **Search:** Enter keywords in the search bar to filter dashboards by name or description.
- **Pinned dashboards:** View only dashboards you have pinned as favorites.
- **All Dashboards:** View all dashboards that are added to the library.

The dashboard library supports pagination to help you navigate through large number of dashboards.

Add or edit dashboards in the library

See [Add a dashboard to dashboard library](#) and [Edit a dashboard in the dashboard library](#) for information on adding and editing a dashboard respectively.

View a dashboard

To open a dashboard in full view, locate the dashboard card in the library and select anywhere on the card or select **View** from the Actions menu.

Pin a dashboard as a favorite

Pin dashboards you frequently use to quickly access them from the Pinned dashboards section.

To pin a dashboard, locate the dashboard card in the library and select **Pin** from the Actions menu. To unpin a dashboard, select **Unpin** from the Actions menu.

You can pin a maximum of 8 dashboards to the pinned dashboard section.

Remove a dashboard from the library

You can remove dashboards that are no longer needed, provided you have admin privileges.

To remove a dashboard, locate the dashboard card in the library and select **Remove** from the Actions menu. The dashboard is removed from the Related Dashboards page. This action does not delete the underlying Platform Analytics dashboard.

Add a dashboard to dashboard library

Add a dashboard to the Related Dashboards page in Assistant analytics so that users can access it from the dashboard library.

Before you begin

Role required: virtual_agent_admin

1. Ensure you have the dashboard created in Platform Analytics.
2. Configure the dashboard visibility in Platform Analytics to include Assistant Designer. See [Configure Platform Analytics dashboard details](#)  for more information.
3. Share the dashboard with virtual_agent-admin role. See [Share a Platform Analytics dashboard](#)  for more information.

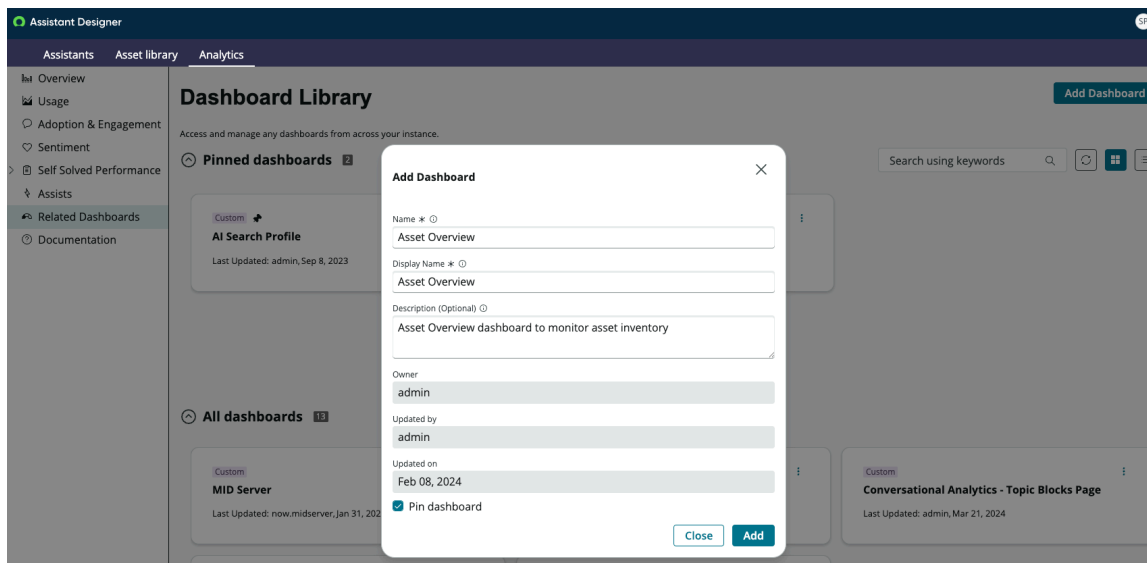
About this task

Adding a dashboard to the library makes it available to users on the Related Dashboards page. You can specify metadata such as the display name, description, category to help users find and identify the dashboard.

Procedure

1. Navigate to **All > Assistant Designer > Analytics** and select Related Dashboards in the left navigation.
2. Select **Add Dashboard** in the Dashboard Library.

Add Dashboard modal



3. On the **Add Dashboard** form, fill in the fields.

Add Dashboard form

Field	Description
Name	Name of the dashboard in Platform Analytics. Use the field to search for and select an existing dashboard to add to the library. This field is required.
Display Name	Name that appears on the dashboard card in the library. Enter a name as per your requirements.
Description (Optional)	Description of the dashboard you want to add to the library. Enter a brief description of the dashboard.
Owner	Displays the owner of the selected dashboard. This field is read-only.
Updated by	Displays the user who last updated the dashboard. This field is read-only.
Updated on	Displays the date when the dashboard was last updated. This field is read-only.
Pin dashboard	Select the check box to automatically pin the dashboard to the Pinned dashboards section after adding it to the library.

4. Select **Add** to add the dashboard to the library.

The dashboard is added to All dashboards section. If you selected the Pin dashboard check box, the dashboard appears in the Pinned dashboards section as well.

Edit a dashboard in the dashboard library

Edit an existing dashboard in the Related Dashboards page to update details such as the display name, description, or the associated dashboard itself.

Before you begin

Role required: virtual_agent_admin

About this task

You can edit an existing dashboard in the library to update its display name, description, or replace the dashboard with a different one. This allows you to swap out a dashboard without removing and re-adding it to the library. Editing a dashboard does not modify the underlying Platform Analytics dashboard content.

Procedure

1. Navigate to **All > Assistant Designer > Analytics** and select Related Dashboards in the left navigation.
2. Locate the dashboard you want to edit and select **Edit** in the Actions menu.

Edit Dashboard modal

Edit Dashboard

✕

Name * ⓘ

Adoption

Display Name * ⓘ

Adoption

Description (Optional) ⓘ

Owner

admin

Updated by

admin

Updated on

Feb 18, 2025

☒ Pin dashboard

Close

Save

3. On the **Edit Dashboard** form, update the fields.

Edit Dashboard form fields

Field	Description
Name	Name of the dashboard in Platform Analytics. Select a different dashboard to replace the current one, or keep the existing selection. This field is required.
Display Name	Name that appears on the dashboard card in the library. Enter a name as per your requirements.
Description (Optional)	Description of the dashboard you want to add to the library. Enter a brief description of the dashboard with its purpose.
Owner	Displays the owner of the selected dashboard. This field is read-only.
Updated by	Displays the user who last updated the dashboard. This field is read-only.
Updated on	Displays the date when the dashboard was last updated. This field is read-only.
Pin dashboard	Select the check box to automatically pin the dashboard to the Pinned dashboards section after adding it to the library.

4. Select **Save** to update the changes to the dashboard.
Changes are immediately visible to users in the dashboard library.

Reviewing voice conversations

Investigate completed voice interactions and troubleshoot individual interaction behavior from the **Conversations** tab in Assistant Designer.

The **Conversations** tab in Assistant Designer shows a log of completed voice interactions across all voice assistants. Use the Conversations tab to review call outcomes, identify issues with tool executions or authentication, and access full transcripts for specific calls.

Conversations tab showing completed voice interactions

Assistant Designer

Assistants Asset library Analytics **Conversations**

Conversation History
Track conversations across every assistant. Click on any interaction ID for the full transcript and performance.

Voice calls 36 Last refreshed just now

Search

Interaction	Short description	Created	Duration with Voice AI	Resolution Status	Agents invoked	User intents	Authentication
IMS00000426	[ENTITY: ORGANIZATION] not starting; incident created without validation	2026-04-24 04:31:32	1:38	Resolved by AI	Create incident with voice AI agent	Missing points	Succeeded
IMS00000413	Phone not turning on incident created	2026-04-23 20:48:35	1:25	Not Resolved	Create incident with voice AI agent	Account access	Succeeded
IMS00000411	Incident creation request for broken [ENTITY: ORGANIZATION]; transfer to [ENTITY: ORGANIZATION] due to processing error.	2026-04-23 20:43:33	1:19	Not Resolved	Create incident with voice AI agent	Flight change, Rewards balance, Missing points	Succeeded
IMS00000399	Travel expense submission request clarification needed due to no specific catalog item found.	2026-04-22 07:54:58	0:54	Not Resolved	Request catalog item with voice AI agent	Seat upgrade request, Refund status	Succeeded
IMS00000394	Phone not starting incident created	2026-04-21 01:24:07	1:28	Not Resolved	Create incident with voice AI agent	Gift Card Decline, Payment assistance, Rewards...	Succeeded
IMS00000393	[ENTITY: ORGANIZATION] not starting—incident created	2026-04-21 01:08:04	1:30	Not Resolved	Create incident with voice AI agent	Missing points, Baggage Inquiry, Payment...	Succeeded
IMS00000392	Phone not working; incident created without follow-up questions	2026-04-21 00:50:06	1:17	Not Resolved	Create incident with voice AI agent	Cancellation request, Payment assistance	Succeeded
IMS00000391	MacBook not starting incident ticket created	2026-04-21 00:41:44	1:33	Not Resolved	Create incident with voice AI agent	Account access	Succeeded
IMS00000389	Incident created for personal phone not turning on	2026-04-20 23:05:15	1:53	Not Resolved	Create incident with voice AI agent	Account access	Succeeded
IMS00000386	Incident created for phone not turning on	2026-04-20 22:45:55	1:32	Not Resolved	Create incident with voice AI agent	Missing points	Succeeded
IMS00000384	[ENTITY: ORGANIZATION] screen not working—incident created	2026-04-20 22:36:06	1:59	Not Resolved	Create incident with voice AI agent	Refund status, Seat upgrade request...	Succeeded
IMS00000369	Mobile phone not working incident created	2026-04-17 03:54:18	2:16	Not Resolved	Create incident with voice AI agent	Cancellation request, Missing points	Succeeded
IMS00000366	Incident created for broken [ENTITY: ORGANIZATION]	2026-04-17 00:08:10	1:13	Not Resolved	Create incident with voice AI agent	Flight change, Payment assistance, Refund status...	Succeeded
IMS00000365	[ENTITY: ORGANIZATION] not turning on; incident created	2026-04-16 23:49:05	2:31	Not Resolved	Create incident with voice AI agent	Gift Card Decline, Refund status	Succeeded

Conversations list

The Conversations list shows one row per completed voice interaction. The following columns appear by default. To show or hide columns, use the column selector.

Interaction

The unique identifier for the interaction record.

Assistant

The name of the voice assistant that handled the interaction. This column is hidden by default. To show it, use the column selector.

Short description

A brief description of the interaction.

Created

The date and time the interaction started.

Duration with Voice AI

The total time the caller spent interacting with the voice assistant.

Resolution Status

How the interaction ended. Possible values: **Resolved by AI**, **Resolved by AI and live agent**, or **Not Resolved**.

Agents invoked

The AI voice agents invoked during the interaction, displayed as chips.

User intents

The user intents detected during the interaction.

Authentication status

Whether the caller was authenticated. Values: **Succeeded** or **Failed**.

Assists consumed

The number of AI assists used during the interaction.

Call Outcome

How the call was handled or routed. Possible values: **Abandoned**, **Contained**, **Live Transfer**, **Session Expired**, or **Ticket Created**. This column is hidden by default. To show it, use the column selector.

List view controls

The top right corner of the Conversations list includes controls for searching, filtering, and customizing the view.

Search

Enter keywords to find specific conversations.

Date range

Select a preset or custom date range to limit the conversations shown.

Filters

Apply one or more filters to narrow conversations by attributes such as resolution status or authentication status.

Refresh

Reload the list to include the most recent completed conversations.

Personalization

Show or hide columns and reorder them to customize the list layout.

Interaction detail report

Select any row in the Conversations list to open the interaction detail report for that call. The report shows performance metric tiles at the top and the following expandable sections:

Interaction detail report

Assistant Designer
IMS0000426
Voice call - None

IMS0000426
Resolved by AI

[ENTITY: ORGANIZATION] not starting; incident created without validation

Caller Phone Number: +1 (641) 339-6567 • Created: 2026 04 24 04:31:32 • 25 assists consumed • 1/5 CSAT

Assistant: ServiceNow Otto Voice Deployment • Agents Invoked: Create incident with voice AI agent

Duration (mins)
1:38
Bot talk time - 8s - 8%
Caller talk time - 9s - 9%
Silence / pauses - 1m 30s - 92%

Authentication
Succeeded
1 attempt

Average response latency
3.9
Seconds

Average tool execution time
0.9
Seconds

Transcript
Some answers are generated by AI. Be sure to check for accuracy.

Hi, this is my servicenow [ENTITY: UK_TRADE_UNION] agent. How can I help?
00:01

I'd like to plead an incident.
00:06

Sure, I can help you with that. First, for security, please use your phone keypad to enter your Employee number, followed by the pound key.
00:09

Thanks for entering the Employee number. Now please use your phone keypad to enter your Soft pin, followed by the pound key.
00:19

Thanks [ENTITY: PERSON], You're all set — I've successfully authenticated you. Let's continue with your request.
00:30

Authentication succeeded via Softpin

Event Log

Authentication
Succeeded

Softpin verification
Status: Success
Authentication latency: 21.0s
Reason: Caller verified successfully
Occurred on: 00:30

Create incident with voice AI agent
AI Agent
1 tool(s) invoked

Create incident flow action
Tool
Status: Success
Execution latency: 0.9s
Request: conversationid: 6f88fe332f9c075073dd931bcafae35f
incident_short_description: MacBook is broken. It's not starting since today. incident_urgency: 2
incident_description: No follow-up questions were asked or answered.
Response: Incident record created and associated to IMS0000426. Number: INC0010042. Urgency: 2. Sys ID: Scd8b6732f9c075073dd931bcafae37f. Short Description: MacBook is broken. It's not starting since today. Caller: Sunny Chopra, Description: No follow-up questions were asked or answered.
Execution Plan: 3fc8b6732f9c075073dd931bcafae316
Occurred on: 01:08

Tool Execution
1 of 1 succeeded

Tool	Execution Status	Execution Time in millis	Request	Response
Create incident flow action	Success	855	{\"toolM2mid\":\"de7def9ff262210de6fffff...	{\"tool_execution_id\":\"88d8b6732f9c075073...

Intent Log
1 of 1 succeeded

Intent	Handler Type	Status
Missing points	AI Agent	Completed

Conversation Insights
AI Inferred

Confusion	Effort Score	Empathy	Frustration
No	Low	Medium	No

Performance metrics

Four metric tiles appear at the top of the report:

- Call duration, with a breakdown of bot talk time, caller talk time, and silence or pauses
- Authentication status and attempt count
- Average response latency in seconds
- Average tool execution time in seconds

Transcript

Shows the full timestamped transcript for the call. Inline markers indicate agent invocations, tool calls, and authentication events.

Note: Some content in the transcript is generated by AI. Verify accuracy before using it for decisions.

Event Log

Shows the sequence of events during the call, grouped by AI agent. For each agent, the section shows the invocation type, individual tool calls, execution status, and timestamps. An authentication subsection appears when authentication was attempted during the call.

Tool Execution

Shows all tools invoked during the call. For each tool, the section shows: name, execution status, execution time in milliseconds, request parameters, and response.

Intent Log

Shows the intents detected during the call, the handler type, and the resolution status for each intent.

Conversation Insights

Shows signals such as confusion, effort score, AI agent empathy, and frustration. These metrics are calculated through large language model (LLM) transcript analysis and may not be fully accurate. Review them before acting on them.

Using Virtual Agent

Virtual Agent is a self-service messaging platform that enables requesters to resolve common issues independently through a conversational chat interface, and transfers conversations to a live agent when human attention is required.

Overview of using Virtual Agent

Virtual Agent is a self-service messaging platform that helps requesters resolve issues without contacting a live agent. Prebuilt conversation topics guide requesters through routine IT, HR, customer service, and workplace tasks, and requesters can also reach Virtual Agent through the same channels they already use, such as web portals, the Now Mobile app, and messaging apps such as Slack and Microsoft Teams.

Generative AI skills from ServiceNow® Otto for Virtual Agent let requesters ask questions and get things done using plain language instead of navigating a fixed menu of topics, and reduce how often a conversation needs to be escalated. When a conversation does need more than Virtual Agent can provide on its own, it can be transferred to a live agent without losing the context the requester already provided.

- [Using ServiceNow Otto for Virtual Agent](#)

ServiceNow® Otto for Virtual Agent combines AI Search with generative AI chat skills, so requesters can resolve issues faster.

- [Escalate to human assistance](#)

When a conversation requires human intervention, a requester can be transferred to a live agent. Open or abandoned conversations can be managed so they don't stay open indefinitely.

Using ServiceNow® Otto for Virtual Agent

ServiceNow® Otto for Virtual Agent enhances the user experience by combining AI Search with generative AI chat skills. These skills can speed up issue resolution and reduce deflection to a live agent.

Standard, enhanced, and premium chat

During the ServiceNow Otto for Virtual Agent guided setup, you may be presented with three user experiences to select from: standard chat, enhanced chat, or premium chat. Standard chat is a conversational support experience within a static chat widget. Enhanced chat and premium chat are conversational experiences within a resizable and movable chat window that include the ability to have multiple active conversations. Enhanced and premium chat enable users to choose their way of engaging with ServiceNow Otto on their ServiceNow portals from a variety of

entry points. When choosing enhanced chat from the guided setup, if you also have AI Search enabled on your portal, you're presented with the **Allow the search bar to open into a full-page chat experience** option. If you select this option, your conversational and search experience appears as a full page inside the portal. The conversational fluidity and citation behavior between the enhanced or premium chat and the chat's full-page experience remains the same regardless of which chat experience you choose. You can still access enhanced or premium chat's resizable and moveable chat window when you have full-page experience turned on and are on screens other than the full-page experience itself. Turning on enhanced or premium chat's full-page experience further combines chat and search capabilities by redirecting you into a full-page chat after entering a query into a portal's search bar.

Note: For more information about selecting a chat experience in the admin guided setup, see [Display your assistant on a portal, channel, or mobile app](#).

The following table outlines feature differences between standard, enhanced, and premium chat.

Standard, enhanced, and premium chat

Feature	Standard chat	Enhanced chat	Premium chat
Portal's search bars redirect to include chat capabilities or directly into chat	No	Yes	Yes
Chat window resizable and moveable	No	Yes	Yes
Interactive view	No	Yes	Yes
Multiple active conversations	No	Yes	Yes
Conversations remain active after task completion	No	Yes	Yes
View all topics/Show all options	Yes	Yes	Yes

The types of citations that appear in synthesized responses are the same between standard and enhanced or premium chat, but their formatting differs. The following citations may appear in your synthesized results:

- Catalog
- Topic, subflows, or actions
- Q&A Knowledge Base articles
- External content connections
- People

For more information on these citations, see their respective sections in [Standard chat](#), [Enhanced chat](#), or [Premium chat](#).

The appearance of the default chat widget button varies depending on whether you have standard, enhanced, or premium chat turned on. The default standard chat button displays as a traditional message icon and the default enhanced chat or premium chat button displays as the universal AI-generated sparkle icon. This button is only accessible through portal pages. While

in enhanced or premium chat's full-page experience, you're unable to access the chat widget button.

Example of the ServiceNow® Otto for Virtual Agent standard chat widget button



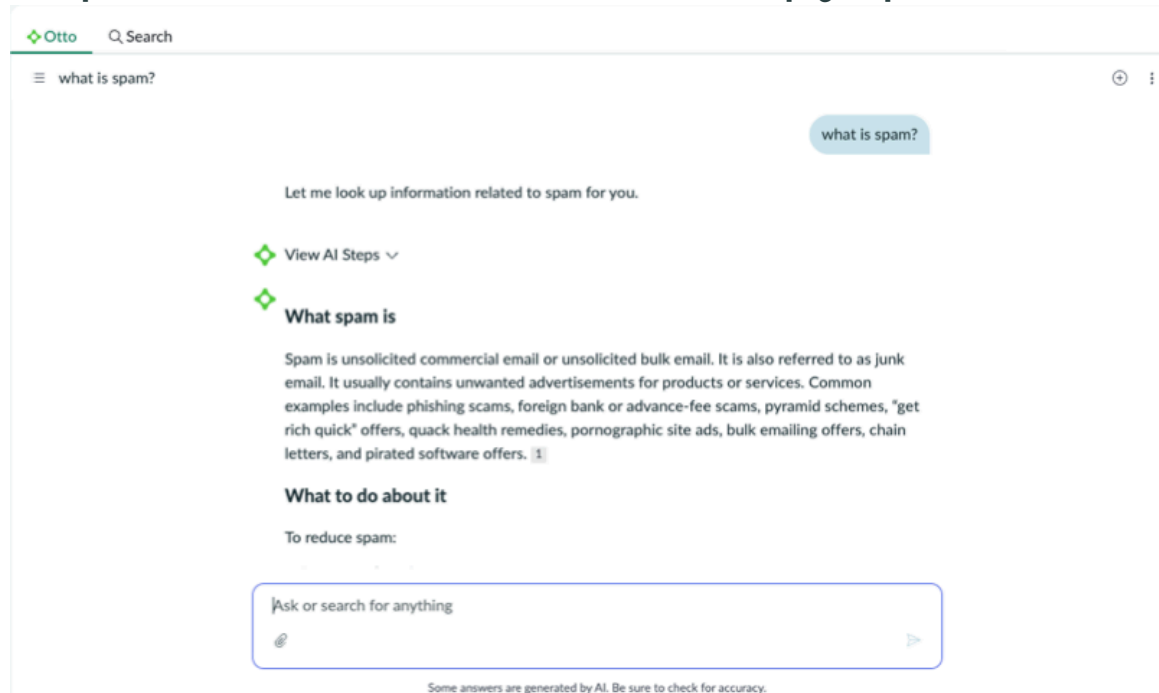
Example of the ServiceNow® Otto for Virtual Agent enhanced chat or premium chat widget button



Enhanced or premium chat's full-page experience

Where your users learn about search results differs between the enhanced or premium chat and enhanced or premium chat's full-page experience. For enhanced or premium chat, when you enter a search query through your portal's search bar, you're redirected to the portal's search results page. At the top of the search results page, you see Genius Results in a synthesized response generated by ServiceNow Otto. When you're using enhanced or premium chat's full-page experience and you enter a search query through one of the portal's search bars, you're redirected to the full-page experience's chat tab. Within the chat tab, you may see a synthesized response generated by ServiceNow Otto within a conversation depending on your utterance. You continue the conversation within the chat tab.

Example of the chat tab, labeled ServiceNow Otto, in the full-page experience



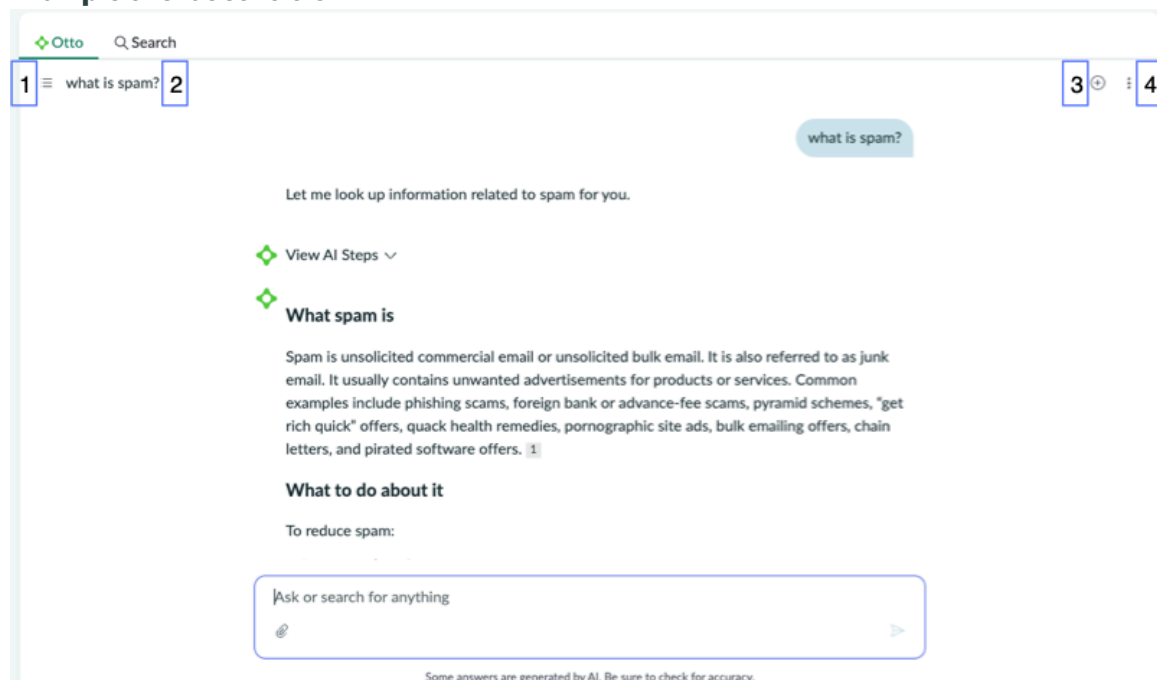
The conversational fluidity and citation behavior between the enhanced or premium chat and enhanced or premium chat's full-page experience remains the same regardless of which chat experience you use. The conversations that you have either through the enhanced or premium chat's window or full-page experience remain in synchronization, and the conversational history is retained in both mediums. For example, if you enter `Order a loaner laptop` the conversational fluidity and citations that appear are the same whether in enhanced or premium

chat or enhanced or premium chat's full-page experience. If you begin the laptop catalog request in the full-page experience, you can still view and continue the conversation in the enhanced or premium chat's window because the chat experiences remain in synchronization with one another. For more information about conversational behavior and citations, see [Enhanced chat](#) or [Premium chat](#).

Each Virtual Agent response includes a feedback icons panel. The feedback icons panel appears on the latest Virtual Agent response and whenever you hover over any previous Virtual Agent response. You can indicate if the response was helpful by selecting the like thumbs up icon (👍). If the response wasn't helpful, select the dislike thumbs down icon (👎). This feedback is used to train the LLM model and improve responses over time. Depending on the context of the response, an additional go to search results icon (🔍) may appear in the feedback icons panel. This icon appears alongside synthesized responses in Virtual Agent, clarifying questions in Virtual Agent, and fallback topics whenever a synthesized response is unavailable but there are regular search results available. When the full-page experience is on and you select the go to search results icon (🔍), you're redirected to the **Search** tab. After redirecting to the **Search** tab, a search query using the last five chat utterances you entered begins. Additionally, a copy message icon (📋) appears on received Virtual Agent responses.

The ServiceNow Otto sub-header consists of four elements. The following figure and table shows an example and description of those elements.

Example of chat controls



ServiceNow Otto sub-header elements

Element	Description
1. Chats (☰)	All chats appear. Chats are organized with the most recent conversations at the top. Selecting a chat opens the chat in the conversation area. If there are unread chats or notifications, a badge number appears on the Chats icon

ServiceNow Otto sub-header elements (continued)

Element	Description
	(). Any unread chat or notification appears with a red dot next to it and the chat title appears in bold. Additionally, if you switch to a new chat while another active chat is ongoing, a pop-up message on the Chats icon () appears: Your previous chat was saved. You can revisit all of your past chats and continue ones that are still active. The following list includes the chat sections that you may see in the chats area. • Active: Chats where you can continue the conversation. If applicable, active chats move to the Closed chats section after two hours of inactivity. This 2 hour time limit can be configured within the Messaging Channels {sys_cs_channel.list} table. To change the inactivity time limit, from the Messaging Channels {sys_cs_channel.list} table, select the NASS record and populate the Conversation Idle Timeout field with your preferred active chat time limit. If you have no active chats, No chatter at the moment is displayed. If more than 12 active chats are running, a Show more link appears to view more chats. Selecting Show more displays an additional 10 chats. • Updates: Updates for important notifications and reminders can be configured to display. When <code>sn_nowassist_va.nass_notification_enabled</code> is set to <code>true</code> (the default), simple (nonactionable) Virtual Agent notifications appear on your portal home page. After selecting a notification, you're redirected to this Updates section. If you have no updates, You're all caught up is displayed. If more than four updates are available, a Show more link appears to view more updates. Selecting Show more displays an additional 10 updates. Note: If <code>sn_nowassist_va.nass_notification_enabled</code> is set to <code>false</code>, the Updates section doesn't appear. • Closed: Closed chats can be configured to display. You know that a message has closed when the designated time has

ServiceNow Otto sub-header elements (continued)

Element	Description
	passed (2 hours of inactivity) or you receive the following response in the chat: It looks like you're finished with this chat, so I'll go ahead and close it. Turn on closed chats by selecting the Show closed chats check box within Conversational Interfaces > Assistants > [Selected Assistant Name] > Chat experience > Closed chats. After being turned on, closed chats are displayed for as long as they're available within the Conversations (sys_cs_conversation) table. Closed chats appear in a read-only mode and can't become active again. If more than four closed chats are available, a Show more link appears to view more closed chats. Selecting Show more displays an additional 10 closed chats. After a conversation has closed, you can't reopen it. Hovering over a closed chat displays the delete icon (🗑️). Confirm the chat deletion on the Delete this chat? modal to permanently delete the chat from the interface.
2. [Chat name]	The name of the conversation. If you select a promoted asset or query, that asset's title appears as the chat name. If instead you enter an utterance into the Reply to field, your initial utterance becomes the chat name. The chat name appears in both the ServiceNow Otto subheader and Chats list > Active section.
3. New chat (⊕)	A new conversation begins. You may be prompted with a greeting message along with any promoted conversational assets such as topics, subflows, and/or actions, or suggested queries.
4. Support and settings (⋮)	Support contact information such as phone numbers and email addresses are listed. If live agents are available, an active Contact Live Agent button is displayed. Although multiple active conversations are possible, you can only have one live agent conversation at a time. Selecting Contact Live Agent begins a chat with a live agent. After a live agent enters the chat, the Contact Live

ServiceNow Otto sub-header elements (continued)

Element	Description
	Agent button becomes inactive. If live agents are unavailable, an inactive No live agents currently available button is displayed. Settings toggles for Audio notifications and Notifications appear. By default, audio notifications are turned on and notifications are turned off. If admins have enabled notifications within the guided setup, users can turn on the notifications.
5. Interactive view ( or )	Note: This icon only appears in the sub-header whenever the interactive view is available. Open or close the interactive view. The interactive view appears towards the right of the conversational chat area. Interactive view is available whenever an organizational chart is an available option in a people citation popover. If multiple interactive views are available in the same conversation, for example, you opened multiple people's org charts in a conversation, a drop-down is available to switch between the different interactive views' tabs.

While in the full-page experience, you can select the **Search** tab. Selecting the **Search** tab auto-populates the search bar with the first utterance found in the chat tab, but a search query doesn't begin. The chat and **Search** tabs are otherwise independent of the other, so running a search doesn't impact your existing chats nor does starting new chats impact your existing search results. You must enter text into the search bar so that the search bar becomes active and then you can submit your search. The search results that appear in the **Search** tab resemble the search results found on the portal page, excluding the Genius Results synthesized response. Two icons may appear next to the search results:

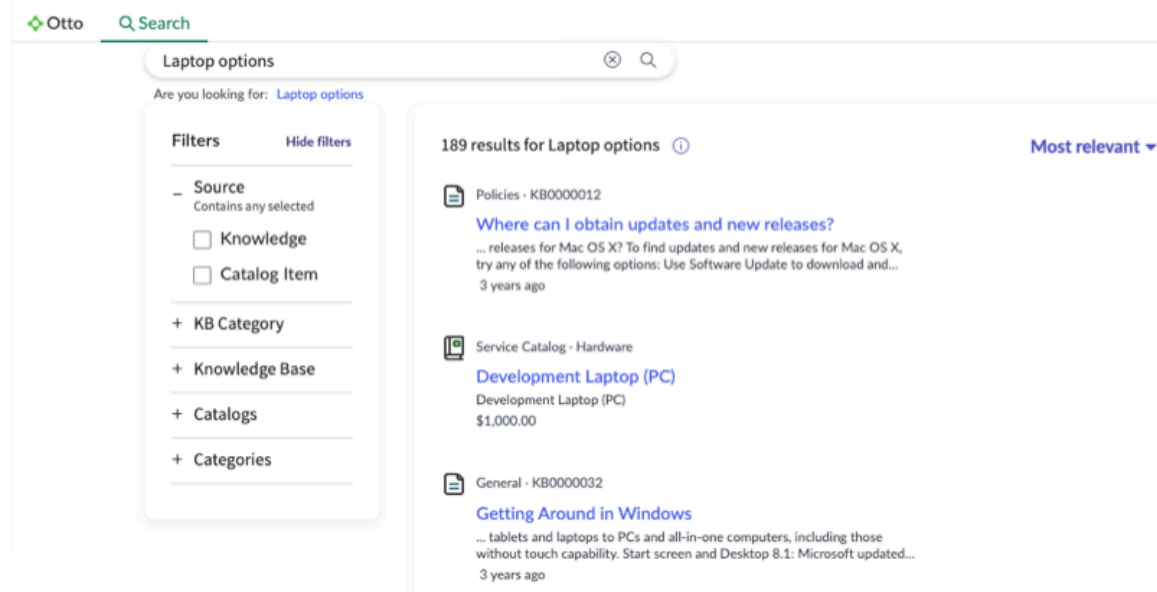
-  (Request in Chat)

The  (Request in Chat) icon opens the conversational catalog into a new chat.

-  (Open in New Tab)

The  (Open a New Tab) icon redirects you to either complete a catalog form or view content in a new tab.

Example of Search tab in full-page experience



The following table outlines the preceding feature differences between enhanced chat window and enhanced chat full-page experience.

Requester differences in enhanced chat

Feature	Enhanced chat	Enhanced chat full-page experience
Entry points	- Entering an utterance into the chat through the chat widget button. - The portals search results page's synthesized response via chat icon () or Request in chat link from popover. - Notifications	- Entering an utterance into the portal's search bar. - The go to search results icon () from an enhanced chat's chat window response.
Portal search bar results	Redirects to the portal's search page results.	Redirects into the full-page experience's chat tab.

Prerequisite requirements for standard, enhanced, and premium chat

Standard, enhanced, and premium chat require the ServiceNow default chat widget button to be turned on. The following actions must be completed for enhanced or premium chat to display a synthesized response after entering a search query through the portal:

- [Configure the portal's AI Search](#) 
- Turn on the ServiceNow default Search page widget.
- Turn on the ServiceNow default chat widget button.

The following actions must be completed for enhanced or premium chat to display a synthesized response in the full-page experience after entering a search query through the portal's search bar:

- Configure the portal's AI Search configured
- Turn on the ServiceNow default Search page widget.
- Turn on the ServiceNow default chat widget button.
- Turn on the ServiceNow default Search Typeahead widget.

More information

Want to learn more? Visit these resources.

- For more information on enhanced chat, see [Enhanced chat](#).
- For more information on enhanced chat in Employee Center, see [Enhanced chat in Employee Center](#) .
- For more information on enhanced chat in self-service portals, see [ServiceNow Otto conversational experience in self-service portals](#) .
- For more information on premium chat, see [Premium chat](#).
- For more information on ServiceNow Otto, see [AI Admin Hub](#) .
- For more information on ServiceNow Otto for AI Search, see [ServiceNow Otto for AI Search](#) .
- For more information on language support, see [Multilingual service for Now Assist](#) .
- For more information on ServiceNow Otto for Virtual Agent analytics, see [Analyzing assistants](#).

Chat streaming responses

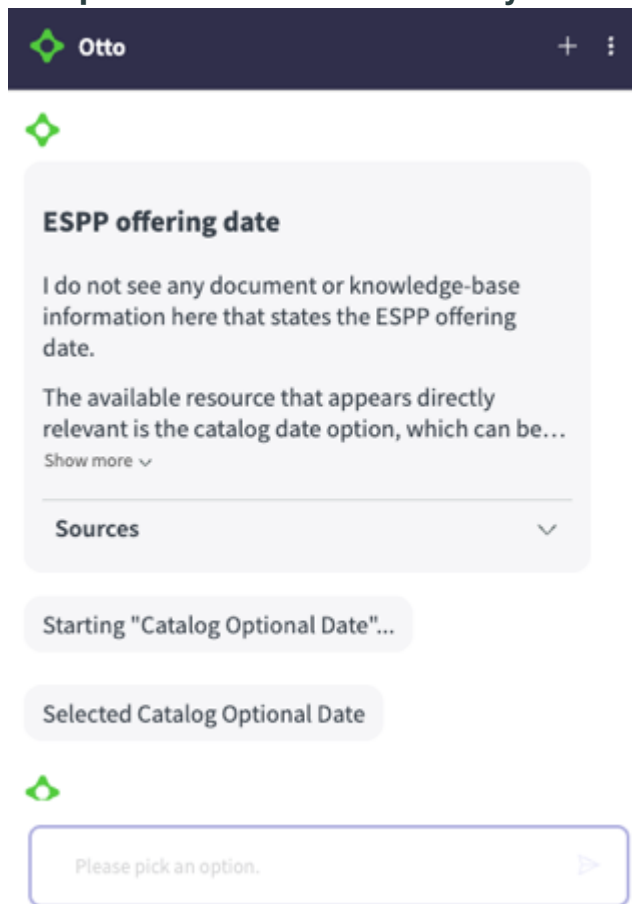
Synthesized responses stream in real time for ServiceNow Otto LLM chat conversations instead of waiting for the entire message to render. Streaming enables responses from the LLM to be sent immediately to help improve performance when replying to requests.

LLM response messages stream for synthesized responses as they're generated instead of appearing all at once to end users. Responses stream in either one letter or one word at a time. After end users enter a question or request into the chat, synthesized responses begin to stream in and stop streaming after the full message has been delivered. While the response is generating, various loading messages (such as *Generating an answer*) appear. For more information and examples of loading messages, see [Latency feedback in Virtual Agent](#). An animated sparkle  icon appears while the response is generating. The animated sparkle  icon changes to the static branded Virtual Agent icon after the response has fully loaded.

 **Tip:** If you want to turn off the animated sparkle icon during streaming, set `sn_nowassist_va.nass_animated_avatar_enabled` to `false` in the System Property [sys_properties] table. When the animated sparkle icon is off, the loading messages are followed by an animated ellipsis  icon. For more information about this system property, see [Available system properties](#) .

For standard chat, the **Show more** link appears after six lines of text is streamed. Selecting **Show more** streams the remainder of the message until the full message is delivered.

Example of a standard chat streamed synthesize response fully loaded



For enhanced chat, streaming is applicable to the synthesized response wherever it applies. When streaming completes, the entire synthesized response displays, rather than a truncated response, in the chat window or enhanced chat. The synthesized response can stream in the chat window or on the portal's search results page, as well as the enhanced chat's **ServiceNow Otto** tab.

To enable streaming, configure your AI assistants to stream responses during the ServiceNow Otto for Virtual Agent guided setup. For more information, see [Assistants overview](#).

Important: The streaming feature isn't available when dynamic translation is turned on. To enable streaming, dynamic translation must be turned off.

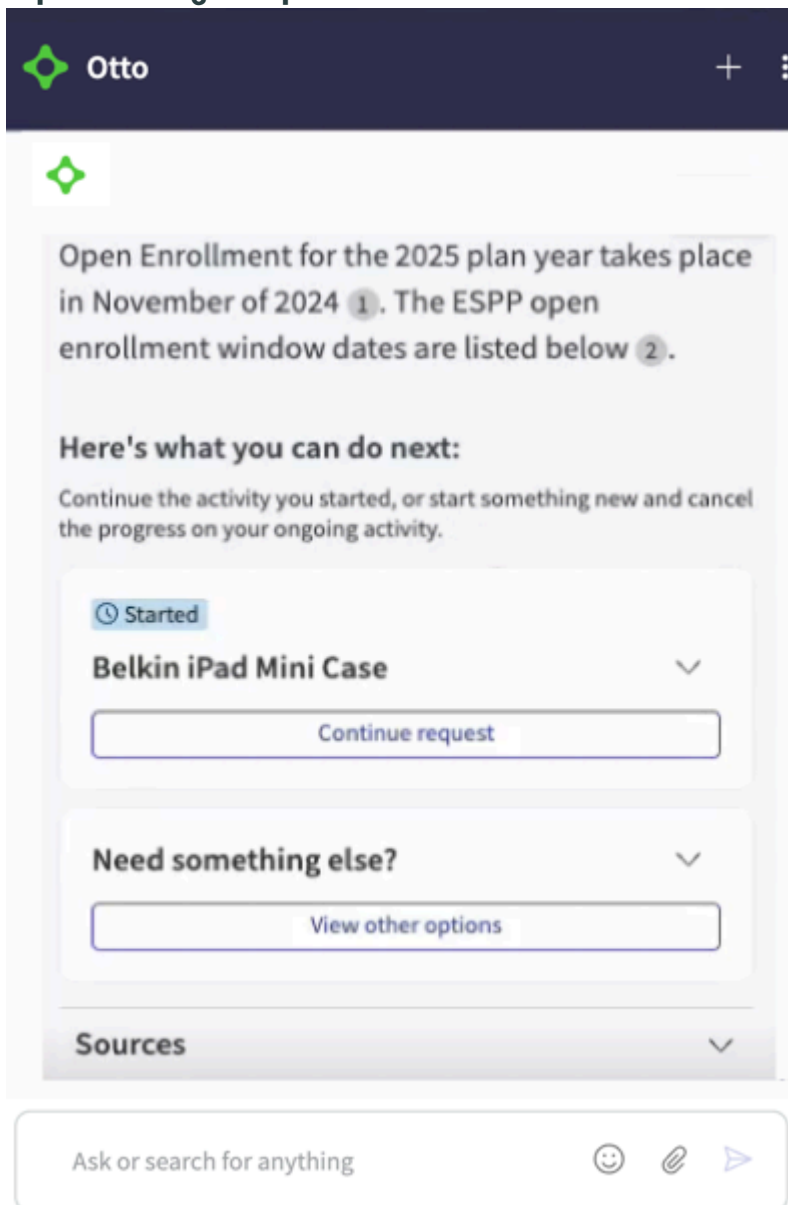
Mid-topic switching during ServiceNow® Otto for Virtual Agent conversations

Mid-topic switching easily lets you switch between requests, using plain language whenever new queries are made in the same ServiceNow® Otto for Virtual Agent conversation.

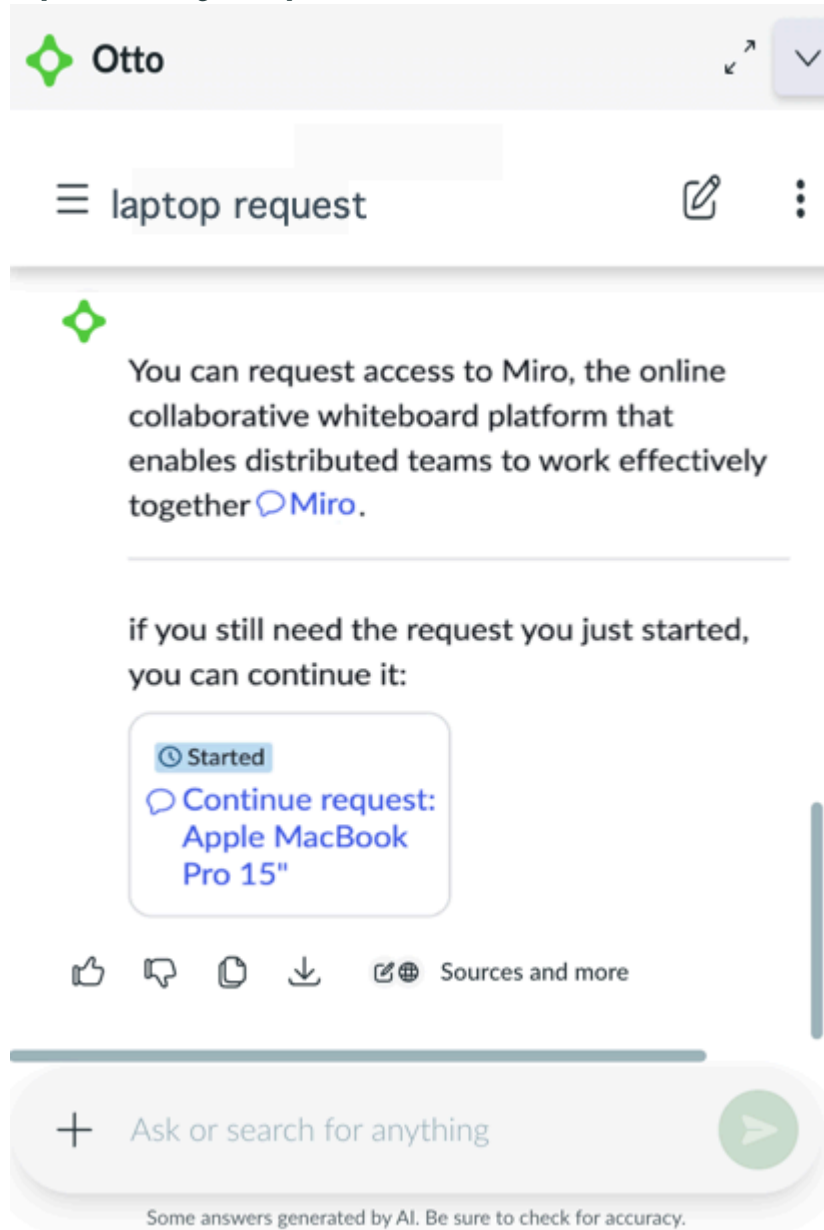
During a ServiceNow Otto for Virtual Agent conversation, you can switch the conversation request without having to restart the conversation. For example, you are in the middle of a conversational catalog item and ordering an iPad when you remember open enrollment is coming up at your company. You can ask Virtual Agent about when open enrollment is without having to exit out of your existing conversation. The Virtual Agent provides a synthesized response which includes a summary about open enrollment, but also informs you that you can either continue with the existing conversation (ordering an iPad) or switch the conversation to focus on your new request (open enrollment).

The following images show examples of how mid-topic switching can appear based on your conversational settings.

Topic switching example in a standard chat conversation



Topic switching example in an enhanced chat conversation



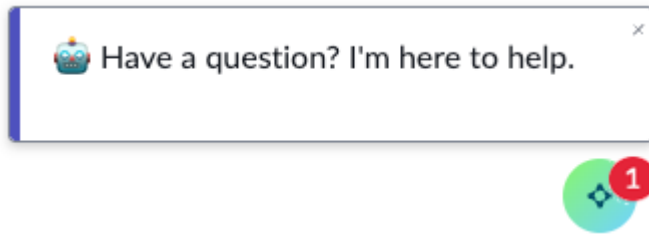
If you decide to continue with your original request, you return to the previous conversation. If you decide to switch the conversational focus to something else, you can view additional information about your new request.

Proactive triggers and Virtual Agent notifications in enhanced chat

Proactive triggers and Virtual Agent notifications can be selected and completed in a Virtual Agent conversation.

Proactive triggers and simple Virtual Agent notifications are displayed the same way on the portal as a pop-up rectangle box.

Example of proactive trigger or notification in enhanced chat



Proactive triggers and Virtual Agent notifications only display on the portal pages with the chat button and are unavailable in the full-page experience view. Selecting a proactive trigger redirects you to a new chat. If you switch to a new chat while another active chat is ongoing, a pop-up message on the chats icon  appears: Your previous chat was saved. You can revisit all of your past chats and continue ones that are still active. For more information on Proactive Triggers, see [Exploring Proactive Triggers](#).

Virtual Agent notifications display as an unread message and after you select the notification, the notification displays in the chat conversation. For Virtual Agent notifications, the `sn_nowassist_va.nass_notification_enabled` system property defaults to `true` in System Properties (`sys_properties.list`). When `sn_nowassist_va.nass_notification_enabled` is set to `true`, Virtual Agent notifications appear on your portal home page. Selecting a notification redirects you to the conversation in a chat. Simple (nonactionable) notifications are displayed in the navigation area's **Chats > Updates** section. Actionable notifications are displayed in the navigation area's **Chats > Active** section. These actionable notifications create a chat with the notification title as the chat title. Selecting an actionable notification loads the conversation with the notification and associated actions. If you don't act and initiate a search, after viewing the search results, you can switch back to the notification that triggered the conversation by entering Show notifications. Entering Show notifications in a non-notification conversation results in a message indicating that there are no actionable notifications to view. To view your actionable notifications, it's best to select the chats icon (). When you select a notification, the unread badge count on the chats icon () goes down. After you have worked with the actionable notification, the notification moves to the **Chats > Closed** section. For more information on configuring Notifications, see [Configuring Virtual Agent notifications](#) and [Configure a delivery channel for Virtual Agent notification](#).

Upload documents in a chat

Upload or drag files into ServiceNow[®] Otto for Virtual Agent to extract relevant data from a file. The assistant analyzes and understands the content of the files, and you can ask questions about the content of the files or get a summary.

Before you begin

ServiceNow Otto for Virtual Agent standard and enhanced chat support uploading documents to the assistant. For more information about the different chat capabilities, see [Standard chat](#) and [Enhanced chat](#). Uploading a document within a chat is available to you when an admin activates this feature in the admin guided setup. For more information, see [Assistants overview](#).

Uploaded file formats include text and image files such as PDF, Word (.doc, .docx), JPEG, and PNG. The maximum size of a file is 5 megabytes (MB). For premium chat, you can upload files by selecting the file upload icon or by dragging and dropping files directly into the chat input box. You can upload a maximum of 10 files per conversation and a total upload limit of 50 MB. Supported file formats are:

- PDF
- JPEG

- PNG
- TXT
- PPTX
- Word
- Excel
- CSV

Role required: requestor

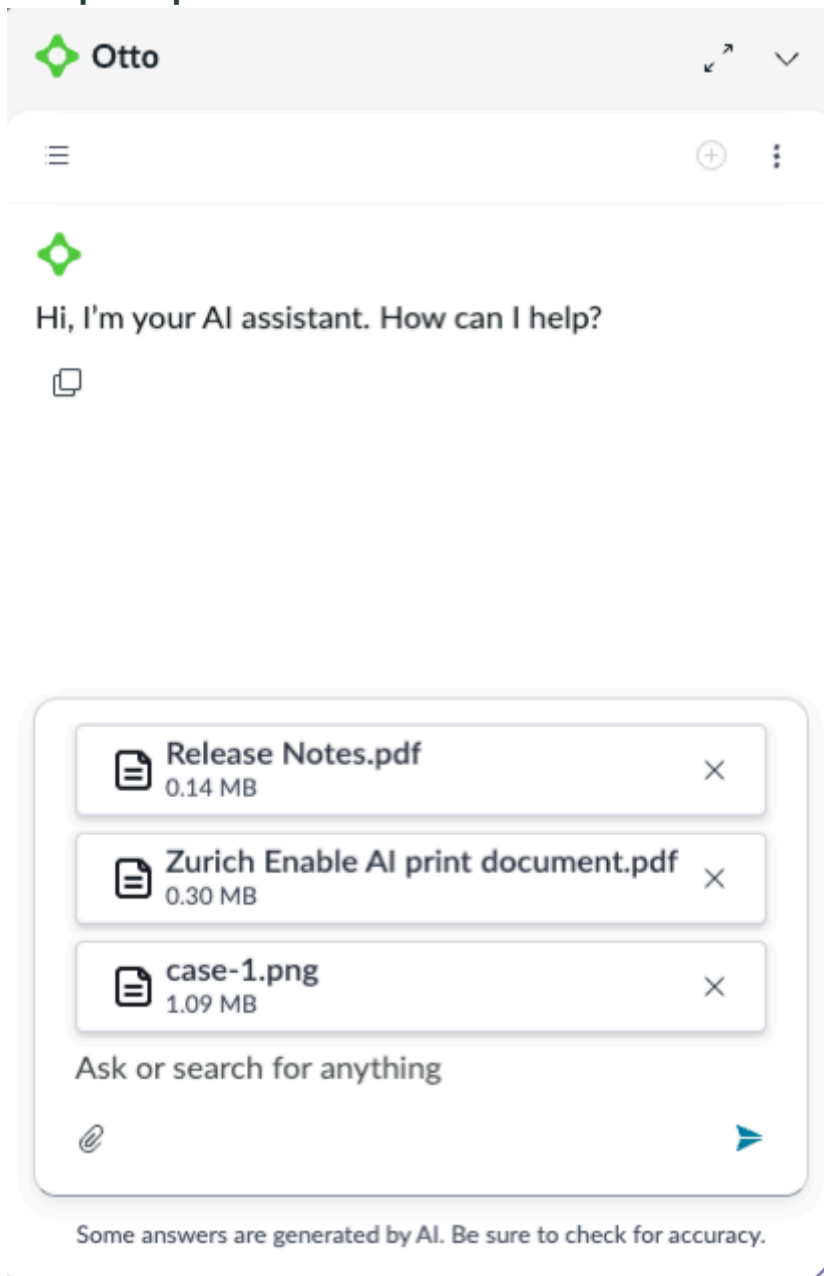
Procedure

1. Navigate to the portal home page that is using ServiceNow Otto for Virtual Agent.
2. Launch the ServiceNow Otto for Virtual Agent chat window.
3. Select the paperclip icon to upload the file or drag the file into the chat.

One or more files can be uploaded to the chat. For legacy chat options, the maximum file upload is three files. For premium chat, the maximum file upload is ten. You see the progress as the file uploads, until its completion. If the file fails to upload, or the content can't be properly parsed, take corrective action.

The file is checked for viruses, and an error message appears when a file is non-security compliant. After the file passes the virus scan, the document is secure, and sensitive data isn't retained beyond the chat session. You can't ask follow-up questions about the file after the chat session ends.

Example of uploaded files into an enhanced chat conversation



4. To ask questions about another file, exit the chat, and upload or drag a new file to the assistant.

Web search

The web search mode performs an internet search to answer a query. Web search mode provides external search results from the internet and these results don't represent company content or policies.

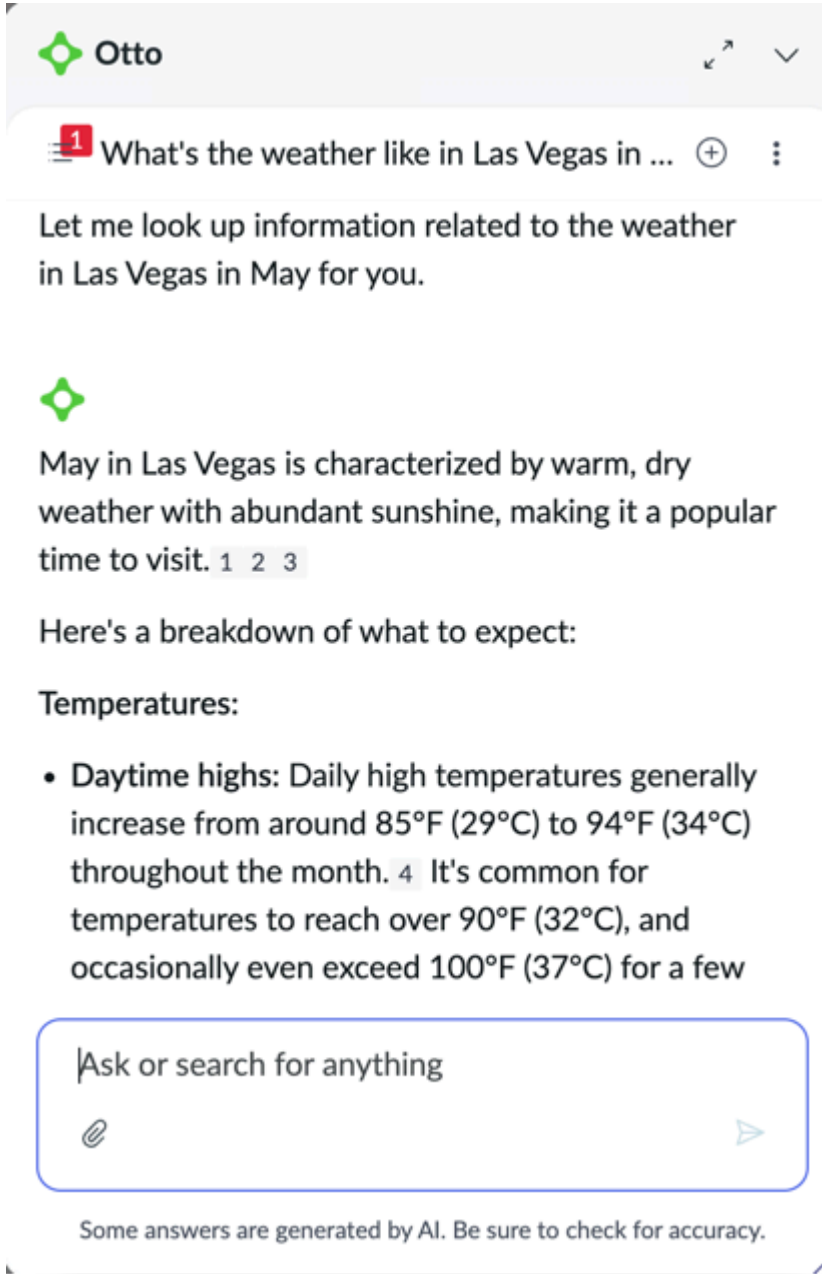
Note: For more information about how to configure web search and turn on web search, see [Web search custom skill](#) and [Manage an assistant chat experience](#).

Web search mode is applicable to ServiceNow Otto for Virtual Agent standard chat and enhanced chat conversations. Select the Start web search mode icon (🌐) to enter into the web search mode. While in this mode, all queries are answered via internet search results rather than internal company search results. When in web search mode, a divider line appears to indicate a

conversational shift and the following text appears: Searching the web (This search is external and does not represent Company content or policies.)

For example, if you ask What 's the latest Macbook pro configuration? in web search mode, a synthesized response appears along with inline citations and sources.

Example of enhanced chat's web search mode



The screenshot shows a chat window titled "Otto" with a green star icon. The user's message is "What's the weather like in Las Vegas in ...". The chat response is "Let me look up information related to the weather in Las Vegas in May for you." followed by a green star icon and the text "May in Las Vegas is characterized by warm, dry weather with abundant sunshine, making it a popular time to visit. 1 2 3". Below this, it says "Here's a breakdown of what to expect:" and "Temperatures:". A bulleted list follows: "• Daytime highs: Daily high temperatures generally increase from around 85°F (29°C) to 94°F (34°C) throughout the month. 4 It's common for temperatures to reach over 90°F (32°C), and occasionally even exceed 100°F (37°C) for a few". At the bottom, there is a search bar with the placeholder text "Ask or search for anything", a paperclip icon, and a send button. A disclaimer at the very bottom states "Some answers are generated by AI. Be sure to check for accuracy."

1 What's the weather like in Las Vegas in ...

Let me look up information related to the weather in Las Vegas in May for you.

May in Las Vegas is characterized by warm, dry weather with abundant sunshine, making it a popular time to visit. 1 2 3

Here's a breakdown of what to expect:

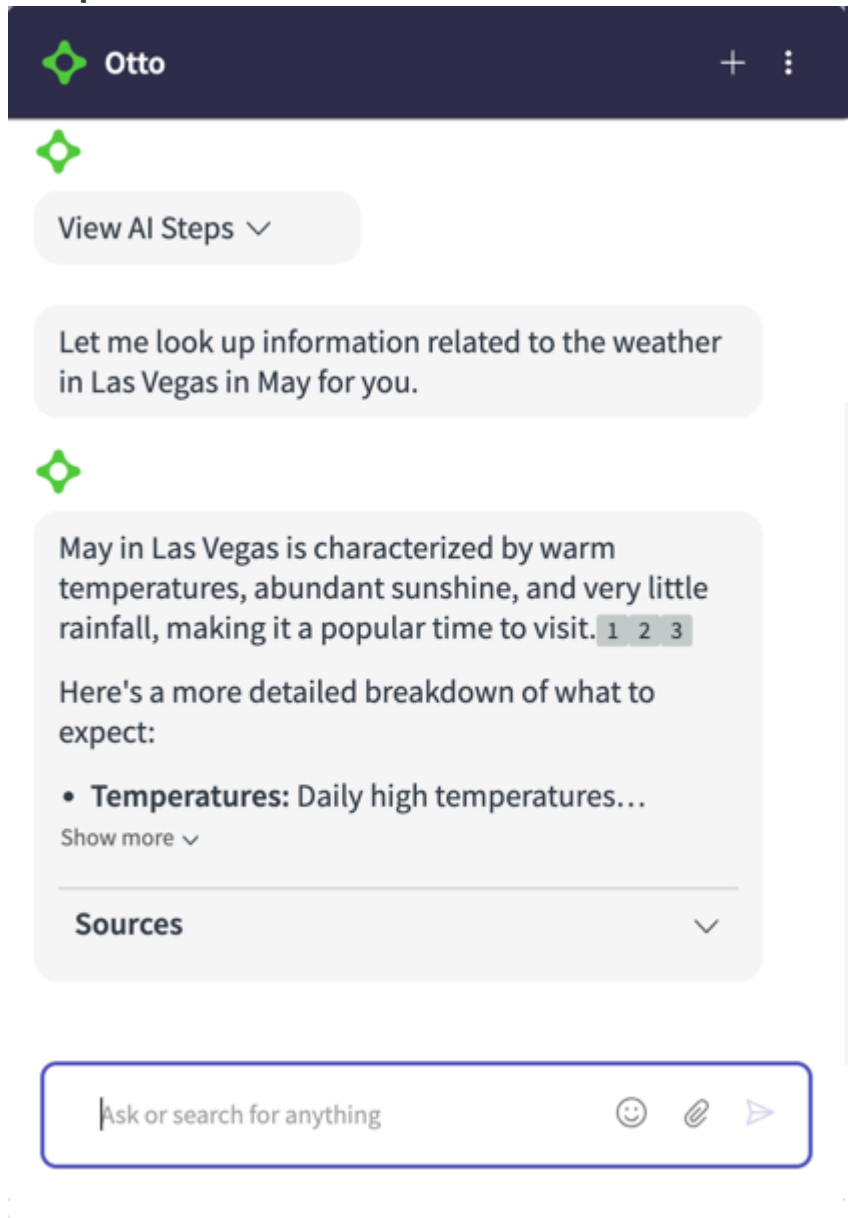
Temperatures:

- Daytime highs: Daily high temperatures generally increase from around 85°F (29°C) to 94°F (34°C) throughout the month. 4 It's common for temperatures to reach over 90°F (32°C), and occasionally even exceed 100°F (37°C) for a few

Ask or search for anything

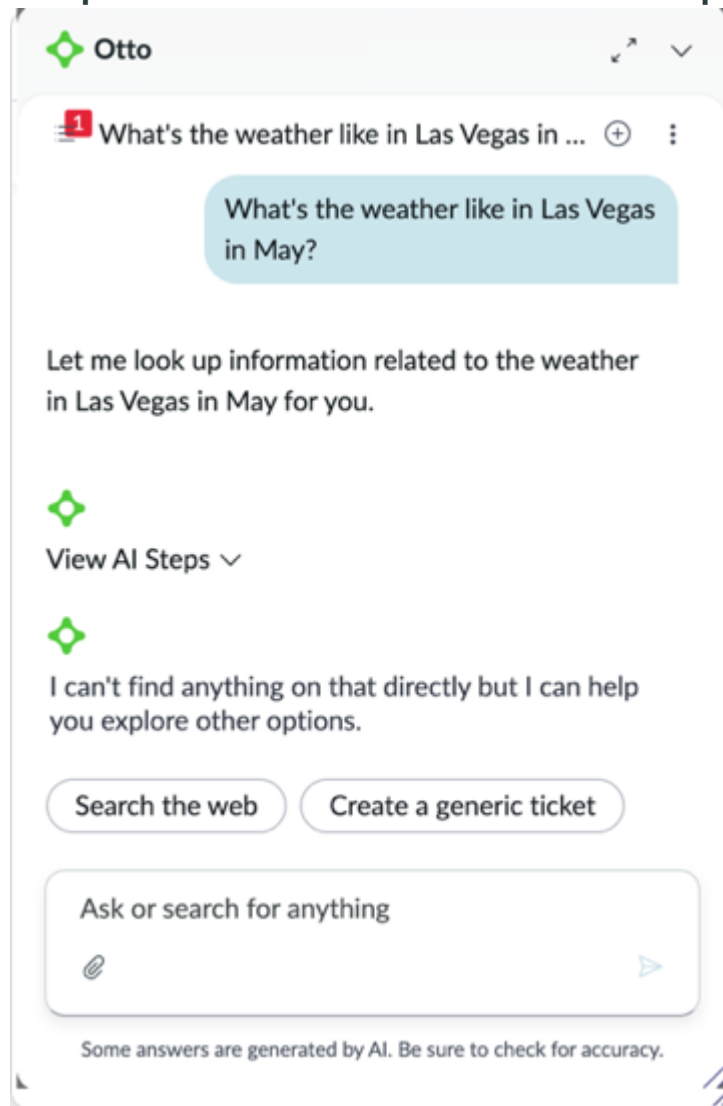
Some answers are generated by AI. Be sure to check for accuracy.

Example of standard chat's web search mode



You can also use web search as a fallback option. For example, if you ask What 's the weather in Las Vegas in the month of May?, the LLM and AI Search are unable to find an answer through internal sources. Instead, you can be presented with the fallback option to **Search the web**.

Example of enhanced chat's search the web fallback option



Note: When entering web search via the Start web search icon (🌐), the prior conversational history is blanked out. When entering web search via the fallback **Search the web** option, only the last query prior to entering web search mode is taken into account.

To exit out of web search mode and return to internal search results, do one of the following:

- Enter **Exit**.
- Select the End web search icon (🌐).
- Select **End** in the Web Search banner.

Note: The Web Search banner is only applicable to enhanced chat conversations.

Small talk in conversations

Small talk topics and small talk utterances from the Semantic Filter Framework are recognized in ServiceNow® Otto for Virtual Agent chat conversations.

Small talk is supported by your primary and fallback languages. The semantic filtering recognizes these types of small talk:

- Greetings: For example, `Hi, how are you today?`
- Gratitude: For example, `Thanks, this was helpful!`
- Complaint: For example, `This answer doesn't help me.`

Chat conversations with complaints may prompt you to request a live agent or another fallback topic, such as, a create a support request topic.

- Closure: For example, `That's all I needed. Bye.`

For standard chat conversations, the conversation ends when closure small talk is recognized.

For enhanced chat conversations, conversations do not end and remain in the Active chat section. You can return to the same chat conversation as long as the conversation has not closed. You know that a message has closed when you receive the following response in the chat: `It looks like you're finished with this chat, so I'll go ahead and close it.` Chat conversations eventually close after a designated time has passed. For more information on the closed chats, see [Enhanced chat](#).

Note: For closure types of small talk, you may receive a confirmation message prior to exiting the conversation. The confirmation message asks, `You'd like to end this topic. Is that right?` with the **Yes** and **No** controls displayed. The confirmation message only appears if the `sn_vad_genai.com.glide.small_talk.closure.prompt_enabled` system property is switched to `False`. Closed conversations eventually move to the Closed chats.

Prompt library

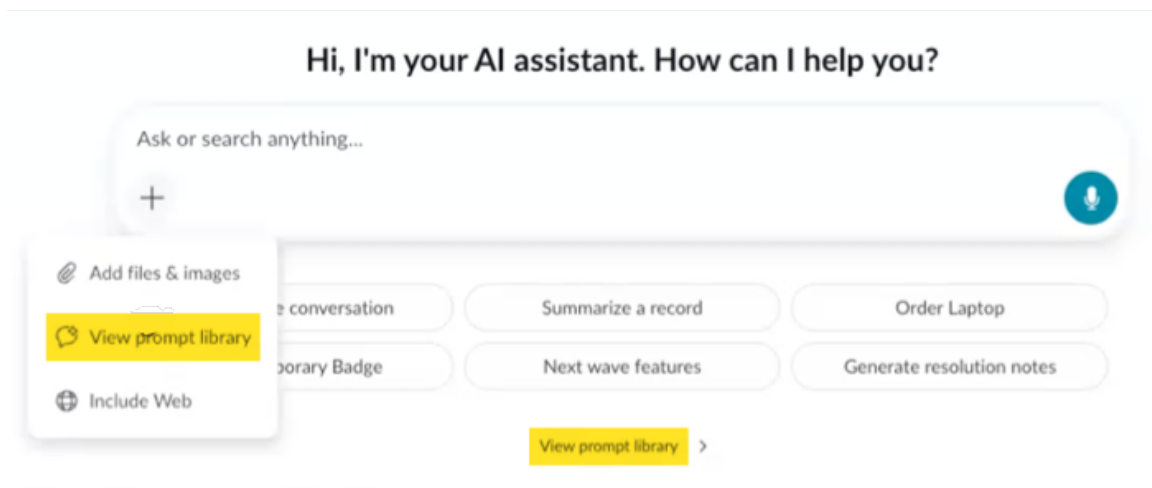
The prompt library provides a centralized place to browse, save, and reuse prompt templates from within chats. Instead of typing frequently-used prompts from scratch, you can select from promoted templates or save your own custom prompts for quick access.

With the prompt library, you can do the following:

- Save time - Select a prompt template and customize it instead of creating it from scratch.
- Maintain consistency - Use standardized templates across your conversations.
- Discover new prompts - Browse recommendations tailored to your workflow.
- Build your own library - Save frequently-used messages as custom prompts for quick reuse.

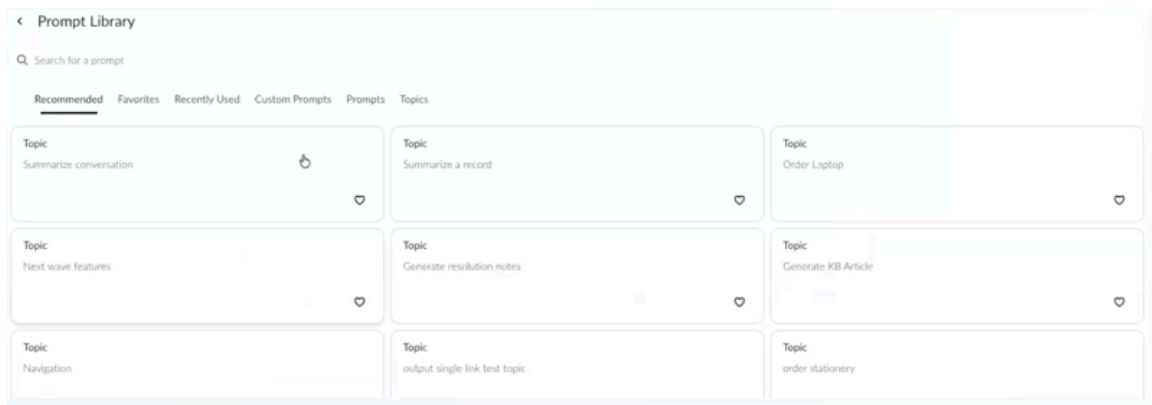
An administrator must enable the prompt library before you can use it, see [Edit a chat assistant](#) for information on enabling it. When the prompt library is disabled, the greeting screen shows the All Topics menu instead.

Access the prompt library by selecting **View prompt library** from the greeting screen or from the + icon on the omnibar.



The prompt library organizes templates across these tabs:

- Recommended - Promoted topics for the assistant.
- Favorites - Prompts and topics you've marked as favorites.
- Recently Used - Prompts and topics you used recently.
- Custom Prompts - Prompts you created (these prompts are private and only visible to you).
- Prompts - All public prompts. Use the drop-down lists to filter the prompts.
- Topics - All promoted topics for your assistant.



Using prompts and topics

Select a prompt or topic card to add it to your chat input. When you select a prompt, the prompt library closes and the prompt text appears in the input field. After the text appears in the input field, you can fill in any placeholder information or make edits before submitting. When you select a topic, you will be directly taken to the chat and enter the topic execution flow. To save a prompt or topic for quick access in your favorites, select the heart icon on the card. Select the heart icon again to remove it from your favorites.

To create a new custom private prompt, send a prompt to a conversation and select the bookmark icon. In the dialog box, enter a title and description, edit the prompt, then select **Save prompt**. To delete a custom prompt, navigate to the Custom Prompts tab, select the more actions icon in the prompt card, then select **Delete prompt**.

Escalate to human assistance

Sometimes a conversation requires human intervention. When this occurs, you can transfer the user to a live agent in Agent Chat.

Transferring Virtual Agent conversations to a live agent

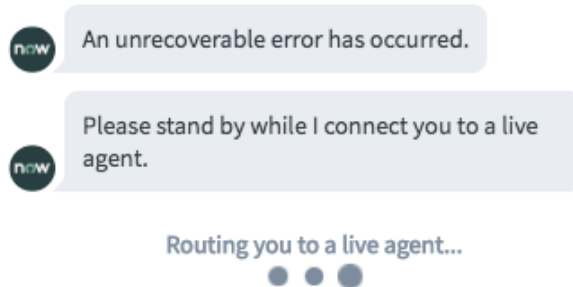
Manage live chat support, including the chat support interface used when a Virtual Agent conversation is transferred to a live agent.

Note: The Glide Virtual Agent plugin (com.glide.cs.chatbot) automatically activates the Glide Conversation Server plugin (com.glide.cs) for chat support.

Conversations in Virtual Agent are transferred to a live agent in several ways. This transfer happens automatically when an unrecoverable error occurs, but it can also be triggered by a script in a topic, when a user manually selects that option, or when a user inputs the request during an LLM conversation.

Automatic transfer to a live agent when an error occurs

When a conversation encounters an error, the conversation automatically transfers to a live agent.



Note: If you don't plan to use Agent Chat, be sure to deactivate it in the Agent Chat settings. For more information, see [Setting up Agent Chat](#).

Automatic transfer to a live agent that is triggered by a script in a topic

In situations where you want a support agent to handle the conversation, you can create a script in your topic that uses the `vaSystem.connectToAgent()` method. This method triggers a transfer to a live agent. This option can be useful for conversations involving negative customer sentiment, high priority requests, or requests outside the scope of your topic process. For example:

```
(function execute() {
    if (vaInputs.urgency == 1 && vaInputs.impact == 3)
        if(vaSystem.isLiveAgentAvailable()) {
            vaSystem.connectToAgent()
        }
    })()
```

This script action control transfers the conversation to a live agent based on the incident impact and user urgency. The script uses the `vaSystem.isLiveAgentAvailable()` method as follows:

- In Agent Workspace, the `vaSystem.isLiveAgentAvailable()` method checks the queue schedule and whether agents are online.
- In Connect Support, the `vaSystem.isLiveAgentAvailable()` method only checks the queue schedule.

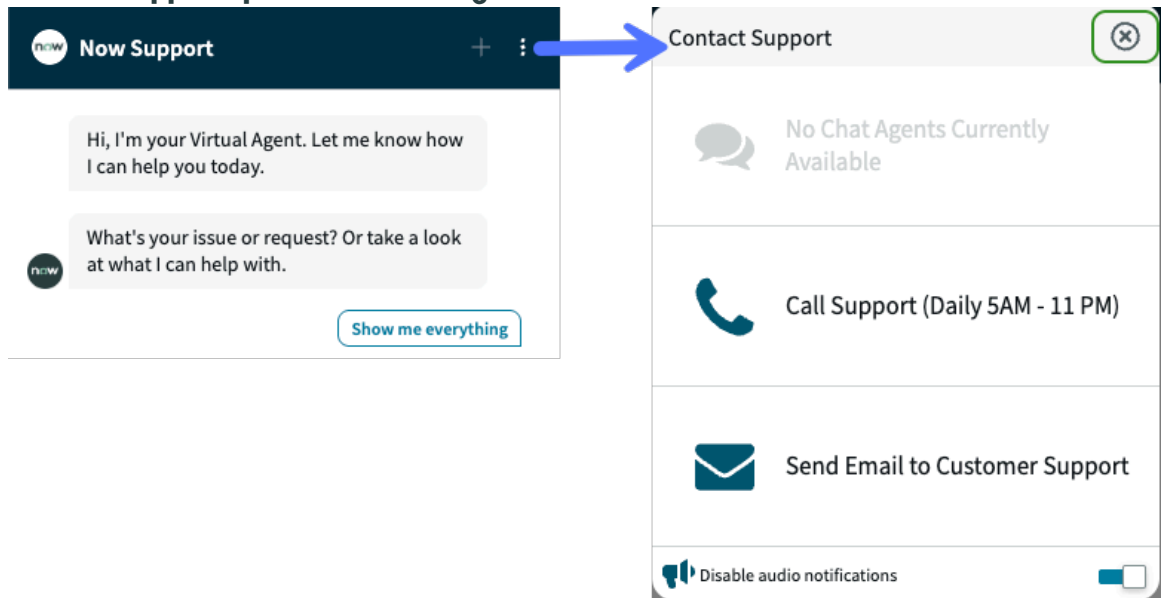
Note: The `vaSystem.isLiveAgentAvailable()` method only checks whether agents are online, regardless of their skill set.

Manual transfer to a live agent using the Contact support option

You can choose the **Contact support** option and then select **Contact Live Agent** to transfer the conversation to a live agent.

Note: Users running a Virtual Agent messaging integration must enter the command `Hi` or `agent` to access the live agent transfer option. If your environment isn't configured for live agents, the `agent` command doesn't work. For more information, see [Integrating Virtual Agent with messaging apps](#).

Contact Support options in Virtual Agent



Manual transfer to a live agent in LLM conversations

In a Virtual Agent conversation using LLM topics, you can enter a statement such as `I need to talk to a live agent, transfer me to a live agent`, or other similar statements. The LLM then turns your chat over to an available live agent.

How Virtual Agent conversation transfers work

For a user engaged in a Virtual Agent conversation, the switch to a live agent is a seamless transfer. When a transfer is triggered, either automatically or by a user manually, the conversation is automatically routed to the appropriate chat support interface, based on your [Agent Chat settings](#). In Agent Chat settings, admins also define the general messages that users see during live agent transfers.

If you're using Agent Workspace, the conversation is automatically routed and assigned to an available live agent. If you're using Connect Support, the conversation is routed to the chat support queue that you specify.

Note: At least one live agent must be available when transferring from Virtual Agent, otherwise the end user is presented with a `no agents available` message and their conversation isn't transferred.

Transfer to a live agent in Agent Workspace

If you're using Agent Workspace, the Virtual Agent conversation is automatically transferred to a qualified available agent, based on the Chat service channel configuration and the queues that the agent supports, as defined in Advanced Work Assignment.

For the user, the conversation with the agent continues in the Virtual Agent (client) interface. In Agent Workspace, the chat assignment appears in the agent's inbox. When an agent accepts the assignment, the agent joins the conversation and interacts with the user.

Transfer to a live agent in Connect Support

If you're using Connect Support, the virtual agent conversation is routed to the appropriate chat support queue. For the user, the conversation with the agent continues in the Virtual Agent client interface. In Connect Support, the agent accepts the queue with the transferred user to join the conversation and interact with the user.

In earlier releases, admins used the Chat Setup form to assign the default chat queues for Customer Service Management, HR Service Delivery, and IT Service Management or a global queue to which Virtual Agent conversations were automatically routed if default queues weren't assigned. These queues, which admins defined in Connect Support, are stored in the Chat Queues [chat_queue] table. If you're using Connect Support as the fulfiller interface and must change chat settings, see [Setting up Agent Chat](#) for details.

User sentiment

When configured, user sentiment analysis is performed on Virtual Agent and live agent conversations. The user sentiment is stored in the Interaction Insights [sys_cs_interaction_insight] table. For details, see [Interaction Insights table](#).

Closing Virtual Agent and Agent Chat conversations

Virtual Agent and Agent Chat conversations that are abandoned by requesters remain open until they are automatically closed by the scheduled job, *Time Out Abandoned VA Conversations*. This job runs hourly each day.

The default timeout period for abandoned Virtual Agent and live agent conversations is two hours (7200 seconds). The *Time Out Abandoned VA Conversations* job runs hourly to find and close any conversations that have been open longer than the default (or configured) timeout period.

As admins, you can change the default timeout period for closing Virtual Agent and live agent conversations by [adding the system property](#) `com.glide.cs.conversation_idle_timeout`. The timeout value that you specify in this property applies to all conversations in supported Virtual Agent and live agent channels, including chat channels such as Microsoft Teams, Slack, and messaging channels (such as SMS). For details, see [Change the timeout period for Virtual Agent and live agent conversations](#).

If you're using Virtual Agent and Agent Chat on multiple chat channels, you can add a channel-level idle timeout value that overrides the timeout value set in the `com.glide.cs.conversation_idle_timeout` property for chat channels. For details, see [Override the conversation timeout period by channel](#).

If needed, you can also change the time at which the Time Out Abandoned VA Conversations job runs.

Note: If you're using NLU/keyword, you can initiate the Closing Conversation topic with phrases tied to the intent (End Conversations) such as `Bye` or `Exit`. If the chat isn't closing when you enter an appropriate phrase, the NLU model for the setup topics might not be published or assigned.

Closing the conversation in an LLM chat works similarly to NLU/keyword chat. You enter a phrase such as `Bye` or `Exit`, the LLM recognizes the statement, and closes the conversation.

Change the timeout period for Virtual Agent and live agent conversations

Add the `com.glide.cs.conversation_idle_timeout` property to the System Property [sys_properties] table to specify the length of time that an abandoned Virtual Agent or Live Agent conversation remains open (idle). When the *Time Out Abandoned VA Conversations* job runs hourly, it closes any Virtual Agent and Live Agent conversations that have been open longer than the specified time.

1. In the navigation filter, enter `sys_properties.list`.

2. Select **New**.

a. Complete these fields:

Field	Value
Name	Enter the system property name: <code>com.glide.cs.conversation_idle_timeout</code>
Description	Enter an explanation for this property: Idle timeout period (in seconds) for all conversations
Type	Select integer.
Value	Enter the number of seconds that abandoned Virtual Agent or Live Agent conversations remain open, after the requester's last response. This value must be less than 7200 seconds, since the <i>Time Out Abandoned VA Conversations</i> job runs every 3600 seconds (hourly) to close idle conversations. For example, a value of 1800 seconds (30 minutes) means that an abandoned conversation remains open for 1800 seconds (30 minutes). When the <i>Time Out Abandoned VA Conversations</i> job runs, it closes any conversations that have been idle longer than 1800 seconds.

b. Select **Submit**.

Override the conversation timeout period by channel

You can set the conversation timeout value for a channel by adding a channel-specific conversation timeout value that overrides the `com.glide.cs.conversation_idle_timeout` property. When the *Time Out Abandoned VA Conversations* job runs hourly, it closes any Virtual Agent or Live Agent conversations in the channel that have been open longer than the specified time.

1. In the navigation filter, enter `sys_cs_channel.list`.
2. In the Messaging Channels table, locate the channel record to be changed and double click the **Conversation Idle Timeout** field.
3. Enter the number of seconds that abandoned Virtual Agent or Live Agent conversations remain open in the channel, after the requester's last response.

For example, a value of 1800 seconds (30 minutes) means that an abandoned conversation in the channel remains open for 1800 seconds (30 minutes). When the *Time Out Abandoned VA Conversations* job runs, it closes any conversations that have been idle longer than 1800 seconds.

4. Save the value.

Change the Time Out Abandoned VA Conversations scheduled job

To change the time that this hourly scheduled job runs or to make other adjustments to the scheduled job:

1. Navigate to **All > System Definition > Scheduled Jobs** and open the Time Out Abandoned VA Conversations record.
2. In the Scheduled Script Execution form, change the **Time** at which the scheduled job runs. Or, depending on how you want to adjust the timing, change other fields in the form as needed.

For example, to change the interval at which the job runs, in the **Run** field, select **Periodically**. You then specify the **Repeat Interval (Days and Hours)** that the job runs and the **Starting** date for the interval. For a description of the other fields that you can change in this form, see [Automatically run a script of your choosing](#).

3. Select **Update**.

The job runs at the specified time and frequency.

Hide or show the faulted reason message in Virtual Agent

Set the system properties to hide or show the faulted reason message for various Virtual Agent chat channels and pending notifications.

Before you begin

Role required: `virtual_agent_admin` or `admin`

About this task

By default, Virtual Agent conversations time out after two hours. For more information on adjusting timeout length, see [Closing Virtual Agent and Agent Chat conversations](#).

You can adjust the message that users see when the conversation ends due to timeout, using the values `com.glide.cs.conversation_faulted_reason` for Virtual Agent, `com.glide.cs.conversation_faulted_reason.now_assist_panel` for Now Assist panel, and `com.glide.cs.conversation_faulted_reason.self_service` for self-service portal chats. You can also change the timeout for a pending notification using the value `com.glide.cs.conversation_faulted_reason_with_pending_notification`.

Setting these values to blank will use the system default message instead of showing an empty message or hiding the message entirely. You can hide or show the faulted reason message for any of the three channels, or the pending notification with the following procedure.

Procedure

1. Navigate to **All > sys_properties.list**.
2. Find the record for the channel whose message you want to hide or show.

Record	Message type
<code>com.glide.cs.conversation_faulted_reason.disabled</code>	Virtual Agent chat
<code>com.glide.cs.conversation_faulted_reason.disabled</code>	ServiceNow Otto panels
<code>com.glide.cs.conversation_faulted_reason.disabled</code>	Self-service portal
<code>com.glide.cs.conversation_faulted_reason.disabled</code>	Pending notification

3. Set the *Value* to **True** to hide the message, or **False** to show it.

Note: The default value is **False**, and the faulted reason message is also shown by default.

Case and incident deflection in Virtual Agent

Virtual Agent provides several self-service options for your user that can help deflect tickets.

Deflection occurs when a user asks a question or makes a request that doesn't result in a ticket or human assistance. There are many ways that your customers can self-serve, including using AI Search and reading Knowledge articles. Virtual Agent provides a number of ways for your users to serve themselves.

Now Assist in Virtual Agent enhanced chat

ServiceNow Otto for Virtual Agent enhances the user experience by combining AI Search with generative AI chat skills. These skills can speed up issue resolution and reduce deflection to a live agent.

Conversational Catalog Request

This ServiceNow Otto for Virtual Agent skill is available in the AI Admin Hub console. For full catalog functionality in the chat window, enable the generative AI experience for catalog item request submissions.

Configuring agentic conversations in Virtual Agent

AI agents can reason, plan, and execute using additional AI agents, Virtual Agent topics, conversational actions and subflows, catalogs, KB articles, custom skills, and any ServiceNow Otto for Virtual Agent skills.

Conversational subflows and conversational actions

Create conversational subflows and actions in Workflow Studio and use them in Virtual Agent conversations.

Integrating ServiceNow Otto for Virtual Agent with Microsoft Teams

Configure ServiceNow Otto for Virtual Agent to use Microsoft Teams as the delivery channel.

Use the deflection topic block

Use the pre-built deflection topic block in Virtual Agent to track the issues that Virtual Agent helped to resolve or actually resolved for a user.

Dynamic Translation in Virtual Agent

If your chat audience is diverse, you want to support them in their own language whenever possible. Use language detection combined with dynamic machine translation to meet that need.

Dynamic language support

The Dynamic Translation application connects to a third-party machine translator. During the conversation, user inputs and responses are translated into the primary language on the instance, and all results are translated back into the user's language for the session. There are benefits and drawbacks for all options, as described in the following list. Before activating machine translations, you should carefully weigh the costs and benefits and set proper expectations for your deployment objectives.

Dynamic machine translation relies on the translation service to translate all content in real time. The accuracy of the translations is dependent on the translation service. Although translation services typically leverage algorithms to translate words based on the context of the conversation or sentence, there may be times when there is minimal context for the algorithm to leverage. Accuracy may be diminished in this situation. Check with your translation service provider about the ability to exclude words from translation or associate vocabulary with specific synonyms.

Using dynamic translation with the supported ServiceNow language plugins

Benefits	Constraints
• Lower implementation costs • Faster completion time • Less human maintenance • ServiceNow provides 22 language plugins with basic translations	• Limited scalability • Limited extensibility

Dynamic language detection and machine translation

Dynamic machine translation for languages that are not supported on the ServiceNow platform provides coverage, but the quality of the user experience may be lower.

Using Dynamic Translation with unsupported languages

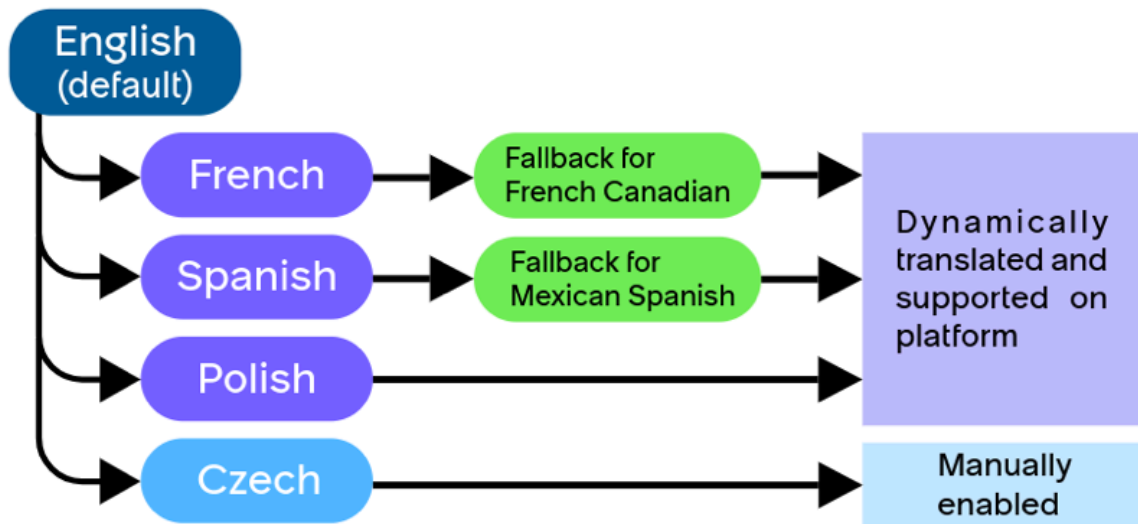
Benefits	Constraints
• Lower implementation costs • Faster completion time • Less human maintenance • Support for many languages • Highly scalable • Highly extensible	• User experience may vary • Potential for mistranslation may reduce user outcomes

Multi-language deployment strategies

Depending on the needs of your user base, you may want a mix of solutions to maximize both user experience and access. You can enable locale support by [designating translated languages as fallback languages](#). For example, you can support Mexican Spanish users by designating Spanish as the fallback language for that locale.

In the following example, French, Spanish, and Polish are dynamically translated and supported as a language on the ServiceNow platform. When the language plugins are installed and activated, it includes some translated content. Since Czech is currently not a supported language on the ServiceNow platform, admins can add Czech as a language and enable Dynamic Translation for the language in Virtual Agent.

Example language support strategy



Localization insights

You can view dynamic translation and localization insights from the Assistant Designer page. Navigate to **All > Conversational Interfaces > Assistant Designer**, and select **Localization Insights** from the list of links in the side panel.

For more information, see [Localization Insights dashboard](#).

Prerequisites for using Dynamic Translation in Virtual Agent

To enable dynamic machine translation, install ServiceNow® language plugins and Dynamic Translation plugins. Then configure Dynamic Translation for your instance.

Before you can [enable dynamic machine translation](#) for a language, you must install and configure Dynamic Translation on your instance.

1. As an admin, install the following plugins:
 - Glide Virtual Agent (com.glide.cs.chatbot)
 - Dynamic Translation for Virtual Agent (com.glide.cs.dynamic.translation.virtual_agent)
2. [Activate language plugins](#) for each language that you want to deploy with dynamic translation.

Note: Languages for Dynamic Translation are stored in the `sys_cs_dynamic_translation_virtual_agent` table.

3. [Enable LLM languages.](#)
4. Create exclusion rules for specific terms and content patterns within the [Exclusion Framework](#) .

The following translation service providers are pre-configured once the plugins are installed:

- Microsoft Azure
- Microsoft Azure OEM
- Google Translate

Configuring other translation service providers

Note: The following content is only relevant to live agent conversations that use Dynamic Translation for Agent Chat.

You can configure any other translation service provider in the Dynamic Translation application as follows:

1. [Integrate with a translation service provider](#) .
2. [Create a translator configuration in Dynamic Translation](#) .
3. (Optional) [Create a language code mapping](#)  to map translator language codes to the ServiceNow® language codes.

Next step

(Legacy) [Configure Dynamic Translation service integration credentials](#)

Enable Dynamic Translation for languages in Virtual Agent

Enable Dynamic Translation for one or more languages in Chat Settings for Virtual Agent.

Before you begin

Install and configure the plugins for Dynamic Translation, as described in [Prerequisites for using Dynamic Translation in Virtual Agent](#). If these prerequisites aren't completed, the Multi language support card described in the following steps doesn't appear.

[Configure multilingual service for ServiceNow Otto applications.](#)

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Select **Virtual Agent**.
3. On the Multi language support card, do the following:
 - a. Turn on the **Language Detection** toggle switch to enable it.
 - b. Select **View All**.
The Multi-language support page opens. All languages that are installed on the instance are listed.
4. In the **Dynamic Translation Enabled** column, select **false** for the language you want to enable.

Virtual Agent > Multi-language support

Multi-language support

Activate languages for dynamic translations by installing the language plugin for ServiceNow supported translations or manually add an active language row in the sys_language table for other languages.

All 8
Last refreshed 2m ago.

Language	Dynamic Translation Enabled
Portuguese	false
French	false
Spanish	false
Japanese	false

a. If prompted, select **Edit record**.

You can view this record but can't edit it here. [Edit record](#)

b. Select **Dynamic Translation Enabled**.

c. Select **Update**.

d. Return to the Multi-language support page and repeat these steps for any other language you want to enable.

5. Optional: Enable language detection for guest users.

If this system property is set to **off**, Dynamic Translation will not work for guest users.

a. Navigate to **All**, and then enter `sys_properties.list` in the filter.

b. In the **Name** field, search for `com.glide.cs.guest_session_resumable`.

c. In the **Value** column, change the setting to **true**.

System Properties Name Search

All > Name >= com.glide.cs.guest_session_resumable

Name	Value	Type
com.glide.cs.guest_session_resumable	true	true false
com.glide.cs.html_output_max_transcript...		integer
com.glide.cs.idle_actionable_notificatio...	8	integer

Configure multilingual service for ServiceNow Otto applications

Turn on multilingual service for user-entered text with native translation or Dynamic Translation in ServiceNow Otto applications.

Before you begin

To see a list of all available languages supported in ServiceNow Otto, see [Multilingual service for Now Assist](#).

To use Dynamic Translation, you must install and activate the application and install at least one language pack. For more information, see [Activate Dynamic Translation](#) and [Activate a language](#). From the Zurich release, Dynamic Translation has available support in specific regulated markets. For details see [KB0743854](#) on the Now Support portal.

Role required: sn_generative_ai.nsa_admin

About this task

There are two translation services available to translate user-generated content in ServiceNow Otto applications. For more information on the differences between the two, see [Multilingual service for Now Assist](#). In that documentation, you can also find the steps for adding another language to your service if it is not preconfigured.

After you have enabled either Dynamic Translation or native translation, translations will be available for in-product experiences, Virtual Agent, and the ServiceNow Otto panel.

Procedure

1. Navigate to **All > AI Admin Hub > Settings**.
2. On the left-hand panel, select the **Multilingual service**.
3. In the native translation or Dynamic Translation tab, toggle the switch to **On**.
A modal displays, confirming your choice and stating that streaming of LLM (large language model) responses will be unavailable when Dynamic Translation is active.
4. You can enable both Dynamic Translation and native translation.
Native translation is applied first. If the language is not supported through native translation, then Dynamic Translation will be applied.
5. **Optional:** To enable the preferred language from the available languages supported in the model providers selected in AI Control Tower, select **Edit** and then select the check-box next to the languages you want to use for translation.

Note:

When Dynamic Translation is inactive, streaming is available. The modal message displayed will change according to the status of the Dynamic Translation.

(Optional) See [Multilingual service for Now Assist](#) for more information about adding new languages for your preferred model to support.

To update your choice, select **Save**.

Result

Multilingual service is enabled for ServiceNow Otto applications.

Enable Dynamic Translation for an unsupported language

The ServiceNow® platform supports several languages, but you can enable dynamic machine translation for additional languages in Virtual Agent.

Before you begin

Install and configure the plugins for Dynamic Translation, as described in [Prerequisites for using Dynamic Translation in Virtual Agent](#).

Role required: virtual_agent_admin or admin

About this task

You can configure Dynamic Translation for any installed language plugin on the ServiceNow® platform. Once installed, the language is available for configuration in the Multi language support card in Virtual Agent Chat Settings. But if you want to support a language that doesn't have a plugin, you can add it to the Languages [sys_language] table. Once added, you can enable dynamic machine translation for that language.

For more information about multi-language support options and their tradeoffs, see [\(Legacy\) Localization options for Virtual Agent for NLU](#). For more information about custom localizations, see [Custom translations](#).

Procedure

1. Navigate to **All**, and then enter `sys_language.list` in the filter.
2. On the Languages page, select **New**.
3. On the form, fill in the fields.

Field	Description
Name	Name and locale of the language, if applicable. For example, Spanish (Mexican) .
Active	Check box indicating that the language is enabled on the instance.
ID	The BCP 47 code for the language. For example, es-MX .
Text Direction	Direction of text for the language. Options are Left-to-Right or Right-to-Left .
Fallback	Language to be used if a translation is not available. The language plugin must be installed on the instance and activated for NLU, if you are using NLU topic discovery. For example, if the language is Mexican Spanish, you can specify Spanish as the fallback language.

4. Select **Submit**.
5. **Optional:** For a better user experience, translate some of the Virtual Agent system messages into the new language.
 - a. Navigate to **All**, and then enter `sys_ui_message.list` in the filter.
 - b. Translate the following Keys:
 - Are you sure you want to end the current conversation?
 - Click here to start a new conversation
 - Close contact options
 - [language name] (for example, **English** or **German**)
 - Disable audio notifications

- End conversation
- I have detected you are typing in {0}. Would you like to continue the conversation in {0}?
- Just now
- No
- No Chat Agents Currently Available
- Please pick an option.
- Please type your request
- Please type your response here
- Send
- Start a new conversation
- Start typing to filter the list of topics below...
- Support options
- Yes

Note: If you specify a supported fallback language for the language you're adding, you do not need to translate Keys in the Messages table. For example, if you add Mexican Spanish as a language, you can specify Spanish as the fallback language. The Spanish language plugin already contains translations of these messages. For more information, see [\(Legacy\) Specify a fallback language for locale-specific languages and NLU prediction](#).

6. When the languages have been added, enable Dynamic Translation.

For more information on enabling Dynamic Translation, see [Enable Dynamic Translation for languages in Virtual Agent](#) and [Configure multilingual service for ServiceNow Otto applications](#).

Specify a fallback language for locale-specific languages and LLM prediction

Provide language locale support by specifying a fallback language for Virtual Agent to use for topics, keywords, and LLM prediction. For example, the ServiceNow® platform doesn't support Mexican Spanish (mx-es), but you can designate Spanish (es) as the fallback language for a better user experience.

Before you begin

Role required: virtual_agent_admin or admin

When ServiceNow Otto for Virtual Agent is on and you work with LLM-enabled conversations, you can establish a fallback language in the Languages [sys_language] table.

Procedure

1. Navigate to the Languages table (sys_language.list).
2. Select the language to open the record.
3. In the **Fallback** field, select the Search icon (🔍) and select an available language.

The screenshot shows the 'Languages' configuration page in ServiceNow. The title bar indicates 'Languages Spanish - Mexico'. There are 'Update' and 'Delete' buttons in the top right corner. The form contains the following fields:

- Name:** Spanish - Mexico
- Application:** Global
- Active:** ☒
- ID:** es-MX
- Chart Font:** (empty)
- Text Direction:** Left-to-Right
- Fallback:** Spanish (highlighted with a green border)

At the bottom left, there are 'Update' and 'Delete' buttons.

4. Select **Update**.

Language detection and dynamic machine translation in Virtual Agent in enhanced chat

Enable a combination of language detection and machine translation for Virtual Agent to improve the chat experience for diverse users. You can designate fallback languages for locales or dynamically translate languages that are not professionally localized or are not supported in topic discovery.

Why enable language detection and dynamic translation

Chat users are more comfortable having conversations in their preferred language. Their preferred language is set in the user's profile language preference. For example, Virtual Agent greets users in the preferred language specified in their user profile. If a user responds in another language, Virtual Agent can detect the change. Depending on your user experience, users either receive a prompt regarding whether they'd like to switch the conversational language to the detected language or the conversational language updates automatically to the detected language. After the language is switched to the detected language, that language becomes the conversation's language for the remainder of the conversation. In many cases, users don't have control over their preferred language, particularly if they are guest users.

Preferred language is the language set in a user's profile. Detected language is the language a user actually types in a conversation.

Guest conversations don't support language detection if resumable guest sessions aren't enabled. Language detection and dynamic machine translation can still improve the chat experience for languages your organization hasn't authored topic content in. For example, your organization may routinely translate topic content into Spanish and French, but you can also enable Dynamic Translation on your ServiceNow® instance to support additional languages, such as Dutch and Danish, without authoring separate content for each one.

You can use language detection to support custom or locale-specific language codes as well. For example, you could designate Spanish (es) as the fallback language for Mexican Spanish (es-mx) to ensure that those users have a good customer experience.

Virtual Agent conversations can be dynamically translated. Virtual Agent uses platform translations and if no platform translations are found, then Dynamic Translation is used instead. If some conversations have been professionally translated, disable dynamic translation for those specific languages. Professional translations may be more accurate and of higher quality than machine translations. Before making a dynamic translation call, the Text Translations for Dynamic Translation [sys_cs_dynamic_translation_text] and Message [sys_ui_message] tables are checked to see if the text has been previously translated or already has a localization

record. A dynamic translation call is only made if no translation exists in either table. After a dynamic translation call is made and that text is translated, that translated text is stored in the Text Translations for Dynamic Translation [sys_cs_dynamic_translation_text] table for future use. This table is cleared every 24 hours to ensure that the most up-to-date translations stored in the Message [sys_ui_message] table are being referenced. Storing previously translated text results in fewer dynamic translation calls to third-party translation services.

Note: You can use language detection independently of Dynamic Translation. Language detection only occurs at the beginning of the conversation, while a Topic Picker is present. It doesn't apply when a user tries to switch the language in the middle of a topic.

How dynamic translation resolves and caches text

You can use Dynamic Translation during the localization process as well. If you're localizing conversations with professional linguists, you can enable Dynamic Translation while some topics and strings remain untranslated. When your deployment in that language is complete, you can disable Dynamic Translation, since professional translations are likely more accurate.

 [Virtual Agent Academy: Dynamically translate languages in Virtual Agent](#)  Watch this video for a demonstration of using Virtual Agent with Dynamic Translation.

Dynamic translation is applicable to:

- Virtual Agent for LLM (standard chat and enhanced chat)
- ServiceNow Otto panel

Language detection and Dynamic Translation process

When you enable language detection and Dynamic Translation for Virtual Agent for other languages, a variety of diverse users gain access to your Virtual Agent chat environment.

Language detection is only applicable to the first utterance entered into the conversation. Conversational language switching cannot occur mid-conversation. During enhanced chat conversations, the conversational language automatically switches to the user's detected language. This automatic switch can occur when a user enters an utterance at the start of a new conversation or within the home page's search field. If the conversational language does not automatically switch to the detected language, the preferred conversational language continues. The following list details the few exceptions in an enhanced chat conversation that would not automatically switch the conversational language:

- The language plugin for the user's detected language is not installed.
- The language plugin for the user's detected language was not installed and dynamic translation wasn't turned on.
- The confidence level of the detected language didn't meet the threshold.

Note: If the conversational language does not automatically switch to the detected language, restart the conversation and try entering a more specific utterance. Entering a more specific utterance may improve the confidence score and lead to an automatic switch to the user's detected language.

When language detection is turned off, no conversational language switching can occur.

The default system language sets all users' default session language. That user's default session language is what sets the conversational language. When a user types an utterance that is not recognized as the system language, the results depend upon your configuration for that language.

The following examples show how a conversational language can be impacted depending upon the language detection and dynamic translation settings:

Language detection and Dynamic Translation configuration settings and results

Language configuration	Results in Virtual Agent enhanced chat conversations
Language detection is enabled, but not Dynamic Translation	Language responses can show up differently depending on whether those topics have been translated. The conversation language may continue in the detected language if translated content for those topics already exists. If translated content doesn't exist, the conversation continues in the preferred conversational language. If the detected language is a locale or other language code that has been configured with a fallback language, the conversational language would either switch to a previously translated language, or the conversation would continue in the preferred conversational language.
Language detection and Dynamic Translation are enabled	If the detected language is enabled for dynamic translation in Virtual Agent Chat Settings and the confidence level is met, the conversation automatically switches to the detected language. For example, the preferred conversational language is in English but the user types a message in Spanish. The conversation language automatically switches to Spanish. The user sees the whole conversation in Spanish even though only the Virtual Agent response is dynamically translated and not the user's message. When the user starts a new chat, the preferred conversational language resumes. In this example, English would be the conversational language and the user must enter an initial message in Spanish to trigger language detection so that they can have another conversation in Spanish.

The language detection and dynamic machine translation process operates according to the following principles:

- Language detection occurs only once per conversation, at the initial user input.

If a user tries to change the language in the middle of a conversation, Virtual Agent returns an I didn't understand message.

- When the conversation has closed and restarted, the language used in the next conversation is the preferred conversational language.
- If a user's detected language is the same as the preferred language, the user does not switch languages.
- If a user's detected language has no fallback language specified and dynamic translation is not enabled for it, the conversation continues in the preferred language.
- If a user's detected language is not activated on the instance, the conversation continues in the preferred language. For more information, see [Activate a language](#).

Note: If you create exclusion rules for Dynamic Translation, those excluded terms are honored during Dynamic Translation. For more information about the Exclusion Framework, see [Exclusion Framework in Dynamic Translation](#).

For more information on enabling language detection, see [Enable Dynamic Translation for languages in Virtual Agent](#). For more information on enabling dynamic translation, see [Configure multilingual service for ServiceNow Otto applications](#).

Note: AI Search results aren't translated.

Dynamic Translation and Agent Chat

If Dynamic Translation is enabled on Virtual Agent but turned off for Agent Chat, the live agent will see what the user sees. If the user started the conversation in another language and the conversational language switches, then the live agent will see the conversation in the user's detected language. This may cause some confusion for both the agent and the customer. To resolve this issue, consider turning on Dynamic Translation for Agent Chat as well. For details, see [Configuring Dynamic Translation for Agent Chat](#).

Supported languages

For better results, install the ServiceNow language plugins for each language that uses dynamic translation. For a detailed list of language plugins, see [Activate a language](#).

You can enable dynamic translation for languages that are not currently supported on the ServiceNow platform. For details, see [Enable Dynamic Translation for an unsupported language](#).

Supported channels

Dynamic Translation for Virtual Agent is currently supported in the following channels:

- ServiceNow chat widget
- Microsoft Teams
- Slack

Note: The Virtual Agent topic test window may identify user utterances from Microsoft Teams or other adapters as `sysparm_search_text`. Dynamic Translation will translate this content as well.

The following channels don't support Dynamic Translation for Virtual Agent:

- ServiceNow mobile client
- WhatsApp
- Twilio SMS

Language detection and dynamic machine translation in Virtual Agent standard chat conversations

Language detection and machine translation work together in Virtual Agent to improve the chat experience for users across languages. You can designate fallback languages for locales or dynamically translate languages that aren't professionally localized or aren't supported in topic discovery.

Why enable language detection and dynamic translation

Chat users are more comfortable having conversations in their preferred language. Their preferred language is set in the user's profile language preference. For example, Virtual Agent greets users in the preferred language specified in their user profile. If a user responds in another language, Virtual Agent can detect the change. Depending on your user experience, users either receive a prompt regarding whether they'd like to switch the conversational

language to the detected language or the conversational language updates automatically to the detected language. After the language is switched to the detected language, that language becomes the conversation's language for the remainder of the conversation. Often, users don't have control over their preferred language, particularly if they are guest users.

Guest conversations don't support language detection if resumable guest sessions aren't enabled. Language detection and dynamic machine translation can still improve the chat experience for languages your organization hasn't authored topic content in. For example, your organization may routinely translate topic content into Spanish and French, but you can also enable Dynamic Translation on your ServiceNow® instance to support additional languages, such as Dutch and Danish, without authoring separate content for each one.

You can use language detection to support custom or locale-specific language codes as well. For example, topic discovery doesn't support Mexican Spanish (es-mx), but it does support Spanish (es). You can designate Spanish as the fallback language for Mexican Spanish, ensuring that these users have a good customer experience.

Note: You can use language detection independently of Dynamic Translation.

How dynamic translation resolves and caches text

Virtual Agent conversations can be dynamically translated. Virtual Agent uses platform translations and if no platform translations are found, then Dynamic Translation is used instead. If some conversations have been professionally translated, disable dynamic translation for those specific languages. Professional translations of topics may be more accurate than machine translations. Before making a dynamic translation call, the Text Translations for Dynamic Translation [sys_cs_dynamic_translation_text] and Message [sys_ui_message] tables are checked to see if the text has been previously translated or already has a localization record. A dynamic translation call is only made if no translation exists in either table. After a dynamic translation call is made and that text is translated, that translated text is stored in the Text Translations for Dynamic Translation [sys_cs_dynamic_translation_text] table for future use. This table is cleared every 24 hours to ensure that the most up-to-date translations stored in the Message [sys_ui_message] table are being referenced. Storing previously translated text results in fewer dynamic translation calls to third-party translation services. For more information about localizing Virtual Agent conversations, see [\(Legacy\) Localizing Virtual Agent NLU conversations](#).

You can use Dynamic Translation during the localization process as well. If you are localizing conversations with professional linguists, you can enable Dynamic Translation while some topics and strings remain untranslated. When your deployment in that language is complete, you can disable Dynamic Translation, since professional translations are likely more accurate.

 [Virtual Agent Academy: Dynamically translate languages in Virtual Agent](#)  Watch this video for a demonstration of using Virtual Agent with Dynamic Translation.

Language detection and Dynamic Translation process

When you enable language detection and Dynamic Translation for Virtual Agent for other languages, a variety of diverse users gain access to your Virtual Agent chat environment.

Language detection is only applicable to the first utterance entered into the conversation. Conversational language switching cannot occur mid-conversation. Language detection prompts users with a question regarding whether they'd like to switch the conversational language during Virtual Agent LLM standard chat conversations.

When language detection is turned off, no conversational language switching can occur.

The default system language sets all users' default session language. That user's default session language is what sets the conversational language. When a user types an utterance that is

not recognized as the system language, the results depend upon your configuration for that language.

The following examples show how a conversational language can be impacted depending upon the language detection and dynamic translation settings:

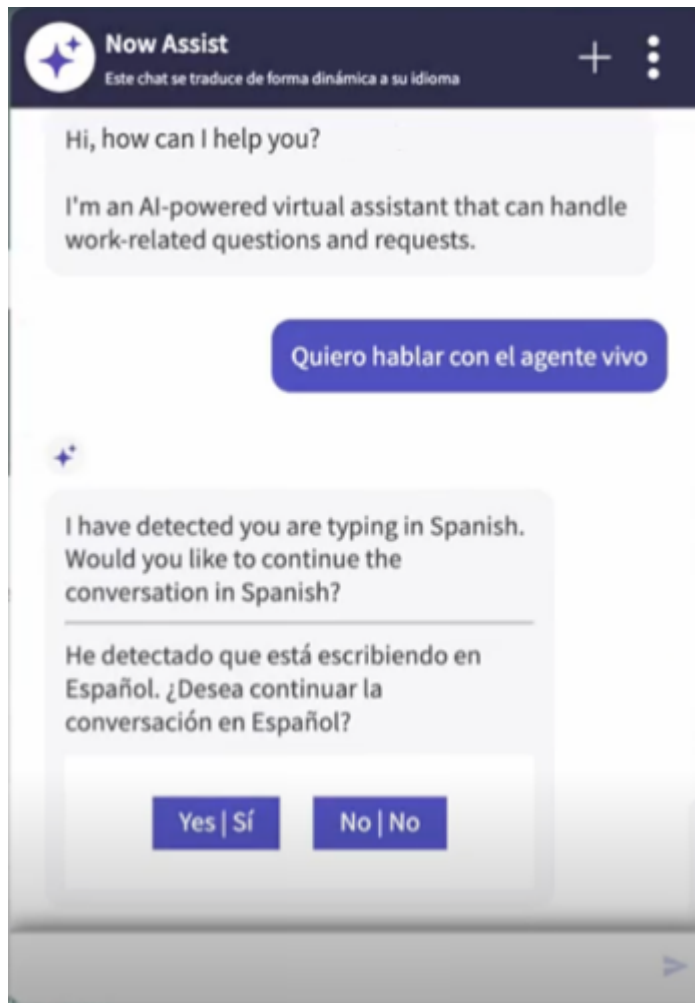
Language detection and Dynamic Translation configuration settings and results

Language configuration	Results in Virtual Agent LLM standard chat conversations
Language detection and Dynamic Translation aren't configured.	For topics that haven't been translated into other languages, the language they appear in depends on the language they were authored in. Typically, the default system language is used for topics and topic discovery.
Language detection is enabled, but not Dynamic Translation	Language responses can show up differently depending on whether those topics have been translated. The conversation language may continue in the detected language if translated content for those topics already exists. If translated content doesn't exist, the conversation continues in the preferred conversational language. If the detected language is a locale or other language code that has been configured with a fallback language, Virtual Agent asks the user if they want to switch the conversation to the fallback language. For example, if the detected language is Mexican Spanish (mx-es), and Spanish (es) has been designated as the fallback language, Virtual Agent asks: I have detected you are typing in Spanish. Would you like to switch the conversation to Spanish? (Yes/No) If the user selects Yes, the fallback language is used for topic discovery and topic display. This continues until the conversation ends. If the user selects No, Virtual Agent does not prompt them again during the conversation.
Language detection and Dynamic Translation are enabled	If the detected language is enabled for dynamic translation in Virtual Agent Chat Settings, Virtual Agent asks the user if they want to switch the conversation to the detected language. For example, the preferred conversational language is in English but the user types an utterance in Spanish. The user receives a prompt asking whether they'd like to switch the conversation to Spanish. The prompt reads, I have detected you're typing in Spanish. Would you like to switch the conversation to Spanish? (Yes/No) If the user selects No, Virtual Agent does not prompt them again during the conversation and the conversation continues in English. If the user selects Yes, the user prompt is translated to the default language. The default language for LLM conversations is within the <code>com.glide.cs.llm.default.Language</code> system property. All topic matches are translated dynamically into the user's conversation language and

Language detection and Dynamic Translation configuration settings and results (continued)

Language configuration	Results in Virtual Agent LLM standard chat conversations
	displayed. In this example, the conversation continues in Spanish and Virtual Agent expects the user to continue chatting in Spanish. After the conversation ends and the user restarts a new conversation by reloading their browser or initially navigating to a portal with no conversation in progress, the prior conversational language (Spanish in this example) continues.

Example of a Virtual Agent LLM standard chat conversation using language detection



The language detection and dynamic machine translation process operates according to the following principles:

- Language detection occurs only once per conversation, at the initial utterance.

If a user tries to change the language in the middle of a conversation, Virtual Agent returns an I didn't understand message.

- After the conversation closes and restarts, the language used in the next conversation varies depending on how the user restarted the conversation. If the user restarts the conversation by reloading the browser, the preferred language is restored in the next conversation. If the user restarted the conversation by using the chat widget's restart feature, the previous conversational language is restored in the next conversation. Regardless of how a

conversation has closed and restarted for standard chat conversations, if a user did not accept to switch languages after a different language was detected in the previous conversation, the preferred language is restored in the next conversation.

- If a user's detected language is the same as the preferred language, the user is not asked to switch languages.
- If a user's detected language has no fallback language specified and dynamic translation is not enabled for it, the conversation continues in the preferred language.
- If a user's detected language is not activated on the instance, the conversation continues in the preferred language. For more information, see [Activate a language](#) .

i Note: If you create exclusion rules for Dynamic Translation, those excluded terms are honored during Dynamic Translation. For more information about the Exclusion Framework, see [Exclusion Framework in Dynamic Translation](#) .

For more information on enabling language detection, see [Enable Dynamic Translation for languages in Virtual Agent](#). For more information on enabling dynamic translation, see [Configure multilingual service for ServiceNow Otto applications](#).

i Note: AI Search results aren't translated.

Dynamic Translation and Agent Chat

If Dynamic Translation is enabled on Virtual Agent but turned off for Agent Chat, the live agent sees what the user sees. If the user started the conversation in another language and the conversational language switches, then the live agent will see the conversation in the user's detected language. This may cause some confusion for both the agent and the customer. To resolve this issue, consider turning on Dynamic Translation for Agent Chat as well. For details, see [Configuring Dynamic Translation for Agent Chat](#).

Supported languages

Install the ServiceNow language plugins for each language that uses dynamic translation. For a detailed list of language plugins, see [Activate a language](#) .

You can enable dynamic translation for languages that aren't currently supported on the ServiceNow platform. For details, see [Enable Dynamic Translation for an unsupported language](#).

Supported channels

Dynamic Translation for Virtual Agent is currently supported in the following channels:

- ServiceNow chat widget
- Microsoft Teams
- Slack

i Note: The Virtual Agent topic test window may identify user inputs from Microsoft Teams or other adapters as `sysparm_search_text`. Dynamic Translation will translate this content as well.

The following channels don't support Dynamic Translation for Virtual Agent:

- ServiceNow mobile client
- WhatsApp
- Twilio SMS

Virtual Agent reference

Reference topics provide descriptions about the Assistant Designer interface components and technical details to learn more about scripting methods and the Virtual Agent Interactions table.

Components installed with Virtual Agent

Several types of components are installed with activation of the Virtual Agent plugin, including tables, user roles, and scheduled jobs.

Plugins installed

The following table lists the plugins that are installed when you activate Virtual Agent.

Plugins automatically installed with Glide Virtual Agent

Plugin	Description
Integration - Multiple Provider Single Sign-On Installer [com.snc.integration.sso.multi.installer]	Enables authentication for multiple identity providers (IDPs) using SAML or OpenID connect(OIDC).
Localization Framework Installer [com.glide.localization_framework.installer]	Provides the framework for localization of Virtual Agent conversations.
Virtual Agent integration with actionable notifications com.glide.cs.actionable.notification	Enables ServiceNow actionable notifications on Virtual Agent channels.

Roles installed

Virtual Agent adds several roles for users operating as Virtual Agent administrators. The parent administrator role, Virtual Agent administrator [virtual_agent_admin], contains all the sub-roles available.

Note:

Simplify user administration by creating groups that contain all the roles necessary for specific personas rather than to individual users. You can then assign individual users to those groups. When users transition to new roles, you can then re-assign their group memberships, and avoid scenarios where users retain unexpected roles.

For details on the administration of users, groups, and roles, see [User Administration](#) .

- If the Virtual Agent admin is granted access to AI Search-related tables, the search application administrator role [search_application_admin] is included.
- If the Virtual Agent admin is granted access to Entity View Action Mapper tables, the EVAM admin role [evam_admin] is included.
- For multilanguage support, the localization_requestor role is included by default. For more information, see [Localization Framework roles](#) .
- Automated Customer Experiences (ACE) user [sn_ace.ace_user] role can access and read ACE records.

- Workflow Studio [action_designer] role launches the Workflow Studio app, to automate tasks with sequences of related steps.
- Activity subscriptions administrator [actsub_admin] role creates subscribable objects and subscribes to activities on those objects.
- External application installation administrator [external_app_install_admin] role installs external apps such as Slack and Microsoft Teams.

Any user assigned this role can alter or delete topics created in Assistant Designer, including topics that other topics refer to or have as dependencies.

- The flow designer [flow_designer] role launches the Workflow Studio app, to create multi-step workflows.
- Image administrator [image_admin] role manages image files on the Images [db_image] table.
- Search application administrator [search_application_admin] role inserts data into, updates, and deletes search-UX related configuration tables including: [sys_search_context_config], [sys_search_source], [m2m_search_context_config_search_source], [sys_search_facet], and [sys_search_filter]. The AI Search administrator [ais_admin] role is included in this role to perform AI Search configuration.
- Self-service manager [sn_ssa_core.self_service_manager] role performs CRUD operations on Pattern and Activity configuration and the Deflection data tables.
- Virtual Agent branding [va_branding] role, fetches branding settings via scripted rest API.

Note: Avoid granting an admin role when more specialized roles are available.

Users installed

The Glide Conversation Server plugin (com.glide.cs) automatically installs a virtual agent user (virtual.agent) in the User [sys_user] table. Ongoing [Virtual Agent interactions](#) are assigned to this virtual agent user. If you're using Advanced Work Assignment (AWA), interactions assigned to the virtual agent user aren't routed by AWA. The virtual agent user is also used in the default web chat branding settings to associate a virtual agent user profile with a bot avatar.

Tables installed

Table	Description
Adapter Configurations [sys_cs_adapter_configuration]	Stores records for default keywords, labels, and message values for third-party messaging integrations.
Adapter Configuration Page [sys_cs_adapter_configuration_page]	Stores the configuration for third-party messaging integrations. This table is the root table for: • Configurations - Slack Integration [sys_cs_adapter_configuration_page_slack] • Configurations - Teams Integration [sys_cs_adapter_configuration_page_teams]

Table	Description
	- Configurations - Workplace Integration [sys_cs_adapter_configuration_page_workplace] - Configurations - Facebook Messenger Integration [sys_cs_adapter_configuration_page_messenger]
Adapter Message [sys_cs_adapter_message]	Stores adapter messages.
Brandings [sys_cs_branding_setup]	Stores different branding configurations for the web-based chat client used in an instance.
Client Adapter [sys_cs_client_adapter]	Stores each adapter state.
Consumer Channel [sys_cs_consumer_channel]	Stores consumer channel information.
Consumer Device Context [sys_cs_consumer_device_context]	Stores consumer device context information.
Context Topics [sys_cs_context_topic]	Stores different configurations for determining the appropriate conversation topic displayed to end users based on their pre-chat survey answers.
Conversation [sys_cs_conversation]	Stores a record for each conversation on the instance. Each record includes the Conversation Task [sys_cs_conversation_task] and Conversation Message [sys_cs_message] related lists, which show all the topics run and associated messages presented in the conversation.
Conversation Consumer [sys_cs_consumer]	Stores a record representing the user in a conversation, and references the associated sys_user record for that user.
Conversation Server Field Script Validators [sys_cs_field_script_validator]	Stores text format validation rules and default error messages. Read-only.
Custom Controls [sys_cs_custom_control]	Identifies custom controls.
Custom Control Definitions [sys_cs_custom_control_definition]	Binds a client type (for example, web or mobile) to a custom control.
Conversation Media	Media attached to conversations are stored in sys_attachment, and associated to this table.

Table	Description
[sys_cs_media]	
Conversation Message [sys_cs_message]	Stores a record for each message in a conversation. Shows the messages displayed for each topic in the conversation flow.
Conversation Server Connect Hand-off [sys_cs_connect_handoff]	Stores mapping of Virtual Agent conversations and Workspace conversations.
Conversation Session [sys_cs_session]	Stores a record for each conversation.
Conversation Task [sys_cs_conversation_task]	Stores a record for each conversation task. Each record shows the conversation flow, which can include multiple topics that are run during the conversation.
Conversation Task FDIH Invocations [sys_cs_fdi_h_invocation]	Tracks the state of a call to a Workflow Studio action or subflow in a conversation.
Conversation Vendor [sys_cs_vendor]	Stores vendor information.
CS Consumer Account [sys_cs_consumer_account]	Stores third-party user information.
Custom Greetings and Setup [sys_cs_context_profile]	Stores a profile record for context-driven chat experiences. Contains customizations in the following child tables: • Setup topics [sys_cs_context_profile_topic] - Stores the setup topics used for each setup topic type. • Promoted topics [sys_cs_context_profile_promotion] - Stores the topics that are highlighted in the Virtual Agent client. • Search Profiles [sys_cs_context_profile_search] - Stores the AI search profile for the associated chat experience.
Custom Controls [sys_cs_custom_control]	Stores the custom input and response controls.
Custom Control Definitions [sys_cs_custom_control_definition]	Binds a client type (for example web chat client) to a custom control. Stores the channel, domain, and user interface component defined for a custom control.

Table	Description
Live Agent Setup [sys_cs_live_agent_setup]	Stores the Live Agent setup with queue information.
Live Agent Support Queue Cache [sys_cs_support_queue_cache]	The database cache used for support queue wait times.
Published Topic [sys_cb_design_topic]	Stores design topic definitions and references the runtime topic.
Session Binding [sys_cs_session_binding]	Stores session binding and AMB channel information.
Configurations - Slack Integration [sys_cs_adapter_configuration_page_slack]	Extends the sys_cs_adapter_configuration_page table. Stores the configuration for the Slack messaging application.
Teams Adapter Configuration Page [sys_cs_adapter_configuration_page_teams]	Extends the sys_cs_adapter_configuration_page table. Stores the adapter configuration for the Microsoft Teams messaging application.
Vendor Client Adapter Configuration [sys_cs_vendor_client_adapter_configuration]	Stores the adapter configuration for third-party messaging applications.
Topic [sys_cb_topic]	Stores a record for each topic (design-time definition).
Topic [sys_cs_topic]	Stores an instance of a topic from sys_cb_topic at run time. Records on this table are cleaned every 12 hours.
Topic Category [sys_cb_topic_category]	Stores all the categories that identify the different types of topics, such as setup topics and small talk topics. Also includes custom categories defined by admins.
Topic Library Usages [sys_cs_topic_library_usage]	Stores references to published topic blocks.
Vendor Context Configuration [sys_cs_vendor_context_configuration]	Stores vendor-specific device context information.
Virtual Agent Context [sys_cs_virtual_agent_context]	Stores Virtual Agent context variables.

Properties installed

Property	Description
com.glide.cs.branding.msg_delay	Minimum delay between bot messages
com.glide.cs.branding.type_presence_delay	Minimum delay before displaying typing animation
com.glide.cs.conversation_faulted_reason	Message that displays the following default message when a conversation has faulted: It seems that you have left the conversation.
com.glide.cs.general.error_message	Generic error message
com.glide.cs.general.live_agent_handoff_error_message	Message when no live agent has been set up
com.glide.cs.general.live_agent_handoff_message	Message to display when handing over to a live agent
com.glide.cs.general.support_email	General support email
com.glide.cs.general.support_hours	General support hours
com.glide.cs.general.support_phone	General support phone
com.glide.cs.global_configuration	The sys_id of the default configuration page (sys_cs_configuration_page)
com.glide.cs.javascript.reserved_words	Reserved words in JavaScript that should not be used as vaInputs names or vaVars names
com.glide.cs.live_agent_queue	The chat queue that users transfer to when a conversation transitions from a virtual agent to a live agent. This default queue is used unless the topic specifies a specific queue to use.
com.glide.cs.suggest.minimum_characters	The minimum number of characters the user must enter in a keyword search before partial matching, phonetic matching, and spellcheck begin to function.
com.glide.cs.suggest.enable_partial_search	Enables partial matching searches on topic searches when set to true.
com.glide.cs.suggest.enable_phonetic_search	Enables phonetic searching on topic searches when set to true.
com.glide.cs.suggest.enable_spell_check	Enables alternate search spellings on topic searches when set to true.

Assistant Designer interface reference

The Assistant Designer interface lets you create, modify, test, publish, and localize topics, topic blocks, and custom controls.

Assistant Designer provides the following views. Some tabs may not be available, depending on how you configured your instance or the type of topic you are working with.

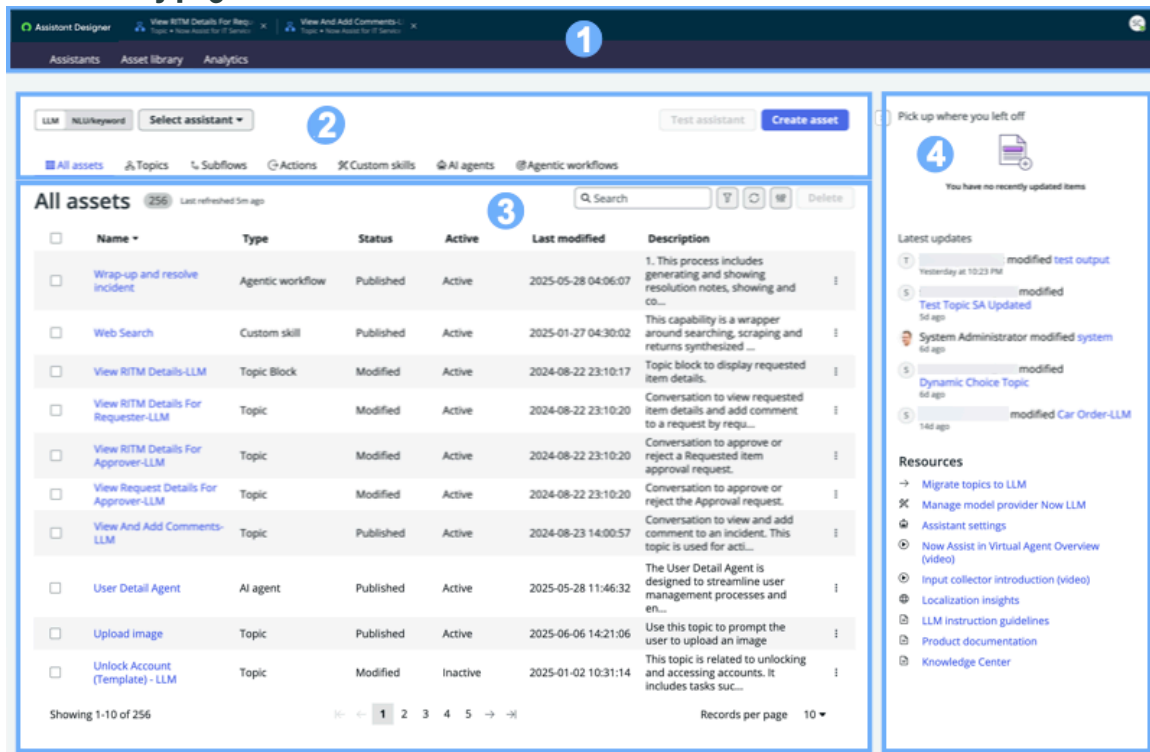
Assistant Designer Asset library

The Assistant Designer Asset library page lists all LLM assets and NLU/Keyword topics for Virtual Agent conversations. You can also create more topics, subflows, actions, custom skills, AI agents, and agentic workflows.

Note: An updated Assistant Designer Asset library user interface is available when you install ServiceNow Otto for Virtual Agent. This content assumes that you can see the list view. If ServiceNow Otto for Virtual Agent is not installed, you see the legacy UI and topics page. For more information, see [Virtual Agent Designer legacy topics page](#).

To navigate to Assistant Designer Asset library, select **All > Conversational Interfaces > Assistant Designer**, then select the **Asset library** tab.

Asset library page



Options in the Asset library

Sections	Fields and descriptions
1. Navigation header bar	Header bar for navigation and Assistant Designer settings. • Assistants: Select this tab to view and create LLM assistants. • Asset library: Select this tab while viewing a topic to return to the Virtual Agent Asset library page. • Analytics: Select this tab to view the Virtual Agent Analytics page. • Topic tabs: Shows any open LLM assets and NLU/Keyword topics as navigation tabs. Hover over a tab to show its type and scope. Select the tab to view that asset or topic. Select the close icon ✕ on a tab to close it. Note: If you close a topic with unsaved changes, a warning window opens. Select Cancel or Close without saving.

Options in the Asset library (continued)

Sections	Fields and descriptions
	If you open more tabs than your browser window can display, a drop-down tab holding the overflowing items appears on the header bar. Select the drop-down tab followed by the asset or topic that you want to view. • User preferences: Icon to access preferences and settings. Hover on the icon to see user name and roles. Select the icon to shows settings for the Virtual Agent Asset library view. Toggle Group tabs by app scope in the settings window to group or ungroup tabs by their application scope. Note: Each group of tabs has a random color when you group tabs by app scope. For more information on changing the scope, see (Legacy) Change the application scope for Virtual Agent Designer topics.
2. Topic list controls	Controls for filtering, managing, testing, creating, and deleting Virtual Agent topics. • LLM or NLU/keyword toggle switch: Use this switch to select between LLM or NLU/keyword discovery type topic lists. ◦ LLM controls: ▪ Select Assistant: Drop-down menu to filter topics associated with a given LLM assistant. Note: Hover over the tooltip icon (i) to see information about the assistant you have selected from the drop-down menu. ▪ Test Assistant: Opens the testing window for the topics that are associated with the assistant you selected. You can use three testing options: Standard Chat, Enhanced Chat, or Premium chat. If you configured either Enhanced Chat or Premium Chat for your instance, you can use that test option. If you configured both Enhanced and Premium chat, you can choose between the two. If you configured Standard Chat, you can choose from all three options. You can see which chat experiences an assistant has by checking Display experiences under the assistant's Settings tab. For more information on assistants and testing options, see Testing assistants and Display your assistant on a portal, channel, or mobile app.

Options in the Asset library (continued)

Sections	Fields and descriptions
	Note: If you have not filtered topics with Select assistant, the option Test in ServiceNow Otto panel appears in this drop-down menu. For more information on associating an LLM assistant with a topic, see Creating a Virtual Agent topic. ▪ Create Asset: Button to create a new Virtual Agent topic. For more information, see Creating a Virtual Agent topic. ▪ All assets: Button to view all LLM assets. ▪ Topics: Button to view only basic LLM topics. ▪ Subflows: Button to view only conversational subflows. ▪ Actions: Button to view only conversational actions. ▪ Custom skills: Button to view custom skills from AI Skill Kit. ▪ AI agents: Button to view list of AI agents. For more information, see Explore AI agents. ▪ Agentic workflows: Button to view list of Agentic workflows. For more information, see Agentic workflows. ○ NLU/Keyword controls: ▪ Test active topics: Button to test all active NLU/keyword topics. ▪ Create topic: Button to create a new NLU/keyword topic. For more information, see, Creating a Virtual Agent topic. • Search icon : Opens a field to enter a string to search for a match in the topic list. When you enter a string, the text is used as a condition in the Filter. • Filter icon : Opens a menu to add filtering conditions that contain a field, operator, and value(s). If you define a condition or enter a string using the <i>Search</i> button, you can remove it by selecting the delete condition  icon. • Refresh list icon : Refreshes the currently defined list of topics. • Edit columns icon : Opens a menu to reorder or change the columns in the topic records list from their defaults.
3. Topic records list	List of all assets and topics available, filtered by list controls. Default columns include the following. • Name: Name given to the topic when created. • Type: Indicates the type of the topic. • Status: Indicates the status of the topic:

Options in the Asset library (continued)

Sections	Fields and descriptions
	○ Draft ○ Published ○ Modified • Active: Indicates whether the asset or topic is <i>Active</i> or <i>Inactive</i>. • Last modified: Time and date when the topic was last modified. • Description: Short description entered when you create the topic. For more information, see Creating a Virtual Agent topic. • Promoted in: Lists the assistants in which the asset is promoted. • Show actions for this row : Icon to open a menu with the following options. ○ <i>Visibility</i>: shows options for the asset's visibility. A check mark appears next to any menu option when it is activated. Note: If the topic is inactive and you try to promote it or make it discoverable or visible, you see a message reading <i>This asset must be active in order to be promoted, discoverable, or visible.</i> Set the topic to <i>Active</i> to perform those actions. ▪ Promoted: Option to toggle the topic's <i>Promoted</i> status. For more information, see Promote or demote LLM conversational subflows, actions, and topics in Assistant Designer. ▪ Discoverable: Option to toggle the topic's <i>Discoverable</i> status. If you mark an asset as discoverable, the LLM assistant can find and use it when it matches the user query. ▪ Visible: Option to toggle the topic's visibility to users. ▪ Active: Option to toggle the topic's <i>Active</i> status. Note: System topics, setup topics, topic blocks, custom controls, and custom controls can't be made visible or discoverable. ○ Conversational Settings: Option to open a window with information on the asset. ▪ <i>Name:</i> Name of the asset. ▪ <i>Asset type:</i> Type of the asset. ▪ Link to asset: Option to open a tab for the asset in Virtual Agent Asset library. ▪ <i>Description:</i> Asset description used for topic discovery. This description is also shown in the asset's Properties tab and its <i>Description</i> value on the assets table on the Assistant Designer Asset library page.

Options in the Asset library (continued)

Sections	Fields and descriptions
	This option appears if you have selected LLM on the LLM and NLU/Keyword toggle switch. For more information, see Conversational settings for assets in the Asset library. ○ Remove from assistant: Option to remove asset from an LLM assistant. You must first select an assistant from the Select assistant drop-down menu to filter assets. This option appears if you have selected LLM on the LLM and NLU/Keyword toggle switch. ○ Delete: Option to delete the topic. Note: If you select Delete, a dialog box opens. Select Delete to continue or Cancel to stop.
4. Side panel	Collapsible panel showing recently opened topics and helpful resources. Select the open or close panel icon  /  to toggle the panel open or closed. • Pick up where you left off: List of the last 3 topics you opened and when they were last updated. Select any from the list to open that topic. • Latest updates: List of the last 5 users to open a topic, along with the topic name and when it was last updated. • Resources: Links and features available for LLM or NLU topics. You can view localization insights, product documentation, and migrate NLU topics to LLM from here. Note: The Migrate topics to LLM option appears in the Resources section only if you have activated ServiceNow Otto for Virtual Agent.

Create a topic form

The Create a topic form is used to set the properties for a new conversational topic for Virtual Agent.

The Create a topic form layout is similar to the Edit topic properties form layout found in the [Topic Properties tab](#). When you finish creating a topic using this form, the model type and topic types are locked in the Properties tab.

Create a topic form

Create a topic

Enter properties. [Learn about designing topics.](#)

Basic properties

* Application scope ⓘ

GlobalX ▼

Model Type ⓘ

LLM▼

* Type

Topic▼

* Internal name ⓘ

Enter a unique name

* Display name ⓘ

Enter a unique name

* Topic description used for discovery ⓘ

Describe the issue this topic handles.

ⓘ Use plain language and detail to describe the topic and improve topic discovery. [See examples](#)

Select LLM assistants to make topics available to them and any primary assistants

- ☐ AIA Assistant
- ☒ Now Assist in Virtual Agent (default)
- ☐ Now Assist Panel - Platform (default)

Advanced properties (optional)

▼ Who can access this topic

▼ Live Agent

▼ Additional

Create a topic form

Field	Description
Application scope	Select the application scope where the topic becomes available. Note: The application scope cannot be changed once the topic is created.
Model Type	The LLM value is used for topic discovery within LLMs. For more information, see LLM topic discovery in Virtual Agent. Note: If this field doesn't appear, verify that both the ServiceNow Otto panel and ServiceNow Otto are turned on. For more information, see Activate the ServiceNow Otto panel standard chat and Assistants overview.
Type	List of assets that you can create. Select Topic.
Internal name	Internal name for topics, small talk topics, and setup topics that reflects its business purpose. Internal name displays on the Assistant Designer Asset library and must be unique across the platform.
Display name	Topic name that displays to users when they interact with Virtual Agent. Display name must be unique.
Topic description used for discovery	A detailed explanation of the LLM topic's purpose, which differentiates it from other topics. The description is used for topic discovery, so the more detailed and specific the topic description is, the more likely it will be to find a good match. A weak example would be: Help users see how many vacation days they have left. A stronger example would be This topic is about a holiday calendar for employees in a company. Users can ask for the holiday list or company holiday for a specific year, specific date, inquire about a specific holiday, or ask if they have a day off for a particular holiday. The topic also covers the availability of a holiday calendar and specific holidays like Freedom Day and wellbeing Day. For more information, see LLM description and instruction guidelines for Virtual Agent topics.
Select LLM assistants to make topics available to them and any primary assistants	The LLM assistant that you associate with the topic for more accurate topic discovery. If you established primary and secondary assistants during the ServiceNow Otto for Virtual Agent guided setup, an on-screen message explains whether the selected assistant is a primary or secondary assistant. When testing a primary LLM assistant, topics from the secondary assistants are included in topic discovery. To view the LLM assistants and their hierarchy, select Manage assistants. If you associate a topic block and a related topic with the same LLM assistant, both are shown as associated with that assistant. When you add an LLM assistant or remove one from your topic, the topic reverts to unpublished.

Create a topic form (continued)

Field	Description
	When you associate an LLM topic with an LLM assistant and publish it, a record for the association is created in the Profile and Document Mapping [sys_cs_document_context_profile] table. If you dissociate the Setup topic from the LLM assistant before republishing, the record is deleted. For more information, see Create LLM assistants.
Advanced properties (optional)	
Who can access this topic	
System Roles	Roles that a user must have to view and run the topic. If a topic is public (available to users, including guest users, who aren't authenticated in the ServiceNow platform), select only the Public role.
Channels	Chat clients in which the topic or topic block will run. These channels are different from the default channels that are natively supported by Virtual Agent. Your instance may have additional channels for custom chat integrations created for it. For more information about channels, see Deploying Virtual Agent topics in other channels.
Context	Expression logic to specify a condition for presenting this topic to users. The condition must evaluate to true. You can set this field using either the condition builder or a script. • Condition: Use the condition builder to add or edit conditions. • Script: Use the script editor to create or edit a script that contains a condition statement.
Live agent	
Live agent context variables	Live agent context variables that are defined in the General Chat Settings. Select the variables that provide dynamic context, which means information from the Virtual Agent chat. This information is transferred from the bot conversation to the live agent. For information about the default list of live agent variables, see Live agent chat context variables.
Additional	
Categories	Label used to identify and group-related topics, topic blocks, or custom controls.

Topic Properties tab

Use the **Topic Properties** tab to identify a topic and how it's used. You can control who uses the topic and what channels it can run in.

The information on the Topic Properties tab reflects what was provided on the Create a topic form. For more information, see [Create a topic form](#) and [Creating a Virtual Agent topic](#).

Topic Properties tab

Flow

Properties

Languages

Edit topic properties

Enter properties. [Learn about designing topics.](#)
Modified just now

Basic properties

* Application scope ⓘ

Global

Model Type ⓘ

LLM

* Type

Topic

* Internal name ⓘ

Ask HR Question

* Display name ⓘ

Ask HR Question

* Topic description used for discovery ⓘ

This skill is a fallback handler for open-ended or general HR-related queries. Trigger this skill when the user asks for HR support but doesn't specify a particular HR topic like leave, benefits, or misconduct. It should act as the **default catch-all** for **nonspecific** or general HR inquiries.

ⓘ Use plain language and detail to describe the topic and improve topic discovery. [See examples](#)

Select LLM assistants to make topics available to them and any primary assistants

☐ AIA Assistant

☒ Now Assist in Virtual Agent (default)

☐ Now Assist Panel - Platform (default)

Advanced properties (optional)

Who can access this topic

Live Agent

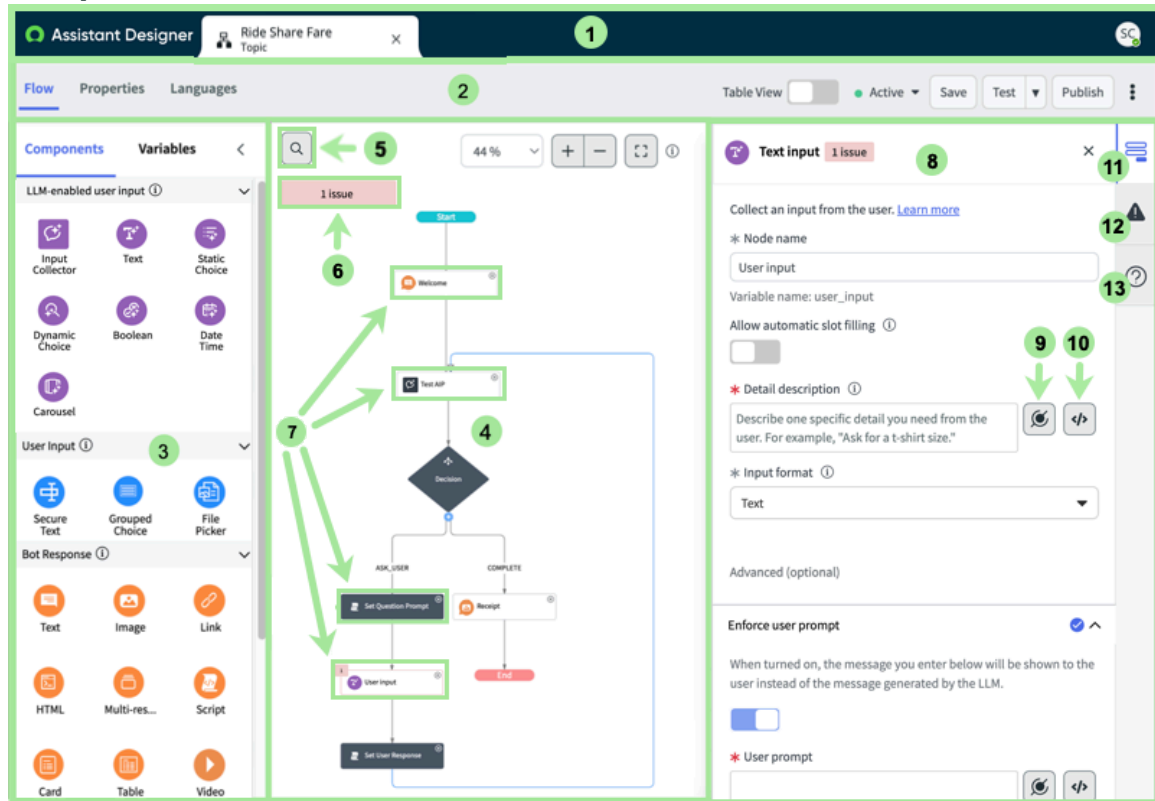
Additional

Topic Flow tab

Use the topic **Flow** tab to build the conversation flow. Use the controls for user inputs, bot responses, and utilities to define the flow.

Flow tab (default view)

Example Flow tab in default view



Note: An updated Assistant Designer Asset library user interface is available when you install ServiceNow Otto for Virtual Agent. This content assumes that you can see the list view. If ServiceNow Otto for Virtual Agent is not installed, you see the legacy UI and topics page. For more information, see [Virtual Agent Designer legacy topics page](#).

Legend (default view)

Feature	Description
1. Navigation bar	Tabs to navigate between your design and the Asset library. You can open and navigate between multiple topics and the Asset library by selecting Assistant Designer or an open topic's tab. Select the close icon  on a tab to close that topic.
2. Topic header bar	Tabs and design options for your topic: • Tabs: Each tab provides a different view for working on your conversation. ◦ Flow: Displays the canvas for building your conversation flow. ◦ Topic Properties tab ◦ (Legacy) NLU Topic Languages tab (available if multiple languages are configured for Virtual Agent). • Table View: Option that displays a table view of the nodes in the conversation flow. You can use this option to switch

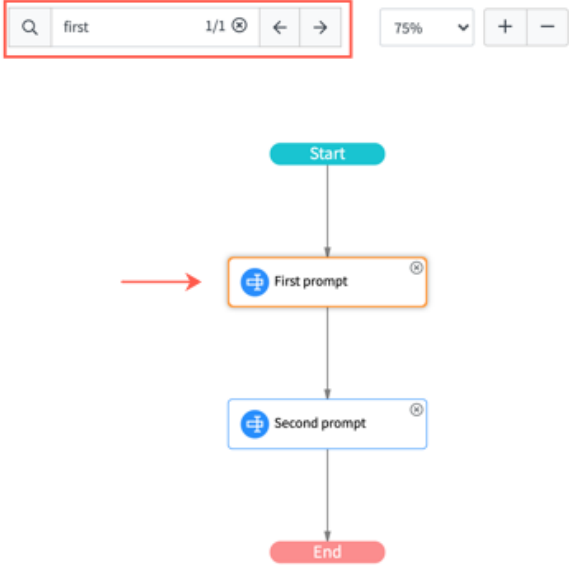
Legend (default view) (continued)

Feature	Description
	between table view and diagram view as you design your conversation. • Active/Inactive: Option that changes the design state so that it's active (available to users) or inactive (in development and not available to users). Select it to see the following options: ◦ Included in Topic Discovery: Option to make the topic discoverable via keywords, NLU, or Now LLM Service. If inactive, the topic is included when performing search fallback. ◦ Included in List of Topics: Option to make the topic visible under the “show me everything” list of topics. • Save: Saves the current design. • Test: Opens the design in a chat test window so that you can preview and test the conversation. If the ServiceNow Otto panel, Microsoft Teams application, or Slack application is configured for your environment, preview options for those channels are displayed in the Test button list. Select Preview in Otto panel or Preview in Microsoft Teams in the list to test your topic in those environments. • Publish: Activates the design and makes it available to the chat clients. If you're using language-specific NLU models, select Review and publish from the Publish list to specify languages. • More actions on topics icon  ◦ Duplicate: Copy the current design to create an unpublished version of the design. ◦ Delete: Remove the current and published version of the design. When updating designs, the header bar displays an Unpublished Changes message until you publish the topic. Hover over the message to see a tooltip explaining the unpublished changes. If you close the topic without saving, a Recover changes button appears on the header bar. Select this button to recover any unpublished changes that were unsaved before closing. The Recover changes button is replaced by the Unpublished changes Recover changes Table View 100%     message. If you add a node, then close the topic before saving or publishing, the node disappears and the button and

Legend (default view) (continued)

Feature	Description
	message appear when you reopen the topic. Select Recover changes to restore the node and remove the Unpublished changes  Recover changes Table View button.  100%  + -  
3. Palette	Collapsible sidebar with Components and Variables tabs. The Components tab shows a list of controls that you can drag onto the canvas to build a conversation. The following types of controls are available: • User Input: Controls used to prompt and capture information from the user in a conversation. When ServiceNow OttoAsset library is enabled and you're working with a large language model (LLM) topic, the LLM User Input section indicates which controls are LLM compatible. • Bot Response: Controls for showing virtual agent responses in a conversation. • Utilities: Controls for performing actions within a topic, such as running a script, adding different conversation paths (branches) in a topic, or adding topic blocks. The Variables tab includes inputs and ComponentsVariables< Input ⓘ channel_type email_address unlock_account user Script ⓘ IVR_CHANNEL_TYPE is_authenticated password_reset_process_ur... userid scripts. Input section

Legend (default view) (continued)

Feature	Description
	• Live Agent variables specified on the topic Properties tab to provide contextual information from the virtual agent session to the live agent. • Input variables defined by User Input controls and Utilities that are added to the flow on the canvas. • "Nodeless" NLU entities added by the topic author that are used as slot-filled input variables for the topic. Script section The Script section includes the scripts found in nodes on the canvas. The topic author can add further script variables to store values outside of control variables. Scripting variables enable more complex scripting scenarios.
4. Canvas	Area that displays the conversation flow graphically. As you drag a control onto the canvas, that control becomes a node in the conversation flow. Includes a related property sheet that opens in the right pane. Each flow has a Start and End node. When you add or remove controls, the layout of controls on the canvas is adjusted automatically.
5. Node search	Option for quickly finding specific nodes in the conversation flow. Select the node search icon  to expand the search field and enter the name of the node that you want to find. When a matching node is found, the node is highlighted in the flow. Use the left or right arrows to search for the previous or next node that matches the search node name. Node search showing highlighted node  <pre> graph TD Start([Start]) --> FirstPrompt[First prompt] FirstPrompt --> SecondPrompt[Second prompt] SecondPrompt --> End([End]) </pre>

Legend (default view) (continued)

Feature	Description
6. Issues warning	Counter showing number of issues needing correction before the topic can be published. For more information, see the Incomplete property warnings section of this documents.
7. Node	Input or output item on the canvas created by dragging a control from the Components or Variables sidebar. All controls in the conversation are represented as individual nodes on the canvas. If a node is incomplete, a counter showing the number of issues in the node appears. For more information, see the Incomplete property warnings section of this documents.
8. Property sheet	Properties specific to the selected node on the canvas. The list of properties changes based on the node you select. Each node has its own set of properties that you can define, which can include scripts that control the behavior or processing that is performed in the node. If NLU is enabled, the property sheets for Input controls contain additional NLU fields. For further information, see Assistant Designer controls .
9. Data pill picker	A tool for selecting data pills from input variables or script variables to use in the property field. Select the data pill picker to select from the existing variables accessible in the topic. You can also drag data pills directly into property fields.
10. Script editor	A tool for adding or editing JavaScript scripts used in a property. Provides scripting assistance, including a list of valid elements at the insertion point. Elements include function name, object names, and variable names available for the topic. For more information, see the JavaScript syntax editor  .
11. Property sheet tab	Opens the property sheet view for the currently selected node on the canvas.
12. Validation Issues tab	Opens the Validation Issues view, showing the number of issues in the topic needing correction before the topic can be published. This tab appears when you try to publish an incomplete topic, and disappears when all issues are resolved. For more information, see Publish a Virtual Agent topic .
13. Resources tab	Opens the Helpful resources view, containing a link to product documentation. In an LLM topic, further resources appear including Guided tours on the canvas, and links to videos for LLM controls.

Legend (default view) (continued)

Feature	Description
	Helpful resources - Guided tour for LLM-enabled nodes - Video for input collector introduction - Product documentation

Flow tab with Table View enabled

Most of the functionality of the Flow tab is the same in Table View. The following figure and table highlight the differences.

Example Flow tab in Table View

The screenshot displays the ServiceNow Assistant Designer interface in Table View. The top navigation bar includes 'Assistant Designer', 'Ride Share Fare Topic', and a 'Table View' toggle which is currently active. The main workspace shows a flow diagram with nodes connected by arrows. The nodes include a 'Start' node, a 'Welcome' node (Text Response), a 'Test AIP' node (AI Prompt), a 'Decision' node, and several action nodes like 'ASK_USER', 'COMPLETE', 'Set Question Prompt', 'User Input', and 'Set User Response'. The 'Variables' panel on the left lists variables such as 'Input', 'actiontype', 'response', 'user_input', 'Script', 'question_prompt', and 'user_response'. The 'AI Prompt' panel on the right shows the configuration for the 'Test AIP' node, including a structured prompt with a node name, identity, and instructions.

Legend (Table View)

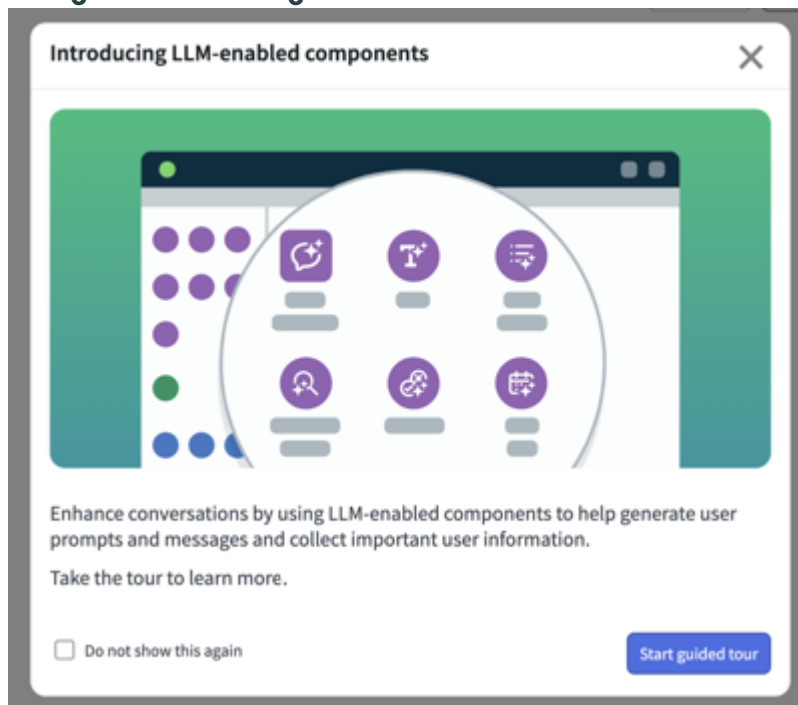
Feature	Description
Palette: Variables sidebar	The Components tab is not shown. Only the Variables sidebar is visible.
Table view	A list of table rows, where each row corresponds to a node in the conversation flow. You can add nodes in this section. When you add or remove nodes, the table rows adjust automatically. A node can be any of the following controls, aside from the Start and End nodes: • User Input: Controls used to prompt and capture information from the user in a conversation. • Bot Response: Controls for displaying virtual agent responses in a conversation. • Utilities: Controls for performing actions within a topic, such as running a script, adding different conversation paths (branches) in a topic, or adding topic blocks. Select Add new node to add a node. You can specify the type of control in the dialog box.
Search table	Option for searching nodes in the conversation (table).

LLM components guided tour

When you create or open a non-read-only LLM topic, a dialog box appears and displays an option to take a guided tour of the LLM components in Assistant Designer Asset library . Select the close icon to close the window or **Start guided tour** to be shown the various components. You can also take a tour by selecting **Guided tour for LLM enabled nodes** in the Helpful resources tab.

To stop seeing the dialog box open each time you open an LLM topic, select **Do not show this again** before closing the dialog box or starting the tour. To restore the dialog box, navigate to **All**, then enter `sys_cb_user_preference_list.do`. On the Designer User Preferences page, find the `LLM_INTRO_MODAL_ENABLED` preference. Open its *Value* field and set it to `true`.

LLM guided tour dialog box

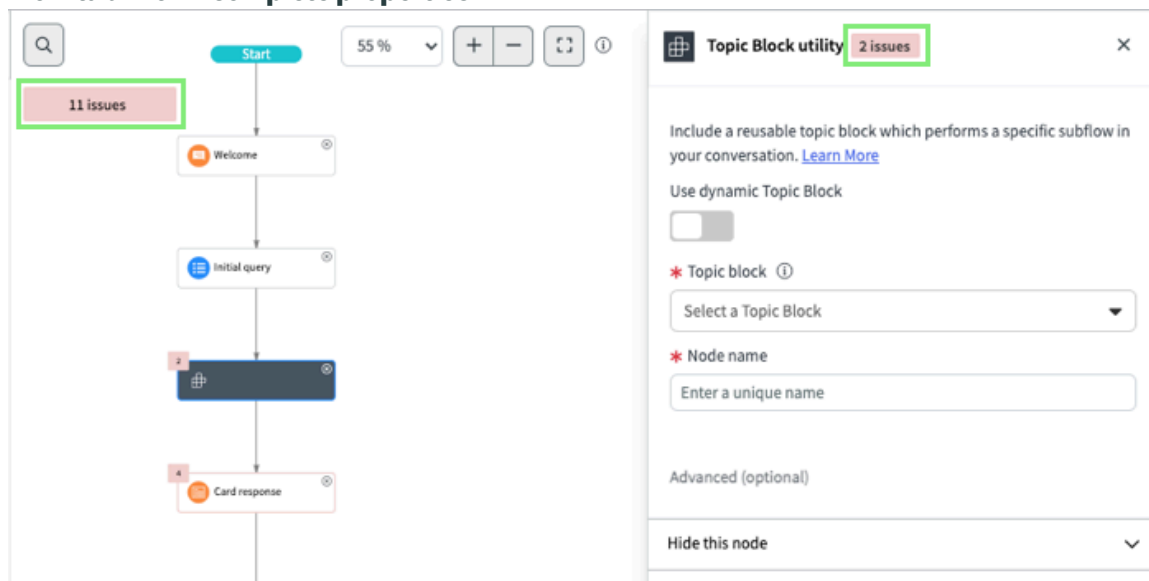


Incomplete property warnings

Controls on the canvas have required properties. If required properties are missing, Assistant Designer Asset library displays the total number of missing required properties and the controls that are missing them. All incomplete warnings must be addressed to test or publish the topic.

In the following example, the topic is missing two required properties. Two nodes are affected, and each is missing one property. The Text response node is missing the Message response.

Flow tab with incomplete properties



Point to the incomplete message to see a tooltip that describes what is missing.

Select the message to get more information

Table View ☐ ● Active ▼ Save Test ▼ Publish

Topic Block utility
2 issues

"Topic Block" is mandatory

"Node name" is mandatory

Include a reusable topic block which performs a specific subflow in your conversation. [Learn More](#)

Use dynamic Topic Block

☐

* Topic block ⓘ

Select a Topic Block ▼

* Node name

Enter a unique name

Assistant Designer controls

A Virtual Agent topic consists of a collection of controls within a topic flow. Use these controls to collect, process, and present information to your users. Controls can also read, create, and update records on your instance.

Each set of controls performs specific functions in a conversation flow.

Control types

Category	Description
Start segment	Appears automatically in a topic flow and cannot be added to or removed from a conversation. This control can be configured with a greeting response that appears when a conversation begins.
End segment	Appears automatically in a topic flow and cannot be added to or removed from a conversation. This control can be configured with a final confirmation message before the end of a conversation. Ensure that all branches of your topic eventually connect to this control.
User Input	Prompts and captures information from the user in a conversation.
Bot Response	Displays bot responses in a conversation.
Utilities	Handles actions and logic within a topic, such as running a script or adding different conversation paths (branches) in a topic. You can also use them to call automated Workflow Studio workflows.

For controls that have prompts, messages, default values, or confirmation messages, you can enter any of the following input values:

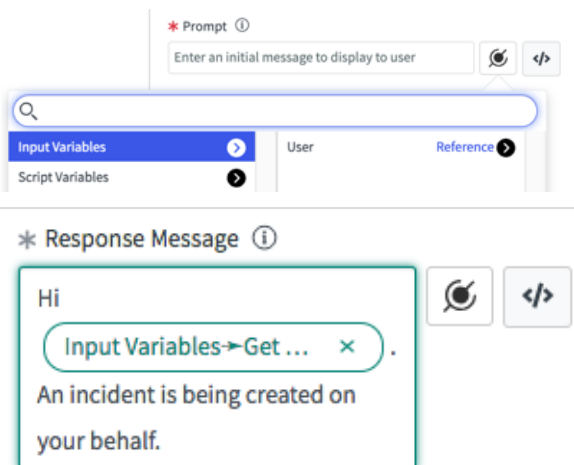
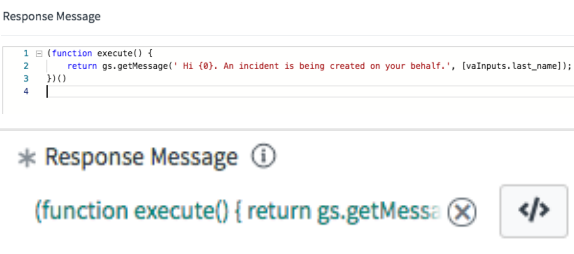
- Text strings
- Data pills
- Strings with embedded data pills
- Scripts that return strings

Data pills

Use data pills to quickly and easily add dynamic information to your controls without using a script. Select the data pill icon  to open the data pill picker interface. In this interface, you can select data from script variables and from input variables set by your User Input controls.

Using data pills enables you to quickly and easily access the data in your variables. In contrast, scripting provides more complex options, like handling translation. The following examples illustrate how to use a text bot response that includes the name of the customer, handled both as a data pill and a script.

Data pill and scripted responses

Method	Result
Data pill	
Script	

The first example uses the data pill selector to choose **Get Name**, an input variable that contains the name of the customer. The second example accomplishes the same thing using a script. The script example also uses `gs.getMessage` to handle translating the message.

Hide or skip this node (condition property)

Almost all controls have a condition property. The exceptions are the Decision utility and the Start and End nodes.

In user input controls, the condition property determines whether the control is used or skipped in a conversation. To always use the control, leave the condition field empty. To determine the conditions under which the control is used, do one of the following:

- Create a condition using the condition builder interface, which lets you add data pills to specify conditions built using this interface.
- Provide a script for the condition property that returns a value of true or false. If the return value is false, the control is not used and the conversation will continue to the next control along that branch of the topic.

Use conditions to make your conversations more dynamic based on context, data, or scripted logic.

Scripted condition	Condition builder condition
Sample script for conditionally showing the node: <pre>(function execute() { var gr = new GlideRecord('incident'); return gr.canCreate(); })();</pre>	

In this example, a condition script returns a value of true if the current user is able to create incident records. This condition prevents a utilities control from creating an incident when the user does not have permission to do so.

Assistant Designer user input controls

Use the collection of input controls provided by Assistant Designer to prompt and capture information from the user in a conversation.

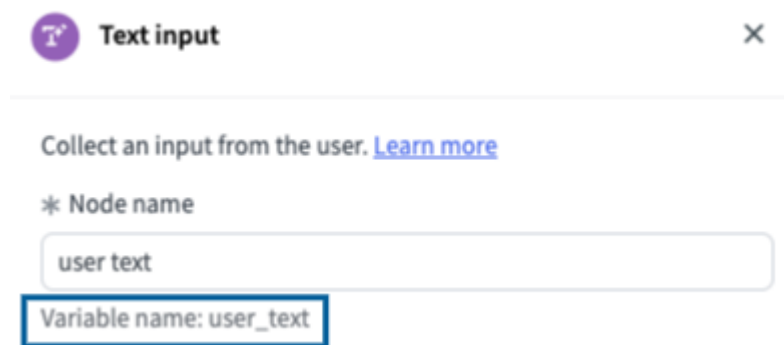
Common input control properties

In addition to [data pills and condition controls](#), each input control has the following common properties:

Input variable for the user response

Each control stores the user response in an input variable that is accessible from other controls within the same topic using the `getValue` and `getDisplayValue` methods. The variable name is based on the name that you assign to the input control. For example, if you assign the name `First prompt` to an input control, the variable name is `first_prompt`. The variable name is lowercase, with an underscore character instead of a space. For more information on these methods, see [Virtual Agent scripts](#).

The Variable name field is populated automatically



Text input

Collect an input from the user. [Learn more](#)

* Node name

user text

Variable name: user_text

Large language model (LLM) user input controls

The following user input controls are supported in LLM topics when you create an LLM Virtual Agent topic. LLM user inputs include the following.

- [Input Collector](#)
- [Text input](#)
- [Static Choice list](#)
- [Dynamic Choice list](#)
- [Boolean input](#)
- [Date Time input](#)
- [Carousel input](#)

Note: Avoid placing more than five user input controls in a single LLM topic, or more than five in a single Input Collector. Excessive user input controls can overwhelm the LLM and may lead to inaccurate or unexpected responses.

Input Collector user input control

Use the Input Collector control to gather data for use by ServiceNow Otto in conversations that use large language model (LLM) topic discovery.

Input Collector demonstration

For an example of the Input Collector from a user perspective, watch this video.

https://player.vimeo.com/video/1107422514?h=327edd1ca3&badge=0&autopause=0&player_id=0&app_id=58479

Input Collector properties

The Input Collector is only available for topics that use LLM discovery.

The Input Collector can hold up to 5 of any of the LLM user inputs aside from another Input Collector. To collect more than 5 user inputs, place multiple Input Collector nodes in sequence or adjust the Value of the `com.glide.cs.va_input_collector_max_nodes` property in the System Properties [sys_properties] table.

You can reorder nodes inside the Input Collector on both the canvas and table views. To reorder nodes on the canvas, select a given node inside the Input Collector and drag it up or down in the list. You can add or remove nodes from an Input Collector, or nodes between multiple Input Collectors, by selecting a node and dragging it into or out of an Input Collector node on the

canvas. To reorder nodes in an Input Collector in the table view, select a given node in the list, then select the up or down arrow next to the node.

You can also set the number of times the Input Collector prompts a user for information before triggering a search instead. You can set the limit under `sn_vad_genai.input_collector_reprompt_limit` in the System Properties [sys_properties] table. The minimum limit is 1, and the default limit is 2. With values greater than 2, the Input Collector reprompts the user up to the set limit before starting a search. If you use very high values (such as 1000), you effectively disable automatic searches, and continue collecting information through additional reprompts.

Specify the flow action properties for the node that you want to create.

Property	Description
Node name	Name that identifies this node in the topic flow.
Advanced	
Additional instructions for LLM	Further instructions to the LLM, such as adding data formats, restrictions, or default values for user responses. You can create additional instructions in plain language, input a script, or define conditions with the data pill picker.
Confirmation message	Toggle switch to display a summary of collected inputs to the user at the end of a conversation. If Summary message is activated, the Virtual Agent (when activated) presents the information that you have entered and asks if everything is correct. Select Yes to continue the chat or No to restart collecting user input. You can also reply by typing a response in the chat window, to confirm or deny the summary or to change your answer. This option is active by default, and shows an enabled icon  when activated.
Hide or skip this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script.

Example Input Collector capability


Input Collector
✕

Add at least one LLM-enabled user input type to gather information from users. The order of inputs does not guarantee the order of messages the LLM will prompt the user with.

* Node name

Get user info

Advanced (optional)

Additional instructions for LLM ▼

Confirmation message ✓ ▼

Hide this node ▼

Input Collector canvas view

Flow Properties Languages
Table View ☐ Active Save Test Publish

Components Variables

LLM-enabled user input

 Input Collector
 Text
 Static Choice

 Dynamic Choice
 Boolean
 Date Time

 Carousel

LLM-enabled bot response

 Text

User input

 Secure Text
 Grouped Choice
 File Picker

Bot response

 Text
 Image
 Link

 HTML
 Multi-res...
 Script

100%

+

-

⌂

?

Start

T-shirt order

2 inputs added

T-shirt size

T-shirt color

End


Input Collector
✕

Add at least one LLM-enabled user input type to gather information from users. The order of inputs does not guarantee the order of messages the LLM will prompt the user with.

* Node name

T-shirt order

Advanced (optional)

Additional instructions for LLM ▼

Confirmation message ✓ ▼

Hide this node ▼

Input Collector table view

FlowPropertiesLanguages

Table ViewActiveSaveTestPublish

Variables

Input

t_shirt_color

t_shirt_size

Script

Search table

Search table

Add new node

Reload

Name	Type	From	To
1 Start	Start	N/A	2 T-shirt order
2 T-shirt order	Input Collector	1 Start	3 End
3 End	End	2 T-shirt order	N/A

Input Collector

Delete

Add at least one LLM-enabled user input type to gather information from users. The order of inputs does not guarantee the order of messages the LLM will prompt the user with.

* Node name

T-shirt order

Input to collect

T-shirt sizeText

T-shirt colorStatic Choice

Add

* From

1 Start

To

3 End

Add new node from current one

Advanced (optional)

Additional instructions for LLM

Confirmation message

Parameters

Channel support

Channel support for the Input Collector control

Channel	Support	Constraints
Microsoft Teams	Supported	None
Slack	Not supported	Not applicable
SMS Twilio	Supported	Not applicable
WhatsApp	Not supported	Not applicable
Google Chat	Supported	None

Text user input control

The Text user input control in a Virtual Agent topic prompts the user for a text string.

Text user input control properties

Property	Description
Node name	Name that identifies this node in the topic flow.
Variable name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the Node name property.

Property	Description
Allow automatic slot-filling	Toggle to allow this node's value to be automatically set by other nodes, as well as during topic discovery. When this toggle is activated, the Detail description field changes from dynamic Data Pill Picker and script options to a static text field.
Detail description	Description of the information that you need from users. If the Allow automatic slot filling toggle is deactivated, you can create a dynamic detail description by selecting the Data Pill Picker icon  to define conditions, or select the Open Editor icon  to enter a script. If the Allow automatic slot filling toggle is activated, you can only enter a static description.
Input format	Text format that is validated when a user enters certain text items. If the user doesn't enter the expected format, an error message indicates that the format is not valid and asks the user to reenter the text. Choose the format of the text item to be validated: • Text: Any text string (no validation). • Email: Format that consists of an email prefix (user name), the @ symbol, and domain. • IP address (IPV4, IPV6): Data communication delivery format for Internet Protocol version 4 or version 6. • Phone number (E.164): Internationally recognized standard phone number format. • URL: Web address format. • Custom: A script that provides a validation rule for a custom text format. The script should include related error messages that are displayed when the expected format is not entered. For phone and IP address format examples, see E.164 phone formats  and IP address field types .
Advanced	
Enforce user prompt	Toggle to open a field for a custom message shown to the user instead of the message generated by the large language model (LLM). You can create custom messages in plain language, input a script, or define conditions with the data pill picker.
Validation	Add a script to validate the user input. For example, check if the user entered a valid email address.
Additional instructions for LLM	Further instructions to the LLM, such as adding data formats, restrictions, or default values for user responses. You can create additional instructions in plain language, input a script, or define conditions with the data pill picker.
Hide or skip this node	

Property	Description
Conditionally use this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script.

Example Text user input control

LLM topic input control properties

Input properties	Input prompt
 Text input × Collect an input from the user. Learn more * Node name User name input Variable name: user_name_input Allow automatic slot filling ⓘ ☒ * Detail description ⓘ Ask the user to enter their full name. * Input format ⓘ Text Advanced (optional) Enforce user prompt Validation Additional instructions for LLM Custom slot filling Classification Handling Hide or skip this node	 Text user input prompt Which ticket do you want to look up? Just now INC0008112

Channel support

Note: Asset library controls may display and function differently in other channels.

Channel support for the Text user input control

Channel	Support	Constraints
Microsoft Teams	Supported	None.
Slack	Not supported	Slack users can edit text previously entered in a conversation. However, Virtual Agent processes messages as they are first entered. If a Slack user edits text input, such as a comment to update a case, then Virtual Agent does not evaluate the edited update.
SMS Twilio	Not supported	None.
WhatsApp	Not supported	The maximum limit is 4,096 characters.
Google Chat	Supported	None

Static Choice user input control

Use the Static Choice user input control in a Virtual Agent topic to list predefined choices available to the user. You can select only one item from a choice list.

Choice display

The choice list contains up to 10 items per page. The choice list prompt contains a search icon  that users can select to filter the results. When more than 10 items exist in an LLM chat conversation, a scroll bar appears. When more than 16 items exist in an LLM chat conversation, a search bar appears.

The Static Choice control provides the option to add a header card that displays above the choice list. Header cards are supported in web and mobile channels.

- The header card can contain a large or small image or a YouTube video card, along with descriptive text. The choice list contains up to five items by default, but the search feature is suppressed. If there are more than five items, users can choose to show the additional items.
- To control the number of items displayed below a header card, add the `com.glide.cs.web_header_picker_page_limit` system property. Use the **Value** to specify the number of items displayed in the choice list. For details about creating a system property, see [Add a system property](#).

Static Choice user input control properties

Property	Description
Name	Name that identifies this node in the topic flow.
Variable name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the Node name property.

Property	Description
Allow automatic slot-filling	Toggle to allow this node's value to be automatically set by other nodes, as well as during topic discovery. When this toggle is activated, the Detail description field changes from dynamic Data Pill Picker and script options to a static text field.
Detail description	Description of the information that you need from users. If the Allow automatic slot filling toggle is deactivated, you can create a dynamic detail description by selecting the Data Pill Picker icon  to define conditions, or select the Open Editor icon  to enter a script. If the Allow automatic slot filling toggle is activated, you can only enter a static description. 
Choices	
Display name	For each choice, the text that appears to the user for that choice. Use short phrases in your choice lists. - Slack has a limit of 30 characters for choice list labels. - Workplace has a limit of 20 characters for choice list labels.
Value	For each choice, the string that is stored in the variable when the corresponding choice is selected.
Advanced	
Header Card	Toggle to open a field to add cards which may include images or YouTube videos. For more information, see Insert a header card in a Static Choice or Dynamic Choice control
Enforce user prompt	Toggle to open a field for a custom message shown to the user instead of the message generated by the large language model (LLM). You can create custom messages in plain language, input a script, or define conditions with the data pill picker.
Validation	Add a script to validate the user input. For example, check if the user entered a valid email address.
Additional instructions for LLM	Further instructions to the LLM, such as adding data formats, restrictions, or default values for user responses. You can create additional instructions in plain language, input a script, or define conditions with the data pill picker.
Hide or skip this node	
Conditionally use this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Property	Description
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script. If users enter a value such as <code>skip this step</code> when the conditions do not allow skipping, they receive a message saying the node cannot be skipped and are re-prompted to provide an answer.

Example Static Choice user input control

Note: Asset library controls may display and function differently in other channels.

Input properties	Static Choice list user prompt																
Static choice input Allow the user to select from a list of predefined choices. Learn more * Node name Laptop selection Variable name: laptop_selection Allow automatic slot filling * * Detail description Ask the user to choose which laptop they want. * Choices <table border="1"> <thead> <tr> <th></th> <th>Display name</th> <th>Value</th> <th></th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Macbook</td> <td>Macbook</td> <td>- +</td> </tr> <tr> <td>2</td> <td>IBM</td> <td>IBM</td> <td>- +</td> </tr> <tr> <td>3</td> <td>Lenovo</td> <td>Lenovo</td> <td>- +</td> </tr> </tbody> </table> Advanced (optional) Header card Enforce user prompt Validation Additional instructions for LLM Hide or skip this node		Display name	Value		1	Macbook	Macbook	- +	2	IBM	IBM	- +	3	Lenovo	Lenovo	- +	Now Assist Select one Search ☐ survey user ☒ Lucius Bagnoli ☐ Jimmie Barringer ☐ Melinda Carleton ☐ Jewel Agresta ☐ Sean Bonnet ☐ Jacinto Gawron ☐ Krystle Stika Submit
	Display name	Value															
1	Macbook	Macbook	- +														
2	IBM	IBM	- +														
3	Lenovo	Lenovo	- +														

Channel support

Channel support for the Static Choice user input control

Channel	Support	Constraints
Microsoft Teams	Supported	None
Slack	Not supported	Header cards aren't supported. When a choice list has three or fewer choices, Slack displays the list as buttons.
SMS Twilio	Supported	Header cards aren't supported.
WhatsApp	Not supported	Header cards aren't supported. The prompt or body text has a maximum limit of 1,024 characters. For list buttons: - Each button label can have a maximum of 24 characters. - Only 10 list buttons are visible at a time. - If there are more than 10 buttons, the system automatically uses pagination to show additional options.
Google Chat	Supported	None

Grouped Choice user input control

Use the Grouped Choice user input control in a Virtual Agent topic to list multiple groups of choices in one message.

Grouped Choice list display

The Grouped Choice list prompts users to select related choices in one message through the default **Select a choice** button. You can enable multi-select for each choice's group and also provide images and short descriptions to create a richer user experience. Users are presented with groups of choices where they're required to submit one selection before returning to the Virtual Agent topic.

Inputs are recorded on the Interactions [interactions] table. For more information, see [Virtual Agent interaction records](#).

Grouped Choice user input control properties

Property	Description
Node name	Name that identifies this Grouped Choice user control node in the topic flow.
Prompt	Prompt or question for the user. The prompt can be either a text string or a script that returns text. For example: Please select your meal preference.

Property	Description
Group name	Name that identifies the grouped choice list in the property sheet. Add one (required) or multiple groups of related choices. Users must select one choice out of all groups. Use short phrases in your choice lists.
Choices	Number of choices added to each group.
Add a group of choices dialog box	
This dialog box only appears after Add is selected.	
Group name	Name that identifies the grouped choice list in the property sheet. A limit of 40 characters for choice list labels exists. The Variable name field is automatically generated from the group name. This read-only variable name appears in all lower-case text and substitutes any spaces in the group name for underscores. If multiple lists with the same name exist, the variable name is appended with <code>_1</code>, <code>_2</code>, <code>_3</code>, and so on. Use this variable in your conversation flow to retrieve user responses for each group within the Grouped Choice node.
Display as	Group heading title that appears in the rendered client.
Display name	Choice name that is displayed to users. At least two unique choices are required.
Value	String that is stored in the variable when the corresponding choice is selected. This value is automatically generated from the display name, but you can edit the field as needed.
Image	Option to add an image for the choice. Individual choice images are entered after you select Add details. To set this field, do one of the following: - Specify the URL link by either entering the link text, using a data pill, or using a script. - Upload an image file by selecting Upload Image.
Description	Option to provide additional information about the choice. Individual choice descriptions are entered after you select Add details. For example: If the grouped choice list is about passengers selecting airplane amenities, like headphones, you could include a description about the type of headphones such as <code>Over - ear wired headphones</code>.
Allow the user to select more than one choice	Option to allow users to choose multiple options from the choice list by selecting Yes .
Advanced	
Customize group selection	

Property	Description
Update title	Option to customize the title of the grouped choice's prompt button. A limit of 40 characters for choice list labels exists. If this field is left empty, the default title that users see is <code>Select a choice</code> .
Image	Option to add an image for the grouped choice's prompt button. To set this field, do one of the following: - Specify the URL link by either entering the link text, using a data pill, or using a script. - Upload an image file by selecting Upload Image.
Confirmation messages	
Input completion confirmation	Bot response shown to the user when the node interaction is complete. The message can be either a text string or a script that returns text. For example, if you're using dot-walking: <code>Thanks, (Input Variables > Username) !</code> Or if you're using a script, the acknowledgement might be: <code>Thanks, {{vaInputs.username}} !</code> .
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Example Grouped Choice user input control

Note: Asset library controls may display and function differently in other channels.

Input properties	List prompt								
Grouped choice input control basic properties Grouped choice input > Display multiple groups of related choices in one message. Available for select channels. Learn more * Node name Flight information * Prompt ⓘ Please select your preferred flight information * Add at least one group of choices ⓘ <table border="1"> <thead> <tr> <th>Group name</th> <th>Choices</th> </tr> </thead> <tbody> <tr> <td>Airline carrier</td> <td>4</td> </tr> <tr> <td>Choose seat</td> <td>3</td> </tr> <tr> <td>Choose food</td> <td>5</td> </tr> </tbody> </table> + Add Advanced (optional) Customize group selection Confirmation messages Hide this node	Group name	Choices	Airline carrier	4	Choose seat	3	Choose food	5	Web UI Grouped Choice list default prompt Welcome to our travel agency's portal. Please select your preferred flight information Select a choice > Web UI Grouped Choice list with customized title and image Welcome to our travel agency's portal. Please select your preferred flight information Select flight information  >
Group name	Choices								
Airline carrier	4								
Choose seat	3								
Choose food	5								

Input properties	List prompt
Add a group of choices dialog box Add a group of choices What is this group about? * Group name Choose food Variable name: choose_food * 1. Display as ⓘ What would you like to eat on your flight * Add two or more choices 2. Display name Value 1 Pretzels Pretzels + - ^ Added: description. Add more details Image Link to an image file you want to include   Upload Image Description Extra salt 2 Honey Stinger Waffle Honey Stinger Waffle + - Allow the user to select more than one? ☒ Yes	Web UI Grouped Choice list Select your seat class type -Choose 1- ☐ First Class First class offers a premier experience with spacious seats ☐ Business Class Business class offers wider seats with more legroom ☐ Economy Class The most basic class Select your meal type -Choose 1- ☐ Chicken BBQ chicken with salad  ☐ Beef Ground beef with potatoes  ☐ Vegetarian Kale-and-Chickpea grain bowl  Clear Submit

Channel support

Channel support for the Grouped Choice user input control

Channel	Support	Constraints
Microsoft Teams	Not supported	Not applicable
Slack	Not supported	Not applicable
SMS Twilio	Not supported	Not applicable
WhatsApp	Not supported	Not applicable
Google Chat	Supported	None

Dynamic Choice user input control

Use the Dynamic Choice user input control in a Virtual Agent topic to dynamically create a list of available choices for your users. Create these choices by querying a table or by using a script to dynamically create them.

Choice list display

The Dynamic Choice list contains up to 10 items per page. When more than 10 items exist in an LLM conversation, a scroll bar appears. When more than 16 items exist in an LLM conversation, a search bar appears.

If selecting multiple choices is turned on, you can search within the **Search for options** field for filtering search results. Select or type all choices that apply, and then select the send icon . When you send your choices through an LLM topic, the LLM responds with whether your choices meet the validation criteria.

You can also select a choice or choices from a list in an LLM conversation by entering an utterance in the chat window. If there is no match for your input, the Virtual Agent informs you that it is not a valid choice, and prompts you to try a different input.

The Dynamic Choice control also provides the option to add a header card that displays above the choice list. Header cards are supported in web and mobile channels.

- The header card can contain a large or small image or a YouTube video card, along with descriptive text. The choice list contains up to five items by default, but the search feature is suppressed. If there are more than five items, users can choose to show the additional items.
- To control the number of items displayed below a header card, add the `com.glide.cs.web_header_picker_page_limit` system property. Use the **Value** to specify the number of items in the choice list. For details about creating a system property, see [Add a system property](#) .

Note:

If you populate a Dynamic Choice list node with only one choice, when testing or using the node, you receive a message reading "We have [choice] as [node name], is this correct?". Use multiple choices in the Dynamic Choice list node to avoid receiving this message.

You can also alter the message content by navigating to **ALL > sys_properties.list** and editing the `glide.cs.retry_question_message` system property. This message value is by default a string `We have {0} as {1}, is this correct?` and is used for slot-filling in multiple cases outside the Dynamic Choice list. Any changes you make are reflected in every use of this property.

Dynamic Choice user input control properties

Property	Description
Node name	Name that identifies this node in the topic flow.
Variable name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the Node name property.
Prompt	Prompt or question for the user. The prompt can be either a text string or a script that returns text. This value is used only when the default value is not specified. For example: <code>What ' s y o u r n a m e ?</code> You can create rich text to alter the styling of the prompt: • Use single asterisks or underscores for italic text. For example, <code>* text *</code> or <code>_text_</code>. • Use double asterisks or underscores for bold text. For example, <code>**text**</code> or <code>__text__</code>.

Property	Description
	• Use triple asterisks or underscores for italic and bold text. For example, <code>***text***</code> or <code>___text___</code>. • Use a spaced hyphen to add a bullet point to a line. For example, <code>- text</code>. • Use a spaced right angle bracket to create a block quote. For example, <code>> text</code>. • Use between one and six hash marks to create headers. For example, <code>#text#</code> or <code>#####text#####</code> • Use brackets and parentheses to create a hyperlink. For example, <code>[Link text](url)</code>. Add an exclamation point to a hyperlink to display an image. For example, <code>![alt text](image url)</code>
Choices	
Populate choices by	Type of dynamic variable to be used. Select one of the following options:

Property	Description
	• Record: Returns records from the table selected. The values for these options are GlideRecord objects. • Script: Expression that returns an array of options. Note: For more efficient pagination return results for a large data set when using a script expression, review the following script and determine whether you want to use this script: <pre>(function execute() { var pagingUtil = new global.VirtualAgentChoicePagingUtil(null, "sys_user", null, "user_name,name", "active=true", null, vaVars); var gr = pagingUtil.getPagingGlideRecordSecure("name", false); var options = pagingUtil.getSecureOptions(gr, null, 'user_name', ['user_name', 'name']); return options; })();</pre> For more information about the preceding scripting details, review information about GlideRecords and the additional information: ◦ <i>fieldName</i>: Field name is optional information. Pass with <code>null</code>. ◦ <i>table</i>: Table name to query for displaying the available options. ◦ <i>pageSize</i>: Page size is optional information. Pass with <code>null</code>. ◦ <i>searchColumns</i>: Table columns in a comma-delimited list that applies to any searchText. ◦ <i>encodedQuery</i>: Initial query to apply to table rows. For example, <code>active=true</code>. ◦ <i>searchText</i>: Search text is optional information. Pass with <code>null</code>. ◦ <i>vaVars</i>: Reference to virtual agent context variables (<code>vaVars</code>). ◦ <i>orderByColumn</i>: Table column used to order the options. ◦ <i>orderDescending</i>: Options appear in descending order. Only <code>true</code> or <code>false</code> values accepted. ◦ <i>gr</i>: Glide record name. ◦ <i>startRow</i>: Starting row is optional information. Pass with <code>null</code>. ◦ <i>valueColumn</i>: Table column name to use as the value of each option. ◦ <i>labelColumns</i>: Array of table columns to use for each option display.

Property	Description
Table	Table to be searched, available only if you selected Record as the method to populate choices.
Filter choices	Option to use the condition builder or provide a script. Select one of the following: • Condition Builder: Creates a filter used to select a subset of records from the table. • Script: Defines the enumeration list for the options (choice list) to be displayed. The name-value pair is stored as a string object. This field is available only when the Record option is selected.
Allow the user to select more than one choice	Option to allow users to choose multiple choices from the choice list.
No records response message	Message displayed to the user when the table search doesn't return any records. The message can be either a text string or a script that returns text.
Advanced	
Header card	Toggle to open a field to add cards which may include images or YouTube videos. For more information, see Insert a header card in a Static Choice or Dynamic Choice control
Default value	
Default Value	Predefined value for the user response to the question or prompt. The response defined in the Default value confirmation field asks the user to confirm the default value. If the user responds with no, the value becomes null. The default value can be either a text string or a script that returns text. For example, if you're using dot-walking, the default value might be: <code>Script Variables > Last username</code> . Or if you're using a script, the default value might be: <code>{{vaScripts.lastUsername}}</code> .
Confirmation messages	
Input completion confirmation	Bot response shown to the user when the node interaction is complete. The message can be either a text string or a script that returns text. For example, if you're using dot-walking: <code>Thanks, (Input Variables > Username) !</code> Or if you're using a script, the acknowledgement might be: <code>Thanks, {{vaInputs.username}} !</code>
Default value confirmation	Message that asks the user to verify that the value in the Default value field is correct. This message is used instead of a value in the Prompt field. It can contain either a text string or a script that returns text. For example, if you're using dot-walking: <code>Are you (Input Variables > Username)?</code> Or if you're using a script, the confirmation message might be: <code>Are you {{vaScripts.lastUsername}} ?</code> .

Example Dynamic Choice user input control

Note: Asset library controls may display and function differently in other channels.

Input properties	List user prompt
 Dynamic choice input × Dynamically create a list of available choices for your users by querying a table or by using a script. Learn more * Node name Select incident Variable name: select_incident Allow automatic slot filling * ⓘ ☐ * Detail description ⓘ Ask the user to select their incident.   * Populate choices by Record * Table Incident [incident] * Filter choices ☒ Condition ☐ Script All > Active = true   ☐ Allow the user to select more than one choice Advanced (optional) Header card ▼ Enforce user prompt ▼ Validation ▼ Additional instructions for LLM ▼ Hide or skip this node ▼ Dynamic Choice list prompt example  Now Support +  Could you please let me know which incident you'd like to select?  INC0010001 INC0000015 INC0000016 INC0000018 INC0000019 INC0000020 INC0000025 INC0000027 INC0000029 INC0000031 Show 10 more... Please type your response here  	

Dynamic Choice script examples

The following script example can be used in the **Define choices** field only if the value for **Populate choice by** is set to **Script**. This script enables requesters to see their previously selected choices if they choose to edit their choices later in the conversation. This script also displays secondary fields to requesters, such as an email address, gender marker, or both, to help them further differentiate their available choices. Displaying the secondary field to requesters can be especially helpful when dealing with similar values, such as selecting the

correct employee name when working with the same or similar names (that is, Christopher Smith or Chris Smith).

```
(function execute() {
    var pagingUtil = new
    global.VirtualAgentChoicePagingUtil(null, "sys_user", 10,
    "user_name,name",
    "active=true", null, vaVars);
    var selectedOptions =
    pagingUtil.getSavedSelectedOptions("user", vaSystem);
    if (!selectedOptions || selectedOptions.length == 0) {
        // Secondary labels can be passed to selected options
        selectedOptions.push({ "value": "abel.tuter", "label":
        "Abel Tuter"
        , "secondary_label": ["abel.tuter@example.com", "male"]
        });
        selectedOptions.push({ "value": "Beth.anglin", "label":
        "Beth Anglin"
        , "secondary_label": ["beth.anglin@example.com",
        "female"]
        });
    }
    vaSystem.setSelectedOptions(selectedOptions, "user", false);
    // Topic authors have the ability to define which values
    should go in the
    // secondary labels by adding secondary label functions
    pagingUtil.addSecondaryLabelFunction(function (gr) {
        return gr.getValue("email");
    });
    pagingUtil.addSecondaryLabelFunction(function (gr) {
        return gr.getValue("gender");
    });
    var gr = pagingUtil.getPagingGlideRecordSecure("name",
    false);
    var options = pagingUtil.getSecureOptions(gr,
    null, 'user_name', ['user_name']);
    return options;
})();
```

Example Dynamic Choice list value expression

```
(function execute(table) {
    var options = [];
    var gr = new GlideRecordSecure(table);
    gr.addEncodedQuery('active=true');
    gr.setLimit(5);
    gr.query();
    while(gr.next()) {
        options.push({ 'value': gr.getUniqueValue(),
        'label': gr.getValue('short_description') });
    }
    return options;
})(table)
```

The script in the *Choice Value Expression* property defines and returns an array of choices. In the example, the script creates an array called `options`, and adds each record found in a `GlideRecord` query to this array. Each element in the array is given a value in the `value` and

label keys using data from that GlideRecord. The *Table* property of the control defines the table used by the script. This example script uses `gr.setLimit(5)` to limit the number of records returned to 5. Using this method helps prevent returned records from creating an overly large choice list.

Dynamic choice control value expression keys

Key	Description
value	The value for the choice. When a user selects a choice from the control, this value is stored in the variable named in the <i>Variable name</i> property.
label	The label that appears for this choice in the choice list.

Channel support

Channel support for the Dynamic Choice user input control

Channel	Support	Constraints
Microsoft Teams	Supported	None
Slack	Not supported	Header cards aren't supported.
SMS Twilio	Not supported	Header cards aren't supported.
WhatsApp	Supported	None
Google Chat	Supported	None

Boolean user input control

Use the Boolean user input control in a Virtual Agent topic to present a Yes/No prompt to the user.

Boolean user input controls prompt the user to answer a Yes/No question, and store the response as a string with a value of *true* or *false*. Use this value in topic utilities, such as the prompted Decision utility, to branch the topic flow based on the answer.

When you place this control on the canvas, a window appears with the header **Add a decision node?** The window message reads **A decision node will be added following this node** and has **No** and **Yes** options. If you select **No**, you must add a Decision utility to complete the Boolean. You can customize the names of the output values on the Decision node. For more information, see [Decision utility](#).

Boolean user input control properties

Property	Description
Node name	Name that identifies this node in the topic flow.
Variable name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the Node name property.

Property	Description
Allow automatic slot-filling	Toggle to allow this node's value to be automatically set by other nodes, as well as during topic discovery. When this toggle is activated, the Detail description field changes from dynamic Data Pill Picker and script options to a static text field.
Detail description	Description of the information that you need from users. If the Allow automatic slot filling toggle is deactivated, you can create a dynamic detail description by selecting the Data Pill Picker icon  to define conditions, or select the Open Editor icon  to enter a script. If the Allow automatic slot filling toggle is activated, you can only enter a static description. 
Advanced	
Enforce user prompt	Toggle to open a field for a custom message shown to the user instead of the message generated by the large language model (LLM). You can create custom messages in plain language, input a script, or define conditions with the data pill picker.
Validation	Add a script to validate the user input. For example, check if the user entered a valid email address.
Additional instructions for LLM	Further instructions to the LLM, such as adding data formats, restrictions, or default values for user responses. You can create additional instructions in plain language, input a script, or define conditions with the data pill picker.
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script. If users enter a value such as <code>skip this step</code> when the conditions do not allow skipping, they receive a message saying the node cannot be skipped and are re-prompted to provide an answer.

Example Boolean user input control

Note: Asset library controls may display and function differently in other channels.

Input properties	Input user prompt
 Boolean input × Prompt the user to answer a yes/no question. Learn more * Node name Software update check Variable name: software_update_check Allow automatic slot filling * ⓘ ☐ * Detail description ⓘ Ask if the user has performed the latest software updates for their machine's OS.   Advanced (optional) Enforce user prompt ▼ Validation ▼ Additional instructions for LLM ▼ Hide or skip this node ▼	 Now Support +  Have you performed the latest software update on your machine? Yes No Please type your response here  

Channel support

Channel support for the Boolean user input control

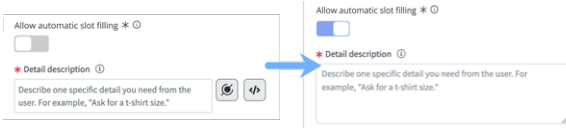
Channel	Support	Constraints
Microsoft Teams	Supported	None
Slack	Not Supported	None
SMS Twilio	Not Supported	None
WhatsApp	Supported	None
Google Chat	Supported	None

Date Time user input control

Use the Date Time user input control in a Virtual Agent topic to enable the user to select a calendar date, time (hours and minutes), or both.

Date Time user input control properties

The Date Time user input control accepts inputs from a calendar selection, or by entering plain language in the Virtual Agent chat window. If you type your answer, the Virtual Agent accepts different inputs depending on how your region handles dates. For example, if you're in the United States, the input control supports the MM-DD-YYYY format, while a user in Spain enters the date in DD-MM-YYYY format.

Date Time property	Description
Name	Name that identifies this node in the topic flow.
Variable Name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the Node name property.
Allow automatic slot-filling	Toggle to allow this node's value to be automatically set by other nodes, as well as during topic discovery. When this toggle is activated, the Detail description field changes from dynamic Data Pill Picker and script options to a static text field.
Detail description	Description of the information that you need from users. If the Allow automatic slot filling toggle is deactivated, you can create a dynamic detail description by selecting the Data Pill Picker icon  to define conditions, or select the Open Editor icon  to enter a script. If the Allow automatic slot filling toggle is activated, you can only enter a static description. 
Input format	Type of Date Time control to be displayed. Select one of the following formats: • Date: Shows only the monthly calendar for the user to select the date. • DateTime: Shows both a monthly calendar and time picker. • Time: Shows only the time picker for the user to select the time (hours and minutes).
Advanced	
Enforce user prompt	Toggle to open a field for a custom message shown to the user instead of the message generated by the large language model (LLM). You can create custom messages in plain language, input a script, or define conditions with the data pill picker.
Validation	Add a script to validate the user input. For example, check if the user entered a valid email address.
Additional instructions for LLM	Further instructions to the LLM, such as adding data formats, restrictions, or default values for user responses. You can create additional instructions in plain language, input a script, or define conditions with the data pill picker.
Hide or skip this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Date Time property	Description
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script. If users enter a value such as <code>skip this step</code> when the conditions do not allow skipping, they receive a message saying the node cannot be skipped and are re-prompted to provide an answer.

Example Date Time user input control

Note: Asset library controls may display and function differently in other channels.

Input properties	Date Time prompt																																																	
 Date time input × Prompt the user to enter a date, time, or date/time combination. Learn more * Node name Departure date Variable name: departure_date Allow automatic slot filling * ⓘ ☐ * Detail description ⓘ Ask the user when they would like to schedule their departure.   Input format ⓘ Date Advanced (optional) Enforce user prompt Validation Additional instructions for LLM Hide or skip this node	 Now Support +    When would you like to schedule your departure date? June 2026 ▾ < ○ > <table border="1"> <thead> <tr> <th>S</th><th>M</th><th>T</th><th>W</th><th>T</th><th>F</th><th>S</th></tr> </thead> <tbody> <tr> <td>31</td><td>1</td><td>2</td><td>3</td><td>4</td><td>5</td><td>6</td></tr> <tr> <td>7</td><td>8</td><td>9</td><td>10</td><td>11</td><td>12</td><td>13</td></tr> <tr> <td>14</td><td>15</td><td>16</td><td>17</td><td>18</td><td>19</td><td>20</td></tr> <tr> <td>21</td><td>22</td><td>23</td><td>24</td><td>25</td><td>26</td><td>27</td></tr> <tr> <td>28</td><td>29</td><td>30</td><td>1</td><td>2</td><td>3</td><td>4</td></tr> <tr> <td>5</td><td>6</td><td>7</td><td>8</td><td>9</td><td>10</td><td>11</td></tr> </tbody> </table> Select 2026-06-03  	S	M	T	W	T	F	S	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11
S	M	T	W	T	F	S																																												
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28	29	30	1	2	3	4																																												
5	6	7	8	9	10	11																																												

Channel support

Channel support for the Date Time user input control

Channel	Support	Constraints
Microsoft Teams	Supported	None
Slack	Not Supported	None
SMS Twilio	Supported	Not applicable
WhatsApp	Supported	None
Google Chat	Supported	None

File Picker user input control

Use the File Picker user input control in a Virtual Agent topic to prompt a user to upload an image or any file type. After the user uploads an image file, the image appears immediately in the Virtual Agent client.

File Picker user input control properties

All file types are supported by the file picker, except the SVG format for image files. Although the image can be high resolution, the image displayed in the Virtual Agent client is scaled based on the aspect ratio. Images scale to fit within the chat window.

In Microsoft Teams, a file can be uploaded through the paper clip (attachment) icon, or using drag-and-drop. Copying and pasting only works for image files. Users can share attachments on Microsoft Teams through the Virtual Agent file picker user input control, and by sending attachments while chatting with a live agent.

The live agent picker scenario:

- Doesn't support the SVG format for image files.
- Supports a combination of text, files, and emojis. However, orders may show up differently between how a user sends these items versus how an agent views these items.
- Doesn't support formatted text.

When a file upload is in progress, you can't upload or enter text for the file picker control. The uploaded files go through a virus scan and validation.

You can link an uploaded file to a case you create using the Record Action utility. For more information, see [Record Action utility](#).

The following table lists the details about the properties of the File Picker.

File Picker properties

Property	Description
Node name	Name that identifies the File Picker user input control node in the topic flow.
Variable name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the <i>Node name</i> property.

File Picker properties (continued)

Property	Description
Prompt	Prompt or question asking the user to upload the item. The prompt can be a text string that includes variables or a script that returns text.
Allow user to upload	Type of file to upload. All file types are supported, except the SVG format for image files.
Advanced	
Confirmation messages	
Input completion confirmation	Bot response shown to the user when the node interaction is complete. The message can be either a text string or a script that returns text. For example, if you're using dot-walking: Thanks, (Input Variables > Username)! Or if you're using a script, the acknowledgement might be: Thanks, {{vaInputs.username}}!
Default value confirmation	Message that asks the user to verify that the value in the Default value field is correct. This message is used instead of a value in the Prompt field. It can contain either a text string or a script that returns text. For example, if you're using dot-walking: Are you (Input Variables > Username)? Or if you're using a script, the confirmation message might be: Are you {{vaScripts.lastUsername}}?.
Hide or skip this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script.
Skip reprompting if	No-code condition statement or low-code script that specifies a condition for letting users skip reprompting in the conversation. When a preceding node is revisited through a topic loopback or Dialog Act, Virtual Agent bypasses this node and automatically retains its original value.

Using the File Picker control in different client interfaces

The process to select an image differs based on the Virtual Agent client interface. Use the following steps to select an image in the client interface of your choice.

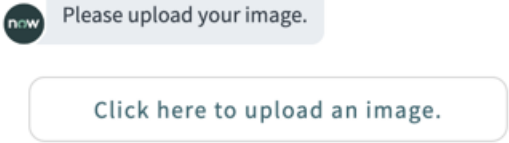
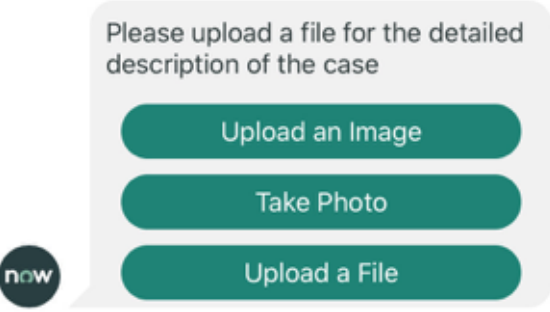
The following table lists details about the File Picker control in different client interfaces.

File Picker control in different client interfaces

Platform	Steps to select an image or file
Web UI	1. Select Click here to upload an image. or Click here to upload a file. 2. Select a file from your local computer. All file types are supported.
Slack	1. Select the Green + icon. 2. Select Your computer. 3. Select an image file from your local computer. All file types are supported.
Microsoft Teams	1. On your local computer, copy an image file. 2. Paste the image file into the text input field in Microsoft Teams.
Workplace	1. Select the Workplace image icon . 2. Select an image file from your local computer. All file types are supported.
ServiceNow mobile	1. Touch Upload an image. 2. Select an image file from the photo library on your mobile device. i Note: The Upload a file button is only available when you enable the All file types file picker property.

Example of a File Picker user input control

i Note: Asset library controls may display and function differently in other channels.

File Picker properties	File Picker prompt
File Picker user input control basic properties  File picker input > Prompt a user to upload an image or any file type. Learn more * Node name Upload file Variable name: upload_file * Prompt ⓘ Select a file to upload * Allow user to upload ☒ Image ☐ All file types Advanced (optional) Confirmation messages Hide or skip this node	Web UI file picker prompt (image)  ServiceNow mobile file picker prompt 

Channel support

The following table lists the details about the channel support for the File Picker user input control.

Channel support for the File Picker user input control

Channel	Support	Constraints
Microsoft Teams	Supported	None
Slack	Supported	None
SMS Twilio	Partial support	Image files only
WhatsApp	Supported	None
Google Chat	Supported	None

Carousel user input control

Use the Carousel user input control in a Virtual Agent topic to present a prompt and a horizontal series of labeled images. The user can select a single item from the carousel.

Tip: If you want to change the default number of listed items per page, you can modify the `com.glide.cs.picker_page_limit` system property. The default value is 10.

Carousel input control properties

Note: The Carousel user input control is not supported in ServiceNow Otto in Virtual Agent.

Property	Description
Node name	Name that identifies this node in the topic flow.
Variable name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the Node name property.
Allow automatic slot-filling	Toggle to allow this node's value to be automatically set by other nodes, as well as during topic discovery. When this toggle is activated, the Detail description field changes from dynamic Data Pill Picker and script options to a static text field.
Detail description	Description of the information that you need from users. If the Allow automatic slot filling toggle is deactivated, you can create a dynamic detail description by selecting the Data Pill Picker icon  to define conditions, or select the Open Editor icon  to enter a script. If the Allow automatic slot filling toggle is activated, you can only enter a static description. 
Define carousel items	Use a script to create items for selection in your carousel. The script should return an array containing one or more items. See the Example carousel item expression section in this topic.
Advanced (optional)	
Enforce user prompt	
Enforce user prompt	Toggle to open a field for a custom message shown to the user instead of the message generated by the large language model (LLM). You can create custom messages in plain language, input a script, or define conditions with the data pill picker.
Validation	Add a script to validate the user input. For example, check if the user entered a valid email address.
Additional instructions for LLM	Further instructions to the LLM, such as adding data formats, restrictions, or default values for user responses. You can create additional instructions in plain language, input a script, or define conditions with the data pill picker.
Hide or skip this node	

Property	Description
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true. This field is not applicable when the Carousel node is used within the Input Collector node.
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script. If users enter a value such as <code>skip this step</code> when the conditions do not allow skipping, they receive a message saying the node cannot be skipped and are re-prompted to provide an answer.

Example Carousel input control

Carousel properties

 **Carousel input** ✕

Present a prompt and a horizontal series of labeled images. The user can select a single item. [Learn more](#)

* Node name

Image selection

Variable name: image_selection

Allow automatic slot filling * ⓘ

☐

* Detail description ⓘ

Ask the user to select an image.  

When defining your enumeration list in javascript ensure that you assign keys of Name, Value and Body. Other logic in the topic can then retrieve the values from the keys.

* Define carousel items ⓘ

```
(function execute(){var options=[];options.push({'n:'
```

Advanced (optional)

Enforce user prompt

Validation

Additional instructions for LLM

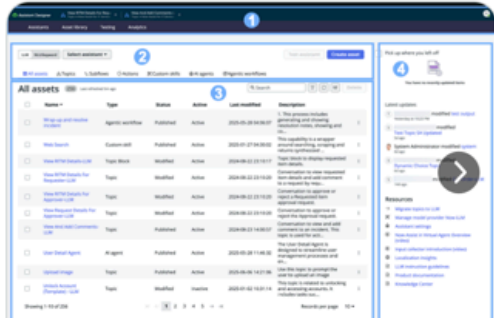
Hide or skip this node

Carousel prompt

 **Now Support** +



Please select an image from the carousel.



Assistant Designer Asset Library
Assistant Designer Asset Library

Select

Please type your response here  

Example carousel item expression

```
(function execute() {
    var options = [];
    options.push(
        {
            'Name': 'Item 1',
            'Value': 'item_1',
            'Description': 'Acme keyboard model 200',
            'Body':
                'https://images.pexels.com/photos/688666/pexels-photo-688666.jpeg'
            'Card_name': 'AcmeCard'
            'Card_data': {"identifier": "IT hardware and
software", "header": "Acme keyboard model 200", "description": "The
model 200 keyboard is a ten-key-less keyboard."}
        }
    );
    options.push(
        {
            'Name': 'Item 2',
            'Value': 'item_2',
            'Description': 'Acme keyboard model 300',
            'Body':
                'https://images.pexels.com/photos/916472/pexels-photo-916472.jpeg'
            'Card_name': 'AcmeCard'
            'Card_data': {"identifier": "IT hardware and
software", "header": "Acme keyboard model 300", "description": "The
model 300 keyboard is a full-size keyboard with a ten-key
pad."}
        }
    );
    return options;
})();
```

The script in the *Carousel Item Expression* property defines and returns an array containing the items that appear in your carousel. The elements of this array must contain name, value, and body keys. In the example, the script creates an array called `options` and adds two elements, each with the required keys. The images here are hard-coded as an example.

Example code key

Key	Description
Name	Name of the carousel item. This name is shown below the image on the carousel.
Value	Value for the item. When a user selects a carousel item, this value is stored in the variable named in the <i>Variable name</i> property.
Description	Text string that describes the carousel item. The description is shown below the image name. A carousel with more than three items displays left and right arrows for scrolling through the images and a Select button under each item. If a description is over 140 characters, users can expand the content.
Body	Image used in the carousel item. The value is a URL for an image file.

Example code key (continued)

Key	Description
Card_name	Text string header identifying the card shown in the carousel.
Card_data	Array containing text strings to be presented on the card. Values include identifier, header, and description.

Channel support**Channel support for the Carousel user input control**

Channel	LLM support	Constraints
Microsoft Teams	Not Supported	None. If the carousel contains more than 10 items, users must select Next to review the remaining items.
Slack	Not Supported	None
SMS Twilio	Not Supported	Not applicable
WhatsApp	Not Supported	None
Google Chat	Supported	None

Secure Text user input control

The Secure Text control provides a means to encrypt sensitive information provided as simple text or other formats. Use this control to encrypt sensitive information in topics that use large language model (LLM) discovery.

Use this control to gather and encrypt user information for topics using large language model (LLM) topic discovery. The Secure Text input also avoids sensitive information from being sent through an LLM.

Secure Text user input control properties

Property	Description
Node name	Name that identifies this Secure Text user input control node in the topic flow.
Prompt	Text string or script that returns text. This value is used only when the default value isn't specified. For example: What is your password?
Input format	Text format that is validated when a user enters certain text items. When the input isn't valid, the bot asks the user to reenter the text. Choose the format of the text item to be validated: • Text: Any text string (no validation). • Email: Format that consists of an email prefix (user name), the @ symbol, and domain.

Property	Description
	- IP address (IPv4, IPv6): Data communication delivery format for internet Protocol version 4 or version 6. - Phone number (E.164): Internationally recognized standard phone number format. - URL: Web address format. - Custom: A script that provides a validation rule for a custom text format. The script should include related error messages that are displayed when the expected format isn't entered. For phone and IP address format examples, see E.164 phone formats and IP address field types.
Hash function	The method digest algorithm based on the standard WS-Security specification.
Encryption salt	Random data that is used as an additional input to a one-way function that hashes data.
Advanced	
Default value	A value for the user response to the prompt. For example, if you already know the user name, the default value might be <code>(Script Variables > Last username)</code> .
Confirmation messages	
Input completion confirmation	Bot response shown to the user when the node interaction is complete. The message can be either a text string or a script that returns text. For example, if you're using dot-walking: Thanks, <code>(Input Variables > Username) !</code> Or if you're using a script, the acknowledgement might be: Thanks, <code>{{vaInputs.username}} !</code>
Default value confirmation	Message that asks the user to verify that the value in the Default value field is correct. This message is used instead of a value in the Prompt field. For example: Are you <code>(Script Variables > Username)</code> ?
Hide or skip this node	
Conditionally show this node	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.
Allow user to skip this node	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script.
Skip reprompting	No-code condition statement or low-code script that specifies a condition for letting users skip reprompting in the conversation. When a preceding node is revisited through a topic loopback or Dialog Act , the Virtual Agent bypasses this node and automatically retain its original value.

Example Secure Text user input control

Input properties

Secure Text input control basic properties

Secure text input

Secure Text Input is not supported on: Teams

Collect an input from the user. [Learn More](#)

* Node name

Username

Variable name: username

* Prompt ⓘ

Ask the user for their full name.

* Input format ⓘ

Text

Hash function ⓘ

SHA-256 (lower case)

* Encryption salt ⓘ

MTcwNDkxNzYxMzE3MSBWQSBEZXNpZ25ldiBpcyBhd2Vzb21l

Advanced (optional)

Default value

Confirmation messages

Hide or skip this node

Input prompt

Web UI Secure Text user input prompt

What is your first and last name?

.....

Channel support

Note: Asset library controls may display and function differently in other channels.

Channel support for the Text user input control

Channel	Support	Constraints
Web UI	Supported	None.
Mobile UI	Supported	None.
ServiceNow Otto panel	Supported	None.
Microsoft Teams	Supported	None.

Channel support for the Text user input control (continued)

Channel	Support	Constraints
Slack	Supported	Slack users can edit text previously entered in a conversation. However, Virtual Agent processes messages as they're first entered. If a Slack user edits text input, such as a comment to update a case, then Virtual Agent doesn't evaluate the edited update.
Workplace	Supported	None.
Facebook Messenger	Supported	The maximum character limit is 5000 characters.
SMS Twilio	Supported	None.
LINE	Supported	The maximum character limit is 5000 characters.
WhatsApp	Supported	None.
Apple Messages for Business	Supported	None.
Alexa (Voice)	Supported	For screen devices, character limits may apply. For more information, see the Alexa developer documentation .

Assistant Designer bot responses

Assistant Designer offers various controls for displaying bot responses in a conversation. Because the bot responses occur in third-party platforms, the format for each output may vary.

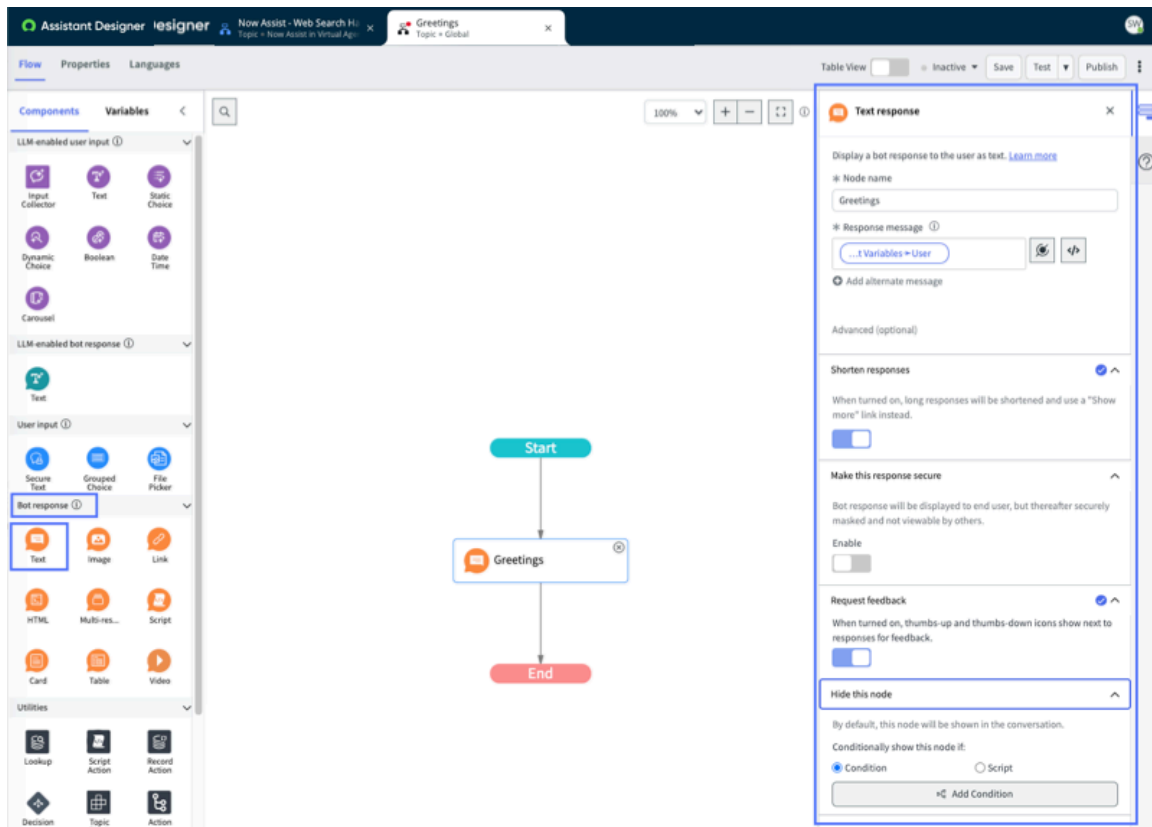
The following bot response controls are available for use within a Virtual Agent topic.

Text bot response control

Use the Text bot response control in a Virtual Agent topic to display a bot response as text. You can format the Text bot responses using the text editor controls. For example, you can bold or italicize the text, as well as include links, bulleted lists, and emojis.

Text bot response properties

Use the Text response properties panel to design bot responses to the user.



General options

Property	Description
Node name	Name that identifies this Text bot response node in the topic flow.
Response message	The Text bot response to the user. The response can be one of the following: - Rich text message. - Script, which can include Glide record variables or script variables. Note: The script can also include a temporary password for the end user. You can format the text messages using the text editor controls. For example, you can use the icons on the Response Message field to bold or italicize the text, as well as include links, bulleted lists, numbered lists, and emojis. * Response Message ⓘ I couldn't find any open incidents. Try one of the following: 🌐 Open an incident in the Support Portal. 📞 Call for immediate assistance at 1-800-867-5309. B <i>I</i> 🔗 📋 📌 😊 + Add alternate message

General options (continued)

Property	Description
	You can also include an input variable, such as a temporary password, in the response message. * Response Message ⓘ Here's your temporary password: Input Variables → Secure ...   To include a link, do one of the following: • Select the link icon: . • Add your response message. Select the text to use as a link, and then select the link icon. Fill in the fields in the Confirmation window. Enter the text to use as the link, and then enter the URL in the Link field. Enter the display label for the link and a static URL, or use the data pill picker to create a dynamic URL.
Add alternate message	Add one or more alternate response messages for the user. Virtual Agent randomly chooses one of your responses for each conversation. * Response Message ⓘ Input Variables → User Qu... sounds great!   Excellent choice.    Let's proceed with Input Variables → User Qu... , then.     Add alternate message

Advanced options

Shorten responses

Enable

When turned on, long bot responses are shortened. A **Show more** link is shown along with the truncated response. When the option is turned off, the entire response is used. By default, this option is turned on.

Make this response secure

Enable

When enabled, the bot response is displayed to the user, but thereafter securely masked and not viewable by others.

Request feedback

Advanced options (continued)

Enable	When turned on, thumbs up and down icons are displayed next to bot responses for feedback.
Hide this node	
Conditionally show this node if	A no-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Channel support**Channel support for the Text bot response control**

Channel	Support	Constraints
Microsoft Teams	Supported	None
Slack	Supported	None
SMS Twilio	Supported	None
WhatsApp	Supported	None
Google Chat	Supported	None

Example Text bot response script

In this example, the script returns a string that greets the user. The `gs.getUser().getFirstName()` property is used to append the first name of the current user.

```
(function execute() {
    return 'Hello ' + gs.getUser().getFirstName();
})();
```

In this example, the script returns links to three instances in the response. Use **Markdown** to include multiple links in the script.

```
(function execute() {
    var output = 'Hello\n';
    output += '\n- [Instance 1](http://instance1.com)';
    output += '\n- [Instance 2](http://instance2.com)';
    output += '\n- [Instance 3](http://instance3.com)';
    return output;
})();
```

Example Text bot response control

Note: Assistant Designer controls may display and function differently in other channels.

Response properties	Text bot response output
Text bot response control basic properties  Text response > Display a bot response to the user as text. Learn more * Node name Asset response * Response Message ① I couldn't find any assets currently assigned to you.  Please call 1-800-HELPDESK for assistance. Or you can try the following: •  Verify that the printer has paper in the tray. • Check for the latest driver here: www.company.com/checkmydriver B <i>I</i>      Add alternate message Advanced (optional) Make this response secure Hide this node	Web UI Text bot response output We could not find any assets currently assigned to you.  Please call 1-800-Helpdesk <i>Or you can try these steps:</i> • Check if the printer has paper  • Check if you have the latest driver here www.company.com/check-driver

LLM Text bot response control

Use this control to write a prompt description that will dynamically create an output message to the user in conversations that use large language model (LLM) topic discovery.

LLM Text bot response control properties

The Text bot response is available on the palette when you work with topics that use LLM topic discovery.

Property	Description
Node name	Name that identifies this LLM Text bot response control node in the topic flow.
Tell the LLM how to respond	What sort of message you want the LLM to send to the user. For example, Greet the user in a friendly, professional manner. You can create messages using plain text, scripts, or conditions defined with the data pill picker.
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Example Text bot response control

 **Text response** ✕

Display a bot response to the user as text. [Learn more](#)

* Node name

Text response 1

* Tell the LLM how to respond ⓘ

Greet the user with a pleasant and professional tone.



Advanced (optional)

Hide this node ▼

Image bot response control

Use the Image bot response control in a Virtual Agent topic to upload and display an image from a URL link. The image aspect ratio determines how the image is sized in the bot chat bubble.

Image bot response control properties

Property	Description
Node name	Name that identifies this Image bot response control node in the topic flow.
Image URL link	The URL link to an image file you want to include in the conversation. To set a value, do one of the following: • Specify the image URL by using the text field, data pill, or script. • Upload an image by clicking Upload Image. If you upload an image, then the selected image is uploaded to the server and is stored in the Images [sys_db_image] table and in the update sets. When the image is stored in the Images table and the update sets, then you can use the image in a production or non-production instance, as needed. After the image is uploaded, the URL link is included in theResponse Properties sheet: Response Properties Image Basic Info * Name ⓘ Image Upload Demo * Image URL Link ⓘ 20210216_130854_2_1616014487159.jpg ✕ Change Image

Property	Description
	Click the link to view the image. The URL is generated dynamically. The name of the instance is inserted at the front of the URL path. You can change or delete the link to the image. If you delete the link on this property sheet, only the reference to the URL is deleted. The image remains on the server for future use.
Image alt text	Alternative, screen-readable text included for accessibility. This text is used along with the image. Enter the text using the text field, data pill, or script. For more information about using data pills or scripts, see Assistant Designer controls .
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Channel support

Channel support for the Image bot response control

Channel	Support	Constraints
Microsoft Teams	Supported	None
Slack	Supported	For details about the maximum image size allowed, check the Slack documentation.
SMS Twilio	Supported	File size limits may vary. For Twilio limitations, check their Accepted Content Types for Media .
WhatsApp	Supported	File size limits may vary. For details, see the WhatsApp documentation.
Google Chat	Supported	None

Example Image bot response control

Note: Asset library controls may display and function differently in other channels.

Response properties	Image bot response output
Image bot response control basic properties  Image response > Upload and display an image from a URL link to the user. Learn more * Node name Image output * Image URL link ① Input Variables ▶ Select In...   Upload Image Image alt text ① Include screen-readable text for accessibility   Advanced (optional) Hide this node ▼	Web UI Image bot response output ☐ Show Logs  Now Support ⋮ just now  ServiceNow mobile Image bot response output 11:24  5G 90% ← Now Support ⌵ 11:21 AM 

Link bot response control

Use the Link bot response control in a Virtual Agent topic to present a bot response. The response contains a header prompt with either a single URL link to an item or multiple URL links for up to three items.

Note: If you're using the link bot response control for Virtual Agent conversations on Now mobile apps, web links open in the mobile browser. If you want links to open in a native mobile screen within the mobile app, create deep links for items in your conversation topics. For details about deep linking in mobile apps, see the [MobileDeepLinkGenerator - Global API](#).

Link bot response control properties

Property	Description
Node name	Name that identifies this Link bot response control node in the topic flow.
Link list	Type of links returned in the output result.

Property	Description
	- Select Single Link to return one item in the output results. - Select Multiple Links to return up to three items in the output results.
Single link properties	
Header	Message displayed above the URL link. The message can be a string with variables or a script.
Label	Text that identifies a single link in the bot bubble. The text can be a string with variables or a script.
Link	Link to a single item, such as a website page or a particular record. The link can be a string with variables or a script that returns a valid URL as a string. For example, you can enter the complete URL, such as <code>https://servicenow.com</code> .
Multiple links properties	
Header Message	Text prompt that is displayed above the list of links. The prompt can be a string with variables or a script.
Link List Value Expression	Script that creates a list of links to display. The script includes the following parameters: link URL, link display label, link description, and link context.
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Channel support

Channel support for the Link bot response control

Channel	Support	Constraints
Microsoft Teams	Supported	None
Slack	Supported	None
SMS Twilio	Supported	None
WhatsApp	Supported	None
Google Chat	Supported	None

Example single-link bot response control

Note: Asset library controls may display and function differently in other channels.

Single link bot response properties

Link bot response output

Single Link bot response control

basic properties

Link response

>

Include a header prompt with either a single URL link to an item or multiple URL links for up to three items. [Learn more](#)

* Node name

Test link

* Link list

☒ Single link

☐ Multiple links

* Header ⓘ

Here is a link

</>

Label ⓘ

Click Here

</>

* Link ⓘ

https://mycompany.com/

</>

Advanced (optional)

Hide this node

▼

Web UI Link bot response output

☐ Show Logs

now

Now Support

⋮

just now

Here is a link

Click Here

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Example multiple-link bot response control properties

Multi-link bot response properties	Link bot response output
Multi-link bot response control basic properties  Link response > Include a header prompt with either a single URL link to an item or multiple URL links for up to three items. Learn more * Node name Test multi-link * Link list ☐ Single link ☒ Multiple links * Header Message ⓘ I found some information that might help you:   * Link List Value Expression ⓘ <code>(function execute(header){ var groupedLinks</code>   Advanced (optional) Hide this node 	Web UI Link bot response output - multiple URL links  I found some information that might help you: Short term disability - United States eligible employee may be able to take time off: Medical Family Care Pregnancy Disability Personal... Knowledge Long term disability - United States to take extended time away from work. The following are the types of leaves of absence for ... Knowledge Family and Medical leave request to take extended time away from work. The following are the types of leaves of absence for ...  Knowledge Note: Multi-link bot output is also supported in Microsoft Teams and Slack.

HTML bot response control

Use the HTML bot response control to display static HTML text in the Virtual Agent bot response.

Note: If you created conversations in earlier releases that use this bot response control to generate card layouts, consider updating your conversations to use the [Card bot response control](#). The Card displays information from a record in your instance and contains a link to that related record.

Security considerations for HTML markup

For security reasons, an HTML sanitizer script runs automatically and checks all HTML markup used in the instance, including Virtual Agent conversations. The sanitizer script removes elements or attributes that might enable cross-site scripting attacks. You can edit the HTML sanitizer script to change the list of markup items to be preserved or removed. For details, see [HTML sanitizer](#). For examples of adding markup items to the exclusion or inclusion lists, see [Configure HTML sanitizer](#).

To disable the HTML sanitizer script only for Virtual Agent conversations, add the `com.glide.cs.html.sanitizer.enabled` system property and set the value to false. For details about creating a system property, see [Add a system property](#).

HTML bot response control properties

Property	Description
Node name	Name that identifies this HTML bot response control node in the topic flow.
HTML message	HTML output to be displayed. Select the Script icon  to open the HTML editor and enter the HTML text.
Height (Pixel)	Maximum height of the area for displaying HTML output in third-party messaging applications.
Width (Pixel)	Maximum width of the bot bubble for displaying HTML output in third-party messaging applications.
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Channel support

Note: As shown in the examples, HTML output can vary in third-party messaging applications. Determine an appropriate **Height** and **Width** area by setting initial height and width values, previewing the HTML output in the messaging applications you intend to use, and then adjusting the height and width values.

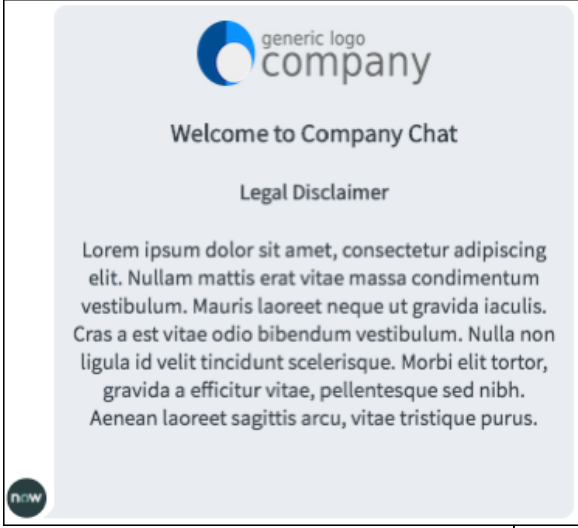
Channel support for the HTML bot response control

Channel	Support	Constraints
Microsoft Teams	Supported	Since HTML is rendered as an image in Microsoft Teams, other controls are recommended. For example, use images or cards instead of HTML for Microsoft Teams.
Slack	Supported	None
SMS Twilio	Not supported	Not applicable
Google Chat	Supported	None

Example HTML bot response output

The HTML bot response shows a static HTML as a chat response. This example includes an image, headings, and paragraph text. The web UI presents this content as HTML. The Slack, Microsoft Teams, and Workplace user interfaces display the same content as a PNG image. URL links within the HTML are extracted and displayed below the image. The URL can be either an absolute or a relative link. If you use a relative link, it must be relative to the ServiceNow instance.

Note: Asset library controls may display and function differently in other channels.

HTML bot response properties	HTML bot response output
HTML bot response control basic properties  HTML response > Show a static HTML as a response from the bot. Learn more * Node name Legal Disclaimer * HTML message ① <html> <body> <img src="images/companylo" </body> </html> Height (Pixel) ① 0 Width (Pixel) ① 0 Advanced (optional) Hide this node	Web UI HTML output 

Multi-response bot response control

Use the Multi-response bot response control in a Virtual Agent topic to sequentially display two or more outputs. Outputs can be text, image, link, or HTML. Users can move from one output to the next through a provided navigation button.

Multi-response bot response control properties

Property	Description
Node name	The name that identifies this Multi-response control node in the topic flow.
Add a response	One or more bot responses. For each output type, select + Add a Response to specify the output and define the output properties. - In the Add a Response dialog box, select the Type, and specify the associated values: Text: In the Value field, enter the text to be displayed in the response. HTML: Enter the Height and Width, in pixels, to set the dimensions of the HTML block. In the HTML editor, enter the HTML markup to be displayed.

Property	Description
	◦ Image: Enter a URL in the Image field, or select Upload Image and choose the image file to upload. ◦ Link: Enter the Header, Label (label for the link), and the Link (path or URL for the link). 2. Select Save.
Advanced	
Navigation button label	
Label the button that lets the user continue the conversation	The label for the button displayed below the output. The button enables the user to move to the next output in the flow.
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Channel support

Channel support for the Multi-response bot response control

Channel	Support	Constraints
Web UI	Supported	None
Mobile UI	Supported	None
ServiceNow Otto panel	Not supported	Not applicable
Microsoft Teams	Supported	None
Slack	Supported	None
Workplace	Supported	None
Facebook Messenger	Not supported	Not applicable
SMS Twilio	Not supported	Not applicable
LINE	Not supported	Not applicable
WhatsApp	Not supported	Not applicable
Apple Messages for Business	Not supported	Not applicable

Channel support for the Multi-response bot response control (continued)

Channel	Support	Constraints
Alexa (Voice)	Partial support	Supported on devices with screens. For non-screen devices, the user receives a message if unsupported elements are used: We found a link. For details, see (Legacy) Fine-tune Virtual Agent settings and topics for the best Alexa voice chat experience.

Example Multi-response control

Note: Asset library controls may display and function differently in other channels.

Output properties

Multi-response bot response control basic properties

Multi-response

Sequentially display two or more outputs (text, image, link, or HTML). Learn more

Node name

New User Multi-Response

Add a response

Response type

Value

Text

Let's get started

HTML

<html><body><div>Let's get started.</div></body></html>

Image

Let's get started_167726...

Link

https://www.google.com...

Add a response

Advanced (optional)

Navigation button label

Hide this node

Multi-response output

Web UI Multi-response bot response output

Test this topic

Create test case

Restart

Include topic discovery

Now Support

Let's get started.

Let's get started.

Let's Get Started

Let's get started

Let's get started

Script bot response control

Use the Script bot response control in a Virtual Agent topic to run a script that returns a single response or a multi-part response.

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Use the Script bot response control when creating a more complex response that relies on scripted calculations or requires a multi-part response. Scripted output can include text, image, cards, links, and HTML to create a versatile response.

Script bot response control properties

Property	Description
Node name	The name that identifies this Script bot response control node in the topic flow.
Script output type	The type of output returned by the script, either single-part or multi-part.
Script response message	The script that generates the selected output type.
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Channel support

Channel support for the Script bot response control

Channel	Support	Constraints
Microsoft Teams	Supported	None
Slack	Supported	None
SMS Twilio	Not supported	Not applicable
WhatsApp	Not supported	Not applicable
Google Chat	Supported	None

Example script

In this example, the script calculates the time two hours from the current time and outputs a multi-part message that includes this information.

```
(function execute() {
    var gdt = new GlideDateTime();
    var gt = new GlideTime();
    gdt.addSeconds(7200);
    gt = gdt.getTime();
    var multiOutMsg = new sn_cs.MultiPartOutMsg();
    multiOutMsg.addPlainTextPart('Thank you for submitting an incident.');
```

```
    multiOutMsg.addPlainTextPart('You should receive a response from a technician by ' + gt.getByFormat('HH:mm'));
    return multiOutMsg;
})();
```

Example Script bot response control

Note: Asset library controls may display and function differently in other channels.

Script properties	Script bot response output
Script bot response control basic properties  Script response > Create a complex response using scripted calculations or a multi-part response. Learn more * Node name Script output Script output type ⓘ Single-part ▼ * Script response message ⓘ <code>(function execute() { var singleOutMsg = new</code>  Advanced (optional) Hide this node ▼	Web UI Script bot response output ☐ Show Logs  Now Support  just now  This is my script output.

Card bot response control

Use the Card bot response control in a Virtual Agent topic to upload and display selected information from a record on your instance, along with rich content, such as a video or image.

A card can contain record information, an image, or a YouTube video content in a compact format. The compact format is designed for readability within the chat window.

The Card bot response can show the following types of content:

- **Record:** Displays content from a single record on your instance. This record can be referenced from variables in the flow or queried using a script that returns a single Glide record from a selected table. The record content includes the display field for the table at the top of the card, followed by any other fields specified by the properties of the bot response.
- **Image:** Displays a large or small image that you provide, along with a title and description. The property sheet provides a pre-configured template for the card layout. Specify the title, description, and the image source.
- **YouTube video:** Displays in an inline video player if supported on the channel. The image is displayed along with a title, description, and hyperlink to relevant content.

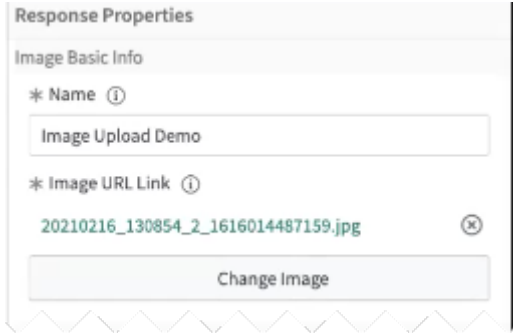
In the Brazil release, only YouTube videos are supported.

Tip: You can also use the [Video bot response control](#) to include YouTube videos in conversations. The Video bot response control includes a navigation button that pauses the conversation. If you want the user to watch the video before continuing with the conversation, use this navigation button. When users have finished watching the video, they can click this navigation button to continue with the conversation.

Note: If you previously created conversations that use the [HTML bot response control](#) to generate card layouts, consider updating your conversations to use the Card bot response control. The Card displays information from a record in your instance and contains a link to that related record. Or, it can display images and can include rich content such as a video.

Card bot response control properties

Property	Description
Node name	Name that identifies this Card bot response control node in the topic flow.
Card type	Type of card to be used. Choose one of the following options: • Record • Large image with text • Small image with text • YouTube Video Card Note: In the Brazil release, only YouTube video cards are supported.
Type: Record	
Record	Reference to a specific record. Data for the card comes from a record referenced in a variable from another node in the flow. For example, the reference could be a Choice List or Glide Action. 1. Select a variable from the current flow that contains a record object. 2. Use the fields list to determine the fields displayed in the card.
Table	Table that references a single Glide record that contains the data shown in the card.
Filter this table by using	Enter the condition or script to filter data in the table and return the record. • Condition: Condition statement that returns the table record. • Script: Glide record query that returns the glide record.
fields	Fields from the ServiceNow record to be displayed in the card. Specify each field by clicking Add Field . Note: If you're using Workplace, a maximum of four fields is rendered on the card. If you have more than four fields, the remaining fields are displayed on a subsequent card, with up to four fields per card.

Property	Description
Type: Large image with text or Small image with text	
Template	A visual representation that shows the image card layout. Each area of the template is numbered.
Map data to fields on the card	Fields that correspond to the numbers shown on the template. These fields are the following: Title: Name or label for the card Description: Explanation of the image Image URL link: Specify the image displayed in the card in one of the following ways: - Specify the image URL, using the text field, data pill, or script. - Upload the image by clicking Upload Image. If you upload an image, the selected image is uploaded to the server and is stored in the Images [sys_db_image] table and in the update sets. When the image is stored in the Images table and the update sets, you can use the image in a production or non-production instance, as needed. After the image is uploaded, the URL link is included in the Response Properties sheet.  Click the link to view the image. The URL is generated dynamically. The name of the instance is inserted at the front of the URL path. You can change or delete the link to the image. If you delete the link on this property sheet, only the reference to the URL is deleted. The image remains on the server for future use. Image alt text: Alternative, screen-readable text that describes the image for accessibility programs. This text is used along with the image. Enter the text using the text field, data pill, or script.
Type: YouTube Video card	
Template	A visual representation of the layout of the video included in the card.
Map data to fields on the card	Fields that correspond to the numbers shown on the template. These fields are the following: Title: Title of the card. Title Link: URL to any relevant content.

Property	Description
	• Description: Description the card, such as the topic the video addresses. • YouTube Video ID: Unique identifier for the video used in the card. This identifier is the string following the equal sign (=) at the end of the video's URL path. For example, in the path shown below, the video identifier is FVgtjdEOa5M. https://www.youtube.com/watch?v=FVgtjdEOa5M https://www.youtube.com/watch?v={Video ID}
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Channel support

Channel support for the Card bot response control

Channel	Support	Constraints
Microsoft Teams	Supported	The video control displays a thumbnail image of the video that users select to open the video in their preferred web browser.
Slack	Supported	Conversational Integration with Slack Version 2.0.0 and later. The video control displays a thumbnail image of the video that users select to open the video in their preferred web browser.
SMS Twilio	Supported	Records and image cards only.
WhatsApp	Partial support	Records and image cards only.
Google Chat	Supported	None

Example Glide record query

```
(function execute(table) {
    /* Write a glide record query, and return the glide record.
       For example:

       var now_GR = new GlideRecord(table);
       gr.addEncodedQuery('active=true^number=INC0010099');
       gr.query();
       if(gr.next()) {
           return gr;
       }
    */
})
```



```
})(table)
```

In this example, the script creates a GlideRecord object, populates this object using a query that should return a single result, then returns the object. The **Table** property defines the table used in this query.

Example Card bot response output for records

Note: Asset library controls may display and function differently in other channels.

Response properties

Card bot response control basic properties

Card response

Upload and display selected information from a record on your instance. You can also include rich content.
[Learn more](#)

* Node name

Incident status

* Card type

Record

* Populate this card by referencing:

Record

Table

* Record

Select Incident

* fields

State

Number

Category

Short description

Add Field

Advanced (optional)

Hide this node

Card output

Web UI Card output

Incident

INC0010067

Category

Inquiry / Help

Short description

network is very slow

State

New

Microsoft Teams Card output

Conversation

Created 2024-07-23 14:45:52

Consumer

System Administrator

Sys ID

03cb2e0a4723ce10f3bd47c4416d43f5

Device Type

Teams

Created

2024-07-23 14:45:52

Go to Conversation

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Example Card bot response for a large image

The Card response layout for images may vary across channels.

Response properties	Card output
 Card response > Upload and display selected information from a record on your instance. You can also include rich content. Learn more * Node name Image large card * Card type Large image with text ▼ To view supported channels, open Large image with text Template  Illustrative card layout. May vary across channels based on template definitions. Map data to fields on the card * 1. Title Don't forget we are going back to the office soon! 👁 </> 2. Description You're scheduled to return to work October 7. 👁 </> * 3. Image URL link Tele_GettyImages-556454119_1647376622096.jpg ✕ Change Image 4. Image alt text 👁 </> Advanced (optional) Hide this node ▼	Web UI image card output Don't forget we are going back to the office soon! Your scheduled return to work Oct 7  Microsoft Teams UI image card Scenery Scenery Description 

Example Card bot response for a small image

The Card response layout for images may vary across channels.

Response properties

Card response

Upload and display selected information from a record on your instance. You can also include rich content. [Learn more](#)

* Node name

Image card

* Card type

Small image with text

To view supported channels, open [Small image with text](#)

Template

1

2

3

Illustrative card layout. May vary across channels based on template definitions.

Map data to fields on the card

* 1. Title

Save the date | Q1 Earnings Call

2. Description

Remember to tune in Wednesday, April 28th for our Q1 Earnings call.

* 3. Image URL link

Tele_GettyImages-556454119_1647376115065.jpg

Change Image

4. Image alt text

Join the call.

Advanced (optional)

Hide this node

Card output

Now Support

Answers generated by AI. Review for accuracy.

Hi, I'm your AI assistant. How can I help?

When do we announce earnings?

Let me look up information related to the earnings announcement date for you.

Save the date | Q1 Earnings Call

Remember to tune in Wednesday, April 28th for our Q1 Earnings call.

Reply...

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Example Card bot response with video content

The way the Card bot response displays videos may vary across channels. For example, the display you see in Slack messages may be different from what you see on Microsoft Teams or Workplace from Facebook. Also, if an embedded player is supported on that channel, the player is included in the display. For more information about channels, see the documentation for the channel that you're using.

Response properties

Card output



Card response



Upload and display selected information from a record on your instance. You can also include rich content. [Learn more](#)

* Node name

Video card response

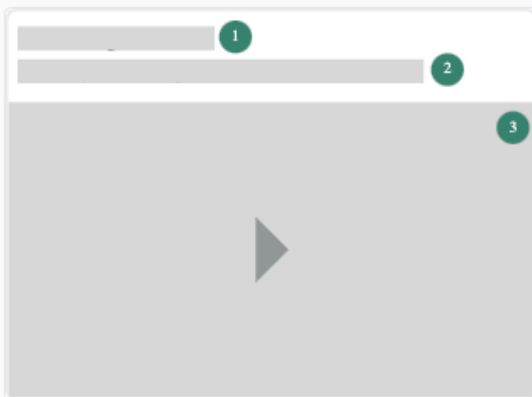
* Card type

Youtube Video Card



To view supported channels, open [Youtube Video Card](#)

Template



Illustrative card layout. May vary across channels based on template definitions.

Map data to fields on the card

* 1. Title

Chief Holiday Officer | Let's workflow it



1B. Title Link

<https://www.servicenow.com/>



2. Description

Ready for work to work better? Our digital workflows are here to bring simplicity to your complexity and transform how work gets done across your enterprise.



* 3. Youtube Video ID

FVgtjdEOa5M



Advanced (optional)

Hide this node



Card bot response output with video on the chat widget



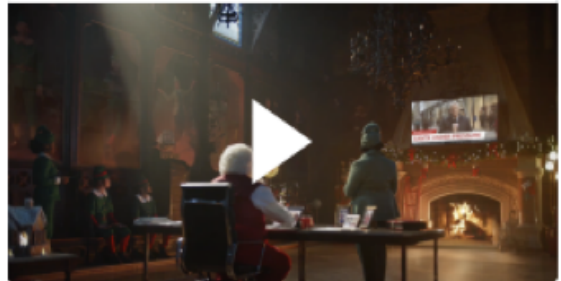
Now Support



youtube.com

[Chief Holiday Officer | Let's workflow it](#)

Ready for work to work better? Our digital workflows are here to bring simplicity to your complexity and transform how work gets done across your enterprise.



Reply...



Card bot response output with video on Microsoft Teams

Video Example

Video Example Description

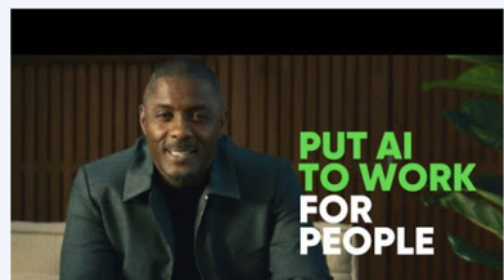


Table bot response control

Use the Table bot response control in a Virtual Agent topic to display a bot response as a table.

Table bot responses enable users to see information in a more organized way.

For example, you can organize and display information such as the following:

- Planned service changes
- Company holidays
- Contact information
- Testing sites

Output tables can have between one and four columns and may include optional column headers. You can populate tables using the conditioner builder or scripts.

Table bot response properties

Property	Description
Node name	Name that identifies this Table bot response control node in the topic flow.
Populate this table by	Options for populating the table. Select one of the following: • Table: Select the ServiceNow table that contains the data to be displayed. • Script: Enter code in the Define rows dialog box.
Table	The name of the table that contains the data. This field is available only when the Table option is selected.
Filter rows	Options for filtering the contents of the table. Choose one of the following: • Condition: Specify a no-code condition statement using the condition builder. For more information, see Condition builder. • Script: Enter a low-code script that specifies a condition. This field is available only when the Table option is selected.
No records response message	Message displayed if no records are found.
Show links for each record	Slide this toggle to activate links for each record in the output in your Virtual Agent conversation. The Show links for each record toggle is not available by default. It can be enabled by changing the value of the system property <code>sn_cs_builder.table_show_links_enabled</code> to true.
Columns and rows	
Columns (left to right)	Table columns that you want to display in the conversation. You can have up to 4 columns. • Field: Select a field from the ServiceNow table to be displayed in the column. • Display name: Reflects the selected column name. Use the default name or change the name.

Property	Description
	This field is available only when the Table option is selected.
Sort rows by	Option for sorting returned rows by column. You can sort by one of the selected columns, or by a column not shown in the response to the user. Choose Ascending or Descending order for the sort. If you don't specify a sort order, rows are sorted by creation date in descending order. If you specify a different sort order, creation date is used as a secondary sort order. This field is available only when the Table option is selected.
Advanced	
Headers	
Header	Header or title for the table when the table is displayed in the response output. The header can be a text string, variables, or a script.
Display Column Headers	Toggle switch that enables the display of column headings.
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Channel support

Channel support for the Table bot response control

Channel	Support	Constraints
Microsoft Teams	Supported	None
Slack	Supported	None
SMS Twilio	Not supported	Not applicable
WhatsApp	Not supported	Not applicable
Google Chat	Supported	None

Example Table bot response output

Note: Asset library controls may display and function differently in other channels.

Response properties	Table bot response output															
Table bot response control basic properties  Table response × Table is not supported on: AI Agent Help users to see information in a more organized way. Learn more * Node name Find incident * Populate this table by ☒ Table ☐ Script * Table ⓘ Incident [incident] * Filter rows ☒ Condition ☐ Script All > Active = true ×  * No records response message I couldn't find any incidents.   Show links for each record ☐ Columns and rows * Columns (left to right) ⓘ <table border="1"> <thead> <tr> <th>Field</th> <th>Display name</th> <th></th> <th></th> </tr> </thead> <tbody> <tr> <td>Created</td> <td>Created</td> <td>+</td> <td>-</td> </tr> <tr> <td>Number</td> <td>Number</td> <td>+</td> <td>-</td> </tr> <tr> <td>State</td> <td>State</td> <td>+</td> <td>-</td> </tr> </tbody> </table> Sort rows by ⓘ Active × Ascending Advanced (optional) Headers Hide this node	Field	Display name			Created	Created	+	-	Number	Number	+	-	State	State	+	-
Field	Display name															
Created	Created	+	-													
Number	Number	+	-													
State	State	+	-													

Video bot response control

Use the Video bot response control in a Virtual Agent topic to include a video in the conversation.

The Video bot response control includes a navigation button, which gives users time to watch the video. If you want the user to watch the video before continuing with the conversation, use this navigation button.

When users have finished watching the video, they can select the navigation button to continue with the conversation.

Note: Topic authors can also use the [Card bot response control](#) to include a video in conversations. However, the Card bot response control doesn't include the navigation button, which gives users time to watch the video.

Video bot response control properties

Property	Description
Node name	Name that identifies this video bot response control node in the topic flow.
Card type	Type of card. Select YouTube Video Card . Note: In the Brazil release, only YouTube video cards are supported.
Template	A visual representation of the layout of the video included in the card.
Map data to fields on the card	Fields that correspond to the numbers shown on the template. These fields are the following: Title: Title of the card. Title Link: URL to any relevant content. Description: Description the card, such as the topic the video addresses. YouTube Video ID: Unique identifier for the video used in the card. This identifier is the string following the equal sign (=) at the end of the video's URL path. For example, in the path shown below, the video identifier is FVgtjdEOa5M. <pre>https://www.youtube.com/watch?v=FVgtjdEOa5M </pre> <pre>https://www.youtube.com/watch?v={Video ID}</pre>
Advanced	
Navigation button label	Navigation button used to continue with the conversation. By default, the button is labeled Got it , but you can change it. For example, you change the label to Continue . Users select this navigation button in the chat window to continue with the conversation.
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Property	Description
Node Conditions	Expression logic to specify a condition for presenting this topic to users. The condition must evaluate to true. You can set this field using either the condition builder or a script. • Condition: Use the condition builder to add or edit conditions. • Script: Use the script editor to create or edit a script that contains a condition statement.

Channel support

Note: The way the Video bot response displays videos may vary across channels. For example, the video display you see in Slack messages may be different from what you see on Microsoft Teams or Workplace from Facebook. Also, if an embedded player is supported on that channel, the player is included in the display. For more information about channels, see the documentation for the channel you're using.

Channel support for the Video bot response control

Channel	Support	Constraints
Microsoft Teams	Supported	The video control displays a thumbnail image of the video that users select to open the video in their preferred web browser.
Slack	Supported	Conversational Integration with Slack version 2.0.0 and later. The video control displays a thumbnail image of the video that users select to open the video in their preferred web browser.
SMS Twilio	Not supported	Not applicable
WhatsApp	Not supported	Not applicable
Google Chat	Supported	None

Example Video bot response control

Note: Asset library controls may display and function differently in other channels.

Response properties

Card output

Video bot response control basic properties

 Video response >

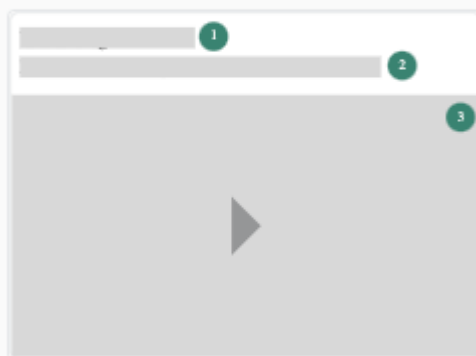
Include a video in conversations with the user. [Learn more](#)

* Node name

* Card type

To view supported channels, open [Youtube Video Card](#)

Template



Illustrative card layout. May vary across channels based on template definitions.

* 1. Title



1B. Title Link



2. Description



* 3. Youtube Video ID



Video bot response output on the chat widget with the navigation button

 Now Support

[Returning to work using Safe Workplace Suite](#)
 Announcing our official plan to return to work leveraging our very own Return to Work Suite



Continue

Please type your response here

Video bot response output on the chat widget without the navigation button

 Now Support

[Returning to work using Safe Workplace Suite](#)
 Announcing our official plan to return to work leveraging our very own Return to Work Suite



Assistant Designer utilities

You can control interactions within a topic by using utilities in Assistant Designer. These utilities perform various actions such as adding topic blocks (reusable components), running a script, or adding different conversation paths (branches) in a topic. Utilities are represented as nodes in a conversation flow but do not display anything to the user.

The following utilities are available for use within a Virtual Agent topic.

Lookup utility

Use the Lookup utility in a Virtual Agent topic to return a ServiceNow record query.

Lookup utility properties

Property	Description
Node name	The name that identifies this Lookup utility node in the topic flow.
Variable name	The variable that stores the record returned by the script. The variable name is automatically created from the <i>Node name</i> property.
Table	The table used for the query.
Filter this table by using	The query to retrieve the record. Use the condition builder or a script to specify a query condition.
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Example Lookup utility

Lookup utility basic properties


Lookup utility
>

Return a ServiceNow record query. [Learn more](#)

* Node name

Lookup incident

Variable name: lookup_incident

* Table ⓘ

Incident [incident]

* Filter this table by using: ⓘ

☒ Condition
 ☐ Script

[All > Active = true > Caller = \(empty\)](#)  

Advanced (optional)

Hide this node ▼

Example Lookup script

```
(function execute(table) {
    var now_GR = new GlideRecord(table);
    gr.addEncodedQuery('active=true');
    gr.setLimit(1);
    gr.query();
    if(gr.next()) {
        return gr;
    }
})(table)
```

In this example, a table is queried for the first active record. The table to be queried is defined in the **Table** property found in the lookup utility control. The `setLimit()` method ensures that only a single record is returned from the database. If a record is found, it is returned. For more information on GlideRecord queries, see [Querying tables in script](#).

Script Action utility

Use the Script Action utility in a Virtual Agent topic to run a script.

Script Action utility properties

Property	Description
Node name	The name that identifies this Script Action node in the topic flow.

Property	Description
Action expression	The script that performs an action.
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Example Script Action utility

Script Action utility basic properties


Script action utility
>

Run a script. [Learn more](#)

* Node name

Script action test

* Action Expression ⓘ

```
(function execute(){ var list = []; if (vaInputs.case_num
```

ⓧ
</>

Advanced (optional)

Hide this node
▼

Example script action

```
(function execute() {
    var list = [];
    if (vaInputs.case_number != "") {
        var gr = new GlideRecord("sn_customerservice_case");
        gr.addQuery("number", "CONTAINS", vaInputs.case_number);
        gr.addQuery("active", "true");
        gr.orderBy("number");
        gr.query();
        while (gr.hasNext()) {
            gr.next();
            list.push(gr.getUniqueValue().toString());
        }
        vaVars.case_list = list;
    }
})();
```

This example performs a search on the [sn_customerservice_case] table for a specific case number based on the input from another control called case_number. The script then places the results in an array and stores them in the case_list variable, which is accessible by other nodes in the same topic. Because vaVars only supports string, number, and Boolean values,

the script uses `toString()` to store these values as strings. The code is contained in an `if` statement, so it only executes if the `case_number` variable has a value. This `if` statement prevents the code from running if the user has not entered a number.

For more information about writing scripts for Virtual Agent, see [Virtual Agent scripts](#).

Record Action utility

Use the Record Action utility in a Virtual Agent topic to create or update a ServiceNow record in a table.

Record Action utility properties

Property	Description
Node name	Name that identifies this record action node in the topic flow.
Variable name	Name of the variable that stores the created or updated record values. The variable name is automatically created from the Node name property. This option is not visible when the Action Type is Update a Record .
Action type	The type of action to perform. Select one of the following: • Create a Record: Creates a new record in the table that you specify. • Update a Record: Updates an existing record based on the context of the conversation.
Table	If you're creating a record, select any table that is available in the instance. If you're updating a record, select a variable for a record that is referenced in the conversation. For example, User .
Field	Select one or more fields in the ServiceNow table to be modified. For each field, select a valid value or specify input variables or script variables.
Advanced	
Attach file to record	A low-code method of attaching an image or other file to a record of your choosing. Note: Ensure that you've an uploaded file using the File Picker node before attaching it to a record with the Record Action node. The uploaded file is initially linked to the conversation table. When the incident is created with the uploaded file using the Record Action node, the file is linked to the incident table. It is no longer referenced through the conversation table, but the incident instead.
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Example Record Action utility

Record Action utility basic properties


Record action utility
3 incomplete
>

Create or update a ServiceNow record. [Learn more](#)

* Node name

Variable name:

Action type ⓘ

Create a record
▼

* Table ⓘ

Choose a table
▼

* Field ⓘ

Field	Value
⊕ Add Field	

Advanced (optional)

Attach file to record
▼

Hide this node
▼

Decision utility

Use the Decision utility in a Virtual Agent topic to add two or more branches that represent different paths in a conversation.

Use scripts or variable conditions to set decision branches

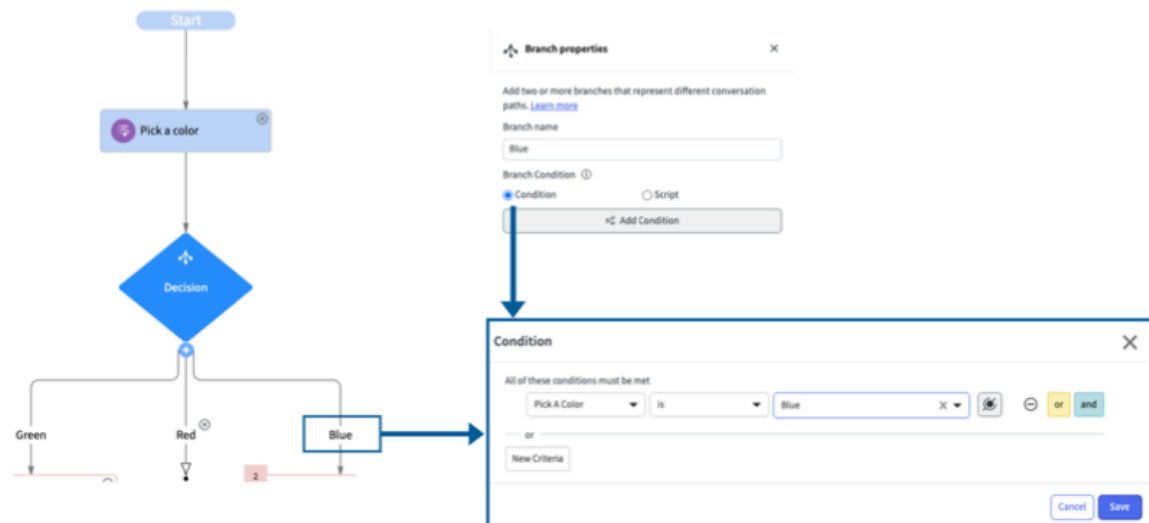
Each branch below a Decision utility node has a condition property. You can define the condition using the condition builder or a script that returns a value of true or false. A branch that returns a value of true is followed, while a branch returning a value of false is not. When creating these scripts or conditions, ensure that only one branch in each Decision utility node evaluates to true.

Note: If you insert a **Boolean** user input control, you're prompted to add a **Decision** utility directly after the Boolean node on the canvas. Selecting **Yes** on the Boolean node's Decision utility prompt automatically generates two branches named *True* and *False*. The two branches conditions are automatically set through the condition builder.

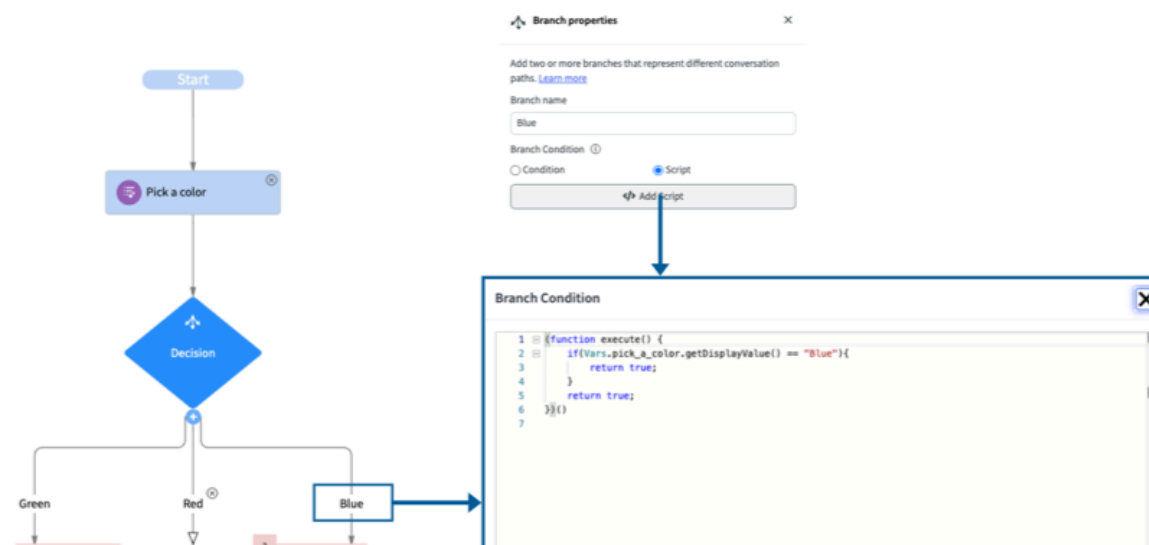
For more information, see [Branch a Virtual Agent conversation with a Decision utility](#).

Example Decision utility node with branches

In this example, a static choice control prompts the user to select from three available colors and the selection is stored in a variable. The Decision utility control is configured with a branch for each possible selection. Each branch uses the condition builder, which returns true when the corresponding color is selected. In the example, the condition builder returns true when the choice is Blue.



You can also use the Script option for branch conditions. In the following example, the script provides the same functionality as the condition builder.



Topic Block utility

Use a Topic Block in a Virtual Agent conversation to perform a specific function or subflow that runs certain steps in a calling topic.

Topic Block utility properties

For more information, see [Add a reusable topic block to a calling topic or topic block.](#)

Property	Description
Node name	Name of the topic block node. The name is automatically assigned based on the topic block that you select. For example, if you choose the Acme Contextual Search topic block, the Name is Acme Contextual Search. With Use dynamic Topic Block active, input a name of your choice.
Use dynamic Topic Block	Set this toggle to activate dynamic Topic Block options.
Topic block	A list of published topic blocks. Select a topic block to add to the calling topic. With Use dynamic Topic Block active, use the condition builder to input a condition or script instead.
Input mapping	The variables to be used as input to the selected topic block. In this example, input mapping variables include catalog item ID, execute contextual search, confirm catalog item, and show end state card. Input mapping These variables are passed to the Topic Block. * catalog_item_id (String) 👁 ⌘ execute_contextual_search (String) false 👁 ⌘ confirm_catalog_item (String) true 👁 ⌘ show_end_state_card (Boolean) ☐ 👁 ⌘ The contents of this area change according to the topic block you selected. Options may include string input, referenced records, scripts, and so forth. With Use dynamic Topic Block active, you add all input mappings manually instead by selecting the Manage inputs to define icon . Inputs are handled similarly to the Input Parameters dialog box in the Start segment of a reusable topic block.
Output mapping	The variables to be output by the selected topic block. For example, the following image has example variables that are enabled:

Property	Description												
	Output mapping These variables are returned from the Topic Block. <table><tr><th>Enable</th><th>Name</th><th>Variable Name ①</th></tr><tr><td>☒</td><td>record_id</td><td> record_id </td></tr><tr><td>☒</td><td>record_table</td><td> record_table </td></tr><tr><td>☒</td><td>variables</td><td> variables </td></tr></table> The contents of this area change according to the topic block you selected. With Use dynamic Topic Block active, you add all input mappings manually instead by selecting the Manage outputs to define icon . Inputs are handled similarly to the Input Parameters dialog box in the Start segment of a reusable topic block.	Enable	Name	Variable Name ①	☒	record_id	record_id	☒	record_table	record_table	☒	variables	variables
Enable	Name	Variable Name ①											
☒	record_id	record_id											
☒	record_table	record_table											
☒	variables	variables											
Advanced													
Hide this node													
Conditionally use this node if	A no-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.												

Example Topic Block utilities

The following Topic Block utility properties include the reference to an available topic block, input mapping variables to the topic block, and the output variables that the topic block will pass.

Topic Block utility

>

Include a reusable topic block which performs a specific subflow in your conversation. [Learn more](#)

Use dynamic Topic Block

* Topic block ⓘ

Request Catalog Item

For more details, open [Request Catalog Item](#)

* Node name

Request Catalog Item

Input mapping

These variables are passed to the Topic Block.

* catalog_item_id (String)

(function execute()) { if (valInputs.first_name

execute_contextual_search (String)

false

confirm_catalog_item (String)

true

show_end_state_card (Boolean)

Output Mapping

These variables are returned from the Topic Block.

Enable	Name	Variable Name ⓘ
☒	record_id	record_id
☒	record_table	record_table
☒	variables	variables

Advanced (optional)

Hide this node

By default, this node will be used in the conversation.

Conditionally use this node if:

☒ Condition ☐ Script

Add Condition

The following Topic Block utility properties have the **Use dynamic Topic Block** toggle switch turned on.


Topic Block utility
>

Include a reusable topic block which performs a specific subflow in your conversation. [Learn more](#)

Use dynamic Topic Block

☒

* Dynamic Topic Block ⓘ

✕
</>

For more details, open

* Node name

Input mapping

Define variables for each input. These are passed to the Topic Block.

 [Manage inputs to define](#)

Output mapping

Define variables for each output. These are returned from the Topic Block.

 [Manage outputs to define](#)

Advanced (optional)

Hide this node ^

By default, this node will be used in the conversation.

Conditionally use this node if:

☒ Condition
 ☐ Script

 Add Condition

Using dynamic Topic Blocks

Toggling the dynamic setting on the Topic Block enables you to programmatically choose which topic block or blocks to invoke, based on any number of conditions. You can pass in a dynamic set of inputs without an explicit, one-to-one match for a Topic Block definition.

For example, assume you have two Topic Blocks. One sets your password by taking your username and returning a success or fail message. The other resets your password, but requires that you send two-factor authentication (2FA) token with the request before returning a success or fail message and a temporary password.

You can create two separate Topic Block invocations to handle the password-reset procedure, or you can create one Topic Block with the dynamic setting active and defined as follows:

- Add a script that checks if the reset type is `includesTwoFactor = true`. If the statement evaluates to `true`, then you return `TwoFactorReset`, otherwise you return `NormalPasswordReset`.
- Define two input mappings: `password` and `twoFactorToken`, both set equal to an object passed in which contains their values.
- Define two output mappings: `successful` and `tempPass`, the latter of which is only set if it exists in the return value for the Topic Block.
- Define two output nodes to output success or failure, and an output to confirm to you whether the `tempPass` value is true.

Example dynamic Topic Block expression

```
(function execute() {
    /* Return the name of the topic block to run. For example:
       switch (vaVars.car_make) {
           case 'Ford':
               return 'Ford troubleshooting';
           case 'Toyota':
               return 'Toyota troubleshooting';
           default:
               return 'General car troubleshooting';
       }
    */
})()
```

The script in the dynamic Topic Block expression returns a value based on your input. In this example, if you input `Ford` or `Toyota`, the Virtual Agent will call for the appropriate troubleshooting topic. If you input any other value, the Virtual Agent returns a general troubleshooting topic instead.

Action utility

Use the Action utility in a Virtual Agent topic to select the flow action properties that the node should create. The Action utility integrates Virtual Agent with the ServiceNow Workflow Studio product.

Action utility properties

Specify the flow action properties for the node you want to create.

Property	Description
Node name	The name of this Action node.
Invoke Workflow Studio asset	Workflow Studio component type. Select one of the following:

Property	Description
	• Action: A reusable operation. • Subflow: An automated process that consists of a sequence of reusable actions, data inputs, and outputs.
Spoke	Name of the scoped application that contains Workflow Studio content that is dedicated to a particular application or record type. For a list of default spokes, see Spokes .
Action/ Subflow	The Workflow Studio action or subflow to be performed in the instance. The Input mapping and Output mapping areas change depending on your selection. For details about the action, select the link beneath your selection to view it in Workflow Studio.
Wait for response?	Toggle switch that determines whether Virtual Agent waits for a response from the specified action before continuing.
Input mapping	The variables to be used as input to the selected action. The contents of this area change according to the action you selected. Options may include string input, referenced records, scripts, and so forth. For options that require a password, enable the Include a password input toggle switch to prompt the user for a password. Secure inputs must use the password2 data type. Input is securely masked and not viewable by others.  Note: If a field is locked and you can't enter a string, the pill picker value must match the field type. For example, if the field type is document_id, the referenced value type must also be document_id. If no matching field exists, reference a field created in another FDIH action output or use a script.
Output mapping	The variables to be output by the selected action. The contents of this area change according to the action you selected.
Advanced	
Permissions	
Run as	Permissions to use for the action. Select one of the following options: • User who initiates session: When selected, the action runs using the same permissions that the current user has. • System User: When selected, the action runs using system privileges, some of which may be unavailable to the current user.
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Example Action utility

 Action utility

>

Trigger automated workflows created in Flow Designer or downloaded as an IntegrationHub spoke. [Learn more](#)

* Node name

Create request

* Invoke Flow Designer object ⓘ

☒ Action

☐ Subflow

* Spoke

ITSM

X ▼

* Action

Create Request

X ▼

Open in Flow Designer for details: [Create Request](#) ⓘ

Wait for response? ⓘ

☒

Input mapping

Include a password input ⓘ

☐

Description (string)





Short Description (string)





Output mapping

Enable	Name	Variable Name ⓘ
☒	(document_id)	Request
☒	(object)	Action Status
☒	(boolean)	Don't Treat As Error

Advanced (optional)

Custom control utility

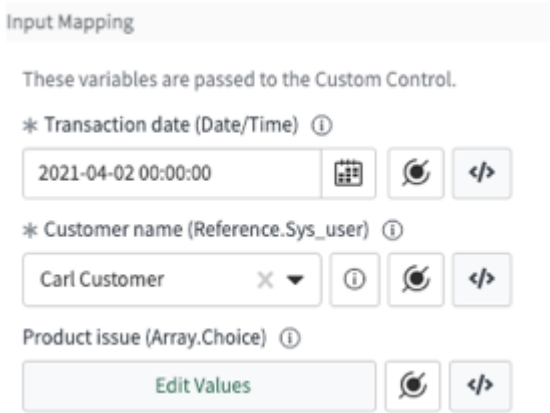
Use the Custom Control utility in a Virtual Agent topic or topic block to reference a custom input control or a custom response control. Custom controls complement the controls provided in Assistant Designer.

Custom control utility properties

Specify the properties of the custom input control or custom response control that you are adding to a topic or topic block. For more information about custom controls and their use, see [Customizing Virtual Agent with custom controls](#).

Note: Custom controls do not work on Internet Explorer version 11.

Custom control utility properties sheet

Property	Description
Custom control	The name of a custom control asset that has been published in the Assistant Designer Asset library.
Node name	The name of the custom control you selected.
Input mapping	The variables to be used as input to the selected custom control. For example, the following image has example variables:  The contents of this area change according to the custom control you selected. Options may include string input, referenced records, scripts, and so forth.
Output mapping	The variables to be output by the selected custom control. For example, the following image has example variables that are enabled:

Custom control utility properties sheet (continued)

Property	Description									
	Output Mapping These variables are returned from the Custom Control. <table><tr><th>Enable</th><th>Name</th><th>Variable Name ⓘ</th></tr><tr><td>☒</td><td>issue</td><td> issue </td></tr><tr><td>☒</td><td>username</td><td> username </td></tr></table> The contents of this area change according to the custom control you selected.	Enable	Name	Variable Name ⓘ	☒	issue	issue	☒	username	username
Enable	Name	Variable Name ⓘ								
☒	issue	issue								
☒	username	username								
Advanced										
Hide this node										
Conditionally use this node if	A no-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.									

Example custom control utility

 Custom control utility >

Include a custom input or response control in your conversation.

[Learn more](#)

* Custom control ⓘ

Geolocation control (input) X ▾

To view supported channels, open [Geolocation control](#)

* Node name

Geolocation control

Output Mapping

These variables are returned from the Custom Control.

Enable	Name	Variable Name ⓘ
☒	georesponsejsonstring	georesponsejsonstring

Advanced (optional)

Hide this node ▾

AI Connector utility

Use this utility to link generative AI to custom skills for added versatility in your Virtual Agent LLM (large language model) conversations.

Note: Depending on your license, you will have access to certain application features, generative AI skills, agentic workflows, and AI agents. For more information, see [ServiceNow product tiers](#).

AI Connector utility properties

Specify the flow action properties for the node that you want to create.

Property	Description
Node name	Name of the AI Connector node.
Select custom skill	Open the drop-down menu to search for a custom skill.
Wait for response	Activate this toggle switch to wait for a response from the action before continuing the conversation.

Property	Description
Input and Output mappings	All input and output mappings are based on the custom skill you select. For more information on custom skills, see AI Skill Kit , Managing custom skills in Assistant Designer Asset library , and Using AI agents in Virtual Agent topics .
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Example AI Connector utility


AI Connector
2 issues
×

Trigger custom skills directly from a topic. [Learn more](#)

* Node name

Web search

* Select custom skill

Select skill ▼

Wait for response? ⓘ

☐

Advanced (optional)

Hide this node ▼

AI Connector
×

Trigger custom skills directly from a topic. [Learn more](#)

* Node name

Web search

* Select custom skill

Web Search × ▼

Open in Skill Kit for details: [Web Search](#)

Wait for response? ⓘ

☒

country

united_states

site

servicenow

max_tokens

Selected data pill will be shown here

num

Selected data pill will be shown here

* query

... Variables ▶ Web Search

search_type (string)

ai_search

Output mapping

Enable	Name	Variable Name ⓘ
☒	provider (string)	Provider (2)
☒	response (string)	Response (2)
☒	error (string)	Error (2)
☒	errorcode (string)	Errorcode (2)
☒	status (string)	Status (2)

Advanced (optional)

Hide this node

▼

Deflection utility

Use the Deflection utility in Virtual Agent to track issues that Virtual Agent helped to resolve or actually resolved for a user.

Deflection utility properties

Specify the flow action properties for the node that you want to create.

Property	Description
Node name	Name of the Deflection node.
Input mapping	
Deflection configuration	Select from a list of pre-defined deflection configurations. For more information, see (Legacy) Create deflection configurations and patterns .
Deflection pattern	Select from a list of pre-defined deflection patterns. Ensure that your selection is tied to a pre-defined deflection. See (Legacy) Create deflection configurations and patterns for more.
Activity table	Table name where the deflection activity occurs. Add incident or task tables related to the deflection.
Activity IDs	List of comma-separated Activity IDs. Add AI Search results or related tasks in the deflection occurrence.
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Example Deflection utility

 **Deflection utility** >

Include a reusable topic block which performs a specific subflow in your conversation. [Learn more](#)

* Node name

HR search

Input mapping

These variables are passed to the component.

* Deflection Configuration (Reference.Ssa_deflection... ⓘ)

HR Default X ▼ ⓘ  

* Deflection Pattern (Reference.Ssa_deflection_patte... ⓘ)

HR VA Search-Served X ▼ ⓘ  

Activity Table (String) ⓘ

Activity Ids (String) ⓘ

Advanced (optional)

Hide this node ^

By default, this node will be used in the conversation.

Conditionally use this node if:

☒ Condition ☐ Script

Add Condition

Diagnostic Topic Executor utility

Use the Diagnostic Topic Executor utility in Virtual Agent to ensure the proper function of components in a topic.

Diagnostic Topic Executor utility properties

Specify the flow action properties for the node that you want to create.

Property	Description
Node name	Name of the node.
Input mapping	
Diagnostic content	String that is passed to the component being diagnosed.
Output mapping	
Is topic executed	Option to confirm that the topic executed properly, with variable data returned by the component. Select Enable to activate, and enter a custom variable name for the value if desired.
Is data collection topic executed	Option to confirm that the data collection executed properly, with variable data returned by the component. Select Enable to activate, and enter a custom variable name for the value if desired.
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Example Diagnostic Topic Executor utility



Diagnostic Topic Executor utility

1 incomplete

>

Include a reusable topic block which performs a specific subflow in your conversation. [Learn more](#)

* Node name

Enter a unique name

Input mapping

These variables are passed to the component.

* diagnosticContent (String)





Output mapping

These variables are returned from the component.

Enable	Name	Variable Name 
☒	istopicexecuted	istopicexecuted
☒	isdatacollectiont...	isdatacollectiont

Advanced (optional)

Hide this node

▼

Geolocation utility

Use the Geolocation utility to gather map coordinates from a user, to personalize topics to a user's location, provide data for navigation or on-site tasks, and other services.

Geolocation utility properties

Specify the flow action properties for the node that you want to create.

Property	Description
Node name	Name of the Geolocation node.
Input mapping	
Permission prompt	String for the custom prompt requesting geolocation from a user.
Output mapping	
Latitude	User's latitude returned after the Permission prompt. Note: All Output Mappings are customizable. Select Enable to activate each one, and input a custom variable name to store the value under if desired.
Longitude	User's longitude returned after the Permission prompt.
Error message	Message returned if the geolocation attempt encounters an error.
Error type	Type of error returned based on the error message.
Status	Status of the geolocation data.
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Example Geolocation utility



Geolocation utility

>

Include a reusable topic block which performs a specific subflow in your conversation. [Learn more](#)

* Node name

Locate user

Input mapping

These variables are passed to the component.

* permissionPrompt (String)

Would you like to share your location?

Output mapping

These variables are returned from the component.

Enable	Name	Variable Name 
☒	latitude	latitude
☒	longitude	longitude
☒	errormessage	errormessage
☒	errortype	errortype
☒	status	status

Advanced (optional)

Hide this node

▼

Multi File Upload utility

Use the Multi File Upload utility to upload more than one file at a time in a Virtual Agent conversation.

Multi File Upload utility properties

Specify the flow action properties for the node that you want to create.

Note: The Multi File Upload utility is supported in Microsoft Teams, Slack, and Virtual Agent API only.

Uploaded files are stored in the Attachments [sys_attachment] table.

Property	Description
Node name	Name of the Multi File Upload node.
Input mapping	
Prompt	Text string prompting the user to upload files.
Allow user to skip	Option to skip uploading files if a user has none.
Max file count	Maximum number of files that can be uploaded.
Max file size	Maximum size of individual files uploaded, measured in megabytes.
Try Again message	Message sent to a user if the file upload fails.
User confirmation message	Message sent to a user confirming that files uploaded.
Allow all file types	Option to allow uploading all file types.
Output mapping	
Files	The message sent to the user that lists files uploaded. Select Enable to activate this output, and input a custom variable name to store the value under if desired.
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Example Multi File Upload utility

 **Multi File Upload utility** >

Include a reusable topic block which performs a specific subflow in your conversation. [Learn more](#)

* Node name

Upload records

Input mapping

These variables are passed to the component.

* Prompt (String)

Please select the files you want to upload



allow_user_to_skip (Boolean)

☒



max_file_count (String)

10



max_file_size (String) ⓘ

10



try_again_message (String)

Please try uploading again.



* user_confirmation_to_reupload_msg (String)

All files received.



allow_all_file_types (Boolean)

☒



Output mapping

Pause utility

Use the Pause utility to create a temporary halt in your Virtual Agent conversations.

Pause utility properties

Specify the flow action properties for the node that you want to create.

Property	Description
Node name	Name of the Pause node.
Input mapping	
Seconds	Duration of pause. Note: Any duration value greater than the maximum defined in the system reverts to the maximum, or 60 seconds if not defined.
Advanced	
Hide this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Example Pause utility


Pause utility
>

Include a reusable topic block which performs a specific subflow in your conversation. [Learn more](#)

* Node name

Pause

Input mapping

These variables are passed to the component.

* Seconds (String) ⓘ

10





Advanced (optional)

Hide this node
∨

Assistant Designer capabilities

Add in-depth functions to Virtual Agent conversations with Assistant Designer capabilities. These controls provide special filters and abilities to your Virtual Agent topics.

The ServiceNow platform offers various products (such as Dynamic Translation) that can be used in Assistant Designer along with other areas of the ServiceNow AI Platform. For Virtual Agent, these capabilities function as no-code topic blocks, performing complex functions in a conversation.

Unlike the User Inputs, Bot Responses, and Utilities, capabilities are features that are part of the ServiceNow AI Platform, which have been mapped to nodes in Assistant Designer. The nodes are available for use in the Conversation Builder when you enable Generative AI Controller.

Enable capabilities

To enable capabilities in Assistant Designer, see [Generative AI Controller](#) .

Virtual Agent technical reference

Use these topics to learn more about scripting methods, NLU system entities, and the Virtual Agent Interactions table.

Virtual Agent utilizes a queuing system to process incoming messages coming from asynchronous channels. Dedicated worker threads pull from this queue and process the messages in their own transactions. This enables Virtual Agent to scale to meet traffic volume. Virtual Agent transactions run as non-interactive (the scriptable method `gs.isInteractive()` will return false).

Various roles and tables are available when you activate Virtual Agent. For more information, see [\(Legacy\) Plugins installed with Virtual Agent for NLU](#). Virtual Agent also has a data retention policy to manage table size. For more information, see [Data management in Conversational Interfaces](#).

The following technical reference topics are available.

Virtual Agent interaction records

Each time a Virtual Agent conversation occurs, an interaction record captures the entire conversation in the Interactions [interaction] table. The record includes all topic elements used in the conversation, as well as live agent transfers.

Interactions [interaction] table

Each conversation in an instance generates an interaction record in the Interactions [interactions] table, which logs the conversation between a requester and Virtual Agent. The interaction records include conversations that occur across the supported chat channels: chat widget, native mobile app, and messaging integrations.

Note: The Interactions table is part of the Interaction Management plugin (com.glide.interaction). Virtual Agent, Agent Chat, and Connect Support use this plugin.

These interaction records provide administrators, Virtual Agent administrators, support agents, and support managers with a convenient way to review what happened during a conversation. The records also provide a quick way to see the type of conversations that occur: Virtual Agent, live agent transfers to Agent Chat, and live agent transfers to Connect Support.

Interactions [interaction] table

	Interactions	Number	Search							
All										
	Number	Opened	Opened for	State	Type	Agent chat	Virtual agent	Assigned to	Application	
	IMS0000002	2022-03-29 10:02:51	(empty)	Closed Complete	Chat	false	true	Virtual Agent	Global	
	IMS0000002	2018-02-20 11:05:47	Guest	Closed Complete	Walk-up	false	false	(empty)	Global	
	IMS0000003	2018-02-20 11:05:47	Guest	Closed Complete	Walk-up	false	false	(empty)	Global	
	IMS0000003	2022-03-29 10:09:29	(empty)	Closed Complete	Chat	false	true	Virtual Agent	Global	

Note: Conversation transcripts are available only for Virtual Agent records that have Virtual Agent conversations and live agent transfers to Agent Chat.

- When a conversation transcript for live chat exceeds 4000 characters, the transcript is handled as an attachment to the interaction record.
- File attachments that the user uploads are recorded in the Attachments [sys_attachment] table, which corresponds to the interaction record. Attachments are automatically displayed in the activity stream.
- For Virtual Agent conversations that have live agent transfers to Connect Support, only the Virtual Agent conversation is included in the interaction transcript. Live agent conversations in Connect Support are recorded in the activity stream.

Key fields in the Interactions table

To view the Interactions table, navigate to **All**, and then enter `interaction.list` in the navigation filter. You can configure the fields displayed in the table using the [list collector](#)  (slushbucket).

Field	Description
Agent average response time	Average time based on how long the agent takes to respond to each message sent by a requester. For example: <pre>00:00 Requester: I have a question. 00:01 Agent: What is it? 00:04 Requester: How do I reset my password? 00:05 Requester: I forgot it and can't access my account. 00:07 Agent: Here is the answer.</pre> Pair #1 00:01-00:00 = 00:01 Pair #2 00:07-00:04 = 00:03 $(00:01 + 00:03) / 2 = 00:02$ average
Agent chat	Flag that indicates the conversation was transferred to a live agent in Agent Chat: true or false.
Application	Scope of the application. Scope determines the accessible files and data available to other applications.
Assigned to	Name of the fulfiller: Live agent name or Virtual Agent
Domain	The domain the conversation took place in. For more information, see Domain separation and Virtual Agent .
Number	Number of the interaction record.
Opened	Date and time that the conversation started.
Opened for	Name of the requester. Anonymous users are identified as Guests.
Sentiment	Shows the sentiment level of the interaction, if sentiment analysis is enabled on the instance. This value can be shown to agents in the Agent Chat interface. Business rules can be created based on this value at handoff (Virtual Agent to live agent, live agent to live agent, or live agent to queue). Valid values are as follows: • Positive • Neutral • Negative • null (no value assessed) This value is also entered in the Interaction Insights table.
State	Conversation states:

Field	Description
	- In Progress: Conversation between requester and virtual agent is in progress. - Closed Complete: Virtual agent ends the conversation. - Closed Abandoned: Requester ends the conversation before completing the conversation with the virtual agent. Note: There are different State Reasons for the Closed Complete and Closed Abandoned states, depending on whether you're using Virtual Agent only, Virtual Agent with Live Agent, or Live Agent only. For details on the State Reasons, see Reasons for Closed Complete and Closed Abandoned states.
State Reason	Detailed explanations (reasons) for the conversation states Closed Complete and Closed Abandoned. To learn more, see Reasons for Closed Complete and Closed Abandoned states .
Transcript	Log of the conversation between the requester and agents (virtual or live).
Type	Type of interaction record. Virtual Agent conversations are record type Chat.
Updated	Date and time that the conversation record was last updated.
Virtual agent	Flag that indicates whether the conversation is for Virtual Agent: true or false. A Virtual Agent conversation is flagged when a requester selects a conversation topic or when the topic discovery process starts the appropriate conversation.

Reasons for Closed Complete and Closed Abandoned states

Virtual Agent closes completed and abandoned conversations for various reasons, depending on whether the conversation is for Virtual Agent (VA) only, Virtual Agent with Live Agent (VA-LA), or Live Agent (LA).

Interactions table with State Reason column

Interactions

Number

Search

Actions on selected rows...

New

All

	Number	Opened	Opened for	State	State Reason	Type	Agent chat	Virtual agent	Assigned to
	IMS0000002	2022-03-29 10:02:51	(empty)	Closed Complete	Auto Closed	Chat	false	true	Virtual Agent
	IMS0000002	2018-02-20 11:05:47	Guest	Closed Complete		Walk-up	false	false	(empty)
	IMS0000003	2018-02-20 11:05:47	Guest	Closed Complete		Walk-up	false	false	(empty)
	IMS0000003	2022-03-29 10:09:29	(empty)	Closed Complete	Auto Closed	Chat	false	true	Virtual Agent
	IMS0000004	2022-03-29 18:17:17	(empty)	Closed Abandoned	Left Before Engagement	Chat	false	false	Virtual Agent

The **State Reason** field provides details on the different ways in which a conversation ends. The following table describes the reasons and also the related message displayed for dashboard analytics. For details about how Virtual Agent and Agent Chat handle idle conversations and the corresponding default timeout periods, see [Closing Virtual Agent and Agent Chat conversations](#).

State	State Reason	Virtual Agent	Virtual Agent & Live Agent or Live Agent only
Closed Abandoned	Left Before Engagement	Not applicable.	Requester chose to be routed to a live agent, but closed the

State	State Reason	Virtual Agent	Virtual Agent & Live Agent or Live Agent only
			conversation (selecting + End) before an agent was assigned. Dashboard message: User closed LA - before Agent engagement
Closed Abandoned	No Activity	Requester opened a conversation, but didn't engage with the bot (for example, closed the browser) and didn't initiate topic discovery. The system closed the Virtual Agent idle conversation after the default timeout. - Virtual Agent idle chat timeout: Two hours (default) - Dashboard message: System closed VA - user never engaged	Requester chose to be routed to a live agent (not through pre-chat setup) but didn't engage with the agent. If the conversation timed out and the <i>Time Out Abandoned VA Conversation</i> scheduled job ran, the interaction state is Closed Abandoned with No Activity. Dashboard message: System closed LA - before Agent engagement
Closed Complete	User Ended	After engaging with the bot (requester entered at least one utterance during a conversation or completed a conversation), requester closed the conversation session by selecting End. Dashboard message: User closed VA - Clicked End/X	Requester started to chat with live agent but closed the chat client by selecting End. Dashboard message: User closed LA - Clicked End/X
Closed Complete	Auto Closed	Requester interacts with VA topic and completes the conversation. No live agent interaction. Dashboard message: System closed VA - Auto Closed	Not applicable.
Closed Complete	No User Response	Requester engaged with the bot (entered at least one utterance), but left without actively closing the conversation. The system closes the idle conversation after two hours (default).	Requester engaged with live agent but stopped and left the agent hanging (idle live chat). The system closes the idle live chat after six minutes (default).

State	State Reason	Virtual Agent	Virtual Agent & Live Agent or Live Agent only
		- Virtual Agent idle chat closed: Two hours - Dashboard message: System closed VA - User no response	- Idle live chat closed: Six minutes - Dashboard message: System closed LA - User no response
Closed Complete	Topic Complete	Requester engaged with the bot in a topic but didn't respond to the Anything Else setup topic, or chose Yes to continue but didn't respond. The <i>Time Out Abandoned VA Conversations</i> job closes the interaction after the default timeout. - Virtual Agent idle chat closed: Two hours - Dashboard message: System closed VA - Topic complete	Not applicable.
Closed Complete	Left for search	Requester engaged with the bot (entered at least one utterance), but selected Search in the middle of the conversation and didn't return to the conversation. The system closes the conversation because of inactivity. Dashboard message: System closed VA - Left with AI search	Not applicable.
Closed Complete	Agent Ended	Not applicable.	After requester started a chat with a live agent, the agent actively closed the conversation by selecting End Chat. Dashboard message: Agent closed LA - Clicked End/x
Faulted	Error	A runtime exception occurred while processing a message.	Requester's conversation was closed due to a runtime error.

Detailed view of a Virtual Agent interaction record

From the Interactions table, you can open a specific record to see additional details about the Virtual Agent interaction: a transcript of the conversation, related tasks, and interaction logs.

Note: If a field is not visible, you can add it to the form view. For more information, see [Configuring the form layout](#).

Conversation transcript

The transcript shows the dialog exchange between the agent (virtual or live) and requester, as well as the time stamp for each dialog turn.

Interaction IMS0000596

Number: IMS0000596

Type: Chat

State: Closed Complete

Short description:

Transcript:

[12:15] Virtual Agent: Hi, I'm your Virtual Agent. Let me know how I can help you today.
 [12:15] Virtual Agent: What's your issue or request? Or take a look at what I can help with.
 [12:15] Virtual Agent: Show me everything
 [12:16] : my computer won't work
 [12:16] Virtual Agent: You'd like help with printer dup TT. Is that right?
 [12:16] : No
 [12:16] Virtual Agent: No problem, let's try again. Select one that matches what you want to do.
 [12:16] Virtual Agent: What's your issue or request? Or take a look at what I can help with.
 [12:16] Virtual Agent: Show me everything
 [12:16] : Open IT Ticket (DAL)
 [12:16] Virtual Agent: Please enter a short description of your issue.
 [12:16] : My computer won't boot up
 [12:17] Virtual Agent: Showing results 1 to 2 of 2
 [12:17] Virtual Agent: @L[https://.../va_link.do?token=77ee77ef77eSNzhkN2M4ZmU4N2QzMdExMDRIYzRiOTE4ZGFIYjM1MzVt6zvt5Qx77es77etZF95ek9RajJtVWZwTWdNRfjiQmdXUT09TF8tRml3M01BVXVfczNNTHhMWiltN1JLNdSVXdBc1k5MldWb2J6aUJhdV5WUQ2OHp1TmZoOFI4UEVQTV80NVFUWWIGVnlSLW1FaHRZbjdnOUI5SnIzU1CTHhMZEVCblIDUzdsTnEwSkZwZS1Rd3htZzdFTUZtS3YxQk1yM0h5T3Vjc1BmWHU2dTJ2bGISTVNDVFkzeWVYd1ZoSHNISTZOMnVHbVp77eu77ev&target_url=https%3A%2F%2F...%2Fkb_view.do%3Fsysparm_article%3DKB0000009]Are Copyrighted Files Illegal to Have On My Computer?
 Are Copyrighted Files Illegal to Have On My Computer? Tools built to make use of the Internet of repeated infringement. Does IT scan my computer for illegal files? Although Knowledge

Related Tasks

Any cases, incidents, or requests created or updated during the conversation are automatically attached to the interaction record as a Related Task. To ensure that these tasks are included with the interaction record, design your conversation topics using certain Assistant Designer utilities and the system method `vaSystem.attachRecordToConversation`. For details, see the [Topic design considerations](#) section.

Interaction IMS0000596

Update Associate Record

Related Tasks (1) User's Tasks (1) Interaction Logs (14)

Number Search Actions on selected rows...

Number	Priority	State	Assigned to	Short description	Task type
INC0010003	3 - Moderate	New	(empty)	My computer won't boot up	Incident

1 to 1 of 1

Interaction Logs

The **Interaction Logs** tab lists all the topics that run in a conversation, including the setup topics and the topics executed by topic discovery or by user selection. Each topic element is assigned a number that indicates the sequential order in which the topics run.

Number	Document	Document table	Message	Utterance
1	Conversation Task: system	Conversation Task [sys_cs_conversation_task]		
2	Conversation Task: Greetings.	Conversation Task [sys_cs_conversation_task]		
3	Conversation Task: Run AI Search	Conversation Task [sys_cs_conversation_task]		
4	Conversation Task: AI Search - Fallback	Conversation Task [sys_cs_conversation_task]		my computer won't work
5	Conversation Task: Fallback Topic.	Conversation Task [sys_cs_conversation_task]		my computer won't work
6	Conversation Task: Virtual Agent Capabilities.	Conversation Task [sys_cs_conversation_task]		

Security considerations

Information in conversation transcripts is viewable to all users. If you need to control access to records containing sensitive information, you can use scoped access control lists (ACLs) and lock scripted access to those records by using the Restricted Caller Access (RCA) feature. For details, see [Set application scope, application resource, and event access](#) and [Manage Restricted Caller Access](#).

Topic design considerations

If your Virtual Agent conversations create or update incidents, cases, or requests, consider designing your topics with the following [Assistant Designer utilities](#) and system method:

- [Action utility](#) to create or update incidents or cases
- [Lookup utility](#) to view information
- System method `vaSystem.attachRecordToConversation(String tableName, String sysId)` to attach the task to the interaction record

Use these utilities and system method so that incidents, cases, or requests created during a Virtual Agent conversation are included in the **Related Tasks** list of the interaction record.

Note: Records created or updated using the [Script Action utility](#) are not captured as related tasks in the interaction record.

Data management in Conversational Interfaces

Use data management tools, such as table cleaners, to maintain Conversational Interfaces tables.

Virtual Agent table cleaning

Virtual Agent has a data retention policy that automatically deletes records from certain base system tables when they reach a specific age, to prevent tables from growing to an unmanageable size. Some Virtual Agent and related Conversational Interfaces tables are not automatically cleaned. You can activate table cleaning for the following tables.

Conversational Interfaces tables that need cleaning

Table label	Table name	Description	Default record age (seconds)
Chat Server Analytics	sys_cs_analytics	Server records that include sys IDs for messages, threads, conversations, users, and events.	7,776,000
Conversations	sys_cs_conversation	Conversation details, including topic definition, device used, and consumer (user). Note: Table cleaner also automatically deletes the related records for the following: • Conversation Messages • Conversation Tasks • Conversation Members • Session bindings • Profane message logs if using the Profanity Filter	5,184,000
Message Last Reads	sys_cs_message_last_read	Message IDs of the last messages read by users in chat and messaging channels.	15,552,000
CI Analytics	sys_ci_analytics	Conversation details used in Conversational Analytics. If the conversation ID is available, table cleaner removes closed, complete, and faulted conversations from the Conversations [sys_cs_conversation] table.	604,800

The Auto Flushes [sys_auto_flush] table lists the base system tables and their corresponding record ages. When table cleaning is activated, the Table Cleaner scheduled job triggers the table cleaner to remove the records that meet the default record age. If needed, you can change the

record age for a table and specify any conditions to filter the records to be removed. For details, see [Activate table cleaning for Virtual Agent tables](#).

If a table has related child tables, the table cleaner automatically performs a cascade delete to remove the related child tables. For example, when table cleaning is activated for the Conversation [sys_cs_conversation] table, the table cleaner runs automatically when the table is 60 days (5,184,000 seconds) old. The table cleaner also performs a cascade delete to remove the related child tables. To learn more about table cleaning in the ServiceNow AI Platform, see [Table cleaner](#).

Activate table cleaning for Virtual Agent tables

Activate table cleaning for certain tables used in Virtual Agent and Conversational Interfaces.

Before you begin

Role required: admin

About this task

You can activate table cleaning for these Virtual Agent and Conversational Interfaces tables:

- Chat Server [sys_cs_analytics]
- Conversations [sys_cs_conversation]
- Message Last Reads [sys_cs_message_last_read]
- Ci Analytics [sys_ci_analytics]

Procedure

1. Open the Auto Flush [sys_auto_flush] table by typing `sys_auto_flush.list` in the filter navigator.
2. Select the table to be activated for cleaning.
3. Change the fields in the form as needed.

Auto Flush form

Field	Description
Age in seconds	The time, in seconds, that specifies when records in the table are to be deleted. To change the age, enter the new value in seconds.
Active	Option to activate or deactivate table cleaning for this table. Select this option to activate table cleaning.
Cascade delete	Option to activate or deactivate table cleaning for related tables. Some tables may have child tables that are also automatically cleaned.
Conditions	Condition builder for specifying filter conditions that define the records to be removed.

4. Select **Update**.

The Table Cleaner scheduled job automatically runs the cleaner when the table records meet the specified record age and any conditions that you set for them.

Virtual Agent scripts

Use ServiceNow® Virtual Agent script methods and variables to write chat scripts, such as response, trigger, and flow scripts. Variables can also provide context for your live support topics and conversations.

Virtual Agent scripts can provide context for topics, such as retaining information about a user or a user's input. You can use this information to personalize a conversation, such as to present a scripted greeting or confirmation. Scripts can also specify certain actions to be performed on information that was obtained during a conversation. These actions can be used for creating or updating ServiceNow records.

Scripts run on the server in the scope in which a topic is defined. All scope protections apply. If you're developing a conversation for a scoped application, you must use the scoped API. You can use most APIs that run in server scripts.

User input and ServiceNow record variables

In Virtual Agent, the following variables are available for use in scripts that you create for a topic.

User input variables

When you add an input control to a topic, the system automatically creates a variable to store the user input (a string, Boolean value, and so on.). The syntax is `vaInputs.myvar` where `myvar` is the name that you assigned to the input node.

For example, a text input prompt with the name `First prompt` has a system-defined variable called `vaInputs.first_prompt`. Spaces in the name are replaced with an underscore character, and uppercase characters are changed to lowercase.

ServiceNow record variables

If you create a script for a topic that queries a ServiceNow table, then the record object (GlideRecord) returned is automatically available for use in the topic. The variable syntax is `vaInputs.myvar` where `myvar` is the record object. For details on querying ServiceNow tables to return a record object, see [Querying tables in script](#).

Use dot-walking in variables that contain a ServiceNow record to specify a particular field in the table. The syntax is `vaInputs.myvar.field`. For details on dot-walking within a script, see [Dot-walking examples](#).

Accessing user input and ServiceNow record variables

Use `vaInputs` objects to access ServiceNow record variables in scripts. For example, the `vaInputs.myvar == "expected value"`. To access values from user inputs that are not records, use `vaInputs.myvar.getValue()`.

The following methods are available.

valInputs methods

Method	Description												
<code>vaInputs.myvar == "expected value"</code>	Evaluates whether myvar matches an expected value. Note: Values for user input variables are stored in the sys_user record using user input controls. These values can be changed in your scripts. - The Brazil release supports additional data types. For more information, see Input data types in V10 topics. - By default, the user variable is available as a reference to the sys_user record for the user.												
<code>vaInputs.myvar.getValue();</code>	Returns the value.												
<code>vaInputs.myvar.getDisplayValue();</code>	Returns the display value if the stored value is not a valid ServiceNow record. For variables that contain valid records, this method returns the display value as defined by the display field for that table. The following example shows the label and choices for a user input. In this case, myVar . getValue() would return a value of 10, 20, or 30, while myVar . getDisplayValue() would return Orange, or Pear. Example choice list * Choices <table><thead><tr><th></th><th>Display name</th><th>Value</th></tr></thead><tbody><tr><td>1</td><td>Apple</td><td>10</td></tr><tr><td>2</td><td>Orange</td><td>20</td></tr><tr><td>3</td><td>Pear</td><td>30</td></tr></tbody></table>		Display name	Value	1	Apple	10	2	Orange	20	3	Pear	30
	Display name	Value											
1	Apple	10											
2	Orange	20											
3	Pear	30											
<code>vaInputs.myvar.getDefaultValue();</code>	Returns the default value in a confirmation message.												
<code>vaInputs.myvar.getDefaultDisplayValue();</code>	Returns the display value for the default value in a confirmation message.												
<code>vaInputs.myvar.unbindEntity();</code>	Removes the value of input variables that the prediction service slot-filled with extracted entities (unbinds it from the initial input value). For example, if the user decides to change their choice in a confirmation prompt, you can unbind the entity from the input variable. The user will then be prompted again when they loop back to the corresponding node.												

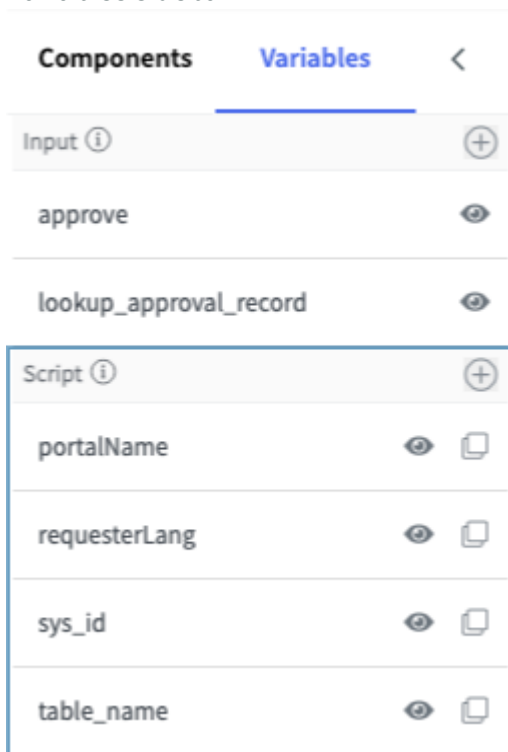
valInputs methods (continued)

Method	Description
	Note: NLU must be enabled on the topic. In the Assistant Designer, select the Properties tab, then click Enable NLU up NLU. For information about defining NLU, see Entities .

Script variables

You can define script variables for information that is not stored in ServiceNow tables but that can be used to share that information elsewhere in a topic. Script variables are similar to workflow scratchpad variables that store primitives such as integers, Boolean values, or strings. A string value can be either a static or dynamic scripted value. Use the Variables sidebar to define script variables for a topic in Assistant Designer.

Variables sidebar



Note: Script variables are intended for use by topic authors with advanced scripting skills.

The variable syntax is `vaVars.myvar`, where `myvar` is the name that you assign to the variable. For example, you can assign a value to the variable using `vaVars.myvar = value;`. Unlike user input variables, script variables can be assigned values in a script.

For information about defining a script variable in a topic, see [Define script variables for a topic](#).

Context variables

Context variables work in a global scope whereas system variables work within the scope of the topic. You can use context variables in system parameters within the web client URL. These variables can be used anywhere in the conversation using the `vaContext` object. Use these options to create links to Virtual Agent with predefined variables.

The following example link contains a parameter, `sysparm_city=milan`. In addition to opening a Virtual Agent conversation, using this link creates a variable called `city` with a value of `milan`. This variable can be accessed in a script using `vaContext.city`.

```
https://<instance>.service-now.com/$sn-va-  
web-client-app.do?sysparm_city=milan
```

A number of Live Agent variables are available for use in topic scripts. These variables include the following:

- *application*
- *language*
- *portal*
- *search_text*
- *short_description*

The variable syntax is `vaContext.LiveAgent_myvar`, where `myvar` is one of the available [live agent context variables](#). Access the variable using `vaContext.LiveAgent_myvar = value;`.

To use Live Agent variables in topic scripts, open the topic in Assistant Designer. On the **Properties** tab, select the pencil icon next to **Live Agent Variables** to add them to the topic.

For information about live agent context variables that are included with Virtual Agent, see [Live agent chat context variables](#).

vaVars methods

Method	Description
<code>vaVars.global_utterance</code>	Updates when skill picker renders and an utterance is typed in.

vaSystem methods

You can use methods in the `vaSystem` object to do various tasks. Some of these tasks include the following:

- Attach images to records.
- Access the search string that was used to find the current topic.
- Verify that a live agent is available to receive a conversation.
- Connect the user to a live agent.

Note: The use of undocumented system methods is not recommended, as they are unsupported and may be discontinued or altered at any time without prior notice.

Methods used in Virtual Agent topic scripts

Method	Description
<code>vaSystem.applyLinkTemplate(String sysId, String tableName, String actionName)</code>	Creates an external link that is
<code>vaSystem.attachRecordToConversation(String tableName, String sysId)</code>	Attach ServiceNow records to t list in a Virtual Agent interaction

Methods used in Virtual Agent topic scripts (continued)

Method	Description
	records are updated or created in the <code>vaSystem</code> table for the current Agent conversation.
<code>vaSystem.attachToRecord(String mediaId, String tableName, String sysId)</code>	Attach an uploaded image to a record in the <code>vaSystem</code> table. The method uses the following parameters: <code>mediaId</code>: The path for the image to be attached. To use an image uploaded by the customer, use <code>getVaInputs().image_input</code>. <code>tableName</code>: A string that contains the name of the table. <code>sysId</code>: The <code>sys_id</code> of the record to which the image is attached.
<code>vaSystem.connectToAgent()</code>	Connects the customer to a live agent. For more information on this method, see Agent conversations to a live agent .
<code>vaSystem.didConnectToLiveAgent()</code>	Returns a Boolean (true or false) indicating whether the current conversation was connected to a live agent.
<code>vaSystem.getClosingMessage()</code>	Returns a closing message for the current conversation from system property <code>com.glide.cs.general.close_message</code> . (The message is different for different messaging apps such as Microsoft Teams and Slack).
<code>vaSystem.getConversationId()</code>	Returns the conversation ID of the current conversation.
<code>vaSystem.getGreetingMessage()</code>	Returns a greeting message for the current conversation from the key "Hi, I'm your Virtual Agent. How can I help you today?"
<code>vaSystem.getInteractionSysId()</code>	Returns the interaction ID of the current conversation.
<code>vaSystem.getSearchText()</code>	Returns the last utterance type from the current conversation.
<code>vaSystem.getTopicSelectionMessage()</code>	Returns a UI message with the text "What issue or request? Or take a look at our knowledge base with." (The message is different for different messaging apps such as Microsoft Teams and Slack). This method is returned from the system property <code>com.glide.cs.topic_selection_message</code> .
<code>vaSystem.getTranscript()</code>	Gets the conversation transcript for the current conversation.
<code>vaSystem.isLiveAgentAvailable()</code>	Checks whether a live agent is available to receive a conversation that is transferred from the bot. To transfer a conversation to a live agent, call this method before calling <code>vaSystem.connectToAgent()</code> .
<code>vaSystem.isLiveAgentConfigured()</code>	Returns whether live chat is enabled for the current conversation.

Methods used in Virtual Agent topic scripts (continued)

Method	Description
<code>vaSystem.resetAllEntities()</code>	Resets all entities logged in the session.
<code>vaSystem.sendBatchedMessages()</code>	Immediately sends queued messages.
<code>vaSystem.sendSeparatorMessage()</code>	Sends a separator message line, such as a closing message from <code>getClosingMessage()</code> .
<code>vaSystem.sendSystemMessage(String message, Boolean showAvatar)</code>	Sends a system message and an avatar message from <code>getGreetingMessage()</code> .
<code>vaSystem.sendTopicPickerControl(String topicSelectionMessage, String topicPickerButtonLabel)</code>	Sends a topic picker control with a message for the message and "Show me" button label.
<code>vaSystem.sendSkillPickerControl(skillSelectionMessage, args)</code>	Sends the skill picker control to the user. The <code>skillSelectionMessage</code> parameter allows additional configuration options: • <code>hideSkillDetails</code> hides the skill details message. It defaults to <code>false</code>. • <code>hidePromotedTopics</code> hides promoted topics from the skill picker. It defaults to <code>false</code>. • <code>hideShowMeEverything</code> hides the "Show Me Everything" button from the skill picker. It defaults to <code>false</code>. • <code>showNoSkillsConfigured</code> shows the "No Skills Configured" message when no applicable skills are found. It defaults to <code>false</code>. • <code>appendPromotedSkills</code> appends a bulleted list of promoted skills to the skill picker message. It defaults to <code>true</code>.
<code>vaSystem.switchTopicByName()</code>	Enables the user to jump from the current conversation topic to the specified topic. The X button is available, so the user can exit the conversation. After the topic switch, the conversation resumes the global topic. When the topic switch ends, the user can select Click here to restart conversation at the bottom of the screen to restart the topic. The optional <code>resumeBehavior</code> parameter specifies how the conversation resumes: • If <code>resumeBehavior=resume</code>, the conversation resumes the calling topic. • If <code>resumeBehavior=skip</code>, the conversation skips the calling topic.

Methods used in Virtual Agent topic scripts (continued)

Method	Description
<i>vaSystem.switchTopicById(sysid)</i>	If <i>resumeBehavior</i> is not specified, the default behavior for the instance is used. This method is the sysid of <i>sysid</i> and enables the user to jump from the current conversation topic to the specified topic. If the X button is available, so that the user can exit the conversation. After the topic is switched, the conversation resumes the global topic. When the conversation ends, the user can select Click here to restart conversation at the bottom of the topic to restart the topic. The optional <i>resumeBehavior</i> specifies how the conversation resumes as follows: • If <i>resumeBehavior=resume</i>, the conversation resumes the calling topic. • If <i>resumeBehavior=skip</i>, the conversation skips the calling topic. If <i>resumeBehavior</i> is not specified, the default behavior for the instance is used.
<i>vaSystem.topicDiscovery(String searchTextOverride, Boolean keywordImpl)</i>	Performs topic discovery based on the <i>searchTextOverride</i> parameter. The <i>keywordImpl</i> parameter uses the following parameters: • <i>searchTextOverride</i>: A string that overrides the user input to run topic discovery. • <i>keywordImpl</i>: A Boolean that specifies whether to use keywords.

Method that can be used outside Virtual Agent topics

Method	Description
<i>sn_cs.VASystemObject.getTranscriptById(<conversation sysId>)</i>	Gets the transcript for the current Virtual Agent conversation.

Input data types in Virtual Agent topics

You can define inputs of commonly used Glide Virtual Agent (com.glide.cs.chatbot) data types in Assistant Designer without writing a script. Define the input data type on the Start node of a custom control or topic block.

Data types in Assistant Designer

The data type designation allows Virtual Agent to perform secondary validation on NLU predicted values. For example, if your choice list has red, white, and blue, but the NLU prediction service returns green, the input won't be slot-filled because that wasn't a valid choice.

When you specify an input with a data type on a calling topic, you can use the data pill picker to specify information collected from the user or previously looked up in a custom control or topic block.

Data type	Description
String	Alphanumeric text. The value uses JavaScript data conventions.
Boolean	Boolean value of true or false (yes or no).
Reference	Table record by sys_id. Select a ServiceNow table in the Table field. You can define conditions for the returned record.
Date/Time	Date and time values.
Array.String	Sequence of alphanumeric text values. To limit the number of strings that authors can specify, use the Max Number of Rows field.
Array.Datetime	Sequence of date and time values. To limit the number of dates that authors can specify, use the Max Number of Rows field. Click + to specify more than one default value.
Array.Reference	Sequence of table records by sys_id. Select a ServiceNow table in the Table field. You can define conditions for the returned record. To limit the number of records that authors can specify, use the Max Number of Rows field. Note: The <i>Array.Reference</i> input data type in Assistant Designer corresponds to the <i>List.[Table]</i> input data type in Workflow Studio. For more information, see Action input and output data types .
Array.Choice	Sequence of choice list values for a specific choice field. For example, printer, computer, and monitor.

Note: Duplicate default values are not allowed with array data types.

Example data type definition

This User Name Array.Reference input variable limits the number of records to 5. It references the sys_user table with the condition that all names must start with **a**.

Add input
✕

* Name

* Type

Required
☐

Hint

Max Number of Rows

* Table

All of these conditions must be met

Name
starts with
a

or
and

or
New Criteria

Default value (..

Cancel Save

Virtual Agent URL parameters

Virtual Agent provides various system parameters that admins can add to an instance URL to control how page content is rendered.

Virtual Agent URL structure

You can control the page rendered for an instance by adding URL parameters to the instance URL, which is `https://<instancename>.service-now.com`.

System parameters for Virtual Agent chat widget

The Virtual Agent chat widget is supported for use in portals or embedded in third-party pages. The following system parameters control the conversation content rendered in the Virtual Agent chat widget.

Parameter	Description	Example
<code>sysparm_branding_key</code>	Applies a chat branding configuration to the web chat client. Value: branding key for the configuration	- Apply the branding configuration to a destination page: <code>https://<instance_name>.service-now.com/\$sn-va-web-client-app.do?sysparm_branding_key=<branding_key></code> - Apply the branding configuration to an embedded chat widget: <code>https://<instance_name>.service-</code>

Parameter	Description	Example
		now.com/\$sn-va-web-client-app._embed.do?sysparm_branding_key=<branding_key>
sysparm_default_topic	Sets the default topic on launch via topic sys_ID.	https://<instance_name>.service-now.com/\$sn-va-web-client-app.do?sysparm_default_topic=<topic_sys_id>
sysparm_domain_id	Restricts the chat to the specified sys ID for a domain.	https://<instance_name>.service-now.com/\$sn-va-web-client-app.do?sysparm_domain_id=<domain_sys_id>
sysparm_live_agent_only	Takes user directly to a live agent, if available.	https://<instance_name>.service-now.com/\$sn-va-web-client-app._embed.do?sysparm_live_agent_only=true
sysparm_load_active_only	Loads the current active conversation. Values: • true: Loads only the active conversation • false: Doesn't load active conversations Note: If the sysparm_skip_load_history and sysparm_load_active_only parameters are both set to true, the existing sysparm_skip_load_history parameter takes precedence.	https://<instance_name>.service-now.com/\$sn-va-web-client-app.do?sysparm_load_active_only=true
sysparm_search_text	Sets the search text for the conversation.	https://<instance_name>.service-now.com/\$sn-va-web-client-app.do?sysparm_search_text=<search_text> For example, <search_text> is request&laptop.
sysparm_skip_load_history	Skips the previous message history and starts a new conversation. Values:	https://<instance_name>.service-now.com/\$sn-va-web-client-app.do?sysparm_skip_load_history=true

Parameter	Description	Example
	• true: Doesn't load message history • false: Loads message history Note: If the <code>sysparm_skip_load_history</code> parameter is set to false and the <code>sysparm_load_active_only</code> is set to true, the <code>sysparm_load_active_only</code> loads the current active conversation.	
<code>sysparm_preview_mode</code>	Displays the conversation in test mode.	<code>https://<instance_name>.service-now.com/\$sn-va-web-client-app.do?sysparm_preview_mode=true</code>
<code>sysparm_requester_session_language</code>	Specifies the requester's language for the conversation session when Dynamic Translation for Virtual Agent is installed and configured.	<code>https://<instance_name>.service-now.com/\$sn-va-web-client-app.do?sysparm_requester_session_language=letter language code></code>

Latency feedback in Virtual Agent

The `com.glide.cs.message.processing.enabled` system property notifies requesters whenever the generative AI large language model (LLM) is processing their request in the Virtual Agent chat widget and ServiceNow Otto panel.

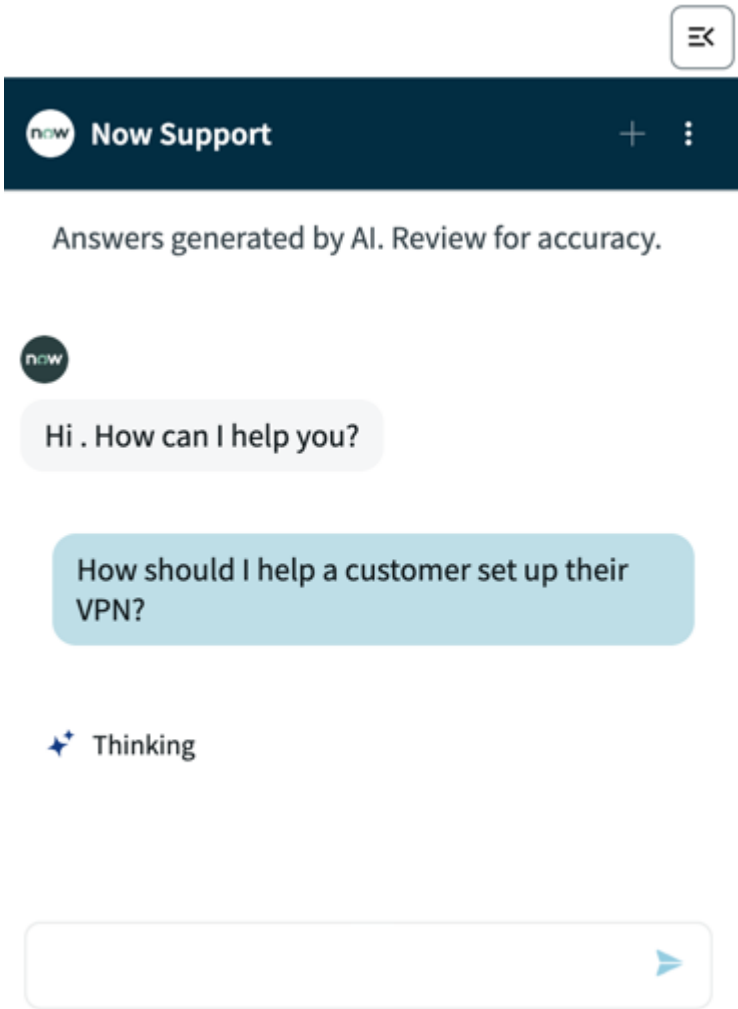
Latency feedback messages

The `com.glide.cs.message.processing.enabled` property is off by default, but can be turned on in the System Properties [sys_properties] table. After turning on this system property, users receive a temporary response to indicate that the LLM call is running and that their request is being processed. Message examples include:

- Thinking...
- Looking into your request...
- Reviewing key details...
- Gathering the needed info...

The latency feedback messages can't be customized and disappears after the LLM generates a response.

Example of a latency feedback message



ServiceNow Otto for Virtual Agent reference

Virtual Agent topic developers can create topics for use in the ServiceNow Otto[®] panel channel. The following Assistant Designer controls are currently supported.

For more information about the panel channel, see [Channels in Conversational Interfaces](#).

Supported controls for the ServiceNow Otto[®] panel channel

Control type	Supported controls
User input controls	• Input Collector • Text • Static choice • Dynamic choice • Boolean • Date Time • Carousel

Supported controls for the ServiceNow Otto[®] panel channel (continued)

Control type	Supported controls
	For more information, see Assistant Designer user input controls .
Bot response controls	• Text • Link • HTML • Card (record card and record card with action only) For more information, see Assistant Designer bot responses.

Interactive view customization tables

Make your own user interface applicable to the interactive view with some customization in the following two tables: Now Canvas Definition [sn_now_canvas_definition.list] and Now Canvas Configuration [sn_now_canvas_configuration.list].

Interactive view customization tables overview

You must first work with the Now Canvas Definition table [sn_now_canvas_definition.list] before working with the Now Canvas Configuration table [sn_now_canvas_configuration.list] because the configuration table relies upon data found in the definition table. The Now Canvas Definition table [sn_now_canvas_definition.list] defines the user interfaces and the Now Canvas Configuration table [sn_now_canvas_configuration.list] serves as the action of when to call the interactive view for the defined user interface. The Now Canvas Definition table [sn_now_canvas_definition.list] only has one default definition: iframe.

The following tables list the fields that you must work with to create those customized interactive views. Some of these fields may not be available upon default. For more information about how to add or remove fields from the form layout, see [Configuring the form layout](#) .

Now Canvas Definition table [sn_now_canvas_definition.list]

Field	Description
Name	Name of the user interface that is going to use the interactive view.
Definition type	Select either UX macroponent or UX component. Depending on this selection, either the UX Component Definition field or UX Macroponent Definition field displays.
UX Component Definition	Name of the independent seismic component.
UX Macroponent Definition	Name of the UXF page that uses UI builder.

Now Canvas Configuration table [sn_now_canvas_configuration.list]

Canvas ID	Name of the user interface that is pulled from the Now Canvas Definition table [sn_now_canvas_definition.list].
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Now Canvas Configuration table [sn_now_canvas_configuration.list] (continued)

Active	Status of whether this is an active or non-active interactive view.
Related Table Name	Related table can be one of the following: • AI Agent • Generative AI skill • Tool • Topic • Use case
Related Record	Related record associated with the related table.
M2M Canvas Configuration Deployment Channels related list	Related list that displays the name of the active or in-active deployment channel associated with this interactive view. Select New to associate this interactive view configuration with a deployment channel. You must do this to complete the interactive view association with the intended deployment channel. Searching at the Deployment Channel field level opens up the ServiceNow Otto Deployment Channels [sys_now_assist_deployment_channel_list.do] table to select a channel.

ServiceNow® Otto for Virtual Agent system properties

Use system properties to customize your assistant. Some properties are available on a system properties form, but some lesser-used properties are available only from the System Property [sys_properties] table. Legacy refers to the standard or enhanced chat experience. Premium refers to the premium chat experience.

Property	Description	Legacy or premium
com.glide.cs.doc_qna.va_attachments	Set the maximum number of attachments that can be attached at one time for the assistant. Default value = 3.	Legacy
com.glide.cs.nass.synthesized_voice	Hide the displayed for premium catalog items for ServiceNow Otto for Virtual Agent and ServiceNow Otto panel's enhanced chat. The default value is false.	Legacy
com.glide.interactive_view.enabled	Open an interactive side panel view next to the chat window. The default value is true to activate AI Experience on your instance.	Legacy

Property	Description	Legacy or premium
sn_ai_websearch.perplexity_model	Specify the Perplexity model to use for web search. The default value is sonar.	Legacy
sn_ais_assist.kgmlq_schema_name	Control the information available to ServiceNow Otto for Virtual Agent through Knowledge Graph. The default value is sn_kg.now_user_graph_n1q.	Legacy
sn_nowassist_va.assistant_persona	Should hide chat personalization when branding an assistant. - Choices: AGENT_PERSONA, TONE_RESPONSE_LEN, TONE_RESPONSE_LEN_PERSONA - Type: Choice list - Value: AGENT_PERSONA (This is the default that keeps personalization hidden.) To show tone and response length, remove AGENT_PERSONA from the Value field and replace it with TONE_RESPONSE_LEN. To show tone, response length, and persona, remove AGENT_PERSONA from the Value field and replace it with TONE_RESPONSE_LEN_PERSONA.	Legacy and premium
sn_nowassist_va.display_default_catalog_image	Show or don't show the default cart image if a catalog item doesn't have an image set in its record. Value = true shows the default cart image. This is the default value. Value = false removes the default cart image. Note: A catalog item that is associated with an image continues to be displayed irrespective of the system property.	Legacy
sn_nowassist_va.enable_nass_display_optin	Displays the View all topics link on the chat's greeting	Legacy and premium

Property	Description	Legacy or premium
	screen. The default value is <code>false</code> .	
sn_nowassist_va.enable_suggested_queries	Enables suggested search queries for enhanced chat to appear in the chat window. Any search query performed in the portal's search bar appears as a part of the greeting topic for subsequent new conversations. The default value is <code>false</code> .	Legacy
sn_nowassist_va.enhanced_chat_pin_enabled_esc url>	Creates a system property to enable pinning a chat window on a portal. In the system property, <code><portal-url></code> is the URL suffix for the portal application. For example, the system property for enabling a chat window in Employee Center would be <code>sn_nowassist_va.enhanced_chat_pin_enabled_esc.url</code> . By default, pinning a chat window is enabled for Service Portal. For all other portals, create the system property. For a list of URL suffixes, navigate to All > Service Portal > Portals .	Legacy and premium
sn_nowassist_va.max_suggested_queries	Determines the maximum number of suggested search queries to display within the greeting topic for enhanced chat window conversations. The default value is 6.	Legacy
sn_nowassist_va.show_view_more_for_synthesized	Show the Need more help button in a standard chat conversation. The Value field is empty by default so the button doesn't appear. To show the Need more help button, enter <code>regular</code> , <code>clarification</code> , or <code>regular, clarification</code> . regular: The Need more help button appears only for synthesized responses. clarification: The Need more help button appears only for clarification responses. Clarification responses typically occur	Legacy (standard chat only)

Property	Description	Legacy or premium
	when an end user's response is too vague and clarification is needed for a more targeted response. • regular, clarification: The Need more help button appears for both synthesized responses and clarification responses.	
sn_nowassist_va.synth_response_revisit_position	Change the position of the fallback and revisit options in a conversation. In the Value field, enter BEFORE_FALLBACK or AFTER_FALLBACK, and then select Update.	Legacy
sn_nowassist_va.synthesized_autostart_items	When synthesized response only returns a singular action, configure whether to automatically launch the action. By default, only Virtual Agent topics and agents automatically launch. You can configure this for whenever synthesized response returns a single conversational catalog item, a single Virtual Agent topic along with Knowledge Base information appears, a single conversational catalog item along with Knowledge Base information appears, or an agent response with sourced Knowledge Base information appears. • Type: string • Default value: topic, agent, agent_with_sources • Location: System Property [sys_properties] table	Legacy
sn_nowassist_va.use_planner2_fallback	Set to false (default value) to use the Virtual Agent fallback message when an answer cannot be found. Set to true to use an LLM-generated fallback message that is more specific in	Legacy

Property	Description	Legacy or premium
	response whenever an answer cannot be found.	
sn_ais_assist.enable_pi_in_nba	Enable relevant history-based suggestions. False: Only LLM-based suggestions appear. This is the default value. True: History-based suggested actions can appear and occupy multiple suggested action slot options.	Legacy

Assistant analytics dashboard indicator details

View the data and calculations behind an indicator that is presented in the form of a visualization on the Assistant analytics dashboard.

Assistant analytics indicators contain the following details: indicator type, data source, calculation, available breakdowns, unit, and precision.

These indicators collect data at a daily frequency. Data is only available for dates before the current date. If you want to see results from the current day, you must wait until the next day.

Overview page indicator details

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
Cumulative AI-assisted actions	AI-Assisted Actions in Conversations	Automated	Gen AI Log Metadata	Count of Gen AI log actions	By Conversation Channels, Assistant	Daily	#	0
Average Distinct Users	Daily Conversation Consumers	Automated	Conversation Log	Count of unique users	By Conversation Channels, Assistant, Context Profiles, Conversation Channels, Conversation State	Daily	#	0
Assist Usage Volume	Conversation Assist Usage Volume	Automated	Gen AI Log Metadata	Daily count of Gen AI log assists	By Generative AI log metadata, Feature, Conversation Channels, Assistant	Daily	#	0

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
Overall Average Conversation CSAT	Average Period Inferred CSAT (Session)	Formula	sn_na_analytics	Count of Daily Inferred CSAT (Session) by Conversation Insights (Processed)	By Empathy, Effort, Frustration, Escalation, Assistant, Conversation Channels	Daily	#	2
Total Assist Usage	Conversation Assist Usage Volume	Automated	Gen AI Log Metadata	Count of Gen AI Log assists	By Generative AI Log metadata Feature, Conversation Channels, Assistant	Daily	#	0

Usage page indicator details

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
Total Conversation by Assistant	Assistant Conversations	Automated	Conversation	Count of conversations by assistant	By Conversation Context Profiles, Conversation Channels, Conversation State, Assistant	Daily	#	0
Total Conversation by Channel	Assistant Conversations	Automated	Conversation	Count of conversations by channel	By Conversation Context Profiles, Conversation Channels, Conversation State, Assistant	Daily	#	0
Result Types Offered	ServiceNow Otto for Virtual Agent Results returned	Automated	CI Analytics	Count of ServiceNow Otto for Virtual Agent search results returned	By ServiceNow Otto for Virtual Agent Result Type, Assistant	Daily	#	0
Conversation State Flow	Assistant Conversations	Automated	Conversation	Count of conversations in each state	By Conversation Context Profiles, Assistant	Daily	#	0

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
				of conversation states: Open, Canceled, Faulted, Completed.	Conversation Channels, Conversation State, Assistant			

Adoption and Engagement page indicator details

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
Average Active Users	Daily Conversation Consumers	Automated	Conversation	Count of unique users (consumer where Model Type = LLM and Consumer is not empty and Conversation Type = Interactive	Conversation Channels, Assistant, Context Profiles, Conversation Channels, Conversation State	Daily	#	0
New Users	AI Engagement : New Users	Automated	Conversation	Count of new users (consumer) where Model Type = LLM and Consumer is not empty and Conversation Type = Interactive	Conversation Channels, Assistant	Daily	#	0
Avg Conversation per User	Average Conversations per User	Formula	None	[[Assistant Conversation Consumers]] [[Daily Conversation Consumers]]	Assistant, Conversation Channels	Daily	#	0

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
Active Assistants	Active Assistants	Automated	Now Assist Deployment	Count of assistants [sys_now_assist_deployment]	None	Daily	#	0
Conversations Assistant Volume Trend	Assistant Conversations	Automated	Conversations	Count of conversations where Model Type = LLM and Conversation Type = Interactive	By Conversation Context Profiles, Conversation Channels, Conversation State, Assistant	Daily	#	0
Assist to Execution Trend	- Conversations Assist Usage Volume - AI-Assisted Actions in Conversations - Assist to Action Ratio	Formula	None	[[Conversations Assist Usage Volume]] / [[AI-Assisted Actions in Conversations]]	By Assistant, Conversation Channels	Daily	#	0
Conversations per Channel	Assistant Conversations	Automated	Conversations	Count of conversations where Model Type = LLM and Conversation Type = Interactive	By Conversation Context Profiles, Conversation Channels, Conversation State, Assistant	Daily	#	0
New User Growth	AI Engagement : New Users	Automated	Conversations	Count of new users where Model Type = LLM and Consumer is not empty and Conversation Type = Interactive	By Conversation Channels, Assistant	Daily	#	0

Sentiment page indicator details

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
Overall Sentiment	Average Daily Inferred CSAT (Session)	Automated	Conversation Insights	Average CSAT Insights where CSAT processed = true and Conversation Conversation Type = Interactive and Conversation Model Type = LLM	By Confusion, Effort, Empathy, Escalation, Frustration, Assistant, Conversation Channels	Daily	#	2
Conversations Analyzed	Conversations Insights (Processed)	Automated	Conversation Insights	Count of conversations where CSAT processed = true and Conversation Conversation Type = Interactive and Conversation Model Type = LLM	By Confusion, Effort, Empathy, Escalation, Frustration, Assistant, Conversation Channels, Next Steps, Resolution State	Daily	#	0
High Empathy Rate	High Empathy Rate - Conversation Insights	Formula	None	$\left(\frac{[\text{Conversations Insights (Processed) Empathy = High}]}{[\text{Conversations Insights (Processed) All}]} \right) * 100$	By Conversation Channels, Confusion, Effort, Empathy, Escalation, Frustration, Assistant	Daily	%	0
Conversations with Negative Emotions	Percentage of Conversations with Negative Emotions	Formula	None	$\left(\frac{[\text{Conversations Insights (Negative Emotions)}]}{[\text{Conversations Insights (All)}]} \right) * 100$	By Conversation Channels, Assistant	Daily	%	2

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
				Insights (Processed))]])*100				
Average Inferred CSAT Over Time	Average Daily Inferred CSAT (Session)	Automated	Conversation Insights	Average CSAT insights where CSAT processed = true and Conversation Assistant Type = Interactive and Conversation Model Type = LLM and Session CSAT is not empty	By Confusion, Effort, Conversation Channels, Empathy, Escalation, Frustration, Assistant	Daily	#	2
Transfers and Escalations Over Time	Conversation Insights (Processed)	Automated	Conversation Insights	Count of conversations where CSAT processed = true and Conversation Assistant, Conversation Channels, Type = Next Interactive Steps, and Conversation Model Type = LLM	By Confusion, Effort, Empathy, Escalation, Frustration, Assistant, Conversation Channels, Next Steps, Resolution State	Daily	#	0
Average Inferred CSAT (Virtual Agent)	Average Daily Inferred CSAT (Virtual Agent)	Automated	Conversation Insights	Average CSAT insights (Virtual agent) where CSAT processed = true and Conversation Conversation Type = Interactive	By Confusion, Effort, Empathy, Conversation Channels, Escalation, Frustration, Assistant	Daily	#	2

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
				and Conversation Model Type = LLM and AI agent CSAT is not empty				
Average Inferred CSAT (Live Agent)	Average Daily Inferred CSAT (Live Agent)	Automated	Conversation Insights[sr]	Average CSAT (live agent) where CSAT processed = true and Conversation Type = Interactive and Conversation Model Type = LLM and Human agent CSAT is not empty	By Confusion, Effort, Empathy, Conversation Channels, Escalation, Frustration, Assistant	Daily	#	2
Average Inferred CSAT (Session)	Average Daily Inferred CSAT (Session)	Automated	Conversation Insights[sr]	Average CSAT where CSAT processed = true and Conversation Type = Interactive and Conversation Model Type = LLM and Session CSAT is not empty	By Confusion, Effort, Conversation Channels, Empathy, Escalation, Frustration, Assistant	Daily	#	2

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
Assistant Recommended Next Steps	Conversations Insights (Processed)	Automated	Conversations Insights	Count of conversations where CSAT processed = true and Conversation Channels Type = Next Interactive Steps, and Conversation Model Type = LLM	By Confusion, Effort, Empathy, Escalation, Frustration, Assistant, Conversation Channels, Next Steps, Resolution State	Daily	#	0
Conversation Insight Inferred Resolution State	Conversations Insights (Processed)	Automated	Conversations Insights	Count of conversations where CSAT processed = true and Conversation Channels Type = Next Interactive Steps, and Conversation Model Type = LLM	By Confusion, Effort, Empathy, Escalation, Frustration, Assistant, Conversation Channels, Next Steps, Resolution State	Daily	#	0
Empathy Levels Distribution Over Time	Conversations Insights (Processed)	Automated	Conversations Insights	Count of conversations where CSAT processed = true and Conversation Channels Type = Next Interactive Steps, and Conversation Model Type = LLM	By Confusion, Effort, Empathy, Escalation, Frustration, Assistant, Conversation Channels, Next Steps, Resolution State	Daily	#	0
Negative Emotion Feedback	Conversations Insights (Processed)	Automated	Conversations Insights	Frustration Count of	By Confusion, Effort,	Daily	#	0

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
Over Time				conversations where CSAT processed = true and Conversation Next Steps, Type = Interactive and Conversation Model Type = LLM and Frustrations is Yes Confusion: Count of conversations where CSAT processed = true and Conversation Conversation Type = Interactive and Conversation Model Type = LLM and Confusion is Yes	Empathy, Escalation, Frustration, Assistant, Conversation Channels, Next Steps, Resolution State			

Self-Solve Performance page indicator details

Note: The records in the Deflection Log [sys_cs_deflection_log] table are retained for a period of 60 days.

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
Total Deflection Events	Deflection Logs	Automated	Deflection Log [sys_cs_deflection_log]	Count of deflections where Conversation is not	Assistant, Conversation Channels, Deflection Types,	Daily	#	0

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
				empty and Conversation Type = Interactive and Conversation Model Type = LLM	Deflection State			
Total Deflections	Deflection Logs : Resolved	Automated	Deflection Log[sys_csdeflection_log]	Count of deflection where State = Resolved and Conversation is not empty and Conversation Type = Interactive and Conversation Model Type = LLM and Conversation Live Agent Transfer Time is empty	Assistant, Conversation Channels	Daily	#	0
Total Live Agent Transfers	Total Live Agent Transfers	Automated	Conversation Log[sys_csconversation_log]	Count of conversation where Model Type = LLM and Conversation Type = Interactive and Live Agent Transfer Time is not empty	Assistant, Conversation Channels	Daily	#	0

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
Deflection Rate	Deflection Rate	Formula	Deflection Log [sys_cs_deflection_log]	$\frac{(\text{Number of deflection records Resolved})}{(\text{Number of deflection records})} \times 100$	Assistant, Conversation Channels	Daily	%	2
Deflection Rate Over Time	Deflection Rate	Formula	Deflection Log [sys_cs_deflection_log]	$\frac{(\text{Number of deflection records Resolved})}{(\text{Number of deflection records})} \times 100$	Assistant, Conversation Channels	Daily	%	2
Deflection Outcome Distribution	Deflection Logs	Automated	Deflection Log [sys_cs_deflection_log]	Count of events where Deflection is not empty and Conversation Type = Interactive and Conversation Model Type = LLM	Assistant, Conversation Channels, Deflection Types, Deflection State	Daily	#	0
Deflection Types Offered	Deflection Logs	Automated	Deflection Log [sys_cs_deflection_log]	Count of events where Conversation is not empty and Conversation Type = Interactive and Conversation Model Type = LLM	Assistant, Conversation Channels, Deflection Types, Deflection State	Daily	#	0

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
Effort Score	Effort Score	Automated	Conversation Insights	Count of conversations where CSAT processed = true and Conversation Type = Interactive and Conversation Model Type = LLM and Effort Score in (High, Medium, Low)	Assistant, Channels, Effort	Daily	#	0

Assists page indicator details

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
Sum of all Conversation Assists	Conversation Assist Usage Volume	Automated	Gen AI Log Metadata	Count of Gen AI assists	By Generative AI Feature, Conversation Channels, Assistant	Daily	#	0
Assist Consumption	Conversation Assist Usage Volume	Automated	Gen AI Log Metadata	Count of Gen AI assists by assistant	By Generative AI Feature, Conversation Channels, Assistant	Daily	#	0
Executions per Assistant	AI-Assisted Actions in Conversations	Automated	Gen AI Log Metadata	Count of Gen AI actions by assistant	By Conversation Channels, Assistant	Daily	#	0

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Data collection frequency	Unit	Precision
Trending sum of all Assists	Conversations Assist Usage Volume	Automated	Gen AI Log Metadata [sys_gen_ai_log_metadata]	Sum of Gen AI assists	By By Generative AI log_metadata Feature, Conversation Channels, Assistant	Daily	#	0
Top 10 Most Used AI Features	Generative AI Usage Log	Pivot Table	Generative AI Usage Log [sys_gen_ai_usage_log]	None	None	Daily	#	0

Voice page indicator details

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Frequency	Unit	Precision
Percent voice conversations deflected	None	None	None	Percentage of voice conversations where Resolved = Yes	None	Daily	%	1
Total deflected conversations over time	Now Assist Analytics Assistant Ims	Automated	Now Assist Analytics Assistant Ims [sn_na_analytics_conv_ims]	Count of voice conversations where Resolved = Yes		Daily	#	0
Total conversations	Now Assist Analytics Assistant Ims	Automated	Now Assist Analytics Assistant Ims [sn_na_analytics_conv_ims]	Count of conversations where Assistant Type = Voice		Daily	#	0
Total conversations over time	Now Assist Analytics Assistant Ims	Automated	Now Assist Analytics Assistant Ims [sn_na_analytics_conv_ims]	Count of all voice calls	None	Daily	#	0
AI Voice Agents in use	Now Assist Analytics Insights	Automated	Now Assist Analytics Insights [sn_na_analytics_insights]	Count of AI agents where Assistant Type = Voice	None	Daily	#	0

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Frequency	Unit	Precision
AI Voice Agents in use over time	Now Assist Analytics Insights	Automated	Now Assist Analytics Insights [sn_na_analytics_insights]	Count of AI agents where Assistant Type = Voice	None	Daily	#	0
Conversations transferred to a live agent	Now Assist Analytics Assistant Ims	Automated	Now Assist Analytics Assistant Ims [sn_na_analytics_conv_ims]	Count of voice calls where Agent analytics_conv_ims	None	Daily	#	0
Number of tickets created	Now Assist Analytics Ims Related Record	Automated	Now Assist Analytics Ims Related Record [sn_na_analytics_conv_ims_related_record]	Count of Interaction Related Records where Agent analytics_conv_ims_related_record false and Interaction Virtual agent = true and Interaction Type = Phone and Interaction AI Voice = true	None	Daily	#	0
Conversations disconnected	Now Assist Analytics Assistant Ims	Automated	Now Assist Analytics Assistant Ims [sn_na_analytics_conv_ims]	Count of voice calls where State=Closed	None	Daily	#	0
Immediate live agent transfers	None	None	Single score	Count of conversations where live agent transfer = yes and call duration < 30 secs	None	Daily	#	0

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Frequency	Unit	Precision
Inferred customer satisfaction (CSAT): average score (out of 5)	Now Assist Analytics Insights	sn_na_analytics_insights	Now Assist Analytics Insights	Average of session CSAT [sn_na_analytics_insights]	None	Daily	#	2
Average voice conversation duration	Now Assist Analytics Assistant Ims	Formula	Now Assist Analytics Assistant Ims	[[AI Agent-Summed duration of calls]]/conv_ims [[AI Agents-Total Calls]]	None	Daily	Minutes	0
Response Time								
50th percentile response time	None	None	Single score	Response time in seconds where 50% responses are completed	None	Daily	Seconds	1
90th percentile response time	None	None	Single score	Response time in seconds where 90% responses are completed	None	Daily	Seconds	1
99th percentile response time	None	None	Single score	Response time in seconds where 99% responses are completed	None	Daily	Seconds	1
Tool Insights (Executions by tool type)								
Scripts	Now Assist Analytics Tool Execution	Automated	Now Assist Analytics Tool Execution	Count of tool executions where Assistant [sn_na_analytics_tool_execution]	None	Daily	#	0

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Frequency	Unit	Precision
				Voice and Tool Type = Script				
Flow actions	Now Assist Analytics Tool Execution	Automated	Now Assist Analytics Tool Execution [sn_na_analytics_tool_execution]	Count of tool executions where Assistant Type = Flow action	None	Daily	#	0
Subflows	Now Assist Analytics Tool Execution	Automated	Now Assist Analytics Tool Execution [sn_na_analytics_tool_execution]	Count of tool executions where Assistant Type = Subflow	None	Daily	#	0
RAG-based search	Now Assist Analytics Tool Execution	Automated	Now Assist Analytics Tool Execution [sn_na_analytics_tool_execution]	Count of tool executions where Assistant Type = Search Retriever	None	Daily	#	0
50th percentile response time	None	None	Single score	Tool execution time in seconds where 50% executions are completed	None	Daily	Seconds	1
90th percentile response time	None	None	Single score	Tool execution time in seconds where	None	Daily	Seconds	1

Visualization	Indicator name	Indicator type	Indicator source table	Calculation	Available breakdown	Frequency	Unit	Precision
				90% executions are completed				
99th percentile response time	None	None	Single score	Tool execution time in seconds where 99% executions are completed	None	Daily	Seconds	1
Use of AI agents								
Voice AI agent summary	Agent Conversations	Automated	Now Assist Analytics Insights [sn_na_analytics_insights]	Count of agents where Assistant Types Voice and Resolved in (Yes, No))	None	Daily	#	0

Multilingual support for voice assistants

Voice assistants support multiple languages to enable users to interact in their preferred language. This topic lists the languages available for voice interactions and linguistic capabilities of the voice assistant.

Supported languages for voice assistants

Voice assistants support the following languages for user interactions:

- English
- German
- Spanish
- Japanese
- Korean
- Dutch
- Brazilian Portuguese
- Italian
- Mandarin Simplified
- French
- Canadian French
- British English

- Mexican Spanish
- Thai
- Hindi
- Danish
- Russian
- Turkish
- Polish
- Swedish
- Norwegian
- Australian English
- Irish English
- Finnish
- Czech
- Slovakian
- Ukrainian
- Malay
- Canadian English

Japanese language considerations

Japanese language support for voice assistants enables Japanese-speaking users to experience natural, culturally appropriate interactions with AI voice agents.

Key considerations

Formality and honorifics: Voice assistants use appropriate levels of formal Japanese speech (keigo) correctly and consistently throughout interactions.

User addressing: Voice agents address users according to Japanese cultural and linguistic norms.

Natural expressions: Responses sound more natural to native speakers while remaining concise, avoiding overly literal translations.

Support for Kanji, Kana, and Furigana in transcriptions.

Alphanumeric content processing

To ensure accurate pronunciation in Japanese text-to-speech (TTS), alphanumeric expressions in tool call results are pre-processed as follows:

Alphabet classification

Alphabetic characters are classified to determine whether they should be:

- Read as a word (for example, "OK" read as "オーケー")
- Read letter-by-letter (for example, "ID" read as "アイディー")

Number classification

Numeric values are classified by type to ensure correct pronunciation:

- Dates and times
- Durations
- Currency amounts
- Measurements
- Record numbers
- Phone numbers
- Other numeric values

Kana transliteration

After classification, all alphanumeric expressions are transliterated into kana (Japanese phonetic characters) for accurate TTS pronunciation.

Conversational Integration apps for Virtual Agent

Integrate and extend the capabilities of Virtual Agent by connecting to your employees and customers where they already are. They are engaged in web portals, Now[®] Mobile apps, and collaboration tools such as Slack, Microsoft Teams, and any other popular chat or messaging app.

Integrating Virtual Agent with messaging apps

Enable users to run Virtual Agent bot conversations in supported third-party messaging apps. Use the Conversational Integration apps for Slack, Microsoft Teams, and Workplace that are available from the ServiceNow Store to configure these messaging apps on your ServiceNow instance.

Note: Conversational Integration apps for Slack, Microsoft Teams, and other consumer apps and voice apps are not supported for on-prem instances.

Admin setup

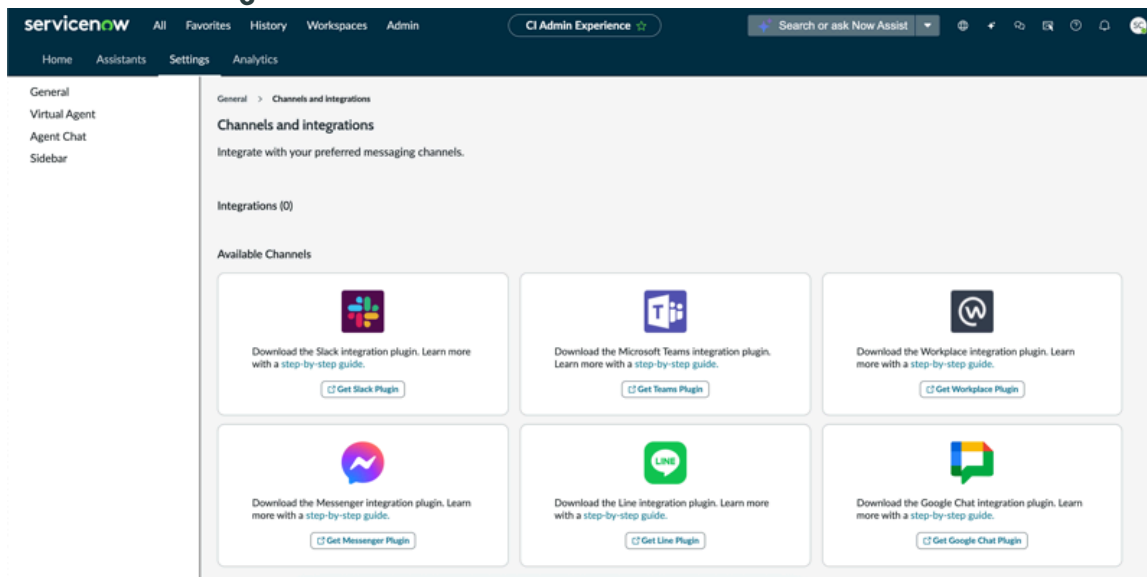
Use the Virtual Agent Conversational Integration apps to configure the messaging applications for your instance. Perform these basic installation steps to set up the Virtual Agent bot.

1. Install the Conversational Integration messaging apps, that are pre-built with ServiceNow Virtual Agent from the ServiceNow Store and then associate the app with your own ServiceNow instance.

For details, see [Integrating Virtual Agent with messaging apps](#).

2. Install the Conversational Integration apps for Slack, Microsoft Teams, Twilio, WhatsApp, and Google Assistant on your ServiceNow instance once they become available for installation from the ServiceNow Store.

Channels and integrations



3. If needed, configure the system messages that users see in Virtual Agent conversations. You can also customize the common commands used in these messaging integrations.

Conversational interface in messaging integrations

The Virtual Agent interface for the Conversational Integration apps (Slack, Microsoft Teams, and Workplace) is similar to the web-based interface. However, there are some differences, such as commands used and how certain interface controls are displayed in these third-party messaging apps.

Common commands in messaging integrations

Command	Description
Hi	Begin a new conversation or end a conversation.
agent	Begin a new conversation or request a transfer to a live agent.
bye	Leave a live chat conversation at any time, for example before engaging with a live agent, during a live chat, or when live chat is about to end.
help	Displays a short list of useful commands.
logout	Unlink your ServiceNow account from a messaging integration.
notification or notifications	Subscribe to or unsubscribe from notifications.
restart	End the current conversation and begin a new one.

After you install the integration, you can customize these commands by using the **Configure** button for the installed teams/communities in the channel specific pages.

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In **General Settings** under **Channels and integrations**, click **View All**.
3. On the Channels and integrations page, you can see the number of integrated channels and available channels for installation on your instance.
4. Click the **Manage** button in the specific channel and navigate to the Settings tab.
5. Click the **view settings** button against Contextual Actions.
6. Select the command record to be changed and update as needed.

Configuring Virtual Agent system messaging in the Conversational Integration apps

You can modify the default messages displayed to your users in Virtual Agent and Agent Chat conversations. For details about customizing them, see [Change Virtual Agent and Agent Chat system messages](#).

Rendering of input controls and bot responses in conversations

Input controls in Assistant Designer, such as the Carousel, render differently in bot conversations in messaging apps than in the web-based interface. Certain bot response controls, such as the Image response and Multi-response controls, also render differently in third-party messaging apps. For details about these differences, see the descriptions of the Assistant Designer [input controls](#), [bot responses](#), and [utilities](#).

Attachments

In live agent conversations, users and agents can upload and exchange any type of attachment file when prompted.

ServiceNow Otto support

Existing channel integrations	Supports ServiceNow Otto	Supports synthesized response
Microsoft Teams/Copilot	Yes	Yes
Slack	Yes	Yes
WhatsApp	Yes	No
SMS/Twilio	Yes	No
Google Chat	Yes	No

Redirect user authentication to a Service Portal

After installing a pre-built Conversational Integration, you can specify a Service Portal in which unauthenticated end users complete the user authentication step (user account linking), instead of in their ServiceNow instance. Users who do not have linked accounts complete authentication before continuing with Virtual Agent in the messaging application.

Before you begin

Install the Virtual Agent messaging integrations for your instance. The system creates a record in the Provider Auth [provider_auth] table for each integration that you install. You use the Provider Auth table to specify the Service Portal in which user authentication occurs.

Role required: admin

Procedure

1. Navigate to **All**, and then enter `provider_auth.list` in the filter.
2. In the Provider Auth table, open the record for the messaging integration you installed.
3. In the **Service Portal** field, select the Service Portal in which user authentication occurs.
4. Click **Update**.

Result

When unauthenticated users start a conversation with Virtual Agent for the first time in the messaging integration, they are redirected to the Service Portal specified for the provider in the Provider Auth table. After they log in to the Service Portal, they are prompted to [link their ServiceNow account to the messaging application](#).

Account linking in pre-built messaging integrations

In Virtual Agent, account linking maps the users of a supported chat or messaging application to their ServiceNow user profile. Account auto-linking authenticates your messaging users, which enables users to automatically access Virtual Agent topics that involve ServiceNow records. If needed, users can also manually unlink from or link to their ServiceNow accounts.

How account auto-linking works

In the Conversational Integrations for Slack and Microsoft Teams, you have the option to enable account auto-linking, which automatically links messaging users to their ServiceNow accounts. If you enable the account auto-linking feature on the Messaging Apps Integration page, your users are not prompted to link to their ServiceNow accounts when they engage with Virtual Agent.

In earlier releases, messaging users were prompted to link to their ServiceNow accounts or continue as guests. However, for the Conversational Integrations for Slack and Microsoft Teams, if you enable account auto-linking, users don't manually link their messaging accounts to their ServiceNow accounts, provided that they use the same email account for their messaging and ServiceNow accounts. During auto-linking, Virtual Agent maps the email accounts of messaging users to the email accounts defined in their profiles in the Users [sys_user] table. When the email accounts match, the user is automatically linked (authenticated) and they do not see the **Link to ServiceNow** button when they begin a bot conversation.

In messaging integrations, your users can still use the **logout** command during bot conversations to unlink from their ServiceNow accounts. However, in all subsequent conversations after unlinking, Virtual Agent prompts them to link their accounts or continue as a guest user.

Account auto-linking

You can allow a user's third-party accounts to be auto-linked to their ServiceNow[®] profile.

You can enable account auto-linking in the `sys_cs_provider.list`. This feature bypasses the prompt for the users to link their accounts manually.

i Note: Account linking is possible only for users who belong to the same domain that was used for installing Microsoft Teams on an instance. To auto-link users from other domains, ensure that Microsoft Teams installation is done using the global domain.

In the navigation filter type `sys_cs_provider.list`. Select the connection record you wish to link. Check the **Allow account linking** box, then check the **Auto link users' ServiceNow profiles** box that appears. Fill in the **Automatic link action** field with the corresponding account linking script.

Example: Account auto-linking script


```

var response_body = inputs['response_body'];
var status_code = inputs ['status_code'];
var email_id = '';
if(status_code>200 && status_code<=210){
    email_id = response_body &&
    JSON.parse(response_body).userPrincipalName;
}
var sysUserId = null;

if(email_id){
    var gr = new GlideRecord("sys_user");
    gr.addQuery("email",email_id);
    gr.query();
    while(gr.next()){
        sysUserId = gr.getUniqueValue();
    }
}
if(sysUserId){
    outputs['status'] = 'Success';
    outputs['userid'] = sysUserId;
}
else{
    outputs['status'] = 'Failure';
}

})(inputs,outputs);

```

Unlink your ServiceNow user account from a messaging application for Virtual Agent conversations

If needed, you can unlink your ServiceNow user account from a messaging app used for the Now Virtual Agent.

Before you begin

Role required: user

About this task

Unlinking your account from a selected Conversational Integration for Slack or Microsoft Teams deactivates the association between your ServiceNow account and the messaging app. After you unlink your account, you can no longer engage in Virtual Agent conversations that query or change records in the ServiceNow database.

Procedure

1. From within the messaging app, type **logout**.
2. From the application navigator, navigate to **Self-Service > My Profile**.
3. Click the **View Linked Accounts** related link.
4. In the Linked Accounts page, select the check box for the messaging integration to be unlinked.
5. Select **Actions on selected rows**, then click **Unlink account**.
The link between your ServiceNow account and the Virtual Agent messaging integration becomes inactive.

Note: Even though you unlinked your account, you can still run public Virtual Agent conversations.

- To link your account again, repeat steps 1 through 3 for the associated messaging integration and in the **Actions on selected rows...**, click **Link account**.

Link your ServiceNow user account to a messaging application for Virtual Agent conversations

Link your ServiceNow account to a third-party messaging application to access non-public Virtual Agent topics that use ServiceNow records.

Before you begin

Role required: user

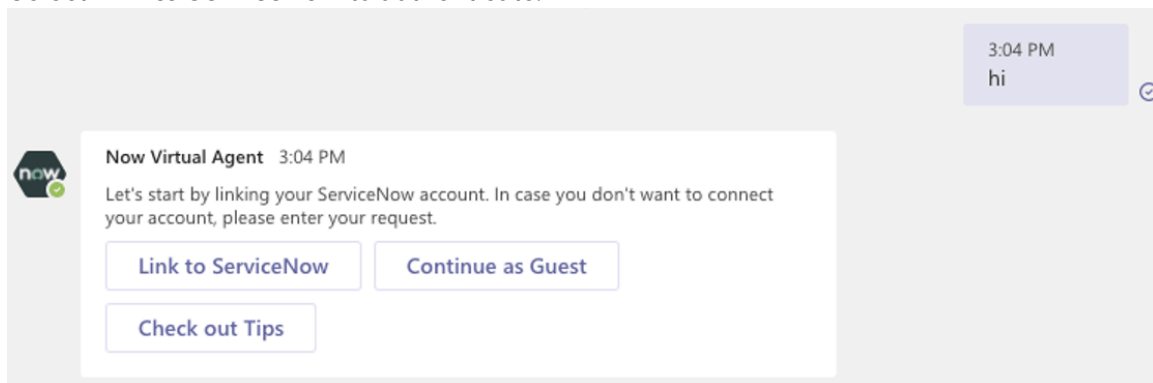
About this task

If the same email account is defined for both your messaging and ServiceNow accounts, your messaging account is automatically linked to your ServiceNow account when you first use Virtual Agent.

However, after you unlink your messaging account from your ServiceNow account (using the **logout** command), the bot gives you the option to link to your ServiceNow account or continue as a guest each time you start a new Virtual Agent session. The authentication step (linking) occurs in your instance or in a specific Service Portal, as set by your admin.

Procedure

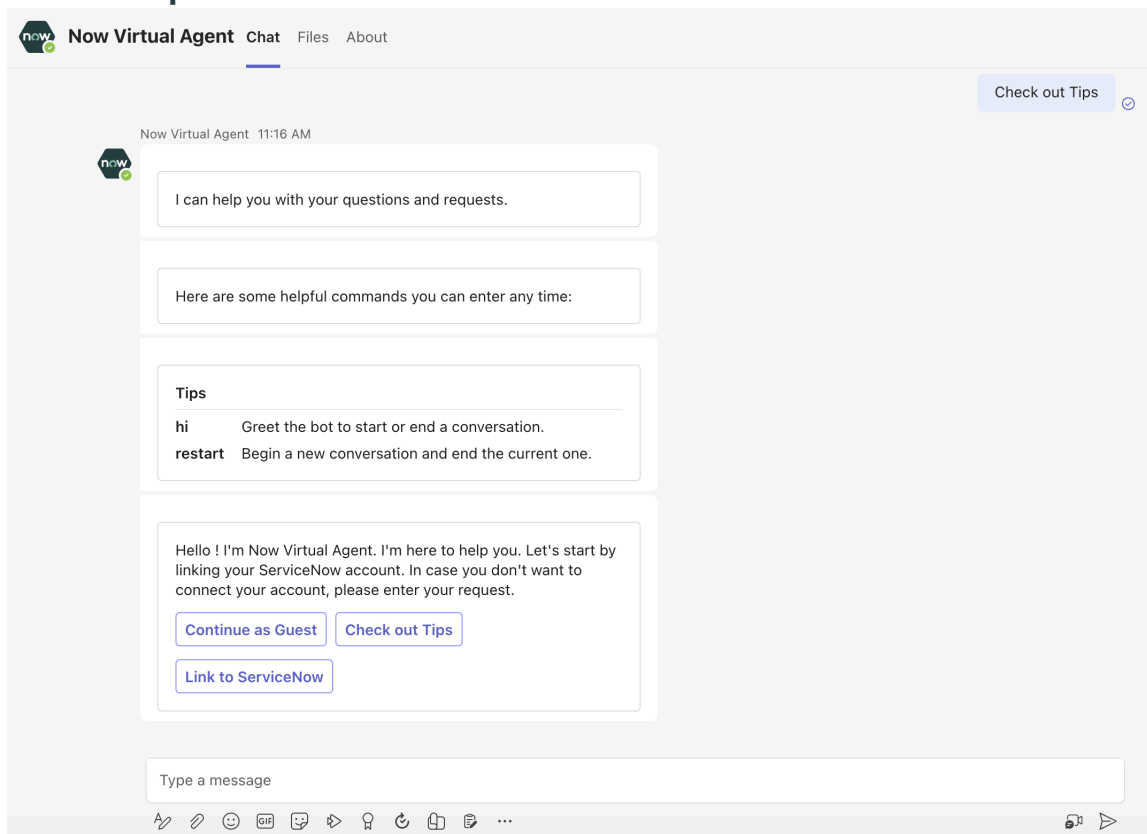
- Open the messaging application.
- Find your Virtual Agent bot.
- Start a conversation with your Virtual Agent bot.
The bot then presents a prompt that provides options to authenticate (**Link to ServiceNow**), **Continue as Guest**, or use the **Check out Tips**.
- Select **Link to ServiceNow** to authenticate.



Authentication directs you to your instance or a specific Service Portal set by your admin. If you're not already logged in to your instance or a Service Portal, you're prompted to enter your login credentials.

Note: If a user is unlinked or continued as a guest, notifications are disabled. Also, only the public topics are discoverable.

Check out Tips



5. In the confirmation that appears prompting you to *Confirm* or *Deny* linkage between your accounts, select *Confirm* to enable the account link.

6. After confirmation, you're directed to your instance user record.

A confirmation message is displayed at the top of the screen.

Related topics

[Redirect user authentication to a Service Portal](#)

Control topic visibility in Virtual Agent messaging channels

Suppress the display of a topic in a Virtual Agent messaging channel by using a condition script that excludes the topic from a channel.

Before you begin

Roles required:

- virtual_agent_admin or admin
- Administrator for third-party applications

About this task

In your condition script for the topic, use a context variable to identify the messaging channel that excludes this topic.

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.

3. Select the topic for updating or create a new topic.
4. Navigate to the **Properties** page, and open **Who can access this topic** under Advanced properties.
5. In the Context section, select **Condition** followed by **Add Condition**.
6. Enter a condition script that identifies the messaging channel (Slack or Microsoft Teams) from which the topic will be excluded.

You can use the following example script, which contains the `vaContext.deviceType` variable, to identify the messaging channel that excludes the topic:

```
(function execute()
{
  if(vaContext.deviceType === 'Slack' || vaContext.deviceType === 'Teams'){
    return false;
  }
  return true;
})();
```

7. To save the topic properties, click **Save**.

Result

Publishing the topic deploys it to the Virtual Agent messaging channels, except for the Virtual Agent channels that you specified in the topic condition script.

Conversational Integration with Apple Messages for Business

Use the Conversational Integration with Apple Messages for Business application to empower customers to engage with your business using their Apple devices. Conversational Integration with Apple Messages for Business provides rich messaging capabilities such as Apple pay, forms, time picker, and authentication.

Get started with Conversational Integration with Apple Messages for Business

Select a tile to get started.

Explore  Integrate Apple Messages for Business with Virtual Agent.	Configure  Install and configure your Apple Messages for Business implementation.	Use  Agents and requesters can use Apple Messages for Business in portals on your instance.
---	--	--

Request apps on the Store

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

Exploring Conversational Integration with Apple Messages for Business

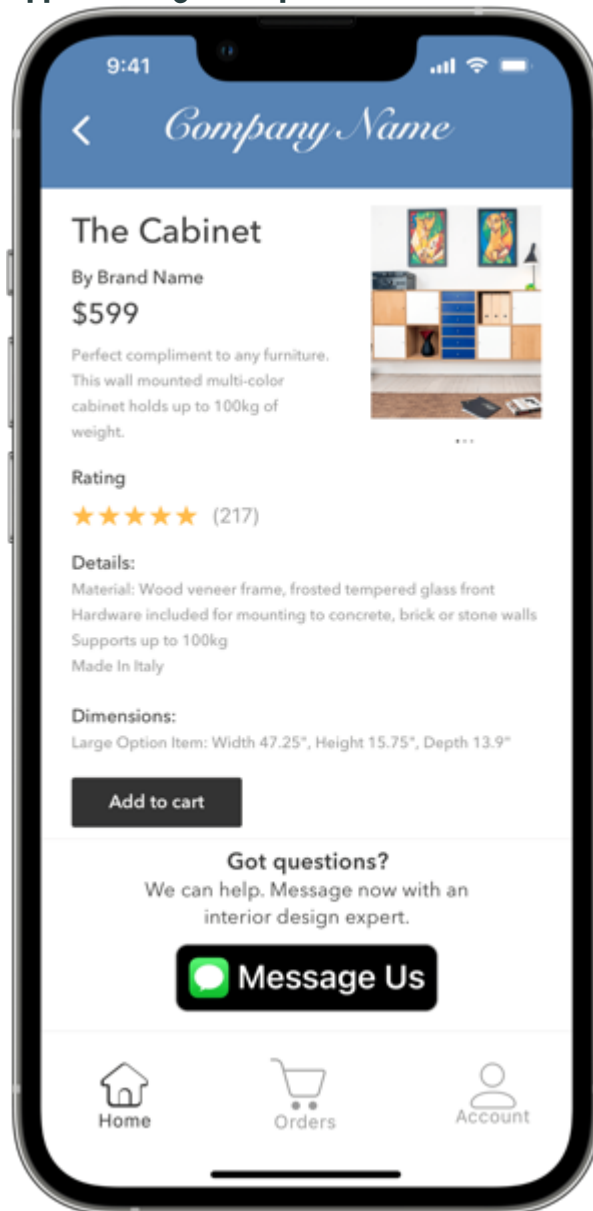
Use Conversational Integration with Apple Messages for Business to connect a requester with a virtual agent or live agent using your company's Apple Messages for Business account.

Conversational Integration with Apple Messages for Business provides rich messaging capabilities such as Apple pay, forms, time picker, and authentication.

Apple Messages for Business users

Customers can start a conversation from a variety of entry points. From each of these entry points, customers can launch the Apple messages app and compose a message. You can add custom buttons to a website, app, or social media page, so that customers can start a conversation with Virtual Agent or live agent. For a full overview of the options available, see the [Apple documentation](#).

Apple message example



- iMessage
- Apple Maps

- Apple Pay
- Search
- Apple apps
- QR codes
- Social media

Conversational Integration with Apple Messages for Business features

Apple Messages for Business includes a set of interactive features such as list picker, time picker, authentication, and Apple pay.

Interactive features

Feature	Description
Rich links	Adds a picture or video preview to a URL.
Quick replies	The user can make an inline choice with a single tap. This includes responses like star ratings or thumbs up or down.
List pickers	Gives the user a list of options to choose from. For example, a travel site can show flights, accommodations, car rentals, and bookings.
Time pickers	Provides time slots for users to choose for appointments, deliveries, and services. To use time pickers, you must have Conversational Appointment Booking  installed.
Apple Pay	Send Apple Pay requests over Messages. For more information on setting up Apple Pay, refer to the Apple documentation  .
Authentication	Apple Messages for Business supports OAuth2 protocol to integrate sign-in authentication to the Messages app.
iMessage App	Users can interact with your business directly from the Messages app on their iPhone, where they are accustomed to messaging their contacts.
Image sharing	Users or live and virtual agents can send photos during a chat.
Video sharing	Users or live or virtual agents can send videos during a chat.
Document attachments	Users or live or virtual agents can send PDF documents during a chat.

What to explore next

To learn more about configuring and using Conversational Integration with Apple Messages for Business, see:

- [Configuring Conversational Integration with Apple Messages for Business](#)
- [Using Conversational Integration with Apple Messages for Business](#)

Configuring Conversational Integration with Apple Messages for Business

Install and set up the Conversational Integration with Apple Messages for Business application to enable requesters to interact with virtual and live agents.

This task provides the general steps to integrate Apple Messages for Business with your ServiceNow instance using the Conversational Integration with Apple Messages for Business application.

1. [Install Conversational Integration with Apple Messages for Business.](#)
2. [Set up the integration on Apple Messages for Business.](#)
3. [Capturing information from a user in a Apple Messages for Business chat conversation.](#)
4. Enable authentication with your Identity Provider (IdP) by configuring the [OAuth setup for Apple Messages for Business](#)
5. Enable Apple Pay on Apple Messages for Business interactions.
 - Refer to the [Apple documentation](#)  for details about configuring your Apple merchant account.
 - Refer to [Complete the payment provider configuration](#) to connect your payment provider information to your ServiceNow® instance.

Install Conversational Integration with Apple Messages for Business

Install the Conversational Integration with Apple Messages for Business so that your business can interact with requesters on the Apple Messages for Business app. The application installs related ServiceNow Store applications and plugins if they are not already installed.

Before you begin

- Review the [Conversational Integration with Apple Messages for Business](#)  application listing in the ServiceNow Store for information on dependencies, licensing or subscription requirements, and release compatibility.
- Create an Apple Messages for Business account at [Apple Business Register](#) .

Role required: admin

About this task

The following applications or plugins are installed with Conversational Integration with Apple Messages for Business:

Conversational Custom Chat Integration (com.glide.cs.custom.adapter)

Provides custom chat integration framework of scriptable APIs to enable the Virtual Agent application on any conversational interface.

For more information on this plugin, see [Creating conversational custom chat integrations in Virtual Agent](#).

ServiceNow IntegrationHub Runtime (com.glide.hub.integration.runtime)

Enables execution of Integration Hub actions and flows.

IHUB Spoke Util Pack (com.snc.ihub_spoke_util_pack)

Enables utility or global scripts that can be invoked from the Integration Spokes.

Conversational Messaging (com.glide.messaging.awa)

Enables messaging actions that are performed when an event occurs.

The following applications and plugins are not installed with Conversational Integration with Apple Messages for Business, but are required in order to use specific features.

Conversational Appointment Booking (sn_va_appt_schedul)

Book, reschedule, and cancel appointments from Virtual Agent conversations. This application is required in order to use the time picker feature in Apple Messages for Business.

Payment framework for conversational channels (sn_va_payment_ctrl)

Enables the payment framework custom control for live agent and virtual agent conversations in Apple Messages for Business.

Procedure

1. Make sure that your Apple Messages for Business account is set up and active.

See the [Apple documentation](#) for more information.

2. Navigate to **All > System Applications > All Available Applications > All**.

3. Find the Conversational Integration with Apple Messages for Business application (sn.va.abc.adapter) using the filter criteria and search bar.

You can search for the application by its name or ID. If you cannot find the application, you might have to request it from the ServiceNow Store.

In the list next to the **Install** button, the versions that are available to you are displayed.

4. Select a version from the list and select **Install**.

In the Review Installation Details dialog box, any dependencies installed with your application are listed.

5. If you're prompted, follow the links to the ServiceNow Store to get any additional entitlements for dependencies.

6. **Optional:** If demo data is available and you want to install it, select the **Load demo data** check box.

Demo data are the sample records that describe application features for common use cases. Load the demo data when you first install the application on a development or test instance.

7. Select **Install**.

Set up the integration on Apple Messages for Business

To integrate Apple Messages for Business with your ServiceNow® instance, you need to set up your Apple Messages for Business account, and then link your Apple Messages for Business messaging service provider account to your ServiceNow® instance.

Before you begin

- Role required: admin
- If your business doesn't already have an Apple ID, create one. Make sure to use the ServiceNow® Messaging Service Provider (MSP).

Note: For more information about creating a business Apple ID, refer to the [Apple documentation](#).

- Create a Apple Messages for Business account.

Procedure

1. Go to [Apple Messages for Business](https://register.apple.com) (register.apple.com).
2. Click **Messages for Business Accounts** to go to your business account.
3. Click **Test your Messaging Service Provider connection**, and **Connect**.
You are redirected to your Now Support portal. Log in if necessary.
4. On your Now Support portal, complete the connection of your Apple Messages for Business account with your ServiceNow instance.
 - a. Use the dropdown to select the instance that you want to connect to your Apple Messages for Business account.
Ensure that the instance has the Conversational Integration with Apple Messages for Business application installed.
 - b. If the connection is successful, the message "Your request on the instance <instance name> is successfully submitted" displays.
If the connection is not successful, you are redirected to the landing page on Now Support. Try again by repeating the connection steps.
5. Once the connection is complete, click **Go to instance** to go to your customer instance and log in if necessary.
6. On the Apple Messages for Business account page, enter the Provider Application name.
This should be a name that will help you identify this connection on your instance.
7. Click **Complete installation**.
If the installation was successful, you are redirected to the instance homepage and the following message displays: "Bot registration successful. View the provider record here."

What to do next

If you want to integrate your Identity Provider (IdP), go to: [OAuth setup for Apple Messages for Business](#).

OAuth setup for Apple Messages for Business

Integrate your Identity Provider (IdP) with Apple Messages for Business using OAuth2 authentication.

Connect Apple Messages for Business to your ServiceNow® instance

Complete the following steps on the Apple Messages for Business site to connect your Apple Messages for Business account to your ServiceNow® instance.

1. Go to the Apple Messages for Business page (register.apple.com) and log in to your Messages for Business account.
2. Go to the **Integrated OAuth2 Authentication** section.
3. Add the Authorization URL from your Identity Provider (IdP) to the **OAuth URL** field.
4. Add the Token URL from your IdP to the **Token URL** field.
5. Add the Client ID from your IdP to the **Client Identifier** field.
6. Refer to the [Apple documentation](#) for further instructions on configuring OAuth2 authentication on your Apple Messages for Business account.

Set up OAuth on your ServiceNow® instance

1. Go to your ServiceNow® instance to set up OAuth.
2. Create a new record in the Application Registries (oauth_entity) table using these instructions: [Use a third-party OAuth provider](#) .
 - Use the grant type **Authorization code**.
 - Add the **Token URL**.
3. Create a new record in the OAuth Entity Scopes (oauth_entity_scope) table using these instructions: [Specify an OAuth scope](#) . If you have multiple scopes, then add a new record for each scope, and create a corresponding Entity Profile Scope record for each scope.
4. Create a new record in the Connection and Credential Aliases (sys_alias) table using these instructions: [Create a Connection & Credential alias](#) . This connection alias is used for fetching the http connection record which you create in the next step.
5. Create a new record in the HTTP(s) Connection (http_connection) table using these instructions: [Create an HTTP\(s\) connection](#) .
 - Type of connection - Select HTTP(s) Connection
 - Set the Connection alias to the sys_alias record created in previous step.
 - Set the connection url to fetch the user information API as per your IdP. (For example: `https://<your-idp-app>.com/api/v1/users`)
6. Create a Profile Parser Action using Workflow Studio. See the code snippets shown here for an example: [Create a profile parser action for Apple Messages for Business](#). See [Building actions](#)  for more details.
7. Create a new record in the Provider Application Authentications (sys_cs_provider_app_authentication) table using these instructions:
 - Set the Provider Channel Identity to your provider app (sys_cs_provider_application)
 - Set the OAuth Entity Profile to the oauth_entity_profile record created with your OAuth Provider (oauth_entity) record.
 - Set the Profile API Connection to the http_connection record created previously.
 - Set the Profile Response Parser Action to the sys_hub_action_type_definition record that you have defined.

Create a profile parser action for Apple Messages for Business

Create an action to parse the user information response and find the corresponding user on the ServiceNow® instance for Conversational Integration with Apple Messages for Business using the information provided here.

Before you begin

Role required: admin

Procedure

1. Refer to the following procedure to create a new action. [Create an action in Workflow Studio](#) .
2. In the Workflow Studio integration hub, set the **Input** field to `response_body (string)`.

Workflow Studio example

The screenshot displays the Workflow Studio interface for a Virtual Agent action titled "Virtual Agent - Parse Okta User Profile". The interface is divided into several sections:

- Action Outline:** Shows the sequence of steps, with the first step being "Extract email and find linked user" (Script).
- Input Variables:** A table with columns "Name" and "Value". It contains one entry: "response_body" with the value "action > response_body". A "Create Variable" button is visible below the table.
- Script:** A code editor containing a JavaScript function `execute(inputs, outputs)`. The script parses the `response_body` into a JSON profile, extracts the email, and uses a GlideRecord to find or create a user in the system. It sets `auth_success` to true if a user is found, otherwise false, and sets `user_sys_id` accordingly.
- Output Variables:** A table with columns "Label", "Name", "Type", and "Mandatory". It contains one entry: "result" with the name "result", type "String", and is mandatory.
- Data Panel:** On the right, it shows the state of variables: `response_body` (String), `result` (String), `Step Status` (Object), and `Action Status` (Object).

3. You can use the following example script to help create your script for the action.

```
(function execute(inputs, outputs) {
  try {
    var profile = JSON.parse(inputs.response_body);
    var email = profile[0]['profile']['email'];
    var user_sys_id = "";
    var result = {
      "auth_success": false,
      "user_sys_id": ""
    };
    if (email) {
      result['auth_success'] = true;
      var userGr = new GlideRecord("sys_user");
      userGr.addQuery("email", email);
      userGr.query();
      if (userGr.getRowCount() == 1)
        if (userGr.next())
          user_sys_id = userGr.getUniqueValue();

      result['user_sys_id'] = user_sys_id;
    }
    outputs.result = result;
  } catch (e) {
    gs.error("Error in Virtual Agent - Parse User Profile: " + e.message);
    throw e;
  }
})
```

```
}
})(inputs, outputs);
```

4. Set the **Output field to the following:**

```
result = {
  "auth_success": false,
  "user_sys_id": "1234"
};
```

Complete the payment provider configuration

Fill out the information in the Payment Provider Configuration table to connect your payment provider information to your ServiceNow® instance.

Before you begin

Role required: admin

About this task

Each payment provider has their own procedures for certification, or configuration of your merchant profile. Refer to the payment provider's documentation for more details.

Procedure

1. Navigate to `sn_va_payment_ctrl_payment_provider_configuration.list`.
2. On the form, fill in the fields.

All information must match the information you have input with the payment provider.

Payment Provider Configuration form

Field	Description
Name	The name of the payment provider. For example: Apple Pay, Google Pay, Stripe
Merchant Name	Your merchant name from your payment provider.
Merchant Identifier	Your merchant id from your payment provider.
Payment Gateway URL	The URL for the payment gateway you host which processes the customer credit card details.
Merchant Capabilities	The types of payment you can accept. For example: Debit, credit, 3DS
Supported Networks	The types of credit cards supported by the payment provider. For example: Mastercard, Visa, American Express
Protocol Profile	The name of the profile you have configured for processing payments.

Field	Description
Order Tracking URL	The URL that the user can access to track their order.
Shipping Contact Update URL	This URL allows the user to update their shipping contact information.
Fallback URL	An alternate URL to allow the user to access the order information.
Payment Method Update URL	This URL allows the user to update their payment method preference.
Supported Countries	Countries that you sell to.
Shipping Method Update URL	This URL allows the user to update their shipping method preference.

3. Click **Update**.

Uninstall the integration for Apple Messages for Business

To remove the integration of Apple Messages for Business with your ServiceNow® instance, you need to log in to your Apple Messages for Business account, and then unlink your Apple Messages for Business partner account from your ServiceNow® instance.

Before you begin

- Role required: admin

Procedure

1. Go to [Apple Messages for Business](https://register.apple.com) (register.apple.com).
2. Click **Messages for Business Accounts** to go to your business account.
3. Select the Business Account that you want to unlink from your ServiceNow® instance.
4. Click **Test your Messaging Service Provider connection**, and **Connect**.
You are redirected to your Now Support portal. Log in if necessary.
5. On the **Remove Apple Messages for Business Account connection** page, click **Delete connection**.
A new tab opens to confirm you want to remove the connection.
6. Click **Remove connection**.
7. Upon successful deletion, you are redirected to your the instance homepage and shown this message: "Business account registration was successfully deleted."

Integrating the Conversational Integration with Apple Messages for Business app with other applications

Other ServiceNow applications and features can use the Conversational Integration with Apple Messages for Business application.

As a live agent, when you accept a request from the Apple Messages for Business service channel, you can converse with the requester within the same channel.

Integrating with Customer Service Management

Integrate the Conversational Integration with Apple Messages for Business application with the ServiceNow® Customer Service Management application to enable your customer contacts and

consumers to initiate a Apple Messages for Business chat conversation with a virtual agent or live agent. An agent can accept a conversation initiated from a Apple Messages for Business chat conversation. For more information, see [Integrating Apple Messages for Business with Customer Service Management](#) .

Using Conversational Integration with Apple Messages for Business

Enable a requester to converse with an agent using Apple Messages for Business chat conversations. An administrator can configure the Conversational Integration with Apple Messages for Business application for integrating the Apple Messages for Business messaging app with a ServiceNow application.

Agents and requesters can do the following:

- A requester can initiate Apple Messages for Business chat conversations with a virtual agent or live agent.
- A live agent can accept Apple Messages for Business chat conversations as work items from their Agent Workspace Inbox to converse with a requester.
- A live agent can continue to interact with a customer conversation in Apple Messages for Business for as long as the customer would like.

For more information, see [Integrating Apple Messages for Business with Customer Service Management](#) .

Accepting Apple Messages for Business chat conversations

As a live agent interacting with a requester over the Apple Messages for Business service channel, you can do the following:

- Converse with the requester through text messages or iMessages.
- Share a knowledge article displayed as a link to the requester.
- Share a record. For example, a customer service case.
- Share any URLs as links with photo or video previews.
- Share photos or videos.
- Share any files as attachments.

 **Note:** If an administrator has configured the Apple Messages for Business service channel for transfer of chat conversations, then you can accept a work item from the Apple Messages for Business chat conversation in your Agent Workspace Inbox. For more information, see [Transfer Apple Messages for Business chat conversations to live agents](#) and [Service channels](#).

Transfer Apple Messages for Business chat conversations to live agents

Configure the Advanced Work Assignment application to transfer a Apple Messages for Business chat conversation initiated by a requester to a live agent.

Before you begin

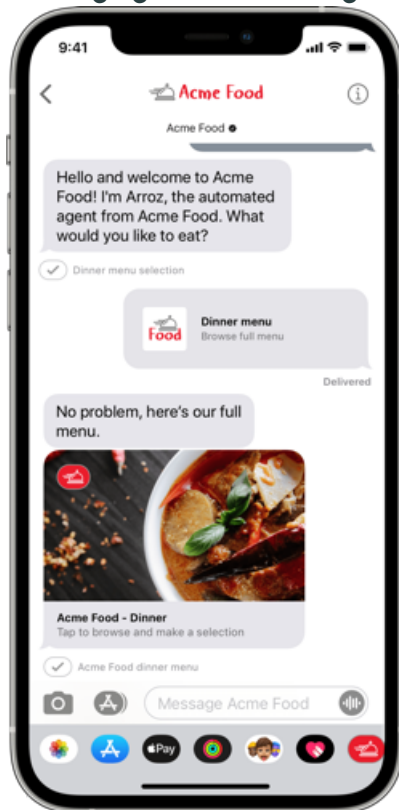
Your administrator must have completed the following tasks:

- [Activate Advanced Work Assignment](#).
- Set the application scope to Conversational Integration with Apple Messages for Business using the application picker. For more information, see [Application picker](#) .
- Activate the Conversational Messaging plugin (com.glide.messaging.awa). For more information, see [Activate Conversational Messaging](#).

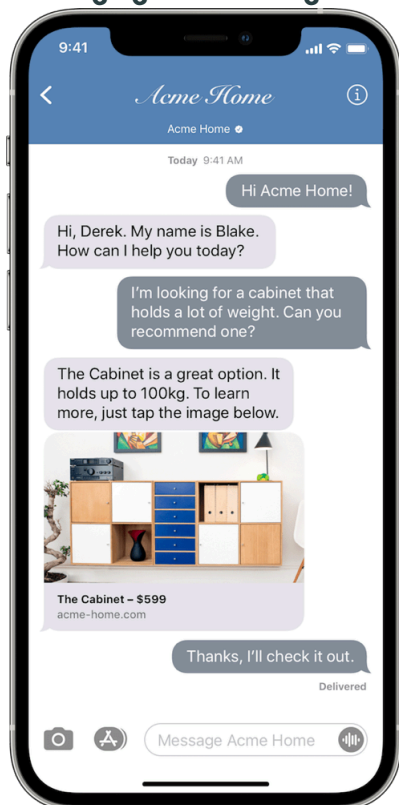
Role required: admin

About this task

Messaging with a virtual agent



Messaging with a live agent



Procedure

1. Enable the Apple Messages for Business service channel.
 - a. Navigate to **Advanced Work Assignment > Settings > Service Channels**.
 - b. In the **Name** column of the Queues list, search for **Apple Messages for Business**.
 - c. Select **Apple Messages for Business**.
 - d. On the Service Channel form, select the **Active** check box.
 - e. Select **Update**.
 - f. Add agents to the **Agent Apple Messages for Business Queue**.
For more information, see [Service channels](#).
2. Automatically route work items for Apple Messages for Business chat conversations to agents by configuring the queue for the Apple Messages for Business service channel.
 - a. Navigate to **Advanced Work Assignment > Settings > Queues**.
 - b. In the **Name** column of the Queues list, search for **Apple Messages for Business Queue**.
 - c. Select **Agent Apple Messages for Business Queue**.
 - d. On the Queue form, select the **Active** check box.
 - e. Select **Update**.

Note: By default, the *Apple Messages for Business - Most Capacity* assignment rule is associated with the Agent Apple Messages for Business Queue. You can create another assignment rule and associate it with the queue. For more information, see [Configure agent assignment rules](#) and [Work item queues](#).

3. Configure agent presence states for the Apple Messages for Business service channel.
 - a. Navigate to **Advanced Work Assignment > Settings > Presence States**.
 - b. In the **Name** column of the Presence States list, select an existing state.
 - c. In the Apply to groups section of the Presence State form, select the add icon > to move the **Agent Apple Messages for Business Group** group from the **Available** column to the **Selected** column.

Note: You can ignore this step if you have selected the **Apply to all groups** check box.

 - d. Select **Update**.

For more information, see [Configure agent presence states](#).

Capturing information from a user in a Apple Messages for Business chat conversation

Use Assistant Designer for creating and managing topics, which are blueprints for conversations between a virtual agent and user.

Use the collection of input controls provided by the Assistant Designer to prompt and capture information from a requester in a Apple Messages for Business chat conversation. For more information, see [Build conversations in the Asset library in Assistant Designer](#).

For more information about displaying images along with external links, see [Link unfurling in Virtual Agent](#).

Apple Messages for Business has an array of interactive features that are native to the app. For more information about these interactive features, see [Conversational Integration with Apple Messages for Business](#).

User notification consent

i Note:

Notifications are turned off by default for the Apple Messages for Business channel. Make sure to enable notifications at the channel level.

Users must opt in to receive notifications. No notifications can be delivered until the user grants consent.

There are two ways for users to grant consent to receive notifications:

- The user can enter **Notification** into the Apple Messages for Business chat to get a bot response with the option to subscribe or unsubscribe from receiving notifications for your business on Apple Messages for Business.
- As the administrator, you can set up the option for users to subscribe or unsubscribe from notifications from your portal. See [Subscription-based notifications](#)  for more information.

User input controls

The Conversational Integration with Apple Messages for Business application supports the following user input controls in Assistant Designer.

Supported user input controls

User input control	Description
Text	User enters a plain text string in the conversation.
Static Choice	User selects an item from a predefined list.
Dynamic Choice	User selects an item from a list that is created dynamically. For example, the user can select from a list of cases that they opened.
Boolean	User enters a Boolean response to the bot. For example, the user can reply Yes or No in a chat conversation.
File Picker	User sends a file to the bot.
Date Time	User selects a calendar date, time (hours and minutes), or both.
Carousel	User selects a single item from the carousel.

For more information about configuring user input controls, see [Assistant Designer user input controls](#).

The Conversational Integration with Apple Messages for Business application supports the following bot responses in Assistant Designer.

Supported bot responses

Bot response	Description
Text	Bot sends a plain text string to the user.
Image	Bot sends an image to the user.

Supported bot responses (continued)

Bot response	Description
Link	Bot sends a web link to the user. Note: Any URLs must be added to the allowed domain list (sys_cs_hostname_allow_list) table.
Table	Bot sends information in a table format so that users can see information in a more organized way. For example, you can organize and display information such as the following: • Planned service changes • Company holidays • Contact information • Testing sites
Card	Bot uploads and displays selected information from a record on your instance. You can choose a record card, video card, or small or large image card.

For more information about configuring bot responses, see [Assistant Designer bot responses](#).

Conversational Integration with Facebook Messenger

Use this application to empower customers to engage with your business using Facebook Messenger.

Get started with Conversational Integration with Facebook Messenger

Select a tile to get started.

Explore  Integrate Conversational Integration with Facebook Messenger with Virtual Agent.	Configure  Install and configure your Conversational Integration with Facebook Messenger implementation.	Use  Agents and requesters can use Conversational Integration with Facebook Messenger in portals on your instance.
--	---	---

Request apps on the Store

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

Notice regarding use by customers

Customers are solely responsible for the implementation of the Conversational Integration with Facebook Messenger application. The use of this application in a Facebook app requires a review of the app by the Facebook Developer Support team. It is the responsibility of customers to complete this app review process. The following links from the Facebook site provide guidance on how to complete the app review process:

1. Facebook Platform Policy Overview: <https://developers.facebook.com/docs/messenger-platform/policy/policy-overview>
2. Facebook Pre-Launch Checklist: <https://developers.facebook.com/docs/messenger-platform/prelaunch-checklist>
3. Facebook review and submission process for applications: <https://developers.facebook.com/docs/messenger-platform/#review--submission-process>

Exploring Conversational Integration with Facebook Messenger

Use this application to enable your users to initiate a Facebook Messenger chat conversation with Virtual Agent.

The application connects a requester with Virtual Agent or a live agent using your company's Facebook Messenger account. To get started with the Conversational Integration with Facebook Messenger application, see [Configure Conversational Integration with Facebook Messenger](#).

What to explore next

To learn more about configuring and using , see:

- [Configure Conversational Integration with Facebook Messenger](#)
- [Transfer Facebook Messenger chat conversations to live agents](#)
- [Integrating the Facebook Messenger messaging app with other applications](#)

Configure Conversational Integration with Facebook Messenger

Install and set up the Conversational Integration with Facebook Messenger application to enable your users to interact with virtual and live agents.

Before you begin

Role required: admin

About this task

This task provides the general steps to integrate the Facebook Messenger messaging app with a ServiceNow application using the Conversational Integration with Facebook Messenger application.

Procedure

1. [Install Conversational Integration with Facebook Messenger](#).
2. [Set up Conversational Integration with Facebook Messenger](#).
3. [Design virtual agent topics to capture information from a Facebook Messenger chat conversation](#).
4. **Optional:** [Close idle Facebook Messenger chat conversations](#).
5. **Optional:** [Integrate Facebook Messenger with other ServiceNow applications](#).
6. **Optional:** [Transfer Facebook Messenger chat conversations to live agents](#).

Install Conversational Integration with Facebook Messenger

You can install the Conversational Integration with Facebook Messenger application (sn_va_fb_messenger) if you have the admin role. The application includes demo data and installs related ServiceNow® Store applications and plugins if they are not already installed.

Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#).

Role required: admin

About this task

The following applications or plugins are installed with Conversational Integration with Facebook Messenger:

Conversational Custom Chat Integration (com.glide.cs.custom.adapter)

Provides custom chat integration framework of scriptable APIs to enable the Virtual Agent application on any conversational interface.

For more information on this plugin, see [Creating conversational custom chat integrations in Virtual Agent](#).

ServiceNow IntegrationHub Runtime (com.glide.hub.integration.runtime)

Enables execution of Integration Hub actions and flows.

Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.
2. Find the Conversational Integration with Facebook Messenger application (sn_va_fb_messenger) using the filter criteria and search bar.

You can search for the application by its name or ID. If you cannot find the application, you might have to request it from the ServiceNow Store.

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

3. In the Application installation dialog box, review the application dependencies.

Dependent plugins and applications are listed if they will be installed, are currently installed, or need to be installed. If any plugins or applications need to be installed, you must install them before you can install Conversational Integration with Facebook Messenger.

4. **Optional:** If demo data is available and you want to install it, select the **Load demo data** check box.
Demo data are the sample records that describe application features for common use cases. Load the demo data when you first install the application on a development or test instance.
5. Select **Install**.

Set up Conversational Integration with Facebook Messenger

Integrate Facebook Messenger with your ServiceNow instance using the Conversational Integration with Facebook Messenger application. Use the application to engage customers in conversations with bots.

Before you begin

- Get ServiceNow entitlements for the following products and applications:
 - Integration Hub
 - Conversational Integration with Facebook Messenger

For more information, see [Get entitlement for a ServiceNow product or application](#).

- Install the following applications on your ServiceNow instance:
 - Integration Hub
 - Conversational Integration with Facebook Messenger
- Complete Facebook Messenger settings.
 1. [Set up a Facebook developer account](#).
 2. [Create a Facebook app](#).
 3. [Review the Messenger Platform Policy](#) and [Pre-Launch Checklist](#) prior to submission.
 4. [Submit the app for review](#).
 5. [Create a Facebook page within the Facebook app you created earlier](#).
 6. [Enable Facebook Messenger](#).

Role required: external_app_install_admin or va_admin

Procedure

1. Connect your company's Facebook Messenger service with your ServiceNow instance.
 - a. Log in to your [Facebook developer account](#) and open the Facebook app you created.
 - b. Enable your Facebook app to send data to your ServiceNow instance by entering the webhook URL.
 - i. Click **Add Callback URL** in the Webhooks section of the app.
 - ii. In the Edit Callback URL dialog box, fill in the fields.

Field	Description
Callback URL	Public URL for webhook. Enter the webhook URL in the following format: <code>https://<instance-name>.service-now.com/api/now/v1/cs/adapters/messenger/message</code>
Token	Token for webhook. By default, the token for ServiceNow webhook is nowbot. As a user with the admin role, you can set the <code>glide.cs.facebook_messenger_verify_token</code> system property to a desired value and then enter that value in this field. Because the <code>glide.cs.facebook_messenger_verify_token</code> system property

Field	Description
	isn't available by default, you must add it with the data type set to string. For more information, see Add a system property .

iii. Click **Verify and Save**.

c. Make a note of your Facebook page ID and access token.

i. Click **Add or Remove Pages** and select your Facebook page.

ii. Make a note of the page ID displayed below the page name.

You can click the page ID to copy the ID to your clipboard.

iii. In the Access Tokens section, click **Generate Token** for the Facebook page you created.

Note: Make note of the page access token used later for authenticating the Facebook Messenger on your ServiceNow instance.

d. Subscribe your Facebook app to your Facebook page.

i. In the Webhooks section, click **Add Subscriptions**.

For each authorized Page, the Webhooks section contains the fields the app can subscribe to.

ii. In the Edit Page Subscriptions dialog box, select **messages** and **messaging_postbacks**.

iii. Click **Save**.

e. [Make a note of the App secret from Basic Settings](#).

f. **Optional:** Send messages with timestamp in the customer's time zone by navigating to **Page settings > Advanced messaging**, selecting the **Time zone** option in the Requested Features section, and clicking **Request** displayed next to the selected option.

2. On your ServiceNow® instance, go to **All > Conversational Interfaces > Channels and Integrations**.

3. On the Facebook Messenger integration section, click **Add**.
The Facebook Messenger Channel integration page opens.

4. Click the three dots on the right hand side and choose **Edit Integration**.

5. On the form, update the name of the bot if desired.

6. Enter the callback URL and the token from your Facebook Messenger account.

7. Click **Submit**.

A success message displays confirming the integration with the Facebook Messenger app.

Closing idle Facebook Messenger chat conversations

Enable agents to effectively manage their active Facebook Messenger chat conversations by automatically closing conversations after they have been inactive for a pre-configured amount of time.

The Virtual Agent conversations are configured for the Facebook Messenger app. By default, any conversations abandoned by requesters remain open or idle until they are automatically

closed daily by the *Time Out Abandoned VA Conversations* scheduled job. For more information, see [Closing Virtual Agent and Agent Chat conversations](#).

As an administrator, you can change the default timeout period for idle Virtual Agent conversations configured for the Facebook Messenger app by setting the `com.glide.cs.facebook_messenger_idle_timeout` system property to the number of seconds that abandoned conversations remain open after the requester's last response. The system property value must be less than the time interval set for the *Time Out Abandoned VA Conversations* scheduled job, set to two hours (7200 seconds) by default. Because the `com.glide.cs.facebook_messenger_idle_timeout` system property isn't available by default, you must add it with the data type set to integer. For more information, see [Add a system property](#).

Integrating the Facebook Messenger messaging app with other applications

Review this topic to see which ServiceNow applications and features can use the Conversational Integration with Facebook Messenger application.

As an administrator, you can use the Conversational Integration with Facebook Messenger application to integrate the Facebook Messenger messaging app with other ServiceNow applications and enable requesters to converse with agents using the Facebook Messenger messaging app.

Integrating with Customer Service Management

Integrate the Conversational Integration with Facebook Messenger application with the ServiceNow® Customer Service Management application to enable your customer contacts and consumers to initiate a Facebook Messenger chat conversation with a virtual agent or live agent. For more information, see [Integrate Facebook Messenger with Customer Service Management](#).

Uninstall Conversational Integration with Facebook Messenger

Users can remove the Conversational Integration with Facebook Messenger application when the app is no longer needed.

Before you begin

Role required: admin

Procedure

1. Go to **All > Conversational Interfaces > Channels and Integrations**.
2. On the Facebook Messenger integration section, click **Manage**.
The Facebook Messenger Channel integration page opens.
3. Click the three dots on the right hand side and choose **Remove Integration**.
A confirmation message displays.
4. Click **Remove**.
The Facebook Messenger application and all of its data is removed.

Legacy setup and configuration

Set up and configure Conversational Integration with Facebook Messenger (Legacy).

(Legacy) Set up the Virtual Agent integration with Facebook Messenger

Configure the Virtual Agent integration for Facebook Messenger and associate the app with your instance.

Before you begin

You should already have the following:

- Facebook page (see <https://www.facebook.com/pages/creation/>  for more information)
- Facebook developer account (see <https://developers.facebook.com/>  for more information)
- Facebook app (see <https://developers.facebook.com/quickstarts>  for more information, make note of the app secret that is generated)

Roles required:

- virtual_agent_admin and external_app_install_admin or admin
- Administrator for third-party applications

Procedure

1. In Facebook developer, navigate to **Messenger > Settings**.

- Locate the Token Generation section.
- From the page list, select the Facebook page you created and make note of the Page Access Token that is generated.
- Locate the Webhooks section and click **Setup Webhooks**.
- On the New Page Subscription pop-up window that displays, enter these fields:

Field	Value
Callback URL	Your ServiceNow instance URL followed by <code>/api/now/v1/cs/adapter/messenger/message</code>
Verify Token	nowbot
Subscription Fields	Select messages and messaging_postbacks

e. Click **Verify and Save**.

2. In your ServiceNow instance, enter `hash_message_verification.list` in the Filter navigator.

- In the Hash Message Verifications form, click **New** to create a new record.
- Enter these fields:

Field	Value
Name	Name that helps to identify this record. This field may default to <code>sample-fb-messenger-inbound-app-token</code> but this default can be changed.
Description	Description for the record

Field	Value
Secret	App secret of your Facebook Messenger app (the secret was generated when you created the app)

c. Click **Submit**.

3. In your ServiceNow instance, enter `token_verification.list` in the Filter navigator.

a. In the Token Verifications form, click **New** to create a new record.

b. Enter these fields:

Field	Value
Name	Name that helps to identify this record. This field may default to <code>sample-fb-messenger-outbound-app-token</code> but this default can be changed.
Description	Description for the record
Token	Page access token of your Facebook Messenger app (from step 1b of this procedure)

c. Click **Submit**.

4. In your ServiceNow instance, enter `message_auth.list` in the Filter navigator.

a. In the Message Auth page, click **New** to create a new record.

b. Enter these fields:

Field	Value
Name	Name that helps to identify this record. This field may default to <code>sample-fb-messenger-app</code> but this default can be changed.
Provider	Name of the provider
Inbound message verification	Name specified on the Hash Message Verifications form (this token verifies if the request is actually from the provider)
Outbound message creation	Name specified on the Token Verification form (this token interacts with the provider on behalf of the user)

c. Click **Submit**.

5. In your ServiceNow instance, enter `sys_cs_adapter_configuration_page_messenger.list` in the Filter navigator.
 - a. In the Facebook Messenger Adapter Configuration Page, click **New** to create a new record.
 - b. Enter these fields:

Field	Value
App Type	Defaults to Facebook Messenger and cannot be changed
Messenger Page ID	Your page ID (the page ID can be found in the URL of the Facebook page)
Name	Name that helps to identify this record. This field may default to <code>sample - fb - messenger - app</code> but this default can be changed.
Provider Auth	Name specified on the Message Auth page

6. Click **Submit**.
7. Configure whether users should be prompted to link their profile to their ServiceNow profile.
 - a. In the Navigation filter, enter `sys_properties.list`.
 - b. Navigate to and click `va.messenger.account.auth`.
 - c. In the **Value** field, enter **true** or **false**.

true	Prompt users to link their account to their ServiceNow profile. Users who link their account to their ServiceNow profile can access all topics and also chat with a live agent. Users who do not link their account can access only guest topics.
false	Do not prompt users to link their account to their ServiceNow profile. Users can access only guest topics but can still chat with a live agent.

- d. Click **Update**.

(Legacy) Configure the help link for the Virtual Agent Facebook Messenger integration

Use the `va.messenger.help.url` system property to create the link that opens a web help page when requesters use the **Help** command in the Virtual Agent Facebook Messenger integration.

Before you begin

- Determine the web page that provides the help content that your Facebook Messenger users need.
- Role required: `virtual_agent_admin` or `admin`

Procedure

1. Set the application scope to **Global**.
2. In the Navigation filter, enter `sys_properties.list`.
3. Click **New**.
4. Complete the following:
 - a. In the **Name** field, enter the system property name: `va.messenger.help.url`.
 - b. In the **Description** field, enter a brief explanation of this property.
 - c. In the **Value** field, enter the URL of the website page that the link opens.
 - d. Click **Submit**.

Result

When your Facebook Messenger users type `help`, they are directed to the URL of the website specified in the `va.messenger.help.url` property.

Using Conversational Integration with Facebook Messenger

Enable a requester to converse with an agent using the Facebook Messenger chat conversations.

An administrator can configure the Conversational Integration with Facebook Messenger application for integrating the Facebook Messenger app with a ServiceNow application. For more information, see [Integrating the LINE messaging app with other applications](#).

A requester can initiate Facebook Messenger chat conversations with a virtual agent or live agent.

A live agent can accept Facebook Messenger chat conversations as work items from their Agent Workspace Inbox to converse with a requester.

Accepting Facebook Messenger chat conversations

As a live agent interacting with a requester over the Facebook Messenger service channel, you can:

- Converse with the requester through text messages.
- Share a knowledge article displayed as a link to the requester.
- Share a record, for example, a customer service case.
- Share any URLs as links.
- Share any files as attachments.

Note: You accept a work item from the Facebook Messenger chat conversation in your Agent Workspace Inbox when an administrator has configured the Facebook Messenger service channel for transfer of chat conversations. For more information, see [Transfer Facebook Messenger chat conversations to live agents](#) and [Service channels](#).

Transfer Facebook Messenger chat conversations to live agents

Configure the Advanced Work Assignment application to transfer a Facebook Messenger chat conversation initiated by a requester (customer contact or consumer) to a live agent.

Before you begin

Your administrator must have completed the following tasks:

- [Activate Advanced Work Assignment](#).
- [Install Conversational Integration with Facebook Messenger](#).
- Set the application scope to Conversational Integration with Facebook Messenger using the application picker. For more information, see [Application picker](#) .
- Activate the Conversational Messaging plugin (com.glide.messaging.awa). For more information, see [Activate Conversational Messaging](#).

Role required: admin

About this task

Procedure

1. Enable the Facebook Messenger service channel.
 - a. Navigate to **Advanced Work Assignment > Settings > Service Channels**.
 - b. In the **Name** column of the Queues list, search for **Line**.
 - c. Select **Facebook Messenger**.
 - d. On the Service Channel form, select the **Active** check box.
 - e. Select **Update**.
For more information, see [Service channels](#).
2. Automatically route work items for Facebook Messenger chat conversations to agents by configuring the queue for the Facebook Messenger service channel.
 - a. Navigate to **Advanced Work Assignment > Settings > Queues**.
 - b. In the **Name** column of the Queues list, search for **Agent Facebook Messenger Queue**.
 - c. Select **Agent Facebook Messenger Queue**.
 - d. On the Queue form, select the **Active** check box.
 - e. Select **Update**.

 **Note:** By default, the *Facebook Messenger - Most Capacity* assignment rule is associated with the Agent Facebook Messenger Queue. You can create another assignment rule and associate it with the queue. For more information, see [Configure agent assignment rules](#) and [Work item queues](#).

3. Configure agent presence states for the Facebook Messenger service channel.
 - a. Navigate to **Advanced Work Assignment > Settings > Presence States**.
 - b. In the **Name** column of the Presence States list, select an existing state.
 - c. On the Presence State form, in the Service channels section, select the add icon > to move the **Facebook Messenger** service channel from the **Available** column to the **Selected** column.
 - d. In the Apply to groups section of the Presence State form, select the add icon > to move the **Agent Facebook Messenger Group** group from the **Available** column to the **Selected** column.

Note: You can ignore this step if you have selected the **Apply to all groups** check box.

e. Select Update.

For more information, see [Configure agent presence states](#).

Capturing information from a user in a Facebook Messenger chat conversation

Use the collection of input controls provided by Assistant Designer to prompt and capture information from the user in a Facebook Messenger chat conversation.

Use Assistant Designer for creating and managing topics, which are blueprints for conversations between a virtual agent and user. For more information, see [Build conversations in the Asset library in Assistant Designer](#).

The Conversational Integration with Facebook Messenger application supports the following user input controls in Assistant Designer.

Supported user input controls

User input control	Description
Text	User enters a plain text string in the conversation. The maximum character limit is 5000 characters.
Static Choice	User selects an item from a predefined choice list. In a quick reply, the label has the maximum character limit of 20 characters. At a time, a user can view only 13 quick replies. If there are more than 13 quick replies, the pagination format is used to view more options. The default value of the maximum number of replies for a page is set in the <i>sn_va_fb_messenger.max_quick_replies</i> system property (location: System Property [sys_properties] table).
Boolean	User enters a Boolean response to the bot. For example, the user can reply Yes or No in a chat conversation.
File Picker	User sends a file to the bot. The supported file types are JPG, PNG, BMP, and MP4. Note the following points about the maximum size limit for a file type: - For images, the maximum size limit is 10 MB. - For videos, the maximum size limit is 200 MB.
Date Time	User selects a calendar date, time (hours and minutes), or both. Note: If your administrator has set the option to request time zone from the customer, the selected date and time reflect customer's time zone. Else, they appear in the UTC time zone. For more information about the time zone setting, see 1.f .
Carousel	User selects a single item from the carousel.

Supported user input controls (continued)

User input control	Description
	In a carousel, the title for an image has maximum limit of 40 characters and the text for the image has maximum character limit of 60 characters. At a time, a user can view only 10 images. If there are more than 10 images, the pagination format is used to view more options. The default value of the maximum number of images in a carousel for a page is set in the <code>sn_va_fb_messenger.max_carousel_cards</code> system property (location: System Property [sys_properties] table).

For more information about configuring user input controls, see [Assistant Designer user input controls](#).

The Conversational Integration with Facebook Messenger application supports the following bot responses in Assistant Designer.

Supported bot responses

Bot response	Description
Text	Bot sends a plain text string to the user.
Image	Bot sends an image to the user.
Link	Bot sends a web link to the user. Note: The web link appears as a URL button in the conversation.
Card	Bot sends selected information from a record on your instance.

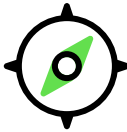
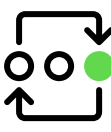
Note: You can also return search results as bot responses in Facebook Messenger chat conversations when there are no relevant topics to display to end users. For more information, see [\(Legacy\) Implementing AI Search in NLU](#).

For more information about configuring bot responses, see [Assistant Designer bot responses](#).

Conversational Integration with Google Chat

Enable requesters to chat with Google Chat or live agents using the Google Chat application. Use the Conversational Integration with Google Chat app, available from the ServiceNow Store, to associate your instance with Google Chat.

Get started with Conversational Integration with Google chat

Explore  Learn more about Conversational Integration with Google Chat	Configure  Install Conversational integration with Google Chat.	Integrate  Integrate Conversational Integration with Google Chat.
--	--	--

Exploring Conversational Integration with Google Chat

Use the Conversational Integration with Google Chat application to connect your end users with Virtual Agent or live agents through your Google Chat account.

Conversational Integration with Google Chat overview

Enable requesters to chat with Google Chat or live agents using the Google Chat application. Use the Conversational Integration with Google Chat app, available from the ServiceNow Store, to associate your instance with Google Chat.

Conversational Integration with Google Chat users

Users

User	Description
admin or virtual_agent_admin	Create and publish Virtual Agent conversations.
admin.google.com	A Google account with admin privileges is required to integrate Virtual Agent in Google.

Follow these steps to add Conversational Integration with Google Chat:

1. [Plugins for Conversational Integration with Google Chat](#)
2. [Installing Conversational Integration with Google chat](#)
3. [Integrating Virtual Agent with Google Chat](#)

Install Conversational Integration with Google Chat

Activate the necessary plugins and ServiceNow Otto for Virtual Agent for Google Chat

Plugins for Conversational Integration with Google Chat

Activate the Glide Virtual Agent [com.glide.cs.chatbot] plugin and the Conversational Integration with Google Chat [sn_va_google-chat] plugin.

You must have either the virtual_agent_admin or admin role and the external_app_install_admin role to activate these additional plugins. For details, see [Activate a plugin](#) .

Note: Ensure that you have performed the following steps before verifying the activation of additional plugins required for Google Chat.

- Installing of the Glide Virtual Agent [com.glide.cs.chatbot] plugin.

For more information about activating the Glide Virtual Agent plugin, see [\(Legacy\) Activate Virtual Agent for NLU](#).

- Downloading the Google Chat app from the ServiceNow® Store.

For more information about downloading the app, Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

- Installing the Google Chat [sn_va_google-chat] plugin in your ServiceNow instance.

For more information about installing Google Chat, see [Installing Conversational Integration with Google chat](#).

Activate ServiceNow Otto for Virtual Agent for Google Chat

Add ServiceNow Otto for Virtual Agent to your Google Chat bot.

Before you begin

Role required: admin or virtual_agent_admin

Create a self-configured bot for Google Chat. For more information, see [Installing Conversational Integration with Google chat](#). Verify that you have updated the version of your Google Chat app in the **Version** field.

Note: Notifications are not supported for premium chat at this time.

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Under **Servicenow Otto for Virtual Agent (default)**, select the **Edit** button.
3. Under the **Settings** tab, select **Display experiences**, then select **Channels**.
4. Choose the self-configured bot for the Teams channel experience you want to activate by selecting the **Select row** check box next to its name.
5. Select **Save and continue**.
6. Navigate to **All > Conversational Interfaces > Channels and Integrations**.
7. Under Integrations, in the Google Chat tile, select **Manage**.
8. In the Self-configured tile, next to your bot's name, select the **Manage bot** icon () , and then select **Manage bot** from the drop-down menu.
9. Select **Edit configuration**, and then select the check box next to **Google chat**.
10. Select **Save**.
The bot is now active for Google Chat, and the bot's Configuration tab opens.
11. Select **Download** to save the manifest zip file.

Configuring your Conversational Integration with Google Chat

Integrate the Now Virtual Agent bot or self-configured bot with Google Chat.

Installing Conversational Integration with Google chat

Install the Google Chat (sn_va_google-chat) application so that Now Virtual Agent and Google Chat users can interact with each other.

Before you begin

- Roles required:
 - virtual_agent_admin and external_app_install_admin or admin.
 - Google Chat administrator (one of the following): Global administrator, Application administrator, or Cloud Application administrator.

Procedure

1. On the Google workspace, navigate to [Build a Google Chat app with Google Apps Script](#).
2. Verify that you have fulfilled the prerequisites.
3. Follow the instructions in the Open your Cloud project in the Google Cloud console section.
4. Follow the instructions in the Turn on the Chat API section.
5. Navigate to <https://console.cloud.google.com/>.
6. Select **APIs & Services** from the Quick Access view or from the side menu.
7. In the list of APIs, select **Google Chat API**.
8. On the Google Chat API screen, select the **Configuration** tab.
9. Verify **Build this Chat app as a Workspace add-on** is selected.
10. Complete the Application info fields:

Field	Description
App name	Application name.
Avatar URL	Publicly accessible avatar image for the application.
Description	Application description.

11. In the Interactive features section, verify **Enable interactive features** is selected.
12. In the Connection Settings section, select **HTTP endpoint URL**.
13. In the Triggers section, select **Use a common HTTP endpoint URL for all triggers**.
14. In the HTTP endpoint URL field, enter the instance name and the URL extension: `<instance url>/api/sn_va_google_chat/va_google_chat_inbound/events`.
15. In the Visibility section, select **Make this Chat app available to specific people and groups in servicenow**.
16. In the Enter email addresses to add individuals and groups in your domain field, enter your email address.
17. Select **Save**.
18. Scroll back to the top of the screen.
19. In the Connection settings section, find and note the Service Account Email - this is your Inbound Service Account Email.

20. In the side menu, navigate to Credentials.
21. In the Service Accounts section, select **Manage service accounts**.
22. Select **+ Create service account**.
23. On the Create service account form, fill in the fields.

Field	Description
Service account name	Name for the service account.
Service account ID	This will be automatically generated for you.
Service account description	Description for the service account.

24. Find and note the email account under the Service account ID field - this is your Outbound Service Account email.
25. Select **Done**.
26. On the Service Accounts page, navigate to the Manage Keys page and select your new outbound service account.
27. Select the Keys tab.
28. From the Add Key drop-down list, select **Create new key**.
29. On the Create private key for 'Outbound Service Account' window, select **P12**.
30. Select **Create**; this automatically downloads a file to your machine.
31. On the Private key saved to your computer window, enter a private key password.

What to do next

[Integrating Virtual Agent with Google Chat](#)

Integrating Virtual Agent with Google Chat

Add either the Now Virtual Agent bot or self-configured bot to your ServiceNow instance to integrate with Google Chat.

Before you begin

Ensure that you've installed the Google Chat plugin [sn_va_google-chat] on your ServiceNow instance before adding any integrations.

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Channels and Integrations**.
2. In the Available Channels section, select the **Add Integration** drop-down menu on the Google



Integrate Google Chat now. Learn more with a [step-by-step guide](#).

Add Integration

Chat tile.

- Note:** The Google Chat tile and its **Add Integration** drop-down menu is available only after installing the Google Chat plugin (sn_va_google-chat) on your ServiceNow instance.

3. Select the integration you want to perform, and follow the instructions.

- Note:** If you're using the self-configured bot, do not check the **Join spaces and group conversations** box in the Enabled APIs & services tab. Conversational Integration with Google Chat only supports 1-on-1 conversations.

Integration type	Method
Now Virtual Agent	Log in to your Google Chat account when prompted. The production bot is automatically configured for your account.

Self-configured bot

- a. On the Integrate Google chat with self configured bot screen, complete the information:

Field	Description
Bot Name	Name for the bot.
Inbound Service Account Email	Enter the inbound service account email from Installing Conversational Integration with Google chat .
Outbound Service Account Email	Enter the outbound service account email from Installing Conversational Integration with Google chat .
Private Key Password	The password is set when you create your key. The default is notasecret.

General > Channels and Integrations > Integrate Google Chat with self configured bot

Integrate Google Chat with self configured bot

Complete all information.

Bot Name

Inbound Service Account Email

Outbound Service Account Email

Private Key Password

Please attach your .p12 file below.

Attachments

- b. In the Attachments section, drag or select your .p12 file.
- c. Select **Submit**.
- d. Navigate to [Google Chat](#).

Integration type	Method
	e. Select New Chat. f. Enter the app name and select it.

Result

If an automated welcome message displays in the chat window, Google Chat is ready to use with Virtual Agent in your instance.

Conversational Integration with LINE

Conduct user-initiated, system-initiated, or agent-initiated conversations using the Conversational Integration with LINE application. The application connects a requester with a virtual agent or live agent using your company's LINE account.

Get started with Conversational Integration with LINE

Select a tile to get started.

Configure



Install and configure your Conversational Integration with LINE implementation.

Use



Agents and requesters can use Conversational Integration with LINE in portals on your instance.

Request apps on the Store

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

Configure Conversational Integration with LINE

Install and set up the Conversational Integration with LINE application to enable your users to interact with virtual and live agents.

Before you begin

Role required: admin

About this task

This task provides the general steps to integrate the LINE messaging app with a ServiceNow application using the Conversational Integration with LINE application.

Procedure

- 1. [Install Conversational Integration with LINE.](#)
- 2. [Set up Conversational Integration with LINE.](#)
- 3. [Design Virtual Agent topics to capture information from a LINE chat conversation.](#)

4. Optional: [Close idle LINE chat conversations.](#)

5. Optional: [Transfer LINE chat conversations to live agents.](#)

Install Conversational Integration with LINE

Install the Conversational Integration with LINE so that your business can interact with requesters on the LINE app. The application includes demo data and installs related ServiceNow Store applications and plugins if they are not already installed.

Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#) .
- For existing customers, ensure that you install the Conversational Integration with LINE application on ServiceNow instances that have been upgraded to at least the Rome release.

Role required: admin

About this task

The following applications or plugins are installed with Conversational Integration with LINE:

Conversational Custom Chat Integration (com.glide.cs.custom.adapter)

Provides the custom chat integration framework of scriptable APIs to enable the Virtual Agent application on any conversational interface.

For more information on this plugin, see [Creating conversational custom chat integrations in Virtual Agent](#).

ServiceNow IntegrationHub Runtime (com.glide.hub.integration.runtime)

Enables execution of Integration Hub actions and flows.

IHUB Spoke Util Pack (com.snc.ihub_spoke_util_pack)

Enables utility or global scripts that can be invoked from the Integration Spokes.

Agent-Initiated Messaging Interface (sn_agent_initiated)

Provides configurations for the agent-initiated messaging capabilities.

Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.
2. Find the Conversational Integration with LINE application (sn_va_line) using the filter criteria and search bar.

You can search for the application by its name or ID. If you cannot find the application, you might have to request it from the ServiceNow Store.

Visit the [ServiceNow Store](#)  to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#) .

3. In the Application installation dialog box, review the application dependencies.

Dependent plugins and applications are listed if they will be installed, are currently installed, or need to be installed. If any plugins or applications need to be installed, you must install them before you can install Conversational Integration with LINE.

4. Optional: If demo data is available and you want to install it, select the **Load demo data** check box.

Demo data are the sample records that describe application features for common use cases. Load the demo data when you first install the application on a development or test instance.

5. Select **Install.**

Set up Conversational Integration with LINE

Set up the Conversational Integration with LINE application so that you can engage customers in conversations with bots.

Before you begin

Before you begin, do the following:

- Get ServiceNow entitlements for the following products and applications:
 - Integration Hub
 - Conversational Integration with LINE

For more information, see [Get entitlement for a ServiceNow product or application](#) .

- Install the following applications on your ServiceNow instance:
 - Integration Hub
 - Conversational Integration with LINE
- Activate the IHUB Spoke Util Pack plugin (com.snc.ihub_spoke_util_pack). For more information, see [Activate a plugin](#) .
- Get a developer account in the [LINE Developers console](#) .

Role required: external_app_install_admin or va_admin

About this task

The LINE messaging app supports only one LINE channel for a ServiceNow instance. If you would like to configure a different LINE channel for your ServiceNow instance, you must first remove the previously configured LINE channel, and then set up the new channel.

Procedure

1. Connect your company's LINE account with your ServiceNow instance.

- a.** Log in to your [LINE Developers Console](#) .
- b.** [Create a channel on the LINE Developers Console.](#) .
- c.** Take note of the channel secret and the channel access token.
You will use later use this information for authenticating the LINE account on your ServiceNow instance.
- d.** To enable your LINE account to send data to your ServiceNow instance, enter the webhook URL and click **Verify**
You specify the webhook URL in the **Webhook URL** field on the Messaging API tab of the LINE Developers Console. Use the following format for the URL: `https://<instance-name>.service-now.com/api/sn_va_line/va_adapter_line.`

2. On your ServiceNow® instance, go to **All > Conversational Interfaces > Channels and Integrations**.
3. On the LINE integration section, click **Manage**.
The Line Channel integration page opens.
4. Click the three dots on the right hand side and choose **Edit Integration**.
5. On the form, update the name of the bot if desired.
6. Enter the channel secret and the access token from your LINE account.
7. Click **Submit**.
A success message displays confirming the integration with the LINE app.

Capturing information from a user in a LINE chat conversation

Use the collection of input controls provided by Assistant Designer to prompt and capture information from the user in a LINE chat conversation.

Use Assistant Designer for creating and managing topics, which are blueprints for conversations between a virtual agent and user. For more information, see [Build conversations in the Asset library in Assistant Designer](#).

User notification consent

Users must opt in to receive notifications. No notifications can be delivered until the user grants consent.

There are two ways for users to grant consent to receive notifications:

- The user can enter **Notification** into the LINE chat with your business. The user gets a bot response with the option to subscribe or unsubscribe from receiving notifications for your business on LINE.
- As an administrator, you can set up the option for users to subscribe or unsubscribe from notifications from your portal. See [Subscription-based notifications](#) for more information.

User input controls

The Conversational Integration with LINE application supports the following user input controls in Assistant Designer.

Supported user input controls

User input control	Description
Text	User enters a plain text string in the conversation. The maximum character limit is 5000 characters.
Static Choice	User selects an item from a predefined list. In a quick reply, the label has the maximum character limit of 20 characters. At a time, a user can view only 13 quick replies. If there are more than 13 quick replies, the pagination format is used to view more options. The default value of the maximum number of replies for a page is set in the <i>sn_va_line.max_picker.choices</i> system property. The property is located in the System Property [sys_properties] table.

Supported user input controls (continued)

User input control	Description
Boolean	User enters a Boolean response to the bot. For example, the user can reply Yes or No in a chat conversation.
File Picker	User sends a file to the bot. The supported file types are JPG, PNG, BMP, and MP4. Files have a maximum size limit based on file type: • For images, the maximum size limit is 10 MB. • For videos, the maximum size limit is 200 MB.
Date Time	User selects a calendar date, time (hours and minutes), or both.
Carousel	User selects a single item from the carousel. In a carousel, the title for an image has a maximum limit of 40 characters and the text for the image has a maximum character limit of 60 characters. At a time, a user can view only 10 images. If there are more than 10 images, the pagination format is used to view more options. The default value of the maximum number of images in the carousel for a page is set in the <i>sn_va_line.max.carousel.cards</i> system property. The property is located in the System Property [sys_properties] table.

For more information about configuring user input controls, see [Assistant Designer user input controls](#).

The Conversational Integration with LINE application supports the following bot responses in Assistant Designer.

Supported bot responses

Bot response	Description
Text	Bot sends a plain text string to the user.
Image	Bot sends an image to the user.
Link	Bot sends a web link to the user.
Web UI image card output	Bot sends content from a record in a compact format, including an image with text.
Table	Bot response is displayed as a table.

For more information about configuring bot responses, see [Assistant Designer bot responses](#).

Closing idle LINE chat conversations

Enable agents to effectively manage their active LINE chat conversations by automatically closing conversations after they have been inactive for a pre-configured amount of time.

The Virtual Agent conversations are configured for the LINE messaging app. By default, any conversations abandoned by requesters remain open or idle until they are automatically closed daily by the *Time Out Abandoned VA Conversations* scheduled job. For more information, see [Closing Virtual Agent and Agent Chat conversations](#).

As an administrator, you can change the default timeout period for idle Virtual Agent conversations configured for the LINE messaging app by setting the `com.glide.cs.line_idle_timeout` system property to the number of seconds that abandoned conversations remain open after the requester's last response. The system property value must be less than the time interval set for the *Time Out Abandoned VA Conversations* scheduled job, set to two hours (7200 seconds) by default. Because the `com.glide.cs.line_idle_timeout` system property isn't available by default, you must add it with the data type set to integer. For more information, see [Add a system property](#).

Integrating the LINE messaging app with other applications

Other ServiceNow applications and features can use the Conversational Integration with LINE application.

As an administrator, you can use the Conversational Integration with LINE application to integrate the LINE messaging app with other ServiceNow applications. You can enable requesters and agents to converse with an agent using the LINE messaging app.

Integrating with Customer Service Management

Integrate the Conversational Integration with LINE application with the ServiceNow® Customer Service Management application to enable your customer contacts and consumers to initiate a LINE chat conversation with a virtual agent or live agent. An agent can initiate a conversation, or accept a conversation initiated from a LINE chat conversation. For more information, see [Integrate LINE with Customer Service Management](#).

Uninstall Conversational Integration with LINE

Users can remove the Conversational Integration with LINE application when the app is no longer needed.

Before you begin

Role required: admin

Procedure

1. Go to **All > Conversational Interfaces > Channels and Integrations**.
2. On the LINE integration section, click **Manage**.
The Line Channel integration page opens.
3. Click the three dots on the right hand side and choose **Remove Integration**.
A confirmation message displays.
4. Click **Remove**.
The Facebook Messenger application and all of its data is removed.

Using Conversational Integration with LINE

Enable a requester to converse with an agent using the LINE chat conversations.

An administrator can configure the Conversational Integration with LINE application for integrating the LINE messaging app with a ServiceNow application. For more information, see [Integrating the LINE messaging app with other applications](#).

The following options are available:

- An administrator can configure system-initiated messages to be delivered as LINE chat conversations.
- A live agent can initiate LINE chat conversations with a requester.

- A requester can initiate LINE chat conversations with a virtual agent or live agent.
- A live agent can accept LINE chat conversations as work items from their Agent Workspace Inbox to converse with a requester.

Initiating LINE chat conversations

As a live agent, you can initiate LINE chat conversations with a requester in two ways:

- Send a message from either an active interaction record, a contact record, or a consumer contact record.
- Set up notifications to be sent to the requester when a business event occurs or when a record is updated. See [Create a provider notification](#).

Note: The requester must subscribe and opt in to receive notifications.

Accepting LINE chat conversations

As a live agent interacting with a requester over the LINE service channel, you can do the following:

- Converse with the requester through text messages.
- Share a knowledge article displayed as a link to the requester.
- Share a record, for example, a customer service case.
- Share any URLs as links.
- Share any files as attachments.

Note: If an administrator has configured the Line service channel for transfer of chat conversations, then you can accept a work item from the LINE chat conversation in your Agent Workspace Inbox. For more information, see [Transfer LINE chat conversations to live agents](#) and [Service channels](#).

Transfer LINE chat conversations to live agents

Configure the Advanced Work Assignment application to transfer a LINE chat conversation initiated by a requester (customer contact or consumer) to a live agent.

Before you begin

Your administrator must have completed the following tasks:

- [Activate Advanced Work Assignment](#).
- [Install Conversational Integration with LINE](#).
- Set the application scope to Conversational Integration with LINE using the application picker. For more information, see [Application picker](#) .
- Activate the Conversational Messaging plugin (com.glide.messaging.awa). For more information, see [Activate Conversational Messaging](#).

Role required: admin

About this task

Procedure

1. Enable the Line service channel.

- a. Navigate to **Advanced Work Assignment > Settings > Service Channels**.
- b. In the **Name** column of the Queues list, search for **Line**.
- c. Select **Line**.
- d. On the Service Channel form, select the **Active** check box.
- e. Select **Update**.
For more information, see [Service channels](#).

2. Automatically route work items for LINE chat conversations to agents by configuring the queue for the Line service channel.

- a. Navigate to **Advanced Work Assignment > Settings > Queues**.
- b. In the **Name** column of the Queues list, search for **Agent Line Queue**.
- c. Select **Agent Line Queue**.
- d. On the Queue form, select the **Active** check box.
- e. Select **Update**.

Note: By default, the *Line - Most Capacity* assignment rule is associated with the Agent Line Queue. You can create another assignment rule and associate it with the queue. For more information, see [Configure agent assignment rules](#) and [Work item queues](#).

3. Configure agent presence states for the Line service channel.

- a. Navigate to **Advanced Work Assignment > Settings > Presence States**.
- b. In the **Name** column of the Presence States list, select an existing state.
- c. On the Presence State form, in the Service channels section, select the add icon > to move the **Line** service channel from the **Available** column to the **Selected** column.
- d. In the Apply to groups section of the Presence State form, select the add icon > to move the **Agent Line Group** group from the **Available** column to the **Selected** column.
- Note:** You can ignore this step if you have selected the **Apply to all groups** check box.
- e. Select **Update**.

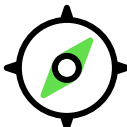
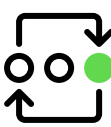
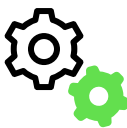
For more information, see [Configure agent presence states](#).

Conversational Integration with Microsoft Teams

Enable requesters to chat with Microsoft Teams or live agents using the Microsoft Teams application. Use the Conversational Integration with Microsoft Teams app, available from the ServiceNow Store, to associate your instance with Microsoft Teams.

Get started with Conversational Integration with Microsoft Teams

Select a tile to get started.

Explore  Learn more about Conversational Integration with Microsoft Teams.	Install  Install Conversational Integration with Microsoft Teams.	Integrate  Integrate Conversational Integration with Microsoft Teams with Virtual Agent.
Configure  Configure your Conversational Integration with Microsoft Teams implementation.	ServiceNow Otto  Use ServiceNow Otto for Virtual Agent in your Microsoft Teams integration.	Design  Use supported Virtual Agent features in Microsoft Teams conversations.

i Important:

- If your instance is in our GovtCommunityCloud (GCC) environment, see to [Integrating Virtual Agent with Microsoft Teams using the self-configured bot](#) for more information.
- If your instance is in our Australia SPP (ServiceNow Protected Platform) environment, see [Enable Microsoft Teams integration in ServiceNow Protected Platform \(SPP\)](#) for more information.
- The Microsoft Teams Graph spoke consumes Integration Hub transactions, thus, usage of Virtual Agent in Microsoft Teams does count against Integration Hub transactions. Microsoft is also monetizing Microsoft Teams API usage, therefore such usage will also count against their Microsoft 365 subscription. For further information, see [Sidebar and Microsoft Teams](#).

Request apps on the Store

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

Exploring Conversational Integration with Microsoft Teams

Use the Conversational Integration with Microsoft Teams application to connect your end users with Virtual Agent or live agents through your company's Microsoft Teams account.

Conversational Integration with Microsoft Teams users

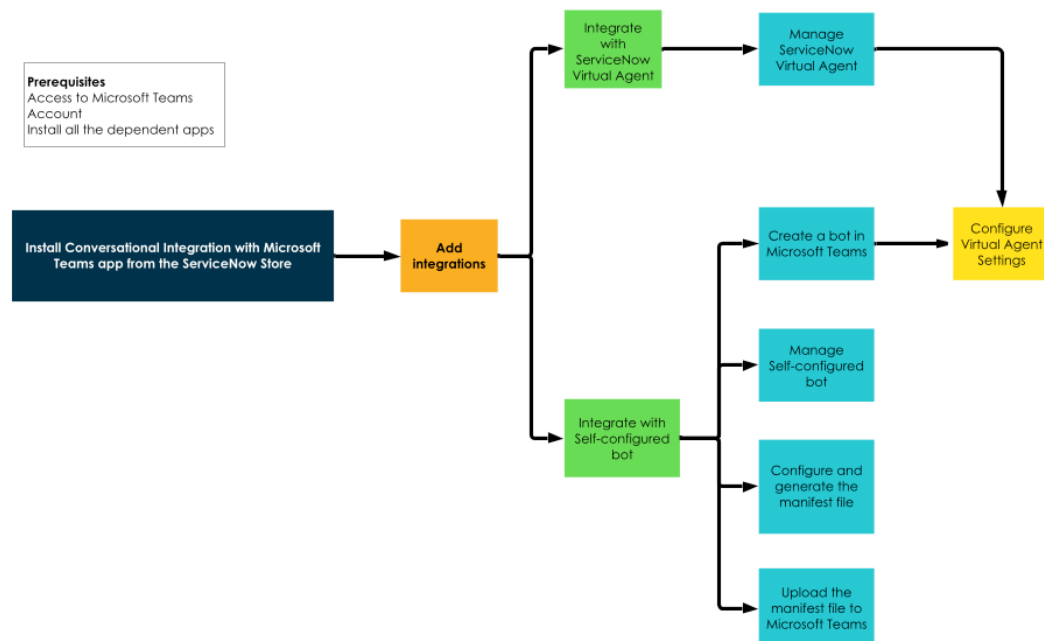
Users

User	Description
admin or virtual_agent_admin	Create and publish Virtual Agent conversations.
admin.microsoft.com	A Microsoft 365 account with admin privileges is required to integrate Virtual Agent in Microsoft Teams.

Conversational Integration with Microsoft Teams workflow

Ensure that you have a Microsoft 365 account with admin privileges (admin.microsoft.com accessible). To install Conversational Integration with Microsoft Teams, you need the admin or virtual_agent_admin role.

Workflow of Conversational Integration with Microsoft Teams



1. Install Conversational Integration with Microsoft Teams.
2. Add integrations.

Integrate with Virtual Agent.

Manage and configure Virtual Agent settings.

Integrate with a self-configured bot.

Create a bot in Microsoft Teams. Manage and configure the self-configured bot, then generate the manifest file. Upload the manifest file to Microsoft Teams. Configure Virtual Agent settings.

Note: Verify that you enabled Message Extensions when generating the manifest file, and verify your bot name is one word.

What to explore next

To learn more about configuring and using Conversational Integration with Microsoft Teams, see:

- [Configure Virtual Agent for Microsoft Teams.](#)
- [Enable ServiceNow Otto for Virtual Agent for Microsoft Teams.](#)
- [Integrate Now Assist in Virtual Agent with Microsoft Teams.](#)
- [Integrate Now Assist in Virtual Agent with Microsoft Copilot.](#)

For more information about integrating Microsoft Copilot with Now Assist, see the following ServiceNow blog and community articles:

- <https://www.servicenow.com/blogs/2024/now-assist-microsoft-copilot> 
- <https://www.servicenow.com/community/virtual-agent-nlu-articles/microsoft-copilot-integration-with-now-assist-faq-zurich-release/ta-p/3048238> 

Plugins for Conversational Integration with Microsoft Teams

Activate the Glide Virtual Agent [com.glide.cs.chatbot] plugin, the Conversational Integration with Microsoft Teams [sn_va_teams] plugin, and verify its additional plugins to enable other features for conversation design.

You must have either the virtual_agent_admin or admin role and the external_app_install_admin role to activate these additional plugins. For details, see [Activate a plugin](#) .

Note: Ensure that you perform the following steps before verifying the activation of additional plugins required for Microsoft Teams.

- Install the Glide Virtual Agent [com.glide.cs.chatbot] plugin.

For more information about activating the Glide Virtual Agent plugin, see [\(Legacy\) Activate Virtual Agent for NLU](#).

- Download the Conversational Integration with Microsoft Teams app from the ServiceNow® Store.

For more information about downloading the app, Visit the [ServiceNow Store](#)  to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#) .

- Install the Conversational Integration with Microsoft Teams [sn_va_teams] plugin in your ServiceNow instance.

For more information about installing Conversational Integration with Microsoft Teams, see [Install Conversational Integration with Microsoft Teams](#).

Verify the following plugins for Conversational Integration with Microsoft Teams.

- Microsoft Teams Graph Spoke [sn_msteams_ahv2]: Plugin is auto installed as part of [sn_va_teams]. In your ServiceNow instance, navigate to **All > sys_plugins.list** and search for [sn_msteams_ahv2] to locate the plugin. If it hasn't been installed, you might have to request from the ServiceNow Store first and install the plugin in your ServiceNow instance.
- MS Teams - App Core [com.snc.msteams.app.core]: Plugin is auto installed as part of [sn_va_teams]. In your ServiceNow instance, navigate to **All > sys_plugins.list** and search for [com.snc.msteams.app.core] to locate the plugin. If the plugin is installed, you are all set to move forward. If it was not installed, reach out to Customer Service and Support.

Install Conversational Integration with Microsoft Teams

You can install the Microsoft Teams (sn_va_teams) application to integrate with Now Virtual Agent if you have the admin role.

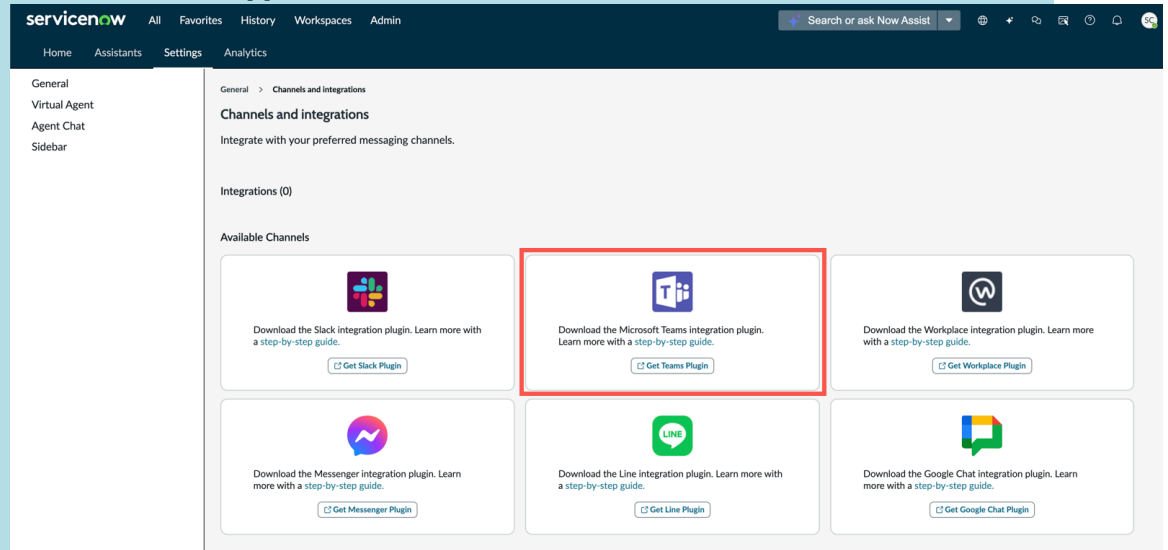
Before you begin

- Roles required:
 - virtual_agent_admin and external_app_install_admin or admin.
 - Microsoft Teams administrator (one of the following): Global administrator, Application administrator, or Cloud Application administrator.
- **Note:** These aren't necessarily required. Microsoft allows non-admin users to give consent to some or all requested permissions. Granting non-admin consent is not recommended, as this may cause unexpected behavior in the Now Now Virtual Agent application. Please review your user consent policies by consulting: <https://learn.microsoft.com/en-us/entra/identity/enterprise-apps/configure-user-consent?pivots=portal>
- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#).
- If you're using an earlier release of Virtual Agent, you must upgrade to the 2023, February store release to use the features supported in this channel integration.
- Conversational Integration with Microsoft Teams requires the Glide Virtual Agent plugin (com.glide.cs.chatbot) to activate full functionality in Virtual Agent or the Virtual Agent Lite plugin (com.glide.cs.chatbot.lite) to activate a limited version of Virtual Agent. Activate the appropriate plugin before you install the integration.

- Install the Conversational Integration with Microsoft Teams app from the ServiceNow® Store.

Important: Installing the Conversational Integration with Microsoft Teams app from the ServiceNow Store activates the app for integration on your ServiceNow instance. If you have not installed the integration app, the Microsoft Teams app is listed in the Available Channels section.

Channels and integrations page before Conversational Integration with Microsoft Teams apps is installed



After you install the Conversational Integration with Microsoft Teams app, Microsoft Teams is seen in the Integrations section, and you can proceed with the configuration.

About this task

Review these guidelines for using Virtual Agent with Microsoft Teams.

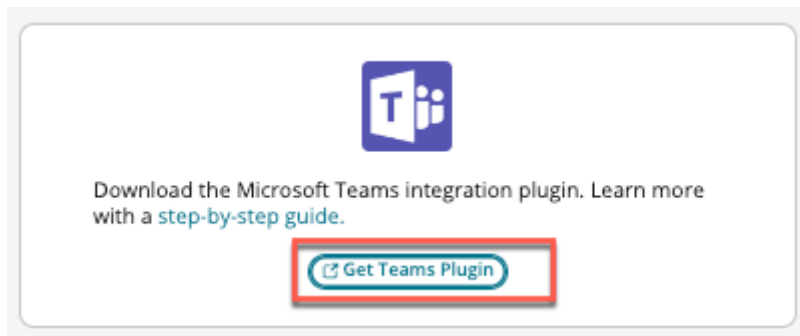
- The Microsoft Teams app creates a one-to-one association between the ServiceNow instance that you're installing from and the Microsoft Teams tenant in which the integration runs.

Use a separate Microsoft Teams tenant for each instance that you plan to install the integration in. If you plan to test with a non-production instance and clone the instance, be sure to run the configuration steps again on the clone target to associate the bot to the new instance. Running the steps again disassociates the integration between the original non-production instance and the tenant.

- The Microsoft Teams app doesn't support the Microsoft Teams premium account, which enables user email accounts other than Microsoft Office 365 accounts.

Procedure

1. Navigate to **All > Conversational Interfaces > Channels and integrations**.
2. On the Channels and integrations page, in the Microsoft Teams card, select **Get Teams plugin**.



You're redirected to the Conversational Integration with Microsoft Teams ServiceNow Store page.

3. Select **Get**.

Note: You must be logged in to the ServiceNow Store portal to get the plugin.

4. On the Conversational Integration with Microsoft Teams ServiceNow Store page, select **Request Install**.

5. On the Request Install screen, provide the **Instance Name** and **Reason for request**. You can also validate the instance that you provided by selecting **Validate Instance**.

6. Select **Request**.

A message pops up on the Request Install screen that your request has been auto-approved.

What to do next

[Integrate ServiceNow Virtual Agent with Microsoft Teams.](#)

Remove Conversational Integration with Microsoft Teams

Remove the integrations between your ServiceNow Virtual Agent bot or the Self-configured bots and Microsoft Teams to disassociate the app with your ServiceNow instance.

Before you begin

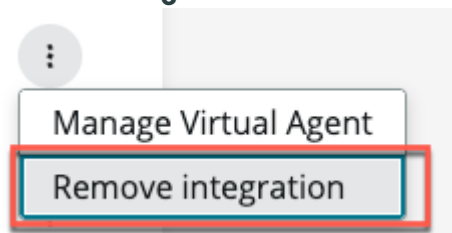
Roles required:

- Virtual_agent_admin and external_app_install_admin or admin
- Administrator for third-party applications

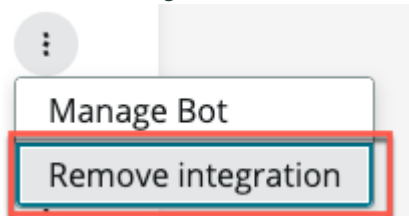
Procedure

1. Navigate to **All > Conversational Interfaces > Channels and Integrations**.
2. On the Channels and integrations page, on the Microsoft Teams tile, select **Manage**
3. In the Manage Microsoft Teams channel page, find the integration (Now Virtual Agent bot or the Self-configured bot) that you would like to remove, select the manage bot icon , and select **Remove integration**.

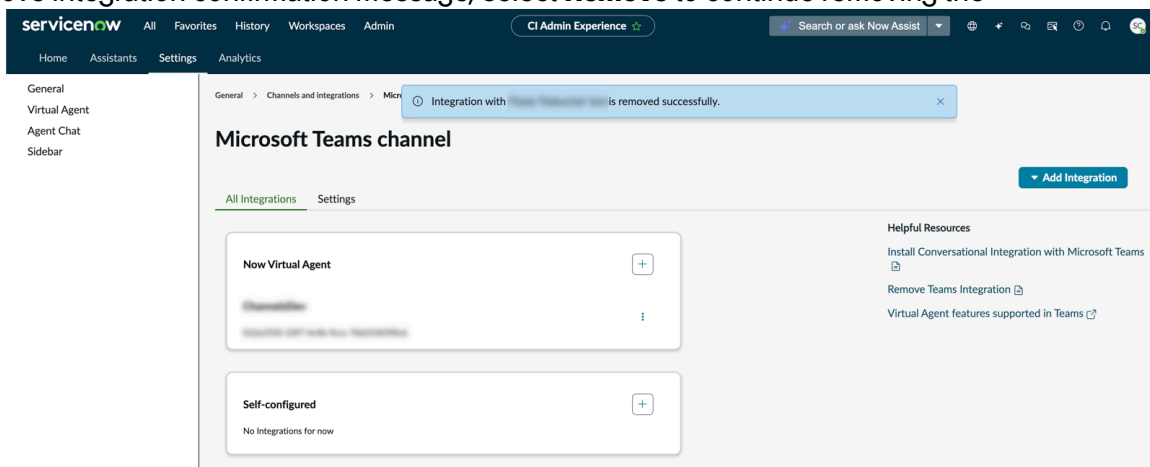
Remove integration with ServiceNow Virtual Agent



Remove integration with Self-configured bot



4. In the Remove integration confirmation message, select **Remove** to continue removing the



integration.

The Virtual Agent integration with the selected Microsoft Teams bot has been removed.

Activate ServiceNow Otto for Virtual Agent for Microsoft Teams

Add ServiceNow Otto for Virtual Agent to your Microsoft Teams and Microsoft Copilot bot.

Before you begin

Role required: admin or virtual_agent_admin

Create a self-configured bot for Microsoft Copilot. For more information, see [Setting up the Self-configured bot for using Microsoft Copilot](#).

Note: Ensure you've updated the version of your Microsoft Teams app in the **Version** field.

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Assistants** tab.
3. On the **ServiceNow Otto for Virtual Agent (default)** tile, select **Edit**.
4. Select **Review display experiences**.
5. Select the **Channels** tab.
6. Choose the self-configured bot for the Teams channel experience you want to activate by selecting the **Select row** check box next to its name.
7. Select **Save and continue**.
8. Navigate to **All > Conversational Interfaces > Channels and Integrations**.
9. Under Integrations, in the Microsoft Teams tile, select **Manage**.
10. In the Self-configured tile, next to your bot's name, select the **Manage bot** icon (), and then select **Manage bot** from the drop-down menu.

11. Select **Edit configuration**, and then select the check box next to **Copilot**.

i Note: The **Copilot** option will be a **Message extension** option instead if you haven't selected the matching bot in Step 4.

12. Select **Save**.

The bot is now active for Copilot, and the bot's Configuration tab opens.

13. Select **Download** to save the manifest zip file.

What to do next

Upload the manifest to Microsoft Teams to make your bot experience available in the Microsoft global apps store, which will also activate the Custom Engine Agent (CEA) in Microsoft Copilot. For more information, see [Upload the manifest package file to publish your bot](#).

Integrate Virtual Agent with Microsoft Teams

Enable ServiceNow Virtual Agent to integrate with the Microsoft Teams application.

Before you begin

Role required: virtual_agent_admin or admin.

Integrating ServiceNow® Otto for Virtual Agent with Microsoft Teams

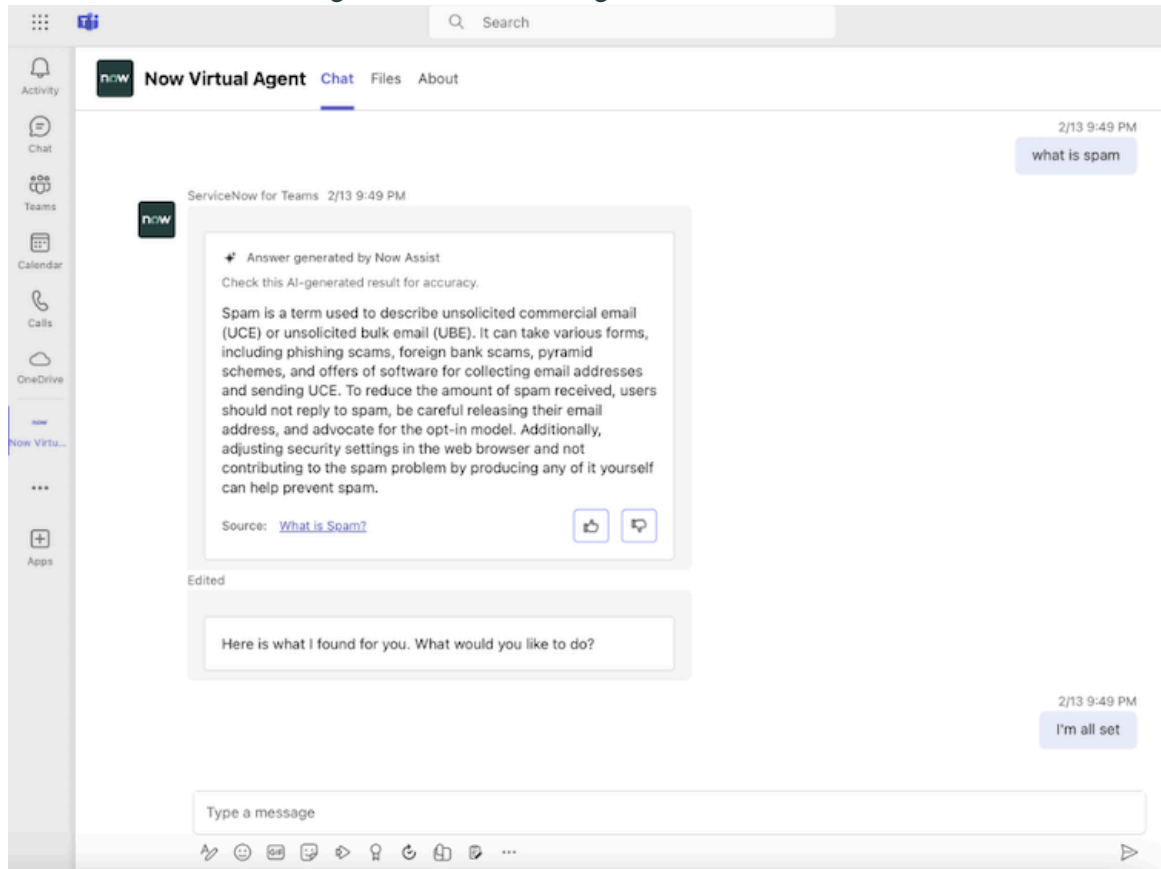
ServiceNow Otto for Virtual Agent uses large language models (LLMs) and generative AI to improve deflection rates and reduce the amount of work that Natural Language Understanding (NLU) topic discovery once required.

ServiceNow Otto for Virtual Agent is available through portals on the chat widget, the mobile app, and Microsoft Teams. To integrate ServiceNow Otto for Virtual Agent with Microsoft Teams, see [Assistants overview](#). In step 12 of the procedure to [Assistants overview](#), there's the option to choose where to display Virtual Agent. Select Microsoft Teams.

ServiceNow Otto for Virtual Agent with Microsoft Teams relies on AI Search fallback topics. Within AI Search fallback topics, two types of results can appear:

1. Genius Results: Catalog items (conversational and non-conversational) and knowledge base articles (single-turn and multi-turn Q&A).

Genius Results for catalog items and knowledge base articles



2. Regular search results (multi-link outputs in conversations).

For more information, see [Exploring Virtual Agent](#) and [Virtual Agent feature support in Microsoft Teams conversations](#).

Integrate ServiceNow Virtual Agent with Microsoft Teams

Add the Now Virtual Agent bot to your ServiceNow instance to integrate with Microsoft Teams.

Before you begin

Install the Conversational Integration with Microsoft Teams plugin (sn_va_teams) on your ServiceNow instance before adding any integrations.

Role required: virtual_agent_admin or admin

Note: This activity requires the Application Administrator or Global Administrator roles, but only to accept one-time permissions for the application on behalf of the customer.

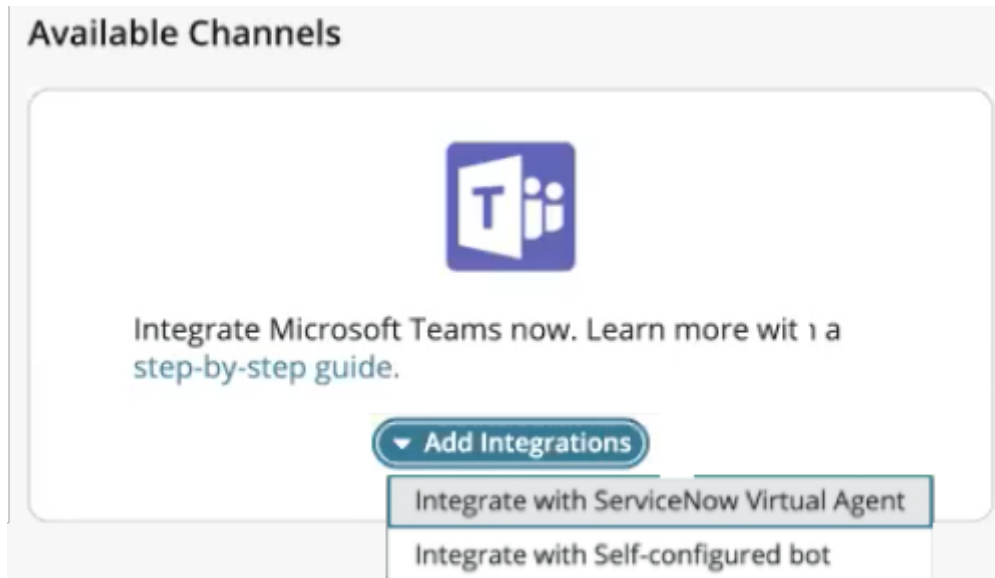
About this task

Any time you create and publish a bot, every user receives all changes you've made. If you create a self-configured bot, the configuration includes a snapshot of the Microsoft Teams integration. Only the changes you make are added when you download the manifest. Re-upload your manifest to push through the changes. You can then use the bot when you publish it in the Microsoft Teams store page. The store page describes how to use the Now Virtual Agent app. If you install the Now Virtual Agent production bot, it will stay up-to-date on all the changes you make.

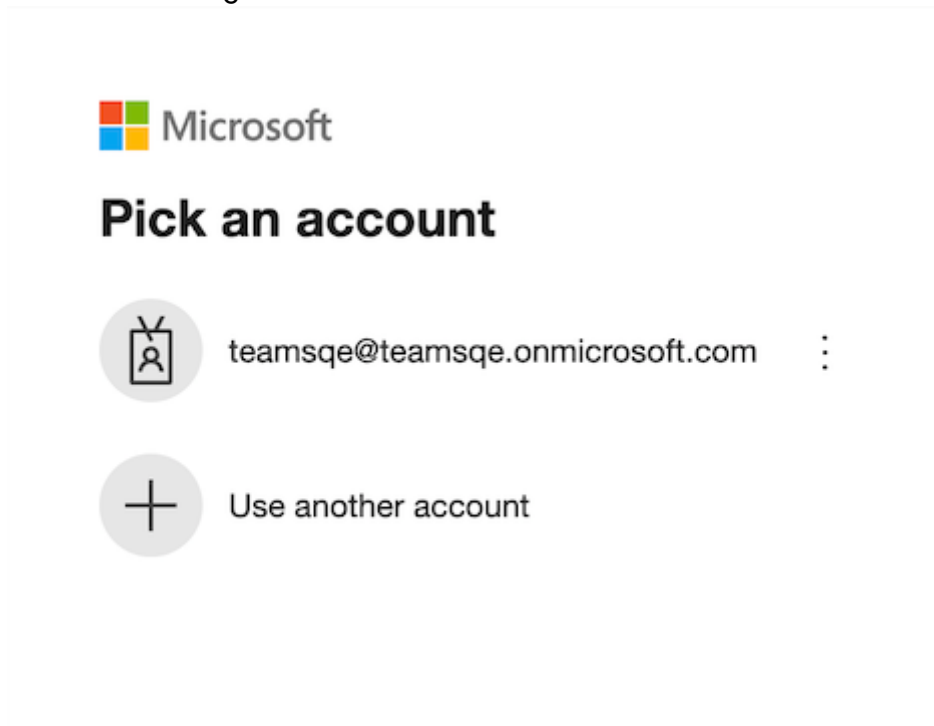
Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In **General Settings** under **Channels and integrations**, select **View All**.
The Channels and integrations page opens.
3. Under the Available Channels section in the Microsoft Teams tile, select **Add Integrations**.

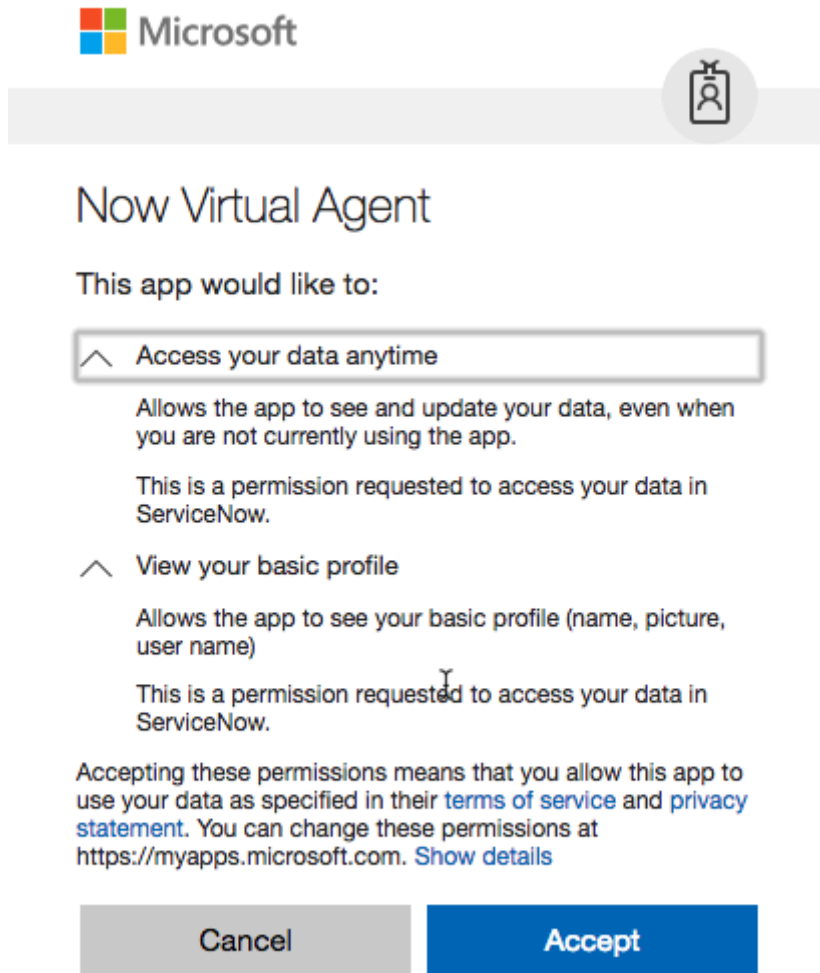
Note: The **Add Integrations** drop-down menu is available only after installing the Conversational Integration with Microsoft Teams plugin (sn_va_teams) on your ServiceNow instance.



4. From the **Add Integrations** drop-down menu, select **Integrate with ServiceNow Virtual Agent**.
5. In the Microsoft Pick an account screen, select a Microsoft Teams account that you would like to use for the integration.

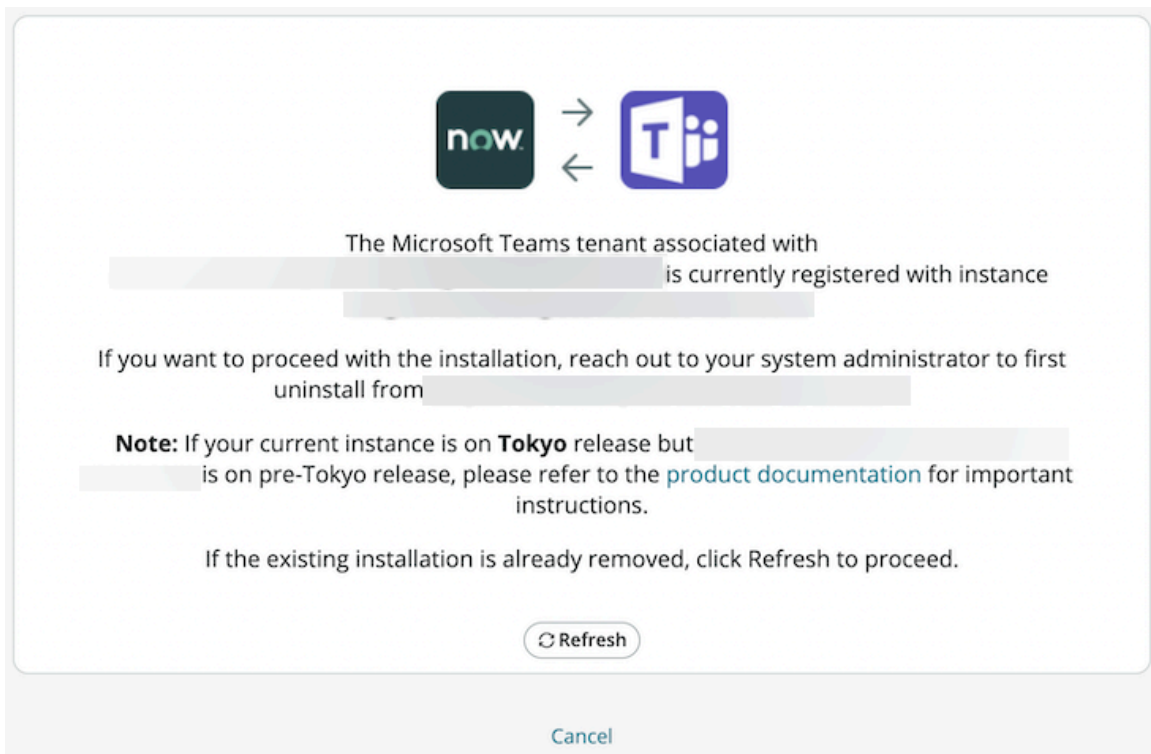


6. Log in to the selected Microsoft Teams account.
7. In the ServiceNow Virtual Agent screen, select **Accept** to accept the permissions for the app.

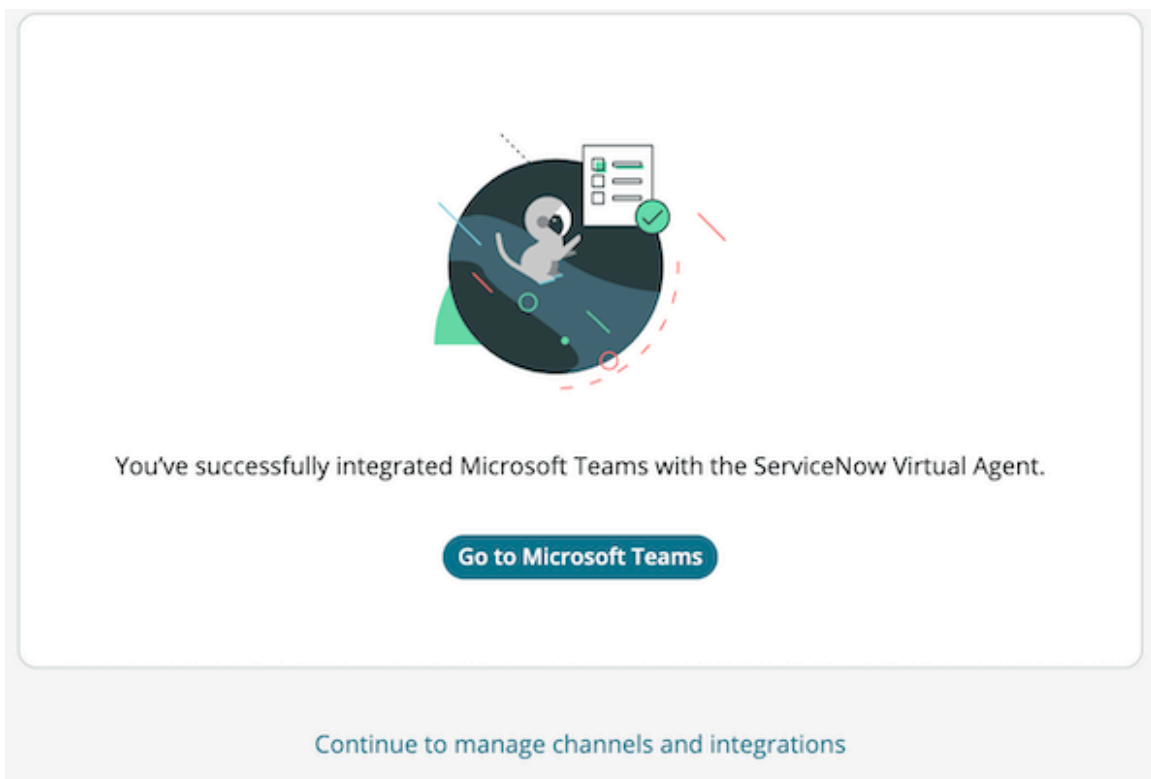


8. If the selected tenant has already been assigned to Virtual Agent, you must first uninstall from the previously associated instance.

Note: Starting from Tokyo release, if your Microsoft Teams tenant is already associated with another ServiceNow instance. If you intend to associate it with a new instance, then you're asked to contact the administrator to first uninstall it from the previously associated instance. For more information, see [Override Microsoft Teams integration](#).



Installation starts in the background. After the installation completes, a message confirms that you successfully installed the Now Virtual Agent integration for Microsoft Teams.

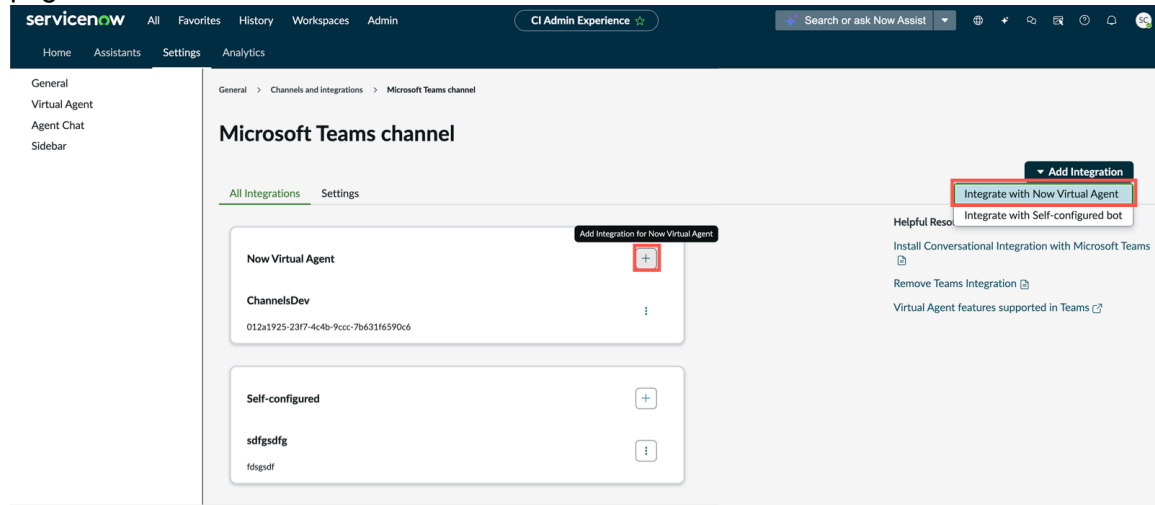


9. Select **Go to Microsoft Teams** to manage your Microsoft Teams app.
10. Select **Continue to manage channels and integrations** to manage the integration on your ServiceNow instance.

The Microsoft Teams application appears in the list of integrations.

What to do next

If you would like to integrate your ServiceNow® instance with another Microsoft Teams bot, select the Add Integration for ServiceNow® Virtual Agent icon against the ServiceNow® Virtual Agent bot or select the **Add integration** drop-down menu on the Manage Microsoft Teams channel page.



For more information, see [Manage the ServiceNow Virtual Agent integration with Microsoft Teams](#).

Override Microsoft Teams integration

Override Virtual Agent integration with Microsoft Teams.

Before you begin

Role required: admin or virtual_agent_admin

About this task

Before Tokyo release, an admin was able to override a Microsoft Teams installation that is associated with an instance with a different ServiceNow instance.

Starting from Tokyo release, if you intend to associate your Microsoft Teams tenant with a new ServiceNow instance, contact the

administrator to uninstall the tenant from the previously associated



The Microsoft Teams tenant associated with
[redacted] is currently registered with instance
[redacted]

If you want to proceed with the installation, reach out to your system administrator to first
uninstall from [redacted]

Note: If your current instance is on **Tokyo** release but [redacted]
[redacted] is on pre-Tokyo release, please refer to the [product documentation](#) for important
instructions.

If the existing installation is already removed, click Refresh to proceed.

[Refresh](#)

[Cancel](#)

i Important: The instructions in [Remove Conversational Integration with Microsoft Teams](#) are only applicable when both instances are compatible with Tokyo and following releases. If one of your ServiceNow instances is on the Tokyo release and another on a release prior to Tokyo, use the following steps.

Procedure

1. In the left navigation filter of your ServiceNow instance, enter `sys_properties.list`.
2. Search and open the `sn_va_teams.enable_va_override` system property.

i Note: If you don't find this system property, you (as an admin) must create one.

3. Set the system property value to **true** to enable the **Override** button.

i Note: By default, the value of the system property is **false**.

4. Select **Override** to associate the instance with a new



Your Microsoft Teams tenant associated with
`adhinav.mishra@snovgroup.onmicrosoft.com` is currently registered with instance:
`https://navitahpass1.service-now.com/`.

[Override](#)

[Cancel](#)

tenant.

Manage the ServiceNow Virtual Agent integration with Microsoft Teams

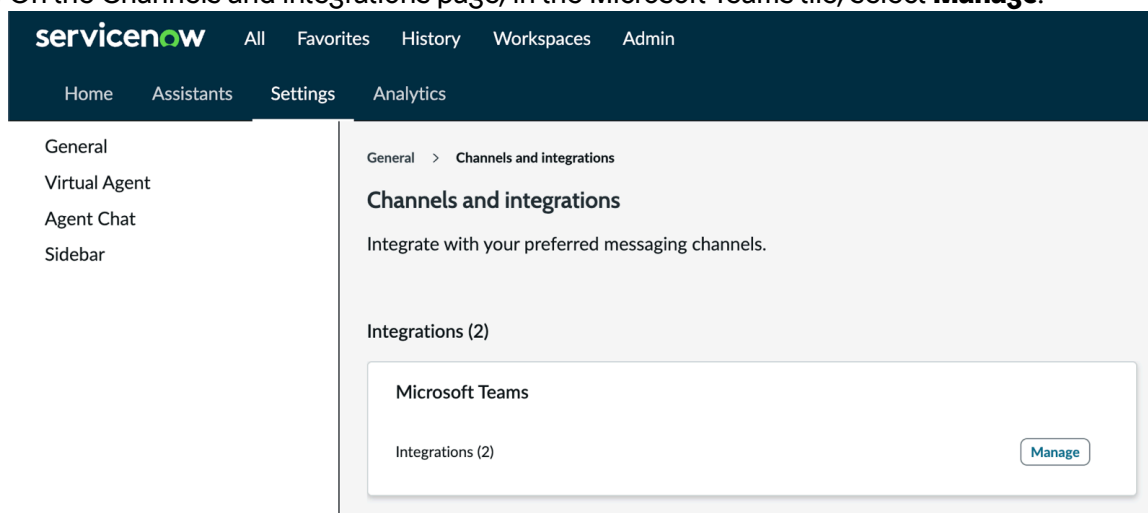
Manage your ServiceNow® Virtual Agent bot branding and customize the bot messages in your ServiceNow instance after integration with Microsoft Teams.

Before you begin

- Roles required:
 - virtual_agent_admin and external_app_install_admin or admin
 - Microsoft Teams administrator (one of the following): Global administrator, Application administrator, or Cloud application administrator

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In **General Settings** under **Channels and integrations**, select **View All**.
3. On the Channels and integrations page, in the Microsoft Teams tile, select **Manage**.



When you select **Manage**, you're redirected to the Manage Microsoft Teams channel page where you can manage the bots.

4. To integrate your ServiceNow instance with another Microsoft Teams bot, select the Add integration for ServiceNow Virtual Agent icon against the ServiceNow Virtual Agent bot or select the **Add integration** drop-down on the top-right of the Manage Microsoft Teams channel page and select **Integrate with ServiceNow Virtual Agent**.
5. Select the Manage Bot icon  and select **Manage Virtual Agent**. You're redirected to the Bot Configuration page for the selected bot.
6. Select the **Branding** tab to brand your Now Virtual Agent bot. For more information about branding your bot, see [Configure branding for your ServiceNow Virtual Agent bot in Microsoft Teams](#).
7. Select the **Bot Messages** tab to create and edit a bot message. For more information, see [Create bot messages](#).

Specialized Virtual Agent integrations for Microsoft Teams

The specialized Virtual Agent integrations for Microsoft Teams support different users as per their need.

- If both your environments are commercial, with .com as the suffix, follow both the self-configured and pre-published setup instructions.
- If your ServiceNow environment is .us and your Microsoft environment is .com, this is the GCC setup. Follow the self-configured bot setup instructions.
- If both your environments are .us, follow the GCC-H or DoD based instructions.

Integrating multiple ServiceNow instances with a single Microsoft Teams tenant

Enables ServiceNow® Virtual Agent to allow multiple ServiceNow instances to integrate with single Microsoft Teams tenant.

The Virtual Agent integration with Microsoft Teams creates a one-to-one association between the ServiceNow instance that you are installing from and the Microsoft Teams tenant in which the integration runs. By default, Virtual Agent supports one-select installation that integrates one Microsoft Teams tenant with one ServiceNow instance. By enabling this integration, Virtual Agent allows integrating multiple ServiceNow instances with a single Microsoft Teams tenant. You can integrate multiple ServiceNow instances with a single Microsoft Teams tenant by creating a bot for each of the instances on the Microsoft Teams tenant.

What to do next

1. [Plugins for Conversational Integration with Microsoft Teams](#)
2. [Create a bot in Microsoft Teams](#)
3. [Integrate your self-configured bot with single Microsoft Teams tenant](#)
4. [Auto-generate the manifest file for uploading on Microsoft Teams](#)
5. [Upload the manifest package file to publish your bot](#)

Create a bot in Microsoft Teams

You must create a bot in Microsoft Teams to be able to integrate with the Virtual Agent.

Before you begin

Role required: Microsoft Teams admin, Global Administrator, or roles containing Application Administrator.

Procedure

1. Login into [Microsoft Teams](#) and navigate to [Developer Portal](#).
2. On the Developer Portal page, navigate to the **Tools > Bot Management**.
3. Select **Create a New bot** and provide a bot name of your choice and select **Add**.
4. Open the bot that you created and select the **Configure** tab.
5. Under Endpoint address, specify the following URL:
For example: `https://<instancename>.service-now.com/api/now/v1/cs/adapter/msft/events`

Note: Replace the <instancename> with the name of your ServiceNow instance where you are integrating with Microsoft Teams. In case of multi-instance single tenant integration, use the secondary ServiceNow instance for integrating with a bot on Microsoft Teams tenant.

6. Select **Save**.
7. Navigate to **Client secrets** and select **Add a client secret for your bot**.

8. Copy the value of the client secret from the **New client secret generated** pop-up for later use as it is displayed only during this step and select **OK**.
9. Navigate to **Developer Portal > Tools > Bot management** and copy the Bot ID of the bot you created.
10. Retrieve the following details of your bot in Microsoft Teams to integrate with Virtual Agent.
 - Tenant ID: Follow the instructions on [Microsoft Teams documentation](#) , to fetch the Tenant ID.
 - Client ID (App ID): Client ID is the Bot Id that you have copied as mentioned in Step 8.
 - Client Secret: It is the secret that you have copied as mentioned in Step 7.
 - Bot Name: The name of the bot that you entered in Step 3.
 - Select the **Single tenant** check box.

 **Note:** If you created your bot before October 2025, you don't need to select the **Single tenant** check box.

11. Press **Enter** to save.

What to do next

[Integrate your self-configured bot with single Microsoft Teams tenant.](#)

Integrate your self-configured bot with single Microsoft Teams tenant

Integrate multiple ServiceNow instances with a single Microsoft Teams tenant by creating multiple bots on the Microsoft Teams tenant. Use your ServiceNow Virtual Agent application, which supports multiple bots on a single Microsoft Teams tenant, to install Conversational Integration with Microsoft Teams application.

Before you begin

Role required: virtual_agent_admin or admin and Microsoft Teams Tenant admin

This installation requires a ServiceNow instance other than the one integrated with the production bot to integrate with one bot (of the multiple bots) on a single Microsoft Teams tenant.

 **Note:** The ServiceNow instance that you will use to integrate with a single Microsoft Teams tenant must not be an instance that you have used for installing Conversational Integration with Microsoft Teams in the primary method where you can integrate only one ServiceNow instance with one tenant.

Ensure that you created a bot on the Microsoft Teams tenant for each ServiceNow instance to be integrated. For more information, see [Create a bot in Microsoft Teams](#).

Procedure

1. Fetch the Tenant ID, Client ID (App ID), Client Secret, and Bot Name details for your bot created in Microsoft Teams.
For more information, see [Retrieve bot details](#).

 **Note:** Use this information when setting up the bot in your ServiceNow instance.

2. As a ServiceNow admin, set up the bot on the ServiceNow instance in the global scope.

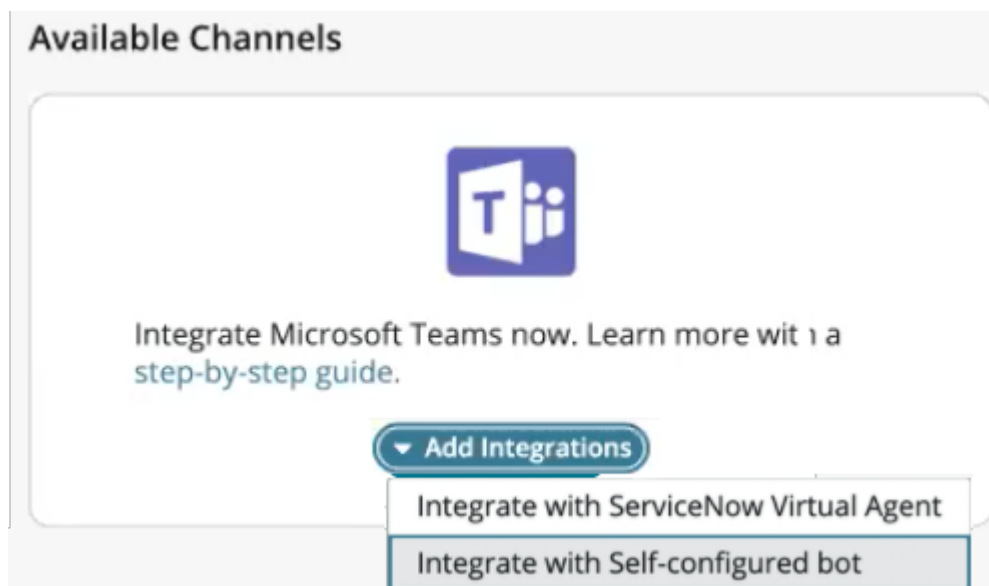
Note: The virtual_agent_admin can install bots with multiple instances or bots apart from production in the ServiceNow instance and avail all the features of Virtual Agent and the flexibility to integrate one of the multiple ServiceNow instances with a bot on a single Microsoft Teams tenant.

a. Log in to your ServiceNow instance (secondary instance for integrating with a bot on single Microsoft Teams tenant) and navigate to **All > Conversational Interfaces > Settings**.

b. In **General Settings** under **Channels and integrations**, select **View All**.
The Channels and integrations page opens.

c. Under the Available Channels section in the Microsoft Teams tile, select **Add Integrations**.

Note: The **Add Integrations** drop-down is available only after installing the Conversational Integration with Microsoft Teams plugin (sn_va_teams) on your ServiceNow instance.



d. From the **Add Integrations** drop-down, select **Integrate with Self-configured bot**.

e. In the Integrate Microsoft Teams with self-configured bot page, enter the **Name of the bot**, **Tenant ID**, **Client ID (App ID)**, and **Client Secret** from creating the Microsoft Teams bot, and select the **Single tenant bot** check box before selecting **Submit**.

Integrate Microsoft Teams with self-configured bot

General > Channels and integrations > Integrate Microsoft Teams with self configured bot

Integrate Microsoft Teams with self configured bot

Complete all information. To learn more, refer the [step-by-step guide](#).

[Submit](#)

Name of the bot ⓘ

Tenant ID ⓘ

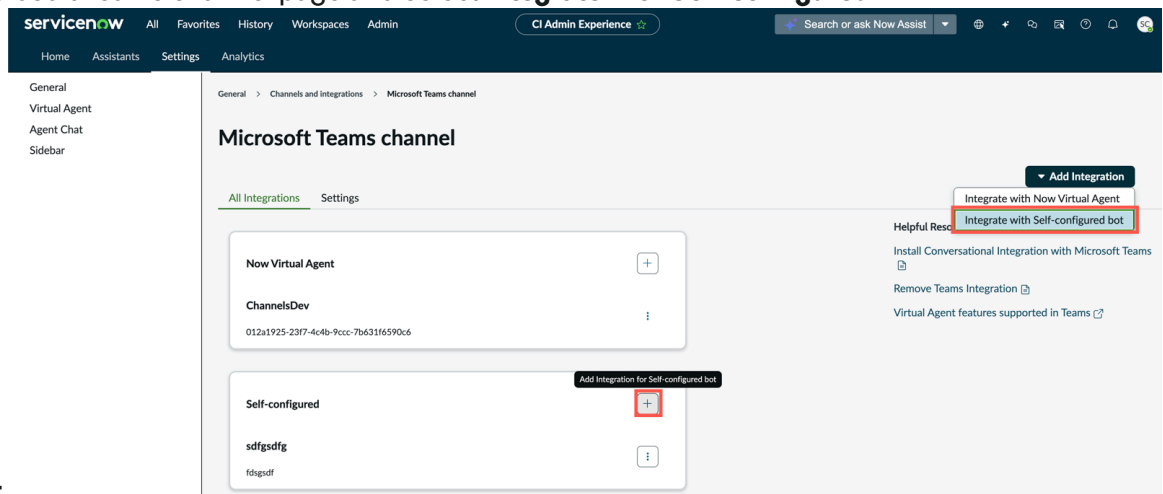
Client ID (App ID) ⓘ

Client Secret ⓘ

☐ Single tenant bot

Note: For each additional bot to be integrated, repeat steps 1 and 2. If you created your bot before October 2025, you don't need to select the **Single tenant bot** check box.

If you would like to integrate your ServiceNow instance with another Microsoft Teams bot, select the Add integration for Self-configured bot icon against the Self-configured bot or select the **Add integration** drop-down on the Manage Microsoft Teams channel page and select **Integrate with Self-configured**



bot.

User receives a message that the installation is successful.

What to do next

- [Auto-generate the manifest file for uploading on Microsoft Teams.](#)
- [Upload the manifest package file to publish your bot](#)

Integrating Virtual Agent with Microsoft Teams using the self-configured bot

You can integrate Virtual Agent with Microsoft Teams by configuring your own bots. The self-configured method provides another way for customers to enable the integration without installing the default Now Virtual Agent app that is published on the Microsoft Store. Unlike the pre-published app, the self-configured bot bypasses the collaboration proxy architecture.

The self-configured method offers a solution for the following cases:

- Commercial customers with a ServiceNow instance running far away from the United States who may be having issues using the collaboration proxy.
- ServiceNow Government Community Cloud (GCC) customers.

Note: Microsoft Azure supports the bot framework in GCCHIGH and DOD (US Department of Defense). For more information about the bot framework support, see [Integrating Virtual Agent with Microsoft Teams for GCC-H or DoD](#).

If you are a commercial customer who has already installed a pre-published bot but would like to integrate with multiple ServiceNow instances within a single Microsoft Teams tenant, see [Integrate your self-configured bot with single Microsoft Teams tenant](#).

Prerequisites

Before integrating Virtual Agent with your Microsoft Teams tenant, ensure that the following prerequisites are met:

- Verify that your ServiceNow instances have been upgraded to the San Diego release.
- Verify that your Microsoft 365 installation is on the commercial environment, which has a `.com` suffix. If your Microsoft 365 environment is in any regulated market environment, see [Integrating Virtual Agent with Microsoft Teams for GCC-H or DoD](#).
- You have not attempted previous installations of the Conversational Integration with Microsoft Teams in your instances.

If you previously tried to install the integration in Quebec and the above releases, refer to this [Knowledge Base](#)  article to remove the residual installation items.

If you previously tried to install the integration in a release prior to Quebec, contact Customer Service and Support for help with cleaning up your instance manually.

- Verify that you have the admin permissions on ServiceNow and Microsoft Azure instances.

What to do next

1. [Plugins for Conversational Integration with Microsoft Teams](#)
2. [Create a bot in Microsoft Teams](#)
3. [Auto-generate the manifest file for uploading on Microsoft Teams](#)
4. [Upload the manifest package file to publish your bot](#)

Auto-generate the manifest file for uploading on Microsoft Teams

Auto-generate the manifest file and customize the branding of your Microsoft Teams app so that you can make Virtual Agent available in your organization.

Before you begin

Role required: `virtual_agent_admin` or `admin`

About this task

An automated manifest file generator on the new Microsoft Teams UI automatically fills in the bot ID and updates the other settings (such as branding) based on input from you, the administrator. The manifest file generator also enables a one-select download of the manifest package.

- Before you generate a manifest file, you must create a self-configured bot (or ensure that one has already been created) in the ServiceNow instance. You can then generate a manifest package for each self-configured bot that you create.
- After you save the manifest form, you can download the manifest zip package, which contains the following three files:

- manifest.json
- color.png
- outline.png

You can edit the manifest form and redownload it as many times as you want.

Note: This feature is only applicable when you're setting up the Virtual Agent integration with Microsoft Teams. If you intend to use ServiceNow for Microsoft Teams with ITSM or HR capabilities, select the **Learn more** link next to **Planning to enable additional ITSM and HR integrations** on the Bot Configuration page. That way, you can configure the manifest in a separate module instead of continuing to configure the manifest here. For more information, see [Create and download the manifest file](#).

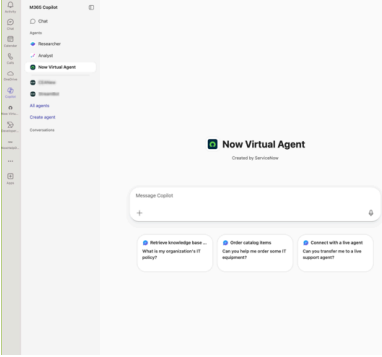
Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In **General Settings**, in the Channels and routing section, select **View All**.
3. On the Channels and integrations page, in the Microsoft Teams tile, select **Manage**.
4. In the Self-configured bot section, select the **Manage Bot** icon . If you haven't enabled Message Extension and you are accessing it for the first time, you see a Turn on new feature alert message that informs you that the Message Extension feature for your Microsoft Teams integration is now available to be turned on.
5. On the **Configuration** tab, select **Edit configuration** and on the form, fill in the fields.

Configure your Bot - VA Microsoft Teams Manifest

Field	Description
Short Name	Short display name for your app. Note: Ensure that the name doesn't exceed 30 characters.
Full Name	Full name of your app. Use the full name if the short name of the app exceeds 30 characters. Note: Ensure that the full name doesn't exceed 100 characters.
Bot (Client) ID	Unique Microsoft generated identifier. This field is automatically tied to the bot creation step and can't be altered.
Short description	Short description of your app experience. Use a short description when space is limited.

Field	Description
	Note: Ensure that the short description doesn't exceed 80 characters.
Full description	Full description of your app. Note: Ensure that the full description doesn't exceed 4000 characters.
Valid domains	List of valid domains for websites that your app expects to load in Microsoft Teams. Note: Currently only the ServiceNow domain is supported.
Version	Specific version of your app to track the incremental manifest submission to Microsoft Teams. For example, 1.0.0. Use a maximum of 2 digits after each decimal. Note: Ensure that you put a higher number for each new version.
Accent color	Color to use as a background for your outline icons. Note: The value must be a valid HTML color code starting with a hash-tag (#). For example, #293E40.
Color icon	Icon of your app that you want to appear in most Microsoft Teams scenarios. You can select the following options: Use Default icon: Changes the color of the icon back to the default color icon. Use Custom icon: Changes the color icon with an icon color of your choice. Note: Ensure that you upload only the .png image files that have fewer than 192x192 pixels to change the color of the icon.
Outline icon	Icon that is seen on the app bar when the app is in use. You can select the following options:

Field	Description
	○ Use Default icon: Changes the outline icon back to the default outline icon. ○ Use Custom icon: Changes the outline icon with an icon of your choice. Note: Ensure that you upload only the .png image files that have fewer than 32x32 pixels to change the outline icon.
Message Extension or Copilot	This section allows you to activate Message extension if your bot is set up for NLU/Keyword, or activate Copilot if your bot is set up for LLM. (For more information on activating LLM for your bot, see Display your assistant on a portal, channel, or mobile app.) ○ The Message extension check box appears if you configure your bot for NLU/Keyword. Message extension lets users search and share the results through the compose message area of the Microsoft Teams client. If you're using this bot for Microsoft Copilot, then ensure that you enable Message Extension.  The screenshot shows the 'Now Virtual Agent' configuration interface. On the left is a sidebar with navigation options like Home, Recent, Knowledge base, and Settings. The main panel has a title bar 'Now Virtual Agent' and a subtitle 'Created by ServiceNow'. Below this is a 'Message Copilot' input field with a plus icon on the left and a speech bubble icon on the right. Underneath are three toggleable cards: 'Add new knowledge base' (with a question mark icon), 'When sending items' (with a document icon), and 'Connect with a live agent' (with a person icon). Each card contains a brief description of its function. By enabling Message Extension for an app or bot, you will see the same app or bot in the message extension area while your conversation with the Now Assist using Microsoft Copilot. ○ Copilot: If you have configured your bot for LLM, this option replaces Message extension. Custom Engine Agent (CEA) replaces the Declarative Agent (DA) and allows you to use Now Assist functionality in Copilot. The Sample Prompts window appears when you select the Copilot check box.

Field	Description
	Enter your prompts to your bot here to have the LLM follow those instructions. 

For more details about each field, refer to [Microsoft Teams documentation](#).

6. Select **Save**.

You're redirected to the Bot configuration page where the manifest file is saved and ready for you to download.

Note:

You can also edit the manifest file by selecting **Edit configuration** on the download page and downloading the file as many times as you would like. With each new manifest, ensure that you enter a higher version number in the **Version** field so that the updated form can be saved successfully.

7. In the Bot configuration page, under Your package, select the **Download** button to download your package file.

Note:

You can also edit the manifest file by selecting **Edit configuration** on the download page and downloading the file as many times as you would like. However, with each new manifest, ensure that you enter a higher version number in the **Version** field so that the updated form to be saved successfully.

What to do next

[Upload the manifest package file to publish your bot.](#)

Upload the manifest package file to publish your bot

Upload the manifest file that you generated to the Microsoft Teams and test your app experience to make it be available in the Microsoft global app store.

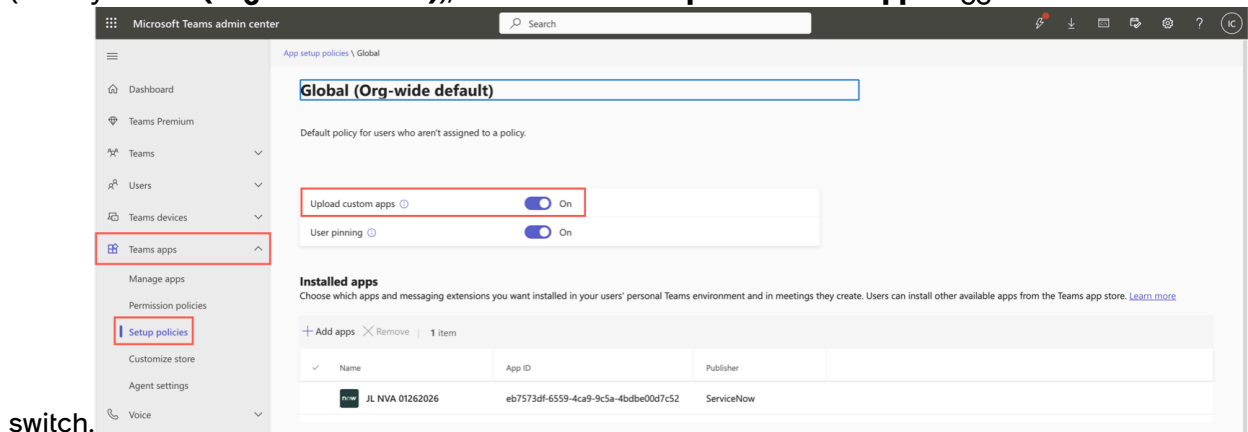
Before you begin

Role required: Microsoft Teams admin, Global Administrator, or roles containing Application Administrator.

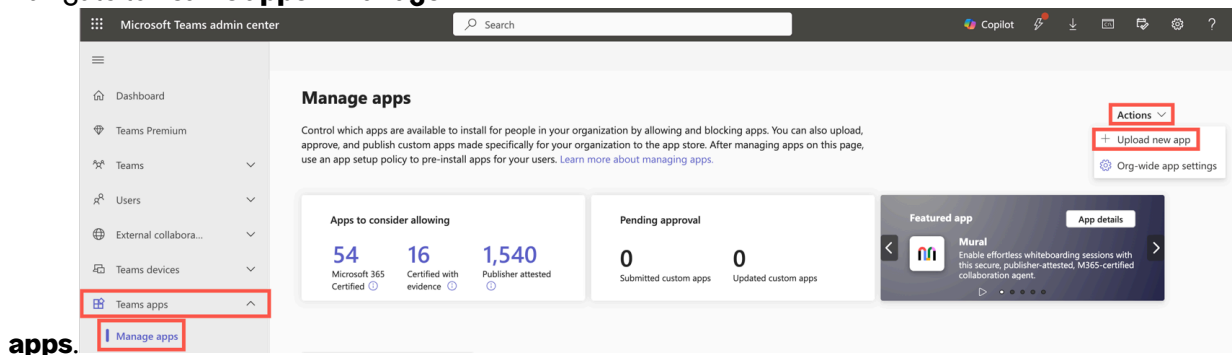
The self-configured bot that you created will not be available in the Microsoft global app store unlike the ServiceNow pre-published app - ServiceNow Virtual Agent. To test your app experience within Microsoft Teams, you must upload your app to Microsoft Teams. Uploading adds the app to the team that you selected and your team can participate in the end-to end conversations with the bot.

Procedure

1. Log in to the [Microsoft Teams Admin Center](#) using the admin credentials and navigate to **Teams apps > Setup policies**.
2. Under **Manage policies**, select the policy you are uploading your manifest under (usually **Global (Org-wide default)**), and activate the **Upload custom apps** toggle



3. Navigate to **Teams apps > Manage**

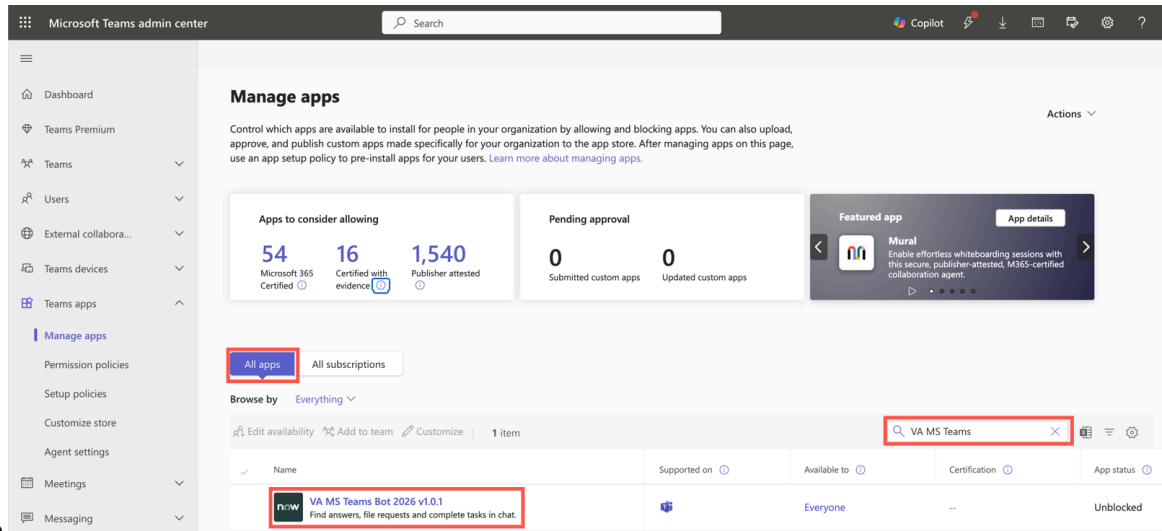


4. Under the **Actions** drop-down menu, select **Upload new app**, then select **Upload** and add your manifest zip file.

Your manifest file is uploaded and appears on the list of store apps.

Note: If you receive any errors, correct the listed errors in your manifest, then download the zip file and upload it through this page again. If you activated Microsoft Copilot in your manifest, the Custom Engine Agent (CEA) is also uploaded with it. For more information on activating Copilot, see [Activate ServiceNow Otto for Virtual Agent for Microsoft Teams](#).

- After you successfully published the bot, select the **All apps** tab and use the search bar to find your



app.

You have successfully published the bot on Microsoft Teams. It should now be available for your organization and you can start interacting with the bot.

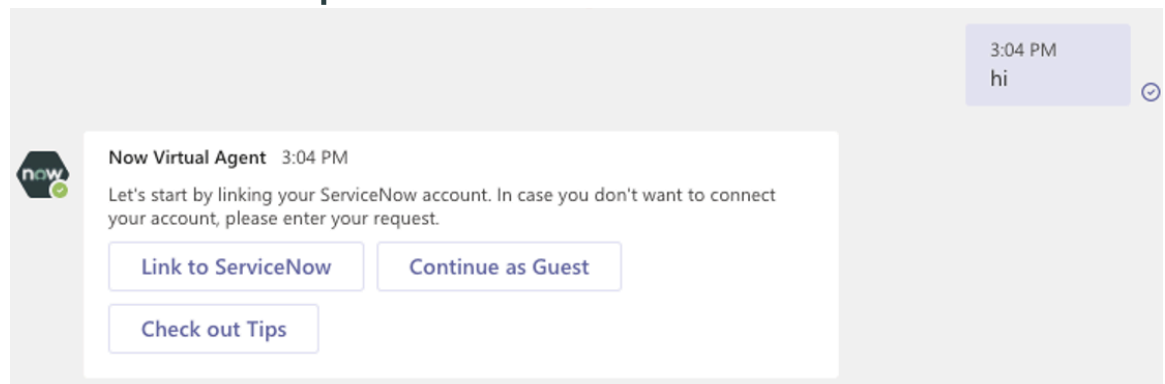
- Perform the following steps on the Microsoft Teams Admin center.

Note: If you have enabled pre-linking by turning on **Automatically Link ServiceNow user profiles** on the Messaging App Integration UI page, users are pre-linked without typing hi. For more information about pre-linking your accounts, see [Installing Microsoft Teams for all Virtual Agent users](#). If you have turned off the check box, use the following manual account linking process described.

- Type **hi** to start interacting with the bot.

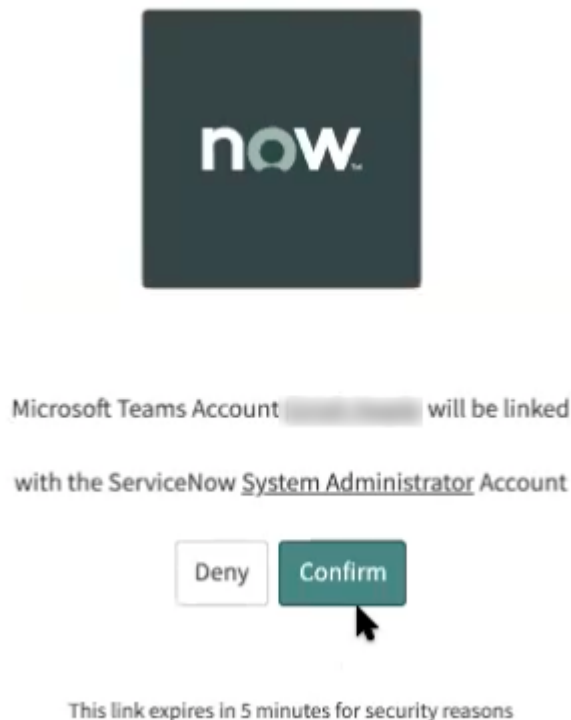
The bot presents a prompt that provides options to authenticate, such as **Link to ServiceNow**, **Continue as Guest**, and **Check out Tips**.

Microsoft Teams bot responses



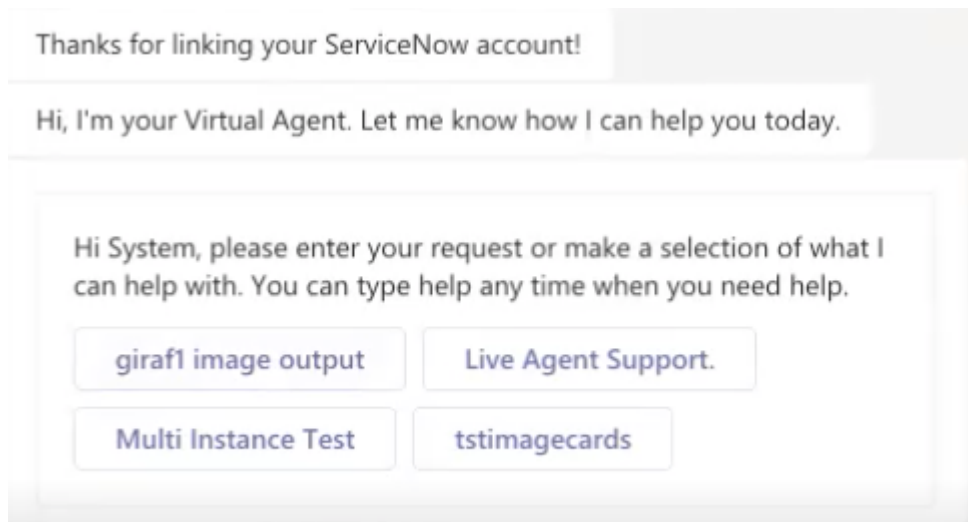
The **Link to ServiceNow** option requires users to enter their ServiceNow instance credentials. If you choose to link to your ServiceNow account, the following screen is displayed asking you to confirm the account linking.

Linking Microsoft Teams account with ServiceNow account



Account linking associates your Microsoft Teams account with your ServiceNow account for the ServiceNow instance that is integrated with the Conversational Integration with Microsoft Teams. Users with linked accounts can run Virtual Agent topics that use ServiceNow information and records.

ServiceNow account linked with Microsoft Teams tenant



If your users do not link their ServiceNow accounts, they can access and run only the public topics.

b. Configure the bot on your ServiceNow instance.

For more information, see [Integrating Virtual Agent with messaging apps](#).

What to do next

You have successfully integrated Virtual Agent with Microsoft Teams using the self-configured method. If you are interested in getting additional ITSM and HR capabilities in Microsoft Teams, see these [instructions for using a self-configured bot](#) with ServiceNow for Microsoft Teams.

Integrating Virtual Agent with Microsoft Teams for GCC-H or DoD

You can integrate Virtual Agent with Microsoft Teams for GCC-H (Government Community Cloud - High) or DoD (Department of Defense) customers by configuring your own bots. The self-configured method provides another way for customers to enable the integration without installing the default Now Virtual Agent app that is published on the Microsoft Store. The self-configured bot bypasses the collaboration proxy architecture.

If you are a commercial customer who has already installed a pre-published bot but would like to integrate with multiple ServiceNow instances within a single Microsoft Teams tenant, see [Integrate your self-configured bot with single Microsoft Teams tenant](#).

If you are a Microsoft GCC (GovtCommunityCloud) customer, do not follow this step. Instead, refer to [Integrating Virtual Agent with Microsoft Teams using the self-configured bot](#).

Prerequisites

Before integrating Virtual Agent with your Microsoft Teams tenant, ensure that the following prerequisites are met:

- Verify that your ServiceNow instances have been upgraded to the San Diego release.
- Verify that you have not previously attempted installing the Conversational Integration with Microsoft Teams app on your instances.

If you previously tried to install the integration in Quebec and the above releases, refer to this [Knowledge Base](#) article to remove the residual installation items.

If you previously tried to install the integration in a release prior to Quebec, contact Customer Service and Support for help with cleaning up your instance manually.

- Verify that you have the admin permissions on ServiceNow and Microsoft Azure instances.

What to do next

1. [Plugins for Conversational Integration with Microsoft Teams](#).
2. [Create a bot in Microsoft Teams for GCC-H or DoD](#).
3. [Integrate your self-configured bot with Microsoft Teams for GCC-H or DoD](#).
4. [Auto-generate the manifest file and upload it into Microsoft Teams for GCC-H or DoD](#).

Create a bot in Microsoft Teams for GCC-H or DoD

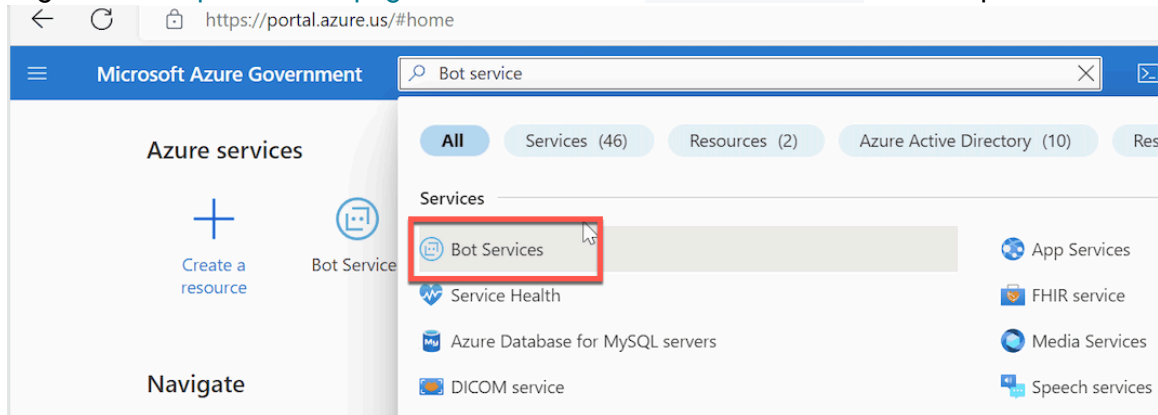
Create a self-configured bot with Microsoft Teams for GCC-H or DoD customers to be able to integrate with the Virtual Agent.

Before you begin

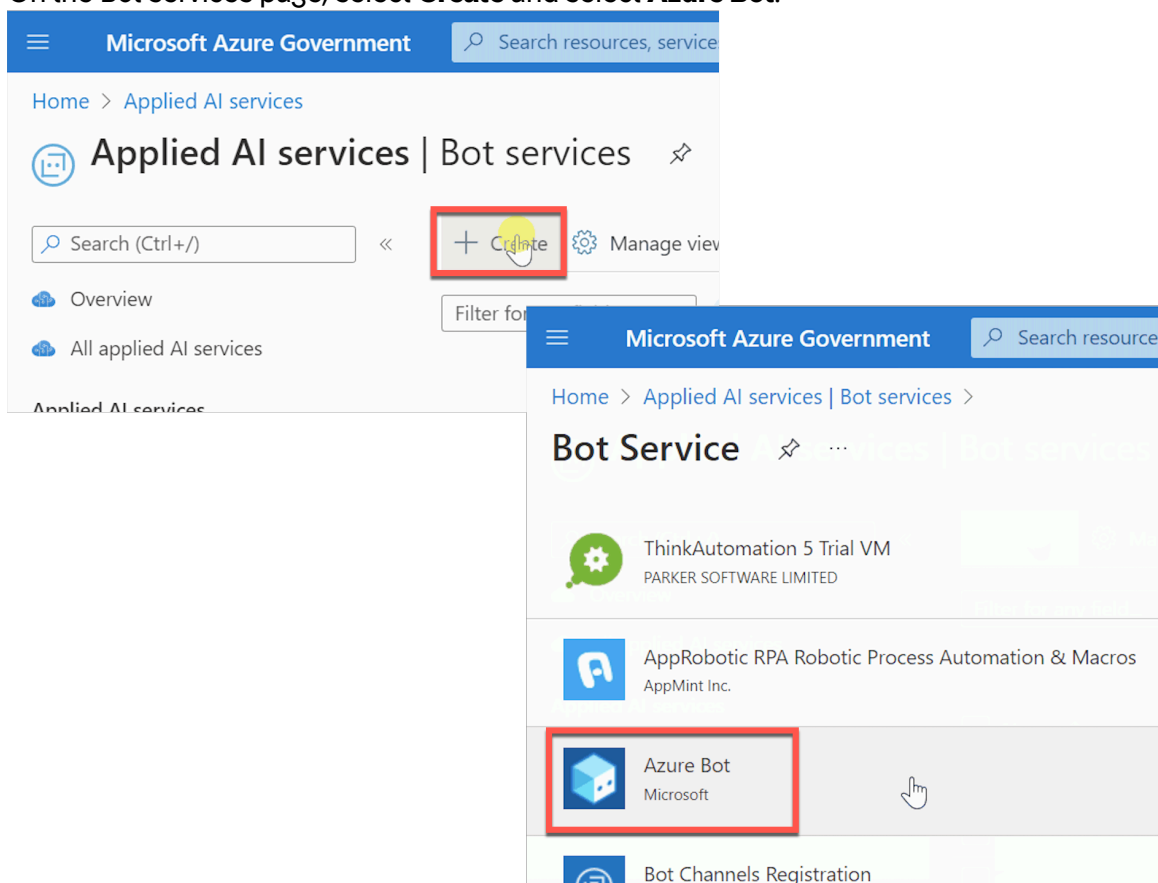
Role required: none

Procedure

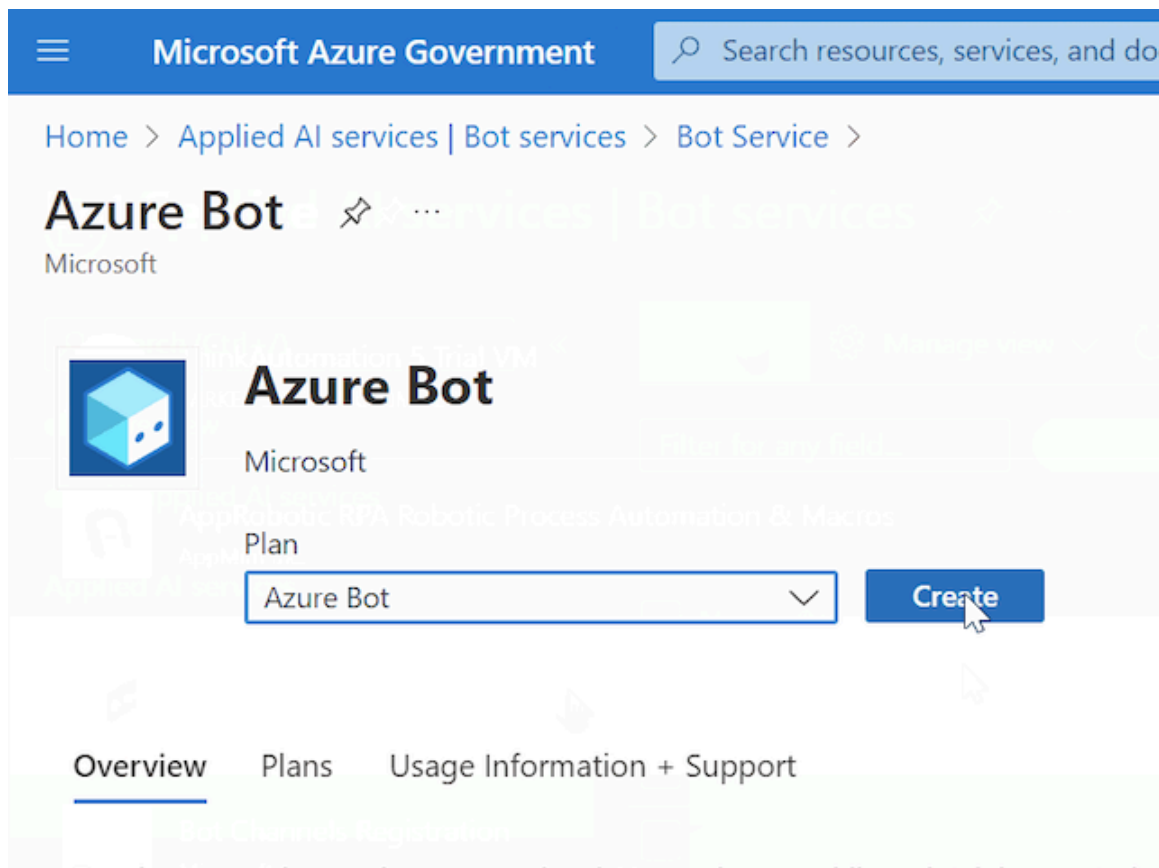
1. Log in to [Azure portal home page](https://portal.azure.us/#home) and search for Bot Services on the top search bar.



2. On the Bot services page, select **Create** and select **Azure Bot**.



3. On the Azure Bot page, select **Create** next to the Plan menu.



4. On the form, fill in the **Bot Handle**, **Subscription**, **Resource group**, **New resource group location**, and **Pricing** details.

Create an Azure Bot ...

Bot handle * ⓘ

Subscription * ⓘ

Resource group * ⓘ

[Create new](#)

Pricing

Select a pricing tier for your Azure Bot resource. You can change your selection later in the Azure portal's resource management. Learn more about available options, or request a pricing quote, by visiting the [Azure Bot Services pricing](#)

Pricing tier

Standard

[Change plan](#)

Microsoft App ID

A Microsoft App ID is required to create an Azure Bot resource. If your bot app doesn't need to access resources outside of its home tenant and if your bot app will be hosted on an Azure resource that supports Managed Identities, then choose option User-Assigned Managed Identity so that Azure takes care of managing the App credentials for you. Otherwise, depending on whether your bot will be accessing resources only in its home tenant or not, choose either Single tenant or Multi tenant option respectively.

Type of App

An App ID can be automatically created below or you can manually create your own, then return to input your new App ID and secret in the open fields.

[Manually create App ID](#)

Creation type

☒ Create new Microsoft App ID

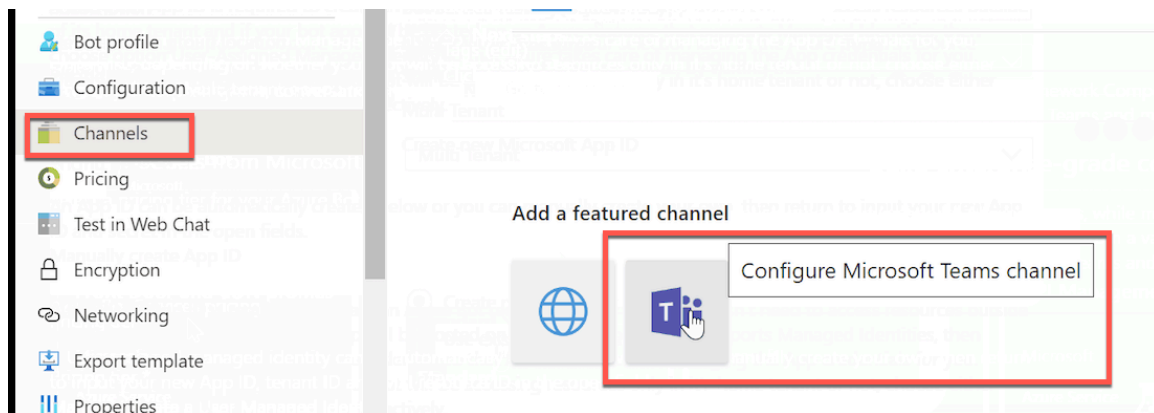
☐ Use existing app registration

- Under **Microsoft App ID**, select the type of application from the Type of App list.
You can create a multi tenant app or a single tenant app.

- Select the **Creation type** radio button.

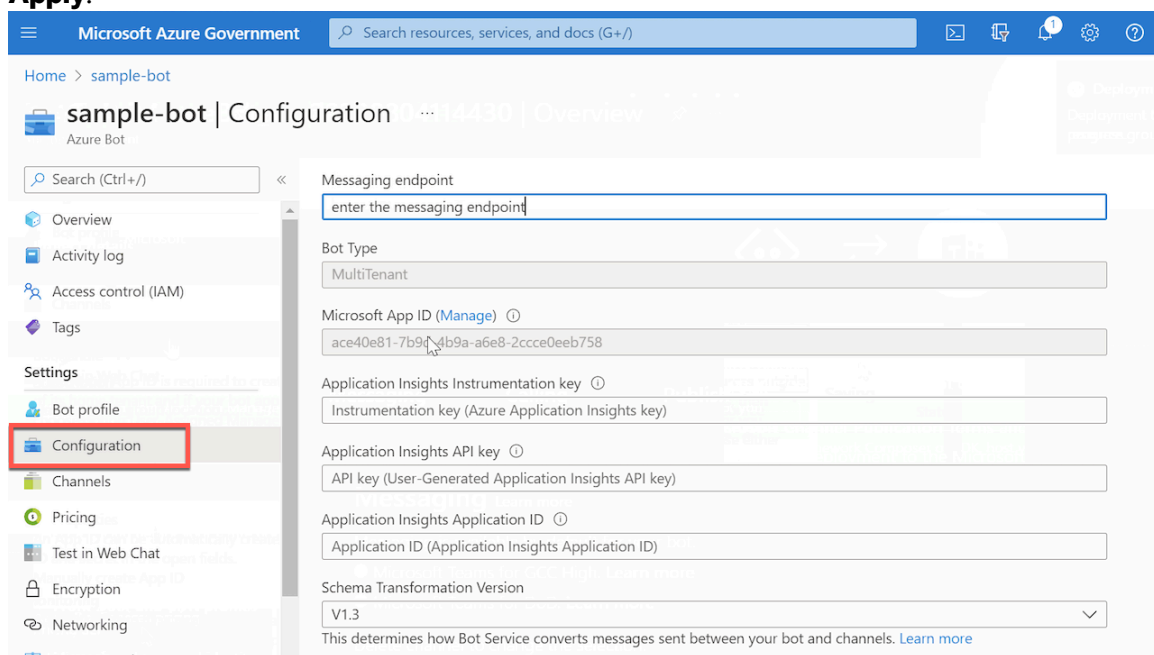
Note: If an existing app is being used, make sure that the type of app is the same as the type of bot you're creating. This verification is important because a multi tenant app will work with a multi tenant Microsoft Teams bot and vice versa.

- Select **Review + create**.
- Review the Basic bot details provided and select **Create**.
When the bot is successfully created, you will receive the Deployment succeeded message.
- On the left navigation, select **Channels** and select the Microsoft Teams icon under **Add a featured channel**.



10. On the Terms of Service pop-up, select **Save** and select **Agree**.
The channel gets saved.

11. On the left navigation, select **Configuration**, complete the configuration form, and select **Apply**.



Note: In the **Messaging endpoint** field, provide the instance URL address.

For example: `https://<instancename>.service-now.com/api/now/v1/cs/adapter/msft/events`.

The domain might not be `service-now.com` and could be different. For example, the domain for GCC is `servicenowservices.com`.

Replace the `<instancename>` with the name of your ServiceNow instance where you are integrating with Microsoft Teams.

12. On the left navigation, select **Overview**.

You can also get to the Overview page by navigating to **Azure Services > Azure Active Directory > Manage > App Registrations** and locate your application from the list to retrieve the following details.

13. Perform the following steps to retrieve the secret value code:

- a. Copy the **Application (client) ID** and **Directory (tenant) ID** of your application and make a note of it.
- b. On the left navigation bar under **Manage**, select **Certificates & Secrets**.
- c. Select **+ New client secret**, add your **Description** and **Expiration**, and select **Add**.
- d. Copy the secret value code in the **Value** field and make a note of it.

 **Note:** The secret value code is visible only once.

Integrate your self-configured bot with Microsoft Teams for GCC-H or DoD

Link your registered Microsoft Teams bot with your ServiceNow instance to integrate it with the Virtual Agent. Use your ServiceNow Virtual Agent application to install and configure Conversational Integration with Microsoft Teams.

Before you begin

Role required: virtual_agent_admin or admin and Microsoft Azure admin.

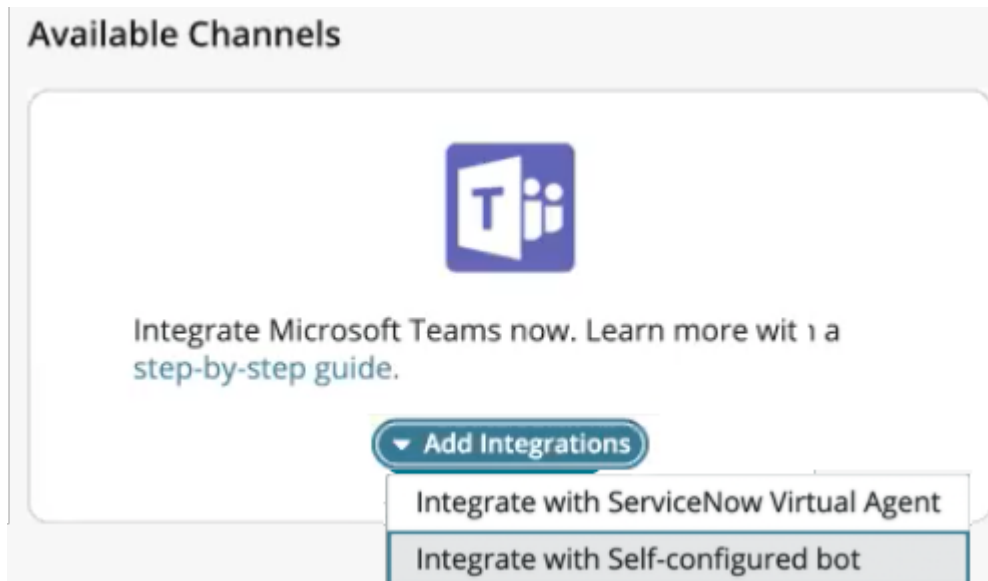
Procedure

1. Fetch the Tenant ID, Client ID (Application ID), Client Secret, and Bot Name details for your bot created in Microsoft Teams.
For more information, see [Retrieve bot details](#).

 **Note:** Use this information when setting up the self-configured bot in your ServiceNow instance.

2. As a ServiceNow admin, set up the self-configured bot on the ServiceNow instance in the global scope.
 - a. Log in to your ServiceNow instance and navigate to **All > Conversational Interfaces > Settings**.
 - b. In **General Settings** under **Channels**, select **View All**.
The Channels and integrations page opens.
 - c. Under the Available Channels section in the Microsoft Teams tile, select **Add Integrations**.

 **Note:** The **Add Integrations** drop-down is available only after installing the Conversational Integration with Microsoft Teams plugin (sn_va_teams) on your ServiceNow instance.



- d. From the **Add Integrations** drop-down, select **Integrate with your self-configured bot**.
- e. In the Integrate Microsoft Teams with self-configured bot page, provide the **Name of the bot**, **Tenant ID**, **Client ID (App ID)**, and **Client Secret** that you made a note while creating the Microsoft Teams bot and select **Submit**.

Integrate Microsoft Teams with self-configured bot

General > Channels and Integrations > Integrate Microsoft Teams with self configured bot

Integrate Microsoft Teams with self configured bot

Complete all information. To learn more, refer the [step-by-step guide](#). Submit

Name of the bot ⓘ

Tenant ID ⓘ

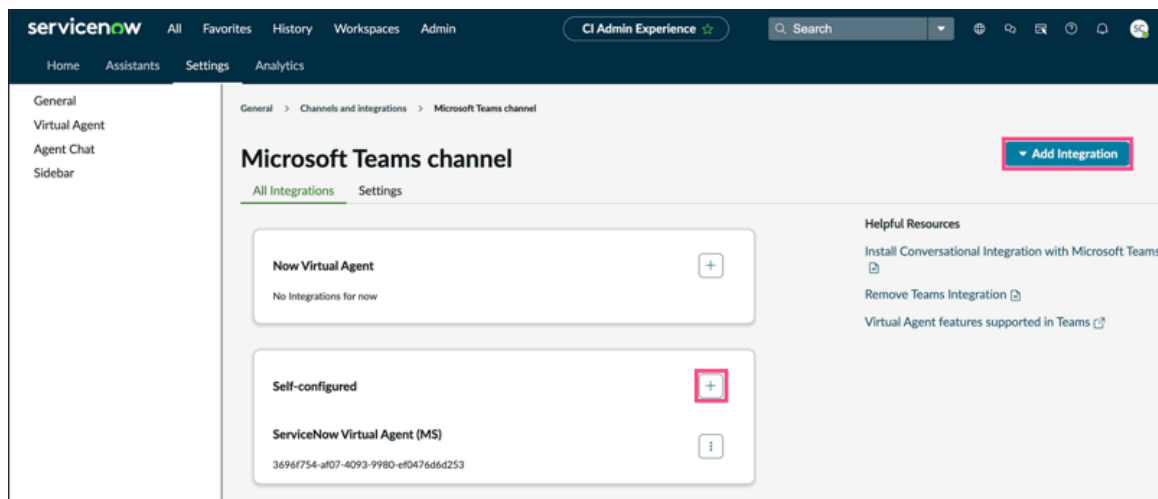
Client ID (App ID) ⓘ

Client Secret ⓘ

☐ Single tenant bot

Note: If you own multiple ServiceNow instances and would like to integrate additional bots for additional instances, repeat the preceding steps to add and integrate with bots.

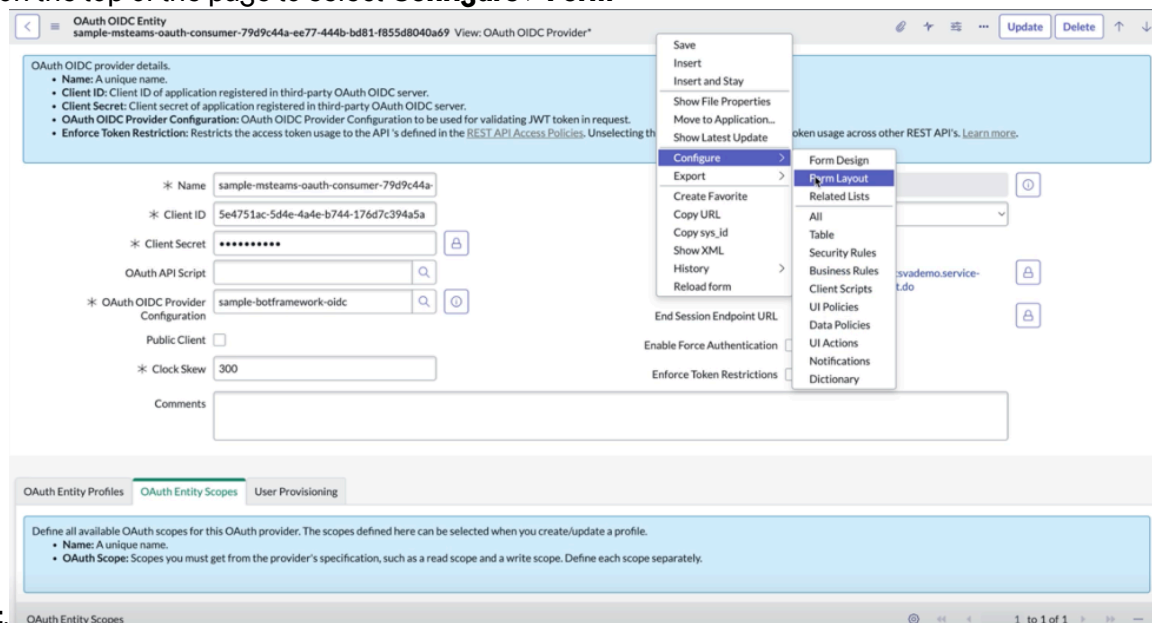
If you would like to integrate your ServiceNow instance with another Microsoft Teams bot, select the Plus icon against the Self-configured bot or select the **Add integration** drop-down on the Manage Microsoft Teams channel page and select **Integrate with your self-configured bot**.



For more information, see [Manage the ServiceNow Virtual Agent integration with Microsoft Teams](#).

User receives a message that the installation is successful.

3. In your ServiceNow instance, navigate to **System OAuth > Application Registry** and open the record that contains the **sample-msteams-oauth-consumer**.
4. Right-select on the grey bar header titled **OAuth OIDC Entity** on the top of the page to select **Configure > Form**



Layout.

5. Search for **Token URL** from the **Available** field, add it to the **Selected** field, and move it under **Redirect URL**.

6. Select **Save** to save the

layout.

You're redirected to the OAuth OIDC Entity record.

7. On the OAuth OIDC Entity form, select the lock icon to unlock the **Token URL** field, and then update the default value:
 - For multi-tenant application: `https://login.microsoftonline.us/MicrosoftServices.onmicrosoft.us/oauth2/v2.0/token`
 - For Single-tenant application: `https://login.microsoftonline.us/<Tenant-ID>/oauth2/v2.0/token`
8. Scroll down the OAuth OIDC Entity form, select the **OAuth Entity Scopes** tab, and update the OAuth scope's default value to `https://api.botframework.us/.default`.
9. On the OAuth OIDC Entity form, select the information icon next to the **OAuth OIDC Provider Configuration** field and select **Open Record**.
10. On the OIDC Provider Configuration form, update the **OIDC Metadata URL** to `https://login.botframework.azure.us/v1/.well-known/openidconfiguration` and select **Update**.

Auto-generate the manifest file and upload it into Microsoft Teams for GCC-H or DoD

After you complete integrating the bot on the ServiceNow instance, configure the manifest file, auto-generate it, and upload the package file to Microsoft Teams to start conversing with the Virtual Agent.

Before you begin

Role required: admin

About this task

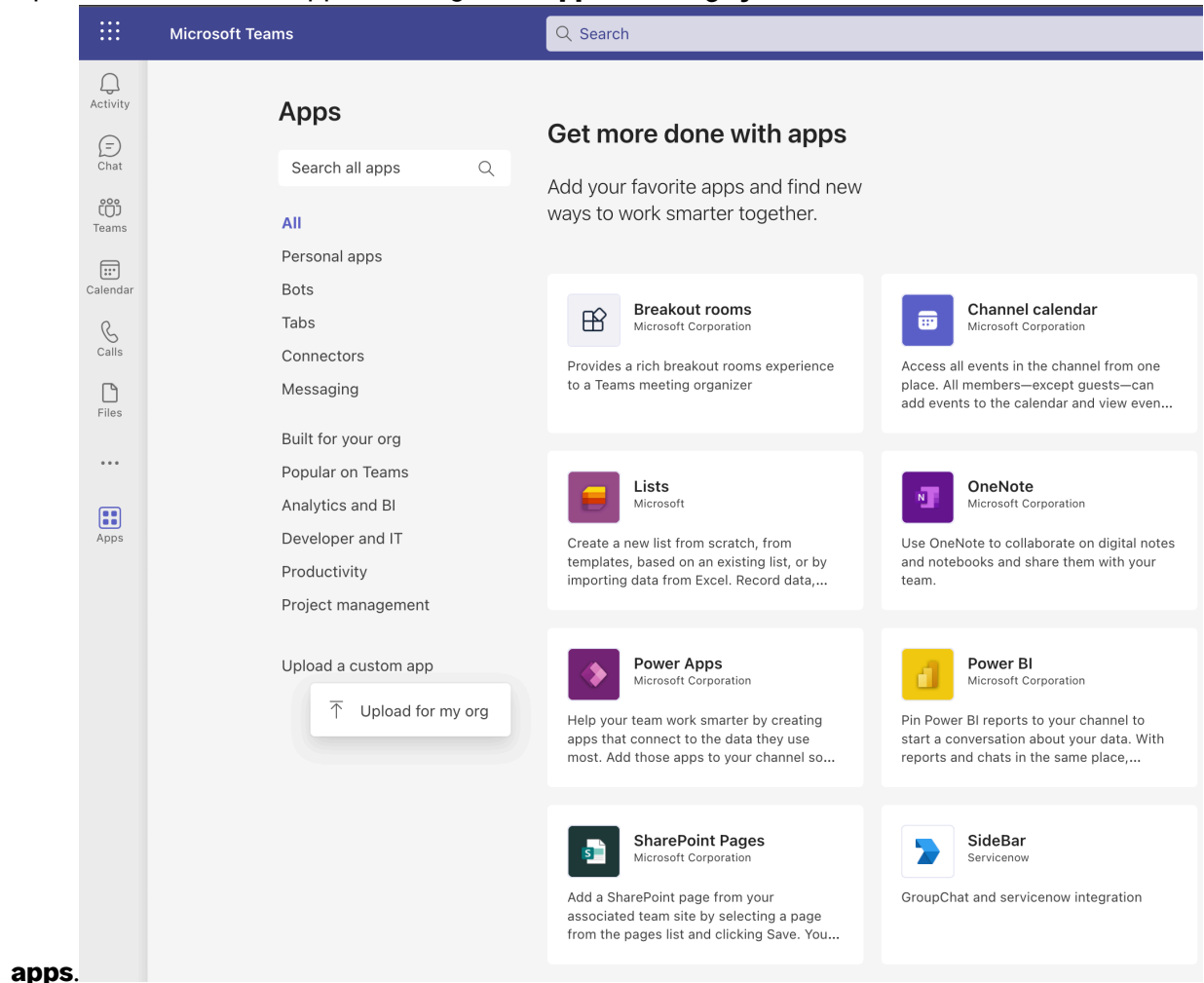
The self-configured bot that you created is not available in the Microsoft global app store, unlike the ServiceNow pre-published app - ServiceNow Virtual Agent. You must upload your app to Microsoft Teams. Uploading adds the app to the team that you select and you and your team can participate in the end-to-end conversations with the bot.

i Note:

You need permission to upload custom apps in Microsoft Teams. To learn how to enable it, refer to the Microsoft documentation.

Procedure

1. To configure the bot, auto-generate the manifest file, and download the manifest configured file in your ServiceNow instance, see [Auto-generate the manifest file for uploading on Microsoft Teams](#).
2. To publish the manifest file, from Microsoft Teams, perform the following steps:
 - a. Open Microsoft Teams app and navigate to **Apps > Manage your**

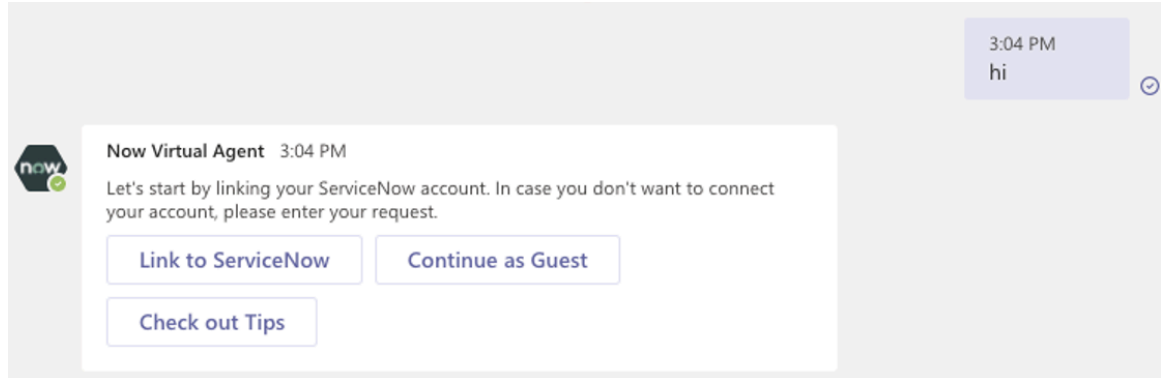


- b. Select **Upload an app to your org's app catalog** to release the self-configured bot to the entire organization.
 - c. Upload the zip file and select **Add/Install**.
 - d. After you successfully published the bot, select the 3-dot menu on the left pane to locate your app (search in the Find an app bar).  You have successfully published the bot on Microsoft Teams. It should now be available for your organization and you can start interacting with the bot.
3. **Note:** If you have enabled pre-linking by turning on **Automatically Link ServiceNow user profiles** on the Messaging App Integration UI page, users are pre-linked without typing hi. For more information about pre-linking your accounts, see [Installing Microsoft Teams for all Virtual Agent users](#). If you have turned off the check box, use the following manual account linking process described.

Type **hi** to start interacting with the bot.

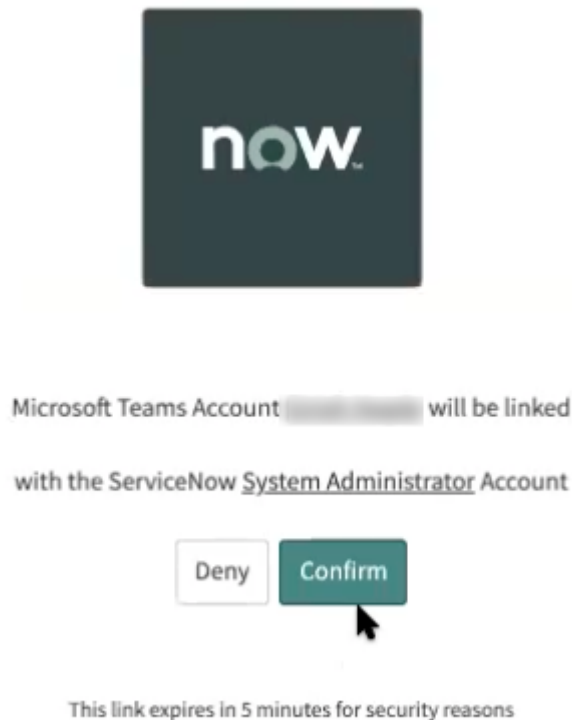
The bot presents a prompt that provides options to authenticate, such as **Link to ServiceNow**, **Continue as Guest**, and **Check out Tips**.

Microsoft Teams bot responses



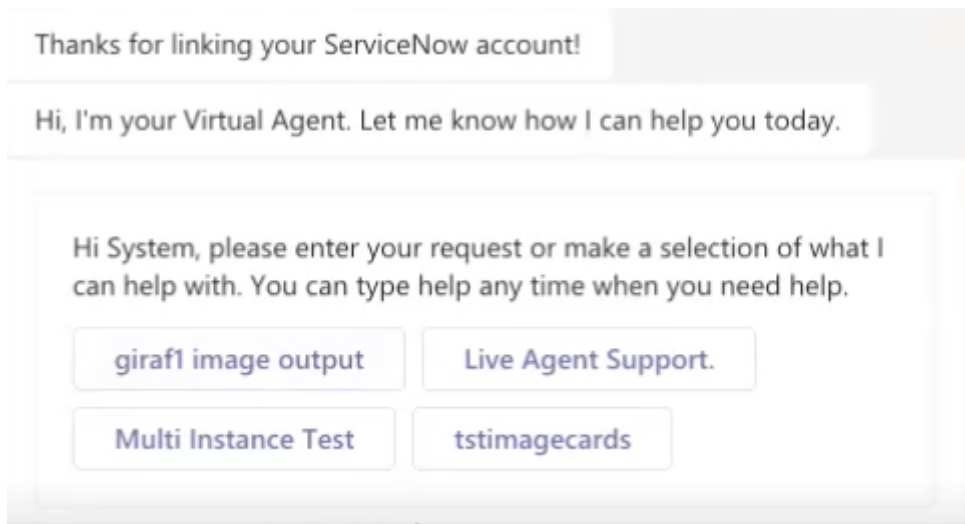
The **Link to ServiceNow** option requires you to enter their ServiceNow instance credentials. If you choose to link to your ServiceNow account, the following screen is displayed asking you to confirm the account linking.

Linking MS Teams account with ServiceNow account



Account linking associates your Microsoft Teams account with your ServiceNow account for the ServiceNow instance that is integrated with the Conversational Integration with Microsoft Teams. If your account is linked, you can run Virtual Agent topics that use ServiceNow information and records.

ServiceNow account linked with Microsoft Teams tenant



If you do not link your ServiceNow accounts, you can access and run only the public topics.

4. Configure the bot on your ServiceNow instance.

For more information, see [Integrating Virtual Agent with messaging apps](#).

What to do next

You have successfully integrated Virtual Agent with Microsoft Teams using the self-configured method. If you are interested in getting additional ITSM and HR capabilities in Microsoft Teams, see [these instructions for using a self-configured bot](#) with ServiceNow for Microsoft Teams.

Limitations in GCC-H or DoD for Microsoft Teams integration with Virtual Agent

Learn about the limitations for Microsoft Teams Government Community Cloud - High (GCC-H) or the US Department of Defense (DoD) Microsoft Teams integration with Virtual Agent.

Limitations

- 1. Manifest version:** Up to v1.10. Ensure that the template that you create has version 1.10 or an earlier version.
- 2. Adaptive Cards:** Enable the `sn_va_teams.send_image_as_data` system property to upload images to your conversation on Microsoft Teams that is integrated with GCC-High. Apply this system property to image and card controls. If you're using an image URL, ensure that its source is a ServiceNow instance.

Deactivate streaming for all GCC customers in Microsoft Teams

Control streaming in Microsoft Teams for any and all Government Community Cloud (GCC) varieties.

Before you begin

Role required: admin or virtual_agent_admin.

About this task

Note: Custom Engine Agent (CEA) is replacing Declarative Agent (DA), the prior Microsoft Copilot integration. The CEA enables Virtual Agent to be discoverable by Microsoft Copilot, with full functional access to ServiceNow Otto for Virtual Agent and multi-turn conversations.

You must have version 10.1.1 or higher of the Microsoft Teams plugin to have CEA support. In version 10.2 of the Microsoft Teams plugin, streaming is inactive by default and CEA is active by default.

You can deactivate streaming as needed with this procedure, by setting values in the Now Assist Channel Configs [sys_now_assist_channel_config] and Custom Adapter Properties [sys_cs_custom_adapter_property] tables. You can use these instructions with all Government Community Cloud types: GCC, GCC-H, and GCC-DoD.

Procedure

1. Navigate to **All > sys_now_assist_channel_config.list**.
2. In the entry for *Teams*, set the *Streaming Ready* value to

false.

3. Navigate to **All > sys_cs_custom_adapter_property.list**.
4. In the search bar, select the search value **for text** from the drop-down menu, and enter `sys_cs_custom_adapter_property`.
One or more records for `sys_cs_custom_adapter_property` appear.
5. Set the *Value* for each record to

false.

Result

Streaming is disabled for your version of GCC in your instance.

Active	Agentic Mode	Device Type	Doc QnA	Output Type	Result Type	Search Result Type	Send Markdown	Streaming Ready	Strip Html
Search	Search	Search	Search	Search	Search	Search	Search	Search	Search
true	On	Teams Copilot	Not Supported	Synthesized	All	Genius Search Result	true	true	Everywhere
true	On	Now Assist Panel	Topic	Synthesized	All	Genius Search Result	false	true	None
☐	On	Teams	Not Supported	Synthesized	All	Genius Search Result	true	false	Everywhere
true	On	Web Client	Topic	Synthesized	All	Genius Search Result	true	true	None
true	On	Android Device	Topic	Synthesized	All	Genius Search Result	true	true	Only Cards
true	On	iOS	Topic	Synthesized	All	Genius Search Result	true	true	Only Cards

Name	Value	Description
*publish	Search	Search
publish_checkpoint_messages	true	
publish_checkpoint_messages	true	

If you want to reactivate streaming, repeat these steps, but set the *Value* for all entries to `true`.

Create and integrate a self-configured bot for a single tenant page

Create a self-configured single tenant bot with Microsoft Teams for integration with Virtual Agent.

Before you begin

Role required: `virtual_agent_admin` or `admin` and Microsoft Azure admin.

About this task

Creating and integrating a single tenant bot is similar to creating a GCC-H or DoD bot, with minor adjustments.

Procedure

1. Follow the instructions in [Create a bot in Microsoft Teams for GCC-H or DoD](#), with the following changes.
 - a. Follow steps 1 through 4 as normal.
 - b. In step 5, select **Single tenant**.
 - c. Follow the remaining steps as normal.
2. Follow the instructions in [Integrate your self-configured bot with Microsoft Teams for GCC-H or DoD](#), with the following changes.
 - a. Follow steps 1 through 6 as normal.
 - b. In step 7, select **Single tenant**, and add your tenant ID, but keep the `.com` domain, for example: `https://login.microsoftonline.com/<tenant-id>/oauth2/v2.0/token`.
 - c. Follow steps 8 through 10 as normal.

Result

Your single-tenant bot is ready for use in Virtual Agent.

Enable Microsoft Teams integration in ServiceNow Protected Platform (SPP)

When installing Conversational Integration with Microsoft Teams, the ServiceNow AI Platform[®] makes the instance configuration simpler by dynamically determining the bot type for commercial and SPP (ServiceNow Protected Platform) environments from the Tokyo release.

The process of installing and configuring Microsoft Teams integration with Virtual Agent in an SPP environment is similar to that of the installation and configuration of the pre-published bot in a commercial environment. But it is the environment in which you are installing makes the difference and the bot is available based on the installation environment.

After you complete the Microsoft Teams integration with Virtual Agent in an instance with SPP environment, the **Now VirtualAgent Australia SPP** bot is available for Australian Govt customers.

For more information on the installation and configuration, see [Install Conversational Integration with Microsoft Teams](#).

Configure Virtual Agent for Microsoft Teams

Configure your Microsoft Teams bots that are integrated with Virtual Agent to enable notifications, to link ServiceNow user profiles, and to set up system messages and contextual actions.

Before you begin

Role required: `admin`

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In **General Settings** under **Channels and integrations**, select **View All**.
3. On the Channels and integrations page, in the Microsoft Teams tile, select **Manage**.
4. Select the **Settings** tab.
5. In the Enable Link Authentication section, configure the different link opening experiences using Smart Links.

For more information about enabling link authentication for your Microsoft Teams bots, see [Configure link authentication and opening experience in Microsoft Teams](#).

6. Swipe to the left the **Enable Notification for all users** toggle button to disable notifications for the linked users.

Note: The **Enable Notification for all users** toggle button is selected by default.

The **Automatically Link ServiceNow user profiles** toggle button is selected by default and disabled for any further change. This option links all the active ServiceNow accounts automatically to the associated Microsoft Teams bot.

7. Set up the **Global Messaging Settings**.

Note: Any changes made to these settings will reflect in all the channels.

- **System Messages:** Customize the default system messages displayed during Virtual Agent conversations.

For more information about changing or updating a system message, see [Change system messages](#).

- **Contextual Actions:** Customize the supported actions per user command inputs.

For more information about updating a contextual action, see [Contextual actions for custom chat integrations](#).

What to do next

The Virtual Agent bot and Microsoft Teams tenant are now integrated for use on your ServiceNow instance. Your messaging users are automatically linked to their ServiceNow accounts.

- Notify your users that the Virtual Agent bot for Microsoft Teams is available for use.
- To improve the live agent experience for your users, you can activate the display of the estimated wait time for live chat support. When a user asks to chat with a live agent, a card shows the approximate wait time to talk with an agent, and gives the user the option to cancel the chat. For details on activating this feature, see [Configure Agent Chat](#).

Configure branding for your ServiceNow Virtual Agent bot in Microsoft Teams

Enable users to configure branding for the published Microsoft Teams bot app, the ServiceNow[®] Virtual Agent. Users are provided with the flexibility to customize the default ServiceNow branding for the Microsoft Teams production bot name and icon.

Before you begin

- Ensure that you have the admin access to your Microsoft Teams tenant and Microsoft Teams admin center.
- Ensure that Virtual Agent is installed on your instance.
- Ensure that the Conversational Integration with Microsoft Teams store app is installed.

Role required: admin

Procedure

1. Log in to [Microsoft Teams](#)  admin center.
2. Navigate to **Teams apps > Manage apps**.
3. In the list of apps, search for the Now Virtual Agent app using the Search bar and open it.
4. Select **Customize** to customize the app.
5. In the Customize panel, you can edit the app name, short description, color icon, outline icon, and accent color.

 **Note:** Follow the tool tips for file size and format restrictions for each field. You can also refer to [Microsoft documentation](#)  on further details on the app customization functionality.

6. Select **Apply**.
You will see the **Publish application** pop-up.
7. Select **Publish**.

 **Note:** Please note that the changes you made to the app may take up to 24 hours to reflect.

Configure link authentication and opening experience in Microsoft Teams

Link authentication and opening experience in Microsoft Teams provides a seamless experience for end users to interact with ServiceNow links when you use Virtual Agent on Microsoft Teams.

Before you begin

Role required: virtual_agent_admin or admin

Ensure that your Microsoft Teams integration is available in the All Integrations tab of the Channels and integrations page before enabling link authentication.

Ensure that your #Microsoft Teams email ID matches with one of the system users' email.

Ensure that you are in the #Conversational Integration with Microsoft Teams scope while completing this step (instead of the Global scope).

About this task

To configure smart links to open in a pop-up or Microsoft Teams tab, admins must first complete the following link authentication steps before moving on to configure smart links.

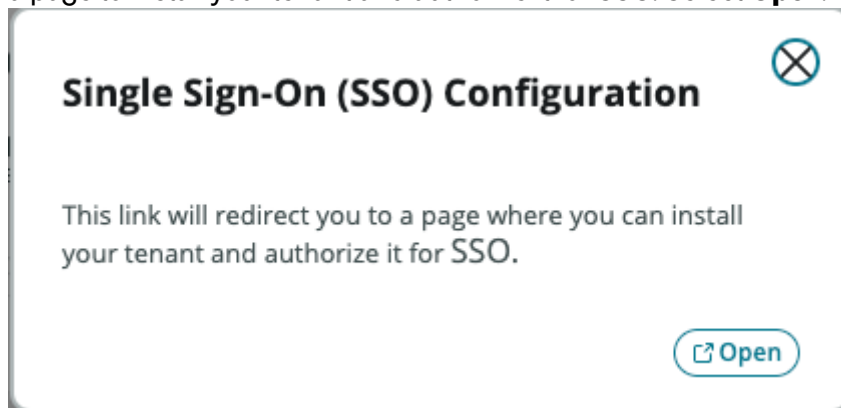
 **Note:** When the status of link authentication is inactive, the link opening behavior falls back to New Browser Tab even when admins configure a link to be opened in a pop-up or Microsoft Teams tab. Therefore, activating link authentication is a pre-requisite of using a pop-up and Microsoft Teams tab.

Important: Be informed that Smart Links do not work for Now Virtual Agent if your instance has a custom domain.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In **General Settings** under **Channels and routing**, select **View All**.
3. On the Channels and integrations page, in the Microsoft Teams tile, select **Manage**.
4. In the Manage Microsoft Teams channel page, select the **Settings** tab.
5. In the Enable Link Authentication section, under **Step 1. Configure SSO for tenant**, select the **Configure SSO** button.

The Single Sign-On (SSO) Configuration pop-up opens to inform you that the link directs you to a page to install your tenant and authorize it for SSO. Select **Open**.

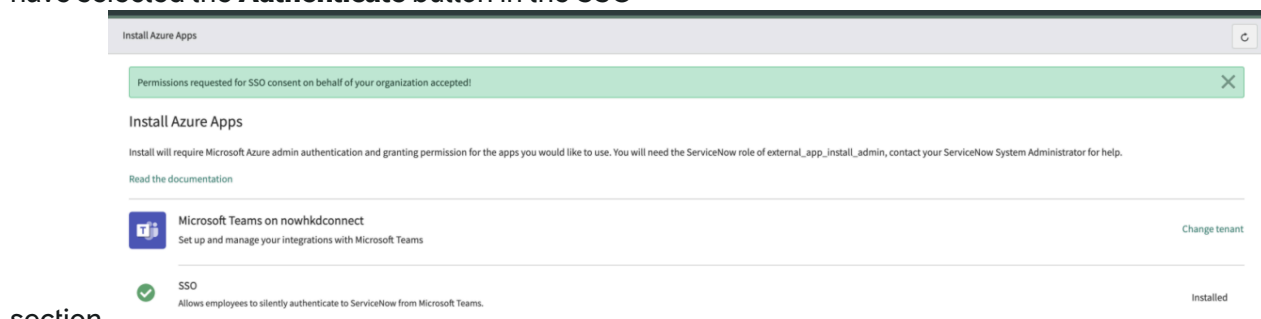


For more information about configuring Single Sign-On, see [Grant permissions to required Microsoft Azure apps](#).

Note:

- SSO can only be enabled on one Microsoft Teams tenant at any given time. If SSO is already enabled on another tenant, make sure to switch the tenant so that SSO can be enabled on the new tenant.
- If you have already configured a tenant and would like to change it to another tenant, then you can do so by selecting **Change tenant**. Once you confirm to change the tenant, you are directed to the Microsoft Teams login page for changing the tenant.

After entering the tenant information, ensure that you have selected the **Authenticate** button in the SSO



section.

6. After you have configured SSO, you must enter an APP ID.
To Find your APP ID, log into the [Microsoft Teams admin center](#), navigate to **Manage apps**, select the app you'd like to configure, and fetch the app ID.

The screenshot shows the Microsoft Teams admin center interface. At the top, there's a search bar and navigation icons. The main header indicates 'Manage apps \ Now Virtual Agent'. The app card for 'Now Virtual Agent' by ServiceNow is displayed, showing it is 'Publisher attested' and 'Allowed'. Below the app card, there are tabs for 'About', 'Permissions', 'Settings', and 'Plans and pricing'. The 'Overview' section features a chat interface preview and text explaining that the app allows performing routine ServiceNow tasks within chat. The 'Details' section contains a table with various app attributes.

Short name	Categories	Certification
Now Virtual Agent	Productivity	Publisher attested ☐
Scope	Admin can install in meetings	App ID
Personal	No	49471a10-fdbc-4ffb-b0b8-944f3df985d9
Publisher	External app ID	Privacy policy URL
ServiceNow	--	https://www.servicenow.com/privacy-statement.html ☐
Website URL	Terms of use URL	Documentation URL
https://www.servicenow.com/ ☐	https://www.servicenow.com/terms-of-use.html ☐	--

Note: If you are using ServiceNow for Teams app, search for the app ID for ServiceNow for Teams and make sure not to use External App ID.

- On the Link Authentication section, at **Step 2. Enter App ID**, enter the app ID that you fetched from your Microsoft Teams admin center, and select **Save**.
You receive a confirmation that your app ID has been saved successfully. You notice that the status of against SSO is green.

Configuring smart links in Microsoft Teams

Configure smart links for your Virtual Agent app in Microsoft Teams to enable different link opening experiences.

Smart link settings in the admin console enable admins to define one of the three link opening options in Microsoft Teams.

1. Microsoft Teams task module/pop-up
2. Microsoft Teams tab
3. New browser tab

Through link authentication and Single Sign-On (SSO) support, link content can be rendered in a pop-up, Microsoft Teams tab, or a new browser tab.

You can configure smart links for Microsoft Teams from the URL navigation system action under **Target Location**. For more information about configuring smart links, see [\(Legacy\) Create a smart link preference](#).

There are three valid link opening options that are applicable to Microsoft Teams and the smart link settings in admin console enables admins to define where to open a link in Microsoft

Teams.

1. **Load in Place:** Links open inside a Microsoft Teams tab.

Note:

- Only ServiceNow links are supported currently.
- While **Load in Place** is always an option for admins to choose from, this functionality is only supported when admins have already installed an additional tab within Microsoft Teams (for example, Employee Center tab as part of the ITSM/HR plugins).
- Admins must ensure that the following steps are complete:
 - MS Teams - App Core (com.snc.msteams.app.core) plugin is installed as part of ITSM/HR plugins and additional tab has already been enabled.
 - The `sn_va_teams.view_msft_tab` system property is set to true.
 - The link authentication status on your ServiceNow instance is green.

2. **New Browser Tab:** Links open in a new browser tab (a new tab in Google Chrome, Safari, etc.).

3. **Popup:** Links open in a pop-up/task module in Microsoft Teams. When pop-up is selected, admins also have the option of selecting a pop-up size of Small, Medium, or Large. The default size is Large.

Before you start configuring pop-up using Target location, double check that the value of `sn_va_teams.view_non_video_msft_task_module` system property is **true**. When the link authentication status is active from the previous step, the value is automatically set to

true. When this system property is true, you can use the pop-up. If you want to disable pop-up in Microsoft Teams, you can manually set this property to **false**.

Note: Only ServiceNow links are supported currently.

When no conditions are specified on the Target Location record, the valid link opening mechanism applies to both chat widget and Microsoft Teams in a way that makes sense to its host application. For example, if admins specify a URL pattern to be opened using **Load in Place** without any conditions, the link on chat widget opens by refreshing the topmost browser frame (chat widget's unique behavior). However, the same link opens in a Microsoft Teams tab.

If both chat widget and Microsoft Teams are valid channels for the customer, then admins can define different target locations for each channel by specifying the device type in the condition field (such as Teams and mweb). If the device type is specified as Teams and no other device types are specified, then that particular target location record will only be applied in Microsoft Teams.

Installing Microsoft Teams for all Virtual Agent users

Pre-link your Virtual Agent requesters to a ServiceNow instance before they run the Conversational Integration with Microsoft Teams. Batch pre-linking enables your Virtual Agent users to immediately chat with a virtual agent and receive notifications without going through the initial authentication linking process.

Before you begin

Note: In order to send notifications to users, the app must be installed to all users. The recommended approach for installing the app to users is [Microsoft Teams App Setup Policy](#). When a user gets added to the policy, Microsoft will install the app to the user, and send us an `installationUpdate` event. When the event is received, the conversation with the user starts and contains the welcome message.

To install the app otherwise, use the following directions.

To install the app otherwise, use the following directions.

- [Install Conversational Integration with Microsoft Teams](#), with the **Automatically Link ServiceNow user profiles** option enabled.
- [Set up Microsoft Teams Graph spoke](#).
- [Set up Microsoft Active Directory spoke](#).

Roles required:

- virtual_agent_admin
- external_app_install_admin
- One of the following Microsoft Teams administrator roles:
 - Global Administrator
 - Application Administrator
 - Cloud Application Administrator
- admin or schedule_admin to change the scheduled job script

About this task

When the **Automatically Link ServiceNow user profiles** option is enabled on the Settings page of the Manage Microsoft Teams channel, a batch of up to 10,000 users is automatically pre-

linked to a ServiceNow instance. Your existing users are pre-linked during the initial run. Newly added users are pre-linked during subsequent daily runs.

To prevent automatic batch pre-linking, disable the **Automatically Link ServiceNow user profiles** option on the Messaging Apps Integration UI page.

Batch pre-linking of your Virtual Agent users to a ServiceNow instance before integrating with Microsoft Teams includes the following benefits:

- Notifications are proactively sent by Virtual Agent to users when their identity in Microsoft Teams is associated with their identity in a ServiceNow instance. This is also true when the user is already linked with ServiceNow Virtual Agent.
- If a user is pre-linked, and when Microsoft Teams notifications are enabled in the app, notifications are pushed to the app even when a user is not logged into a Microsoft Teams account.

Batch pre-linking happens automatically via the **MS Teams Daily Pre Install Job** scheduled job. This job runs by default daily at 1:00 a.m., but you can change the time, if desired. To modify the default scheduled job run time or time zone, access the **MS Teams Daily Pre Install Job** Scheduled Script Execution form.

Procedure

1. Navigate to **All > System Definition > Scheduled Jobs**.
2. Search for the **MS Teams Daily Pre Install Job** scheduled job and select to open the Scheduled Script Execution form for the selected record.
3. In the **Run** field, change the run time to your desired time.
4. For a description of the other fields that you can change in this form, including **Time zone**, see [Automatically run a script of your choosing](#).
5. Select **Save**.

What to do next

You can also customize the auto-linking process for Conversational Integration with Microsoft Teams. For more information, see [Customize auto-linking for Conversational Integration with Microsoft Teams](#).

Customize auto-linking for Conversational Integration with Microsoft Teams

Customize auto-linking for user profiles by defining the email Id of the user in any custom table rather than just the User [sys_user] table.

Before you begin

- Make the User [sys_user] table extensible.
- Create a custom table with custom email fields extending the User [sys_user] table.
- Ensure that the scope of the custom table is Microsoft Teams, or else, create a cross scope privilege.
- Populate the system property in the *table_name.column_name* format.

Role required: admin

About this task

The auto-linking process searches the user table for the email ID and if found, links the user to the profile automatically. You can also customize the auto-linking process by defining the email Id for auto/pre-linking in any custom table rather than the current User

[sys_user] table. You can customize the auto-linking process of user profiles by using the *sn_va_teams.auto_link_email_attribute* system property that defines the column from which the email ID of the user must be read for auto-linking.

Note:

- By default, the value of the system property is empty. If it is set to <empty>, then the email ID for the user is fetched from the [sys_user] table.
- If the value of the system property is specified in the format of *table_name.column_name* (both table_name and column_name must be the physical names from their respective name fields), then the value is read from the column name specified. For example, **sn_va_teams_extendeduser.u_custom_mail**.

Procedure

1. In the navigation filter, enter `sys_properties.list`.

The entire list of properties in the System Properties [sys_properties] table is displayed.

2. Search and open the *sn_va_teams.auto_link_email_attribute* system property.
3. Provide a value in the format of *table_name.column_name* and save the record.
Once the record is saved, you can initiate the conversation with the bot.

Configure promoted topics for Conversational Integration with Microsoft Teams

Configure promoted topics to push out important, common topics for users' quick consumption during a conversation with the Microsoft Teams bot. You can configure up to six different promoted topics to be displayed on the Microsoft Teams channel greeting message.

Before you begin

Role required: admin or va_admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings > Virtual Agent**.
2. In **Virtual Agent settings** under **Custom greetings and setup**, select **View All**.
The promoted topics that you have previously configured will reside in the default chat experience. For more information, see [\(Legacy\) Configure a Virtual Agent NLU chat experience](#). If default chat experience is the only row that you have on your instance, then you observe that the promoted topics will be applied to chat widget, Microsoft Teams, and Slack (unless you configure something unique for Microsoft Teams as instructed below).

If you want to set up unique promoted topics for Microsoft Teams that have to be different from the chat widget, follow the procedure below.
3. In the Custom Greetings & Setup page, select **New**.
4. On the form, fill in the fields.

Create New Custom Greetings and Setup

Field	Description
Name	Name of the chat experience. For example, Microsoft Teams chat experience.
Description	Description of the chat experience.
Active	Enable or disable the chat experience.

Field	Description
Order	Order for the promoted topics to appear on the chat.
Domain	Application scope of the chat experience.
Condition Mode	Situation where your user gets this chat experience. Available Conditions Modes: ○ Advanced ○ Simple
Condition	Condition that defines the condition mode for the chat experience. Set up a simple condition with [devicetype] [is] [teams]. Note: If you set up [devicetype] [is] [teams] in the Condition pop up with a higher order than the default chat experience, then Microsoft Teams picks up the setup topics and promoted topics defined in this experience. This change will not affect chat widget, which is still going to inherit the setup topics and promoted topics defined in the default chat experience.

5. Select **Create custom experience**.

6. Add promoted topics in the Microsoft Teams chat experience form that you created.

- On the Microsoft Teams form, select the **Promoted Topics** tab, and select **Add topic**.
- On the form, fill in the fields.

Create New Promoted Topics

Field	Description
Topic	Name of the topic being chosen. Use the Search icon to choose a topic.
Order	Provide the order for the topic chosen.

Note: Similar to chat widget, you can configure a maximum of six promoted topics for the Microsoft Teams channel.

c. Select **Save**.

What to do next

Start a conversation with the Microsoft Teams bot and you should be able to see the promoted topics after the greeting message that you have setup for the Microsoft Teams channel.

If you have not configured the promoted topics for Microsoft Teams, then the promoted topics from the default chat experience are displayed.

Configure Microsoft Teams Message Extension

Configure Microsoft Teams Message Extension to enable users to use AI Search to find content (Knowledge articles and catalog items), and share information in a one-on-one or group chat. For the base system Virtual Agent integration with Microsoft Teams, this feature is enabled by default.

Before you begin

Role required: admin

About this task

Administrators have the option to configure the number of search results that appear in Message Extension and control the access level of a Guest user.

Procedure

1. Navigate to **All > AI Search > Search Experience > Search Applications** to configure the number of search results that appear in Message Extension.
2. In the **Search Results Limit** field, adjust the number of search results that you want to appear in Messages Extension, and then select **Update**.
Message Extension then generates the new results limit when a user performs a search if AI Search is able to find that number of results. For example, a limit may be set to 8 but if AI Search only finds 6 results, then 6 items are shown.
3. Navigate to **All > System Properties > All Properties** and select *message_extension_guest_access_only* to control the access of the Guest user. When the flag is set to true, Message Extension returns the results that are only visible to the Guest users. Only the items that are publicly available are returned while the property is set to true. By default, this value is set to false, which means that a user can see all search results that they have access to. However, if you set the system property value to true, a user can only access the search results that are publicly available. This system property is useful if you want to avoid having a user accidentally sharing something that they shouldn't be sharing. You don't typically have to change the value. For self-configured bots, see the procedure in [Auto-generate the manifest file for uploading on Microsoft Teams](#) for more information.

Configure Microsoft Azure Conditional Access for Microsoft Teams tenant

You must configure conditional access in Microsoft Azure to restrict users from accessing the production applications. Conditional access helps you from accidentally overriding your production integration with a custom or personal instance integration.

Before you begin

Roles required: virtual_agent_admin and user with Azure admin access.

Procedure

1. Log in to [Microsoft Azure portal](#) .
2. Search for **Azure AD Conditional Access**.
3. Navigate to **New Policy > Create New Policy** and provide the policy a name.<p>

New ...

Conditional Access policy

Control access based on Conditional Access policy to bring signals together, to make decisions, and enforce organizational policies.

[Learn more](#)

Name *

Example: 'Device compliance app policy'

Assignments

Users or workload identities ⓘ

0 users or workload identities selected

Cloud apps or actions ⓘ

No cloud apps, actions, or authentication contexts selected

Conditions ⓘ

0 conditions selected

4. Under Users or Workload identities, select **0 users or workload identities selected**.

A **What does this policy apply to?** pop-up is displayed.

5. Under Include, select **All users**.

Name *

Example: 'Device compliance app policy'

What does this policy apply to?

Users and groups

✖ Include

✖ Exclude

☐ None

☒ All users

☐ Select users and groups

☐ All guest and external users ⓘ

☐ Directory roles ⓘ

☐ Users and groups

Assignments

Users or workload identities ⓘ

All users

Cloud apps or actions ⓘ

No cloud apps, actions, or authentication contexts selected

Conditions ⓘ

0 conditions selected

Note: Selecting All users will include the users in the restriction policy.

6. Under Exclude, select **Users and groups** to exclude admin users who have access to override the tenant.

Control access based on Conditional Access policy to bring signals together, to make decisions, and enforce organizational policies.
[Learn more](#)

Control access based on who the policy will apply to, such as users and groups, workload identities, directory roles, or external guests.
[Learn more](#)

Name *

Example: 'Device compliance app policy'

What does this policy apply to?

Users and groups

✖ Include

✖ Exclude

Select the users and groups to exempt from the policy

☐ All guest and external users ⓘ

☐ Directory roles ⓘ

☒ Users and groups

Select excluded users

1 user

CG Chris Green

...

Assignments

Users or workload identities ⓘ

All users included and specific users excluded

Cloud apps or actions ⓘ

No cloud apps, actions, or authentication contexts selected

Conditions ⓘ

0 conditions selected

Access controls

7. Under Select excluded users, select **0 users and groups selected** to select an admin user and select **Select**.
8. Under Cloud apps or actions, choose which assets to protect.
For example, the NowBot or whatever the name of the ServiceNow bot is in Azure.
9. Under Grant, select **0 controls selected** and select **Block access**.
10. In the Enable policy section, select **On** to turn on the Report-only function.
11. Select **Create**.
After the ACL (Access Control List) is configured, it takes about 15 minutes for the synchronization.

Result

After the policy is created and the synchronization is complete, it restricts any user except the admins from overriding the tenant accidentally.



You don't have access to this

Your sign-in was successful but you don't have permission to access this resource.

[Sign out and sign in with a different account](#)

[More details](#)

Troubleshooting details



If you contact your administrator, send this info to them.

[Copy info to clipboard](#)

Error Code: 53003

Request Id: c5c57725-6307-49f4-be08-58d77fae0d00

Correlation Id: 1d5b5aeb-ea55-491b-bd41-c812c266971c

Timestamp: 2022-04-01T21:02:57.444Z

App name: Now Virtual Agent

App id: 49471a10-fdbc-4ffb-b0b8-944f3df985d9

IP address: 165.225.243.13

Device identifier: Not available

Device platform: macOS

Device state: Unregistered

Flag sign-in errors for review: [Enable flagging](#)

If you plan on getting help for this problem, enable flagging and try to reproduce the error within 20 minutes. Flagged events make diagnostics available and are raised to admin attention.

Note: The restriction does not affect the restricted users from using the Microsoft Teams or the Now Virtual Agent.

Set up your language preferences for your Virtual Agent integration with Microsoft Teams

Set language preferences so that Virtual Agent is in the same language as the user's preferred Microsoft Teams language.

Before you begin

Role required: admin

About this task

You set the Microsoft Teams language preference in the Microsoft Teams client. The ServiceNow language is the language that is typically used in the ServiceNow instance. By default, a user's Microsoft Teams language preference takes precedence over the user preference language of the base system if both languages are different. For more information, see [Change Settings in Microsoft Teams](#).

To ensure consistency, use the same language. If the user preference language in Microsoft Teams isn't an available language in the ServiceNow instance, then the instance language is the default language.

Procedure

Change which language takes precedence by configuring the following system property for users: `sn_va_teams.use_teams_language`.

Setting	Description
True	The language displayed in Virtual Agent honors the user's preferred language that is set in Microsoft Teams.
False	The language displayed in Virtual Agent honors the user's preferred language that is set on the ServiceNow instance.

Localize the bot messages

Localize the bot messages to receive them in a language of your choice during your conversations with the bot.

Before you begin

Role required: virtual_agent_admin

Procedure

1. Navigate to the provider channel identity record of your bot and select the **Bot Messages** tab.

Confirm that the values for those bot messages are accurate.

2. Navigate to the Messages [`sys_ui_message.list`] table and select **New**.

Note: Before creating a new message, ensure that the message you want to create is not already created.

3. On the form, fill in the details.

New Message record

Field name	Description
Key	Message for the record. Make sure that this matches with the bot message value in step 1. If you want to create multiple translations for the same message in different languages, add each translated message individually.
Language	Your preferred language for the conversation/message.
Message	The equivalent of the key message translated into your preferred language.

4. Select Submit.**Result**

Start a new conversation with the bot. You will notice that the translated message is displayed by the bot in user's preferred Microsoft Teams language, if you have already provided the translation for that language.

Using ServiceNow Otto for Virtual Agent conversations with Microsoft Teams

The ServiceNow Otto provides you with the large language model (LLM)-based conversational experience during your conversations with a Now Virtual Agent bot or a Self-configured bot that is integrated with Microsoft Teams.

To enable a bot with LLM-based capabilities and experience LLM-based conversations with ServiceNow Otto, you must first integrate your Now Virtual Agent bot or a Self-configured bot with Microsoft Teams.

Integrating Microsoft Teams with Virtual Agent

You can integrate Virtual Agent with Microsoft Teams either with your Now Virtual Agent bot or the Self-configured bot.

To integrate Microsoft Teams with the Now Virtual Agent, see [Integrate Virtual Agent with Microsoft Teams](#).

To integrate Microsoft Teams with a Self-configured bot, see [Integrating Virtual Agent with Microsoft Teams using the self-configured bot](#).

Conversational experience with ServiceNow Otto in Microsoft Teams

The ServiceNow Otto provides a new AI Search experience in channels with the following features:

- **Legal Disclaimer**

The first message in a conversation with ServiceNow Otto displays a legal disclaimer indicating that it is an AI-generated message followed by the ServiceNow Otto greeting message and LLM-enabled topics.

Legal Disclaimer

VA Test Bot 3:24 PM



Answers generated by AI. Review for accuracy.

Legal disclaimer

Hi Alfonso.

I'm an AI-powered virtual agent and can answer questions, fulfill requests, and generally point you in the right direction. I'm still learning, so I might make mistakes sometimes. Check my answers for accuracy.

Ask me a question to get started or see a list of everything I can help with.



Here are available topics I can help with.

Drop-down with LLM topics

Submit

LLM Topics

VA Test Bot 3:24 PM



Answers generated by AI. Review for accuracy.

Hi Alfonso.

All ip llm

All op llm

Check Ticket and Support Status

Link op llm

Now Assist Live Agent

Order Coffee

order food

Summarize Record 2

List of LLM
topics

...

Submit

• Pagination and Search

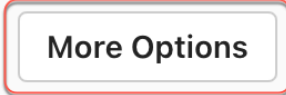
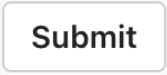
You can navigate through multiple pages of choices and search for specific items or users, using the Search bar.

Pagination and Search

Could you please provide me with the list of all active system users?

Search Text ... 

 Search

Pagination

When you select an LLM-enabled topic, the Search bar is displayed along with the available choices related to the selected topic and the **More options** button. You can either search for an item or user using the Search bar or pick an item or user from the available choices. If you want to look for more available options, you can navigate to the next page using the **More Options** button. If you would like to go back to the previously listed choices, you can use the **Previous Options** button.

If you have searched for a user or an item, the choices related to your search term are displayed. You can either select from the choices available or reset the search and pagination.

 **Tip:** You can reset the Pagination and Search by selecting Enter in the Search bar.

The Pagination and Search capabilities are managed by the following provider properties:

- *picker_pagination_experience_supported*: Enables the pagination experience in your LLM conversations with ServiceNow Otto. The default value of this property is **true**.
- *picker_pagination_limit*: Sets the page limit value for an adapter for displaying the choices. The maximum page limit value that can be set for an adapter is **100**.

For example, if a topic has fewer than 100 choices available and the limit is set to 100, then the **More Options** button is not displayed. If a topic has more than 100 choices available when the limit is to 100, then the **More Options** button is displayed.

• Generative AI QnA card

Use this feature to ask questions and get answers from ServiceNow Otto through LLM in a card format. The response is displayed with a sparkle image, the legal disclaimer, and the citation about the question asked.

Generative AI QnA Card

VA Test Bot 3:23 PM



Answer generated by ServiceNow Otto.

Check sources for accuracy.

Legal disclaimer

Sparkle

Check this AI-generated result for accuracy.

A cookie is a message that a web server passes to your web browser when you visit internet sites. It is stored in a small file called cookie.txt on your browser. When you request another page from the server, your browser sends the cookie back to the server. Cookies are commonly used to track web site activity, for online shopping, and to provide personalized web pages. Only the web site that creates a cookie can read it, and it cannot be used to access your personal information or deliver a virus.

KB0000007: What is a cookie?

Citation with KB article link

Here is what I found for you. What would you like to do?

End this chat

Show more results

For more information about enabling LLM for your bots integrated with Microsoft Teams, see [Enable ServiceNow Otto for Virtual Agent for Microsoft Teams](#).

Enable ServiceNow Otto for Virtual Agent for Microsoft Teams

Enable the large language model (LLM)-based conversational experience with ServiceNow Otto for Virtual Agent integrated with Microsoft Teams.

Before you begin

Ensure that you enable AI Search to have ServiceNow Otto conversations using the Now LLM Service. For more information about enabling AI Search, see [Enable AI Search for Next Experience](#).

Role required: admin

Procedure

- Log in to your ServiceNow instance and navigate to the ServiceNow Otto Features page through one of the following navigation paths:
 - All > ServiceNow Otto Admin > ServiceNow Otto Features.**
 - All > ServiceNow Otto Admin > Features.**

2. From the ServiceNow Otto Features page, select **Platform**.
3. On the ServiceNow Otto skills for Platform page, select **View details**.
4. On the Conversational experience page, select **Set up ServiceNow Otto for Virtual Agent**. You are directed to the Assistants page to select the Virtual Agent. For example, the **ServiceNow Otto for Virtual Agent (default)**.
5. Select a Virtual Agent of your choice.

Assistants

Manage the performance of existing LLM Virtual Agents that were created with Now Assist or create a new one.

Name	Description	Status	Last updated
ServiceNow Otto for Virtual Agent (default)	Default OOTB assistant	on	2024-06-26 23:28:33

Showing 1-1 of 1

Records per page 10

Note: Verify that the Virtual Agent you choose is integrated with the Microsoft Teams tenant before selecting.

6. On the bot page, navigate to **Display experience > Channels** from the pane.
7. Choose the channels to integrate with the ServiceNow Otto in Virtual Agent.

Choose how to display

Select at least one portal or integrate with your preferred messaging channels to display your Virtual Agent. [Learn more](#)

Portals **Channels** Mobile

Channels

Choose the channels you want your Virtual Agent to integrate with. Conversational experiences for any channels selected will now be LLM-based.

Name	Channel Type	Alert
☐ AskNow	Teams	
☒ Twilio whatsapp Test App	WhatsApp	
☒ Twilio	Teams	
☐ Twilio test	Teams	

Available Channels

Download the Slack integration plugin. [Learn more with a step-by-step guide](#)

[Get Slack Plugin](#)

Download the SMS integration plugin. [Learn more with a step-by-step guide](#)

[Get SMS with Twilio Plugin](#)

[Back](#) [Save and continue](#)

8. Select **Save and Continue**.

Integrating ServiceNow Otto for Virtual Agent with Microsoft Copilot

Integrate ServiceNow Otto for Virtual Agent with Microsoft Copilot using Conversational Integration with Microsoft Teams to leverage the generative AI conversational experience.

Note: Custom Engine Agent (CEA) is replacing Declarative Agent (DA), the prior Microsoft Copilot integration. The CEA enables Virtual Agent to be discoverable by Microsoft Copilot, with full functional access to ServiceNow Otto for Virtual Agent and multi-turn conversations.

You must have version 10.1.1 or higher of the Microsoft Teams plugin to have CEA support. In version 10.2 of the Microsoft Teams plugin, streaming is inactive by default and CEA is active by default.

Microsoft Copilot and ServiceNow Otto are generative AI assistants that work together. The Microsoft Copilot integration with ServiceNow Otto in Virtual Agent enables users to get answers and take actions straight from Copilot. Meanwhile, Copilot can hand off requests to ServiceNow Otto in Microsoft Teams. The Microsoft Copilot integration uses the existing setup and configuration experience for Microsoft Teams through the Conversational Integration with Microsoft Teams application, because the primary use case for Copilot is an extension of Microsoft Teams.

You can install the default ServiceNow Otto Virtual Agent bot from the Microsoft Teams app store. This bot deploys automatically, but you cannot customize its prompts or manifest description. You must still install the ServiceNow Microsoft Teams plugin from the ServiceNow app store.

The default Conversational Integration with Microsoft Teams plugin (sn_va_teams) automatically integrates with Copilot. For the integration to work automatically, verify that you have:

- The Xanadu version of the Conversational Integration with Microsoft Teams application installed and configured. If you have a previous version of the application, upgrade it to the Xanadu release.
- Either a Microsoft Copilot license or the free Copilot chat license.

Note:

- Before the integration, make sure that Copilot is enabled on your Microsoft Teams tenant.
- No configuration changes are required on your ServiceNow instance to integrate with Microsoft Copilot.
- There are no additional configurations required for Copilot.
- The ServiceNow Otto license and verify that ServiceNow Otto in Virtual Agent is configured. For more information, see [Assistants overview](#).
- Enable the teams bot (the ServiceNow Otto bot or the Self-configured bot, which you would like to use for Copilot integration) for the ServiceNow Otto Conversations in the **All > Conversational Interfaces > Assistants > Display experience > Channels** section.

For more information, see [Assistants overview](#).

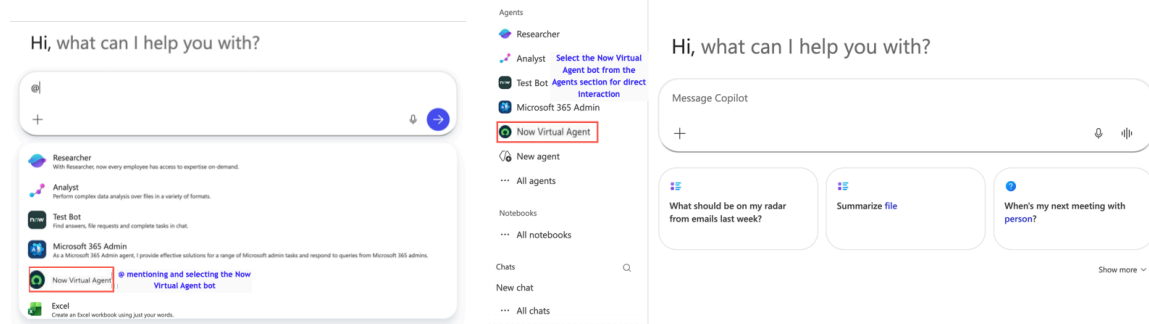
Integrate Microsoft Copilot with Now Virtual Agent bot

If you're using the default Now Virtual Agent bot, no additional setup is required. The process of integrating the Now Virtual Agent bot with Microsoft Copilot is similar to that of integrating the Now Virtual Agent bot with Microsoft Teams.

For more information, see [Integrate Virtual Agent with Microsoft Teams](#).

To interact with the Now Virtual Agent bot within Copilot, you can either @-mention the bot name and invoke it or navigate to the Agents section on the right panel within Copilot to select it for direct interaction.

Selecting the Now Virtual Agent bot within Copilot



The default Now Virtual Agent app that is compatible with Microsoft Copilot integration is available on the Microsoft Teams store for use.

Integrate Microsoft Copilot with Self-configured bot

Use your Self-configured bot to connect with Microsoft Copilot. The process of integrating the Self-configured bot with Microsoft Copilot is similar to that of integrating the Self-configured bot with Microsoft Teams. For more information, see [Integrating Virtual Agent with Microsoft Teams using the self-configured bot](#).

The self-configured bot will support the latest Copilot CEA experience. The production bot will continue to provide support until October 2025. For more information, see [Setting up the Self-configured bot for using Microsoft Copilot](#) and

Setting up the Self-configured bot for using Microsoft Copilot

Using your Self-configured bot with Microsoft Copilot for ServiceNow Otto conversations requires you to complete a few additional setup actions.

Note: Custom Engine Agent (CEA) is replacing Declarative Agent (DA), the prior Microsoft Copilot integration. The CEA enables Virtual Agent to be discoverable by Microsoft Copilot, with full functional access to ServiceNow Otto for Virtual Agent and multi-turn conversations.

You must have version 10.1.1 or higher of the Microsoft Teams plugin to have CEA support. In version 10.2 of the Microsoft Teams plugin, streaming is inactive by default and CEA is active by default.

You can install the default ServiceNow Otto Virtual Agent bot from the Microsoft Teams app store. This bot deploys automatically, but you cannot customize its prompts or manifest description. You must still install the ServiceNow Microsoft Teams plugin from the ServiceNow app store.

For more information on Microsoft Teams and ServiceNow Otto in Virtual Agent installation and settings, see .

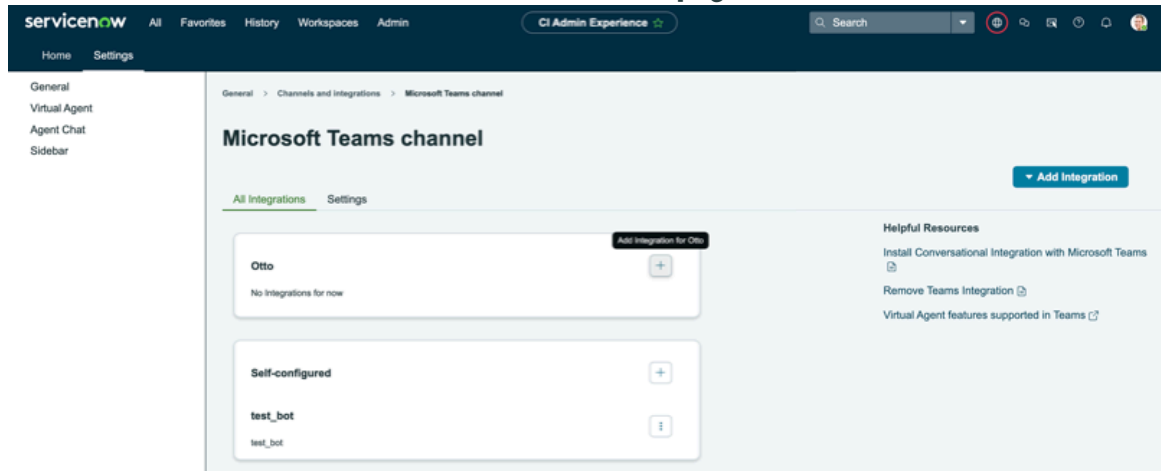
As of October 2025, streaming is active by default for both Teams and Copilot. Configurations are shared by Teams and Copilot, and both apps are linked to the assistant.

You can use the self-configured bot or the default version to install Microsoft Copilot integration. The default bot automatically deploys in Copilot. If you want to use a self-configured bot for Microsoft Copilot, complete the following additional setup:

- Provide the Self-configured bot a name while creating it. This name is also provided to the Custom Engine Agent (CEA).
- Activate your assistant in the Conversational Interfaces configuration page. For more information, see [Assistants overview](#).

- Migrate any relevant topics to the Now LLM Service for ServiceNow Otto large language model (LLM) conversations with Copilot. To migrate your topics to LLM, you must enable LLM. For more information, see [Migrate NLU topics to LLM topics](#).
- Update the following fields within the manifest file that is downloaded from Admin experience to configure the Self-configured bot. You can update your agent's description and update its prompts if it has any unique capabilities.

Conversational Interfaces Microsoft Teams channel page



Update the generic description that ServiceNow provides with a specific use case that you may have in your topics.

For example, you may LLM skills for scenarios unique to your environment, such as reserving a hotel desk or ordering food for a meeting. Add those skills to your description to help Copilot recognize the skill and process it.

For more information, refer to [App manifest scheme](#) in the Microsoft Teams Developer documentation.

- Activate the Copilot check box on the Conversational Interfaces admin page before uploading your manifest.

ServiceNow Otto for Virtual Agent in conversations with Microsoft Copilot

Use ServiceNow Otto plugins in Microsoft Copilot to connect with the Copilot by providing your bot or plugin name during your generative AI conversations.

Copilot Conversations

- Note:** Custom Engine Agent (CEA) is replacing Declarative Agent (DA), the prior Microsoft Copilot integration. The CEA enables Virtual Agent to be discoverable by Microsoft Copilot, with full functional access to ServiceNow Otto for Virtual Agent and multi-turn conversations.

You must have version 10.1.1 or higher of the Microsoft Teams plugin to have CEA support. In version 10.2 of the Microsoft Teams plugin, streaming is inactive by default and CEA is active by default.

ServiceNow Otto and Microsoft Copilot demo

[https://player.vimeo.com/video/1130994883?](https://player.vimeo.com/video/1130994883?h=afa50aafbc&badge=0&autoplay=0&player_id=0&app_id=58479)

[h=afa50aafbc&badge=0&autoplay=0&player_id=0&app_id=58479](https://player.vimeo.com/video/1130994883?h=afa50aafbc&badge=0&autoplay=0&player_id=0&app_id=58479)

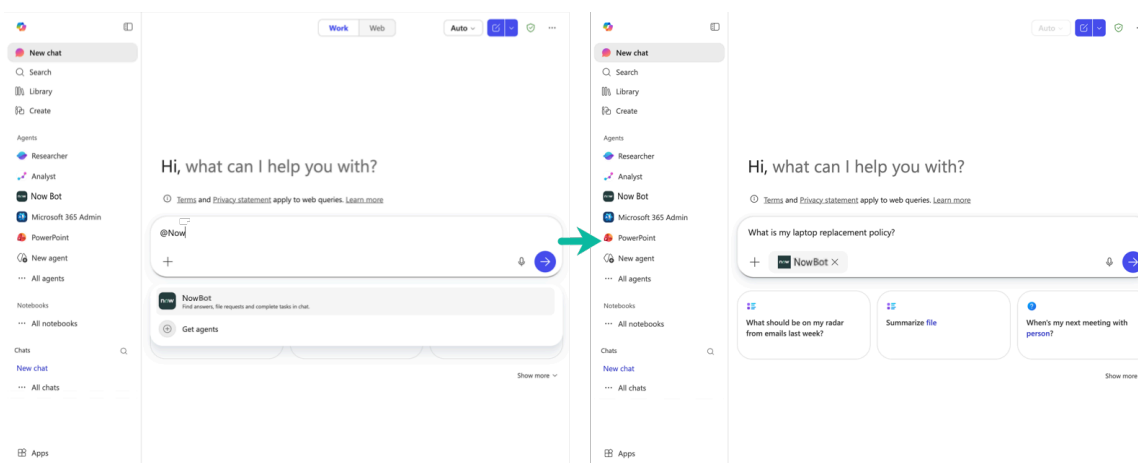
The Copilot integration doesn't follow a conversational flow like the Virtual Agent. It uses a non-conversational flow and provides synchronous responses with ServiceNow Otto that are primarily built on AI Search. Therefore, any search term that you input is passed to AI Search and the results are returned from AI Search. You're then able to render the response and share it as a card in Message Extension.

Sample prompts that you can use within Copilot:

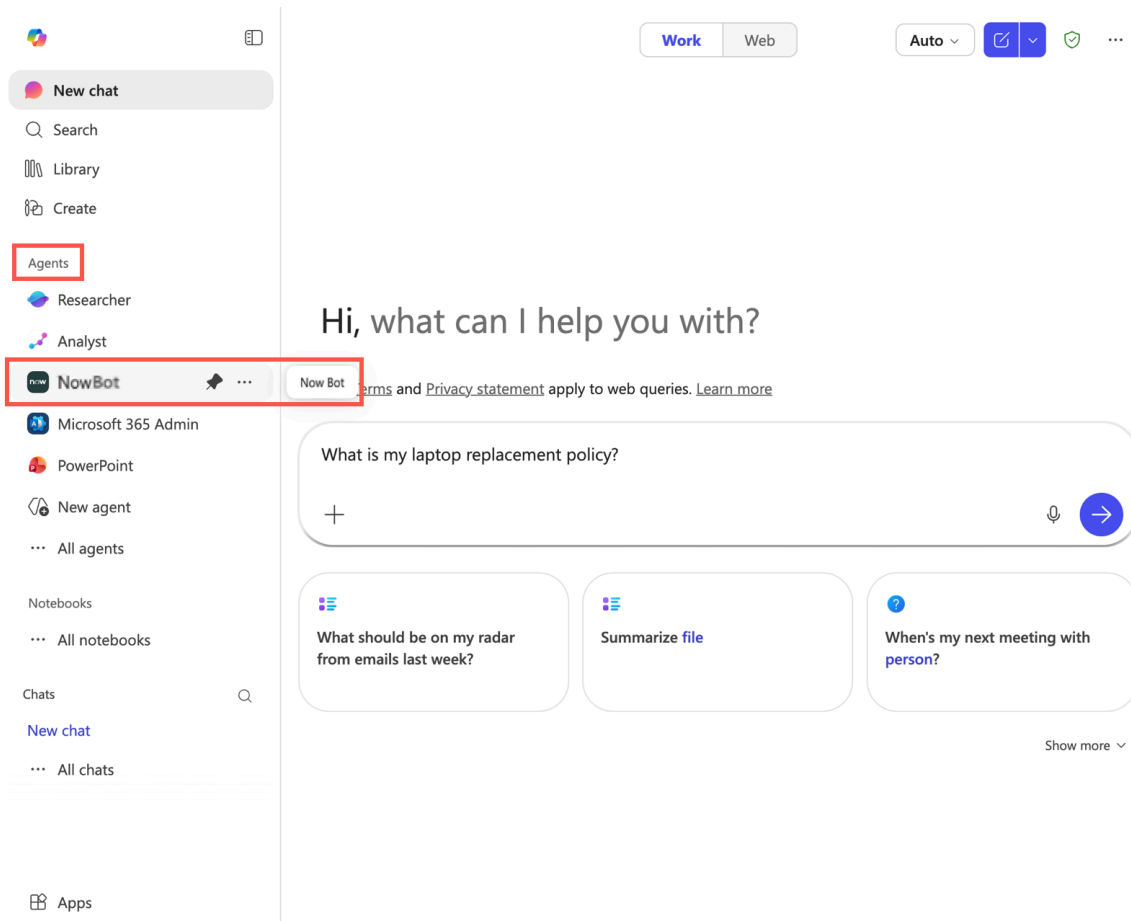
- What is my laptop replacement policy?
- Can you help me order a laptop?

Note: Sample prompts are located in the manifest file, and are displayed in both Microsoft Copilot and Microsoft Teams. You can't customize the prompts or the **View prompts** control displayed in Answers Chat if you're using the pre-published Now Virtual Agent app. To customize prompts, use the self-configured bot. For more information, see [Setting up the Self-configured bot for using Microsoft Copilot](#).

To initiate a chat with Microsoft Copilot, you can @-mention the bot name and based on the input utterance, Copilot verifies that your request in the chat reaches the respective plugin's instance and a response is received.



You can also interact with the bot directly by selecting it from the Agents section on the right panel within Copilot instance. Interacting with the bot this way provides you with the same results or responses as you would receive them while you invoked it.



You can use ServiceNow Otto to search for Knowledge Base articles, catalog items, and so on, and it provides results based on your input for the search. For example, if you searched for iPhone, you're presented with the list of generative AI Search results. You can pick an item from the list and share it with the user of your choice. The user who receives the catalog item shared by you can view it by selecting **View item**.

Note: You can configure the viewing experience of an item to either open it in a browser or within the Microsoft Teams tab if you're using Copilot only with your Self-configured bot.

View item



Sana

Apple iPhone 13

Short Description All-new dual-camera system with ultra wide and night mode. All-day battery. Six new colours. And the A13 Bionic, our fastest chip ever. Key features: Storage capacity: 128 GB, 256 GB, 512 GB Network generation: 4G Style: Smartphone Camera: 12.0 MP Operating System: iOS

Category Mobiles

Price \$799.00

View item

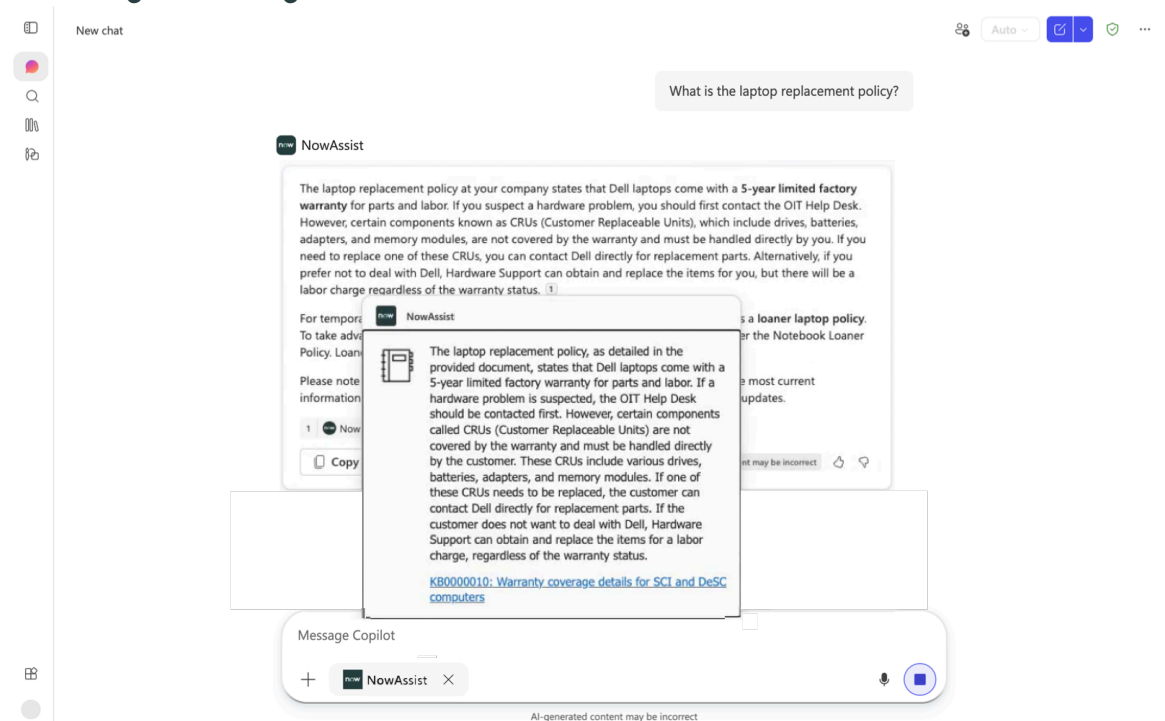
ServiceNow Otto capabilities in Copilot

With the Microsoft Copilot integration, you can initiate generative AI chat with Copilot. The following capabilities are available:

Retrieve a Knowledge Base article

You can ask the Microsoft Copilot your questions and Copilot responds with detailed information about the questions asked along with a relevant Knowledge Base article for more information.

Retrieving a Knowledge Base article



New chat

What is the laptop replacement policy?

NowAssist

The laptop replacement policy at your company states that Dell laptops come with a 5-year limited factory warranty for parts and labor. If you suspect a hardware problem, you should first contact the OIT Help Desk. However, certain components known as CRUs (Customer Replaceable Units), which include drives, batteries, adapters, and memory modules, are not covered by the warranty and must be handled directly by you. If you need to replace one of these CRUs, you can contact Dell directly for replacement parts. Alternatively, if you prefer not to deal with Dell, Hardware Support can obtain and replace the items for you, but there will be a labor charge regardless of the warranty status. ¹

For temporary...
To take advantage...
Policy. Loaner...
Please note...
information...

1 NowAssist

Copy

The laptop replacement policy, as detailed in the provided document, states that Dell laptops come with a 5-year limited factory warranty for parts and labor. If a hardware problem is suspected, the OIT Help Desk should be contacted first. However, certain components called CRUs (Customer Replaceable Units) are not covered by the warranty and must be handled directly by the customer. These CRUs include various drives, batteries, adapters, and memory modules. If one of these CRUs needs to be replaced, the customer can contact Dell directly for replacement parts. If the customer does not want to deal with Dell, Hardware Support can obtain and replace the items for a labor charge, regardless of the warranty status.

[KB0000010: Warranty coverage details for SCL and DeSC computers](#)

Message Copilot

+ NowAssist X

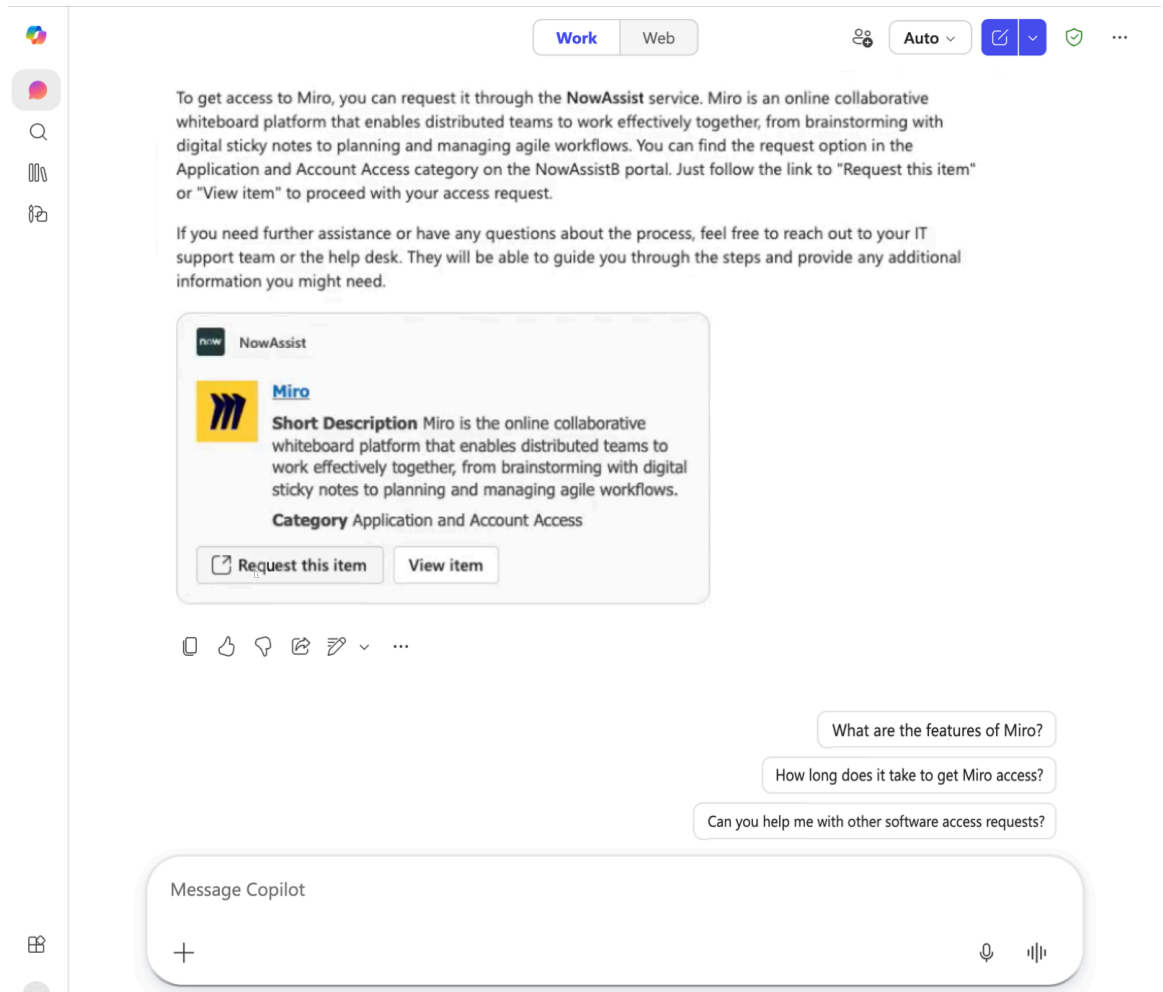
AI-generated content may be incorrect

Note: Any input request to Copilot that takes more than 15 seconds to respond will time out.

Request a conversational catalog item

Use Microsoft Copilot to request a catalog item.

Requesting a catalog item



With Copilot, there's no conversational flow, but when a conversational catalog is requested, Copilot hands off the chat to the Virtual Agent bot (the ServiceNow Otto for Virtual Agent plugin that you used to connect with Copilot) for continuing the conversation. When Copilot hands off the request to Virtual Agent, it sends a Continuing the conversation from Copilot message and invokes the conversational catalog that you requested from Copilot.

Continue conversation from Copilot

 Continuing the conversation from Copilot



Miro
Miro is the online collaborative whiteboard platform that enables distributed teams to work effectively together, from brainstorming with digital sticky notes to planning and managing a workflow.

Should I proceed with this?

Yes

NowAssist

 **Karthick Purushothaman** was selected for **Requested for**

Edited

Do you want to proceed with this?

Yes

NowAssist

 [Required] Why do you need Miro for your business?

For demo

NowAssist

 Ok, here's what I plan to request for you:

Requested for.

Karthick Purushothaman

Business justification.

for demo

Edited

What would you like to do?

Submit

NowAssist

 Do you want to add any attachments before I submit?

No

NowAssist

 I've submitted your request. Here are the details:

Requested Item RITM0010061

Short description Create, collaborate, and centralize communication for cross-functional team work

State Open

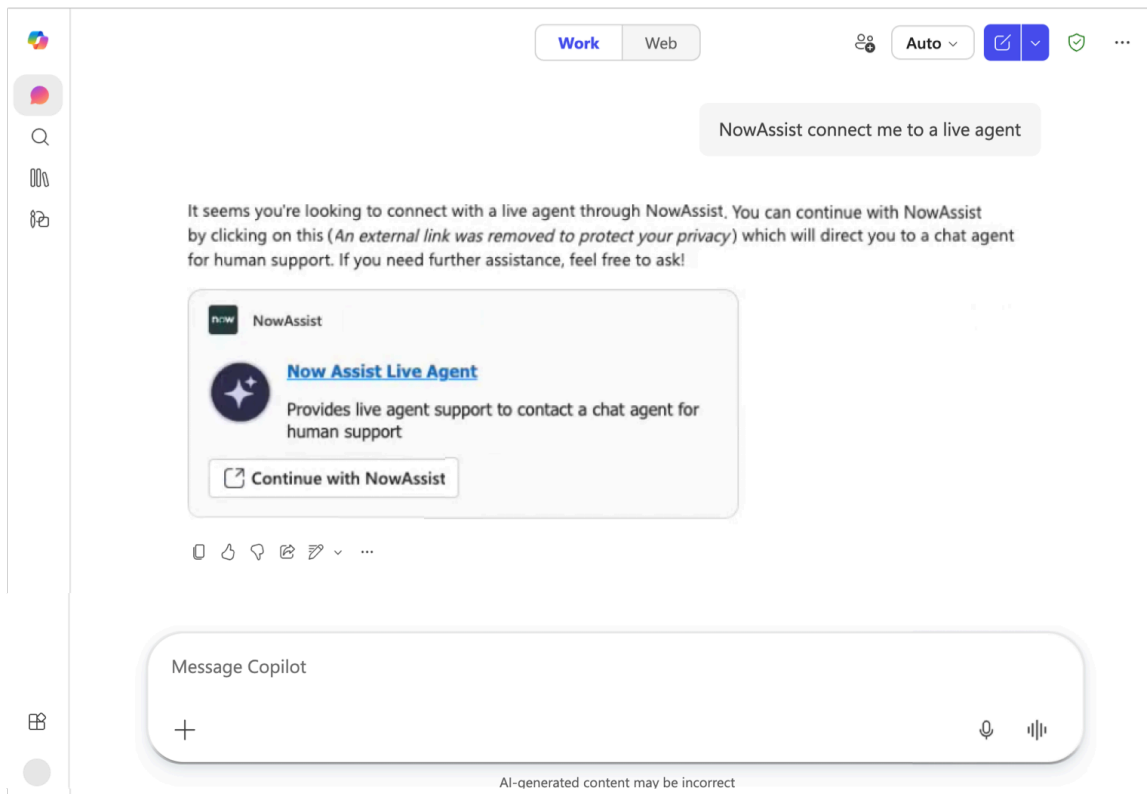
[Go to Requested Item](#)

Thank you for using our support chat.

Transfer to a Live Agent chat

You can ask Copilot to connect you to a ServiceNow Otto Live Agent.

You're directed to the ServiceNow Otto Live Agent for live agent support.



Declarative Agent experience in Copilot

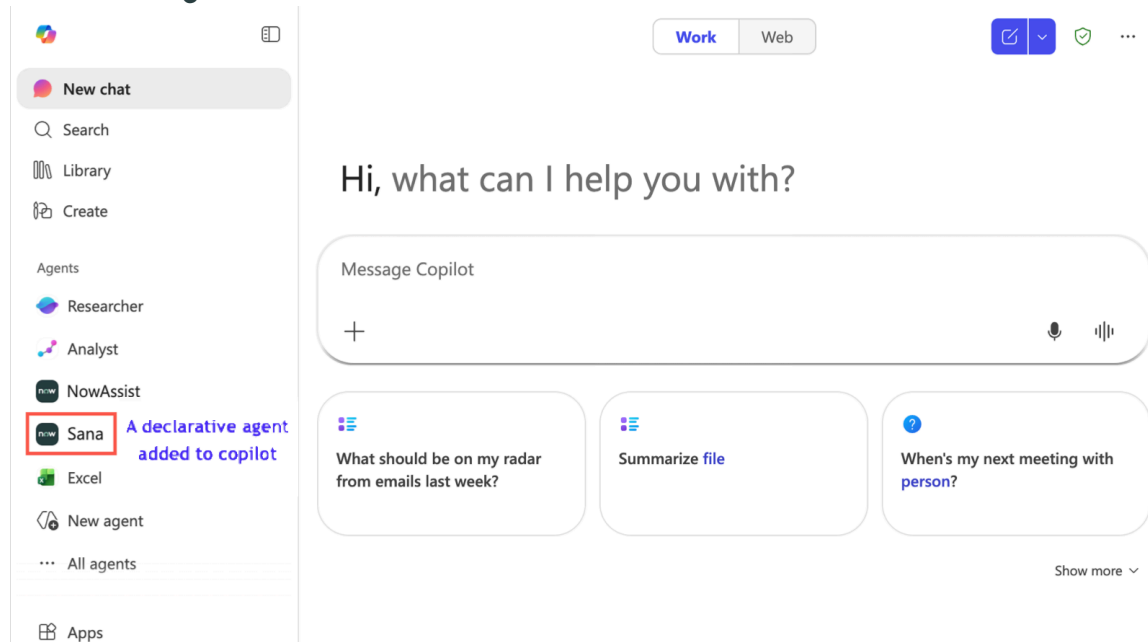
You can add your Self-configured bot to Copilot and use them as declarative agents to meet your unique business needs and establish consistent and personalized experiences.

Note:

- A Copilot license is no longer required in order to use the declarative agent.
- Only bots for which the manifest package file is uploaded to Microsoft Teams can be enabled for use as declarative agents.

To add a bot to Copilot, login to your Microsoft Teams tenant and navigate to **Apps > Features > Agents** and select **Add** against the bot that you would like to add. Once the bot is added, it's available for quick access from the Agents section within Copilot.

Declarative Agent



Synthesized response in Microsoft Teams conversations

Conversational Integration with Microsoft Teams is designed to provide new and rich user experience with synthesized responses using Large Language Models (LLM) based results summarized in a single response for users to see information in a conversational way, and avoid browsing through carousels.

With synthesized responses implemented in Microsoft Teams conversations, the user experience is increased in several ways for the response to contain the most relevant items and information, such as:

- Returning multiple Genius Results and topics in carousel format.
- Providing unified search across topics and catalog items.
- Providing a multi-Knowledge Base Q&A pipeline that enables multiple snippets from multiple Knowledge Base articles to be passed to the LLM as the context for answer generation.

The overall synthesized response helps users experience a conversational flow that understands query intent, searches across records of various types, and summarizes results in a unified, easy-to-consume response.

When you enable the synthesized response picker on Microsoft Teams, users who start a conversation with a Virtual Agent can view a synthesized response picker in response to a query. The response contains catalog items and topics followed by the citation links. For example, if you input a command `laptop` in your conversations, you'll see the responses in a synthesized format.

Now Virtual Agent 5/12 9:15 AM AI-generated 9:15 AM

 Your work laptop can be replaced every 3 years. ¹ You can check if you've reached the replacement date of your laptop by checking the My devices page in your employee portal. If you're eligible for a new laptop, you can go ahead and complete the 'Request a replacement for an outdated laptop' form.

If you've had your laptop for less than 3 years but it has issues running, you can also request to replace it. ¹ You can do this by submitting the 'Request a replacement for a malfunctioning laptop' form. You'll just need to include details about the issues you're experiencing so a member from the IT team can review it and help troubleshoot if needed.

Here's what you can do next:

Check laptop replacement date View item

Request a replacement for an outdated laptop Start request

Request a replacement for a malfunctioning laptop Start request

[View 1 more](#)

Need more info or options? View more

Sources ▾

¹ Laptop replacement policy

[View more](#)

Now Virtual Agent 5/12 9:15 AM AI-generated 9:15 AM

 Alright, here are some other options you might find helpful

Select option ▾

[Catalog] Report and replace a lost laptop

[KB] Laptop return instructions

[KB] Data backup and transfer guide

Chat with a live agent

Revisit "laptop policy"

Submit

Mid-topic switching is also possible during a conversation with synthesized responses and user can continue with their original request or switch the conversation. When the user selects the **View other options** button they get the list of available Knowledge Base articles and catalogs, which the user can select and go through the details.

Virtual Agent feature support in Microsoft Teams conversations

The Microsoft Teams app supports Virtual Agent features, such as Assistant Designer controls for creating conversations, notifications, AI Search results, and more.

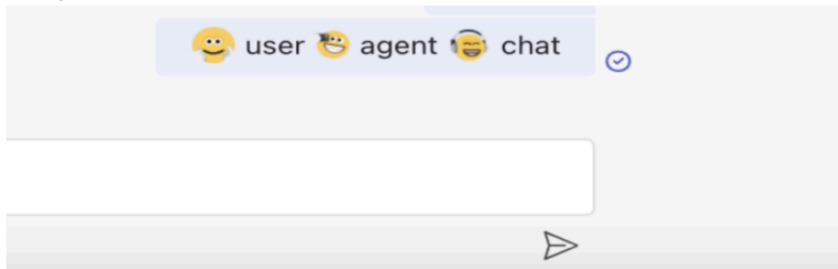
Emojis and text

Starting with Version 4.0.1, when a user chats with a live agent and sends a message that contains emojis, the text gets delivered and the emoji is displayed on the agent workspace.

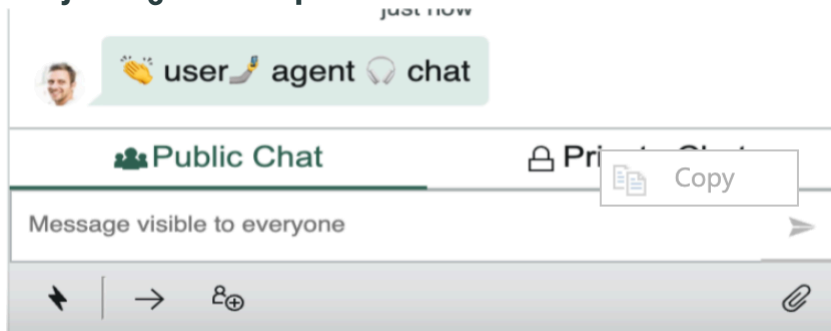
Note: Due to the difference in the platforms (app or web browser) used by the end user and the live agent, there's a difference between the emojis that are sent by the end user and the emojis that are received by the live agent.

A user can understand how emojis look like in a chat conversation and in the Agent Workspace from the following examples.

Emojis in a chat conversation



Emojis in Agent Workspace



Message pagination

Microsoft Teams has a limit on the maximum message size before paginating the message. Adjust the number of characters allowed in a message by going to the system properties [sys_properties] table and setting the number in the system property `sn_va_teams.picker_char_limit`.

AI Search results

ServiceNow Otto for Virtual Agent can generate AI Search results that are displayed as Genius result cards and multi-link outputs in conversations. For details on how Virtual Agent generates AI Search results, see [\(Legacy\) Implementing AI Search in NLU](#). The default AI Search configuration for Virtual Agent enables search results for Q&A (Knowledge Base and catalog items). The user has the option to like or dislike the information presented in the card. For more information, see [Genius Results](#).

URL navigation for chat links

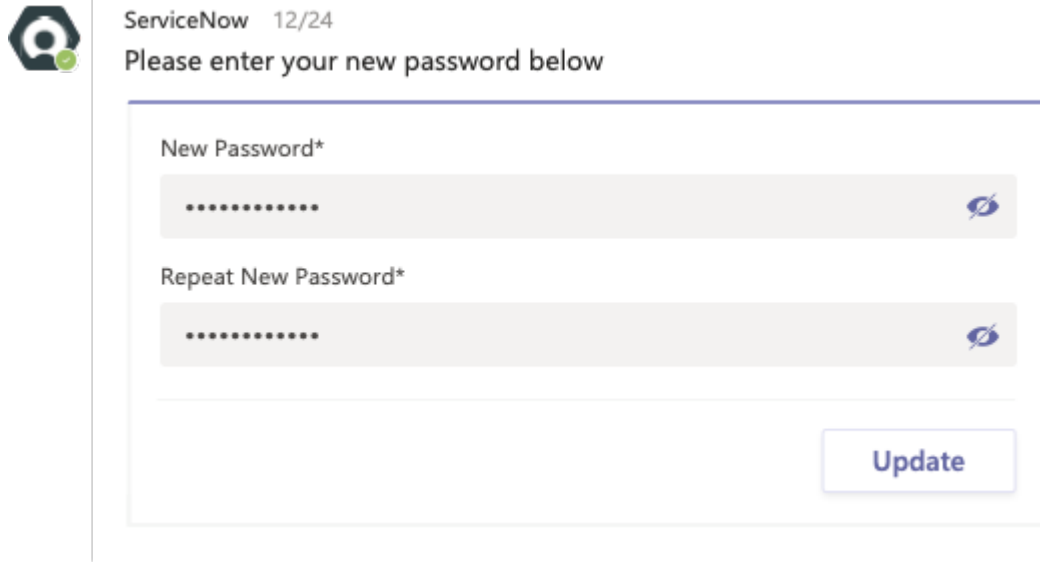
In the Virtual Agent and Live Agent conversations on the Microsoft Teams app, the links to ServiceNow records open automatically in base system portals. These records include the links that are displayed in the output cards, Virtual Agent notifications, and AI Search results. If needed, as the administrator, you can change the portals where these links are opened in. For configuration details, see [\(Legacy\) Configure URL navigation for chat links](#).

Masking of sensitive user data

Starting with Version 2.0.0, passwords that are entered by users and confirmed in bot responses are masked during the password reset conversations in the Microsoft Teams app.

A user can understand how a password is masked in Microsoft Teams from the following example.

Example of password masking



ServiceNow 12/24

Please enter your new password below

New Password*

.....

Repeat New Password*

.....

Update

Support for file uploads

Starting with Version 2.0.0, users can upload their file attachments with the paper clip icon  in the Microsoft Teams conversations.

A user can learn to attach an icon in the Microsoft Teams chat window from the following example.

File attachment support



Trusted domains

Values specified in the Trusted media domains field of the Provider Channel Identities table [sys_cs_provider_application] take precedence over the Connections table [sys_cs_provider] and overrides its values.

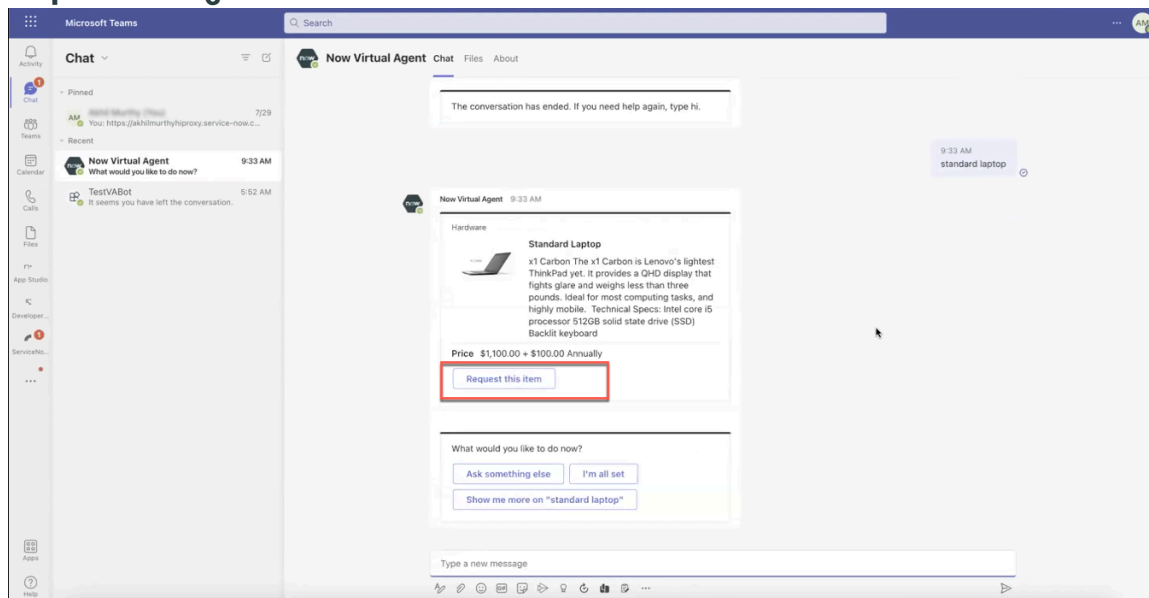
Catalog opening experience in Microsoft Teams conversations

Starting with Version 4.1.0, users can request a catalog item from the Microsoft Teams app during a conversation.

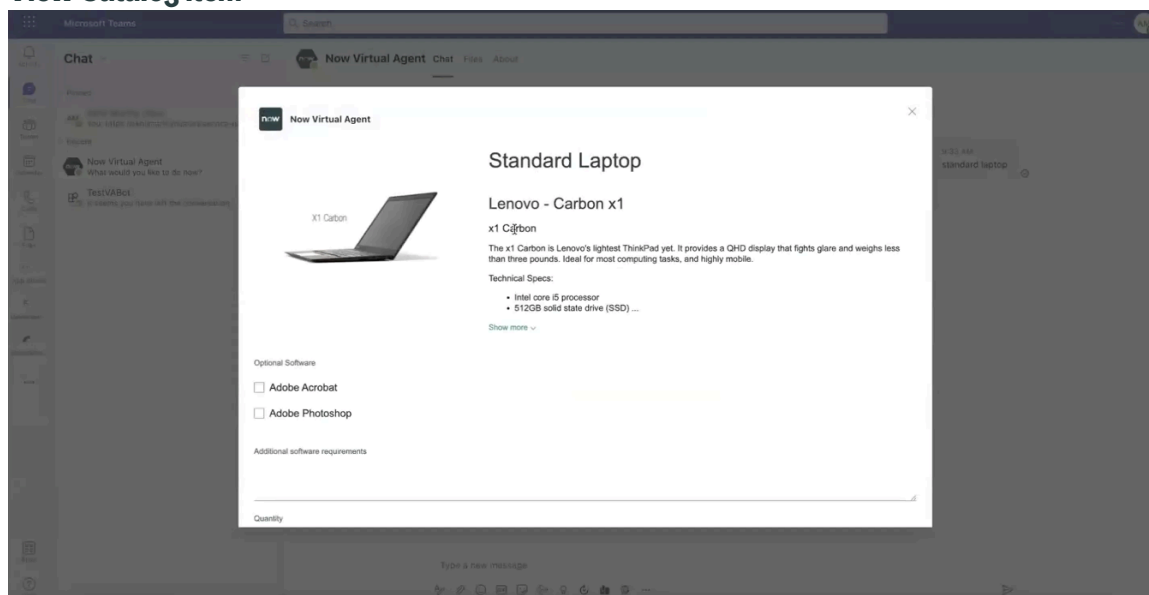
You can select the **Request this item** button in a conversation with Microsoft Teams. This button opens the catalog item in the Task Module window, where the user can view the information of the item and submit the request within Microsoft Teams.

The following examples show how a user can request and then view a catalog item.

Request Catalog item



View Catalog item



Custom branding in the Microsoft Teams application

Microsoft Teams supports app customization, which enables you, as the administrator, to customize the branding of the Now Virtual Agent bot in the Conversational Integration with Microsoft Teams. To learn more about app customization, see these resources:

- [Customize apps in Microsoft Teams](#) in the Microsoft Teams documentation.
- [MS Teams branding for the conversational integration](#) in the ServiceNow Community.

HTML rendering in Microsoft Teams

When a Virtual Agent sends a message in Microsoft Teams with HTML tags, only those HTML tags supported by Microsoft Teams are rendered as normal tags.

For more information about the Microsoft Teams supported HTML tags for bot messages, see [Formatting bot messages](#).

Custom controls in Microsoft Teams

Using the Custom Control utility will cause failure in Microsoft Teams conversations with the message channel is not supported. See [Custom control utility](#) for more information on the utility.

Assistant Designer Asset library user input and bot response controls in Microsoft Teams

The Assistant Designer Asset library user input and bot response controls for creating conversation topics are supported in Microsoft Teams conversations, including the table bot response, the card control that can display images, and the image bot response controls.

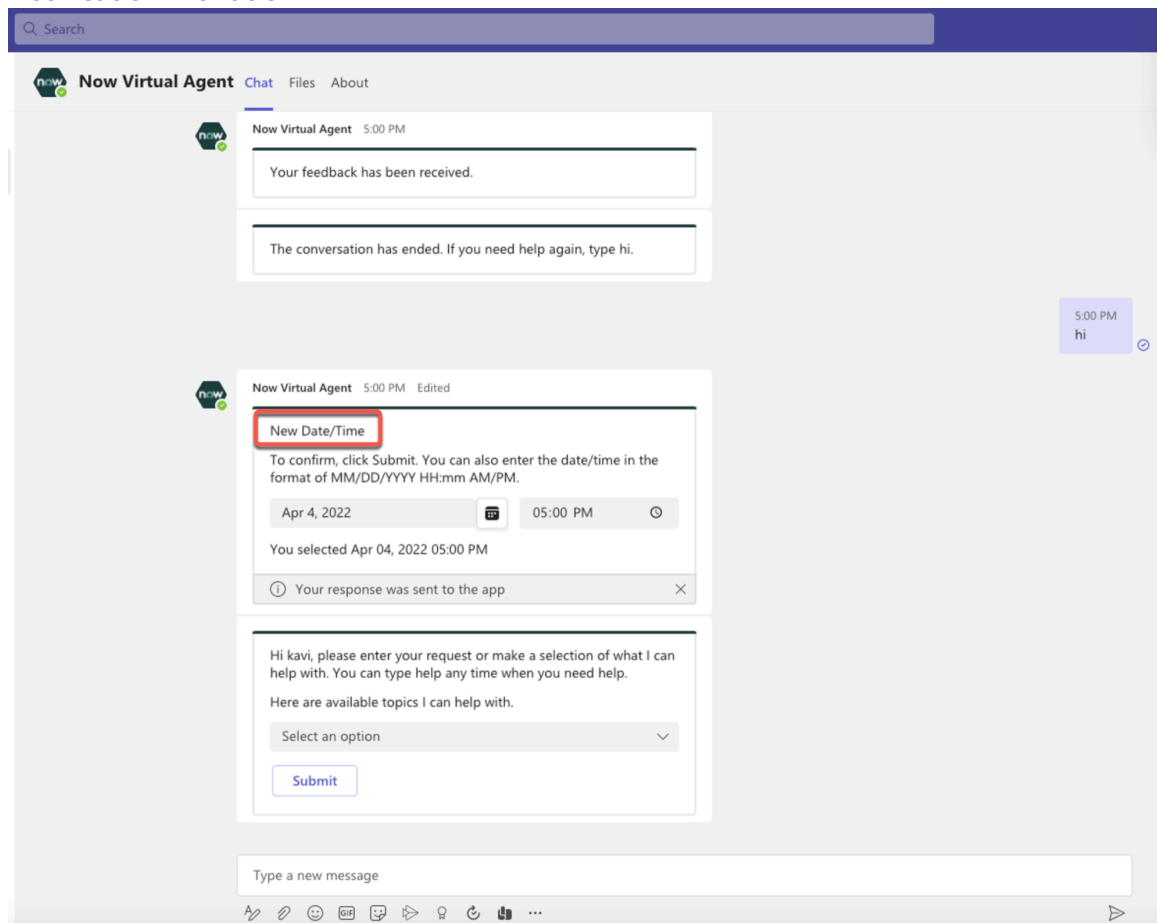
Starting with Version 2.0.0, the updated card and new video bot response controls are supported in Microsoft Teams conversations. The video control displays a thumbnail image of the video that users select to open the video in their preferred web browser.

For more information about user input controls and bot responses, see [Assistant Designer user input controls](#) and [Assistant Designer bot responses](#), respectively.

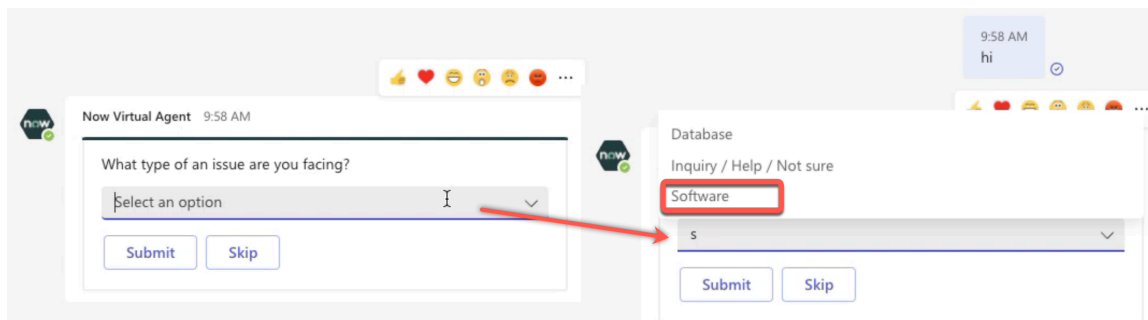
Starting with Version 3.0.10, to improve the bot performance and enable a better conversational experience with Virtual Agent on Microsoft Teams, the non-card bot response controls such as text, links, and date cards are converted into adaptive cards.

As part of converting all controls to adaptive cards, the content displayed on notifications received through bot responses is customized. The Microsoft Teams bot displays a preview of the notification content on the card, such as the message content, card title, or description, where applicable.

Notification with title



Starting with Version 3.0.10, during a conversation with the Microsoft Teams bot, you can search for a particular choice from the list using the drop-down picker controls.



Starting from Version 4.1.0, you have the option to turn off the confirmation banner that appears when you send a response to Virtual Agent in Microsoft Teams conversation.

Set the `sn_va_teams.hide_teams_response_message` system property value to **true** to turn off the confirmation banner (by default the value of the system property is set to **false**).

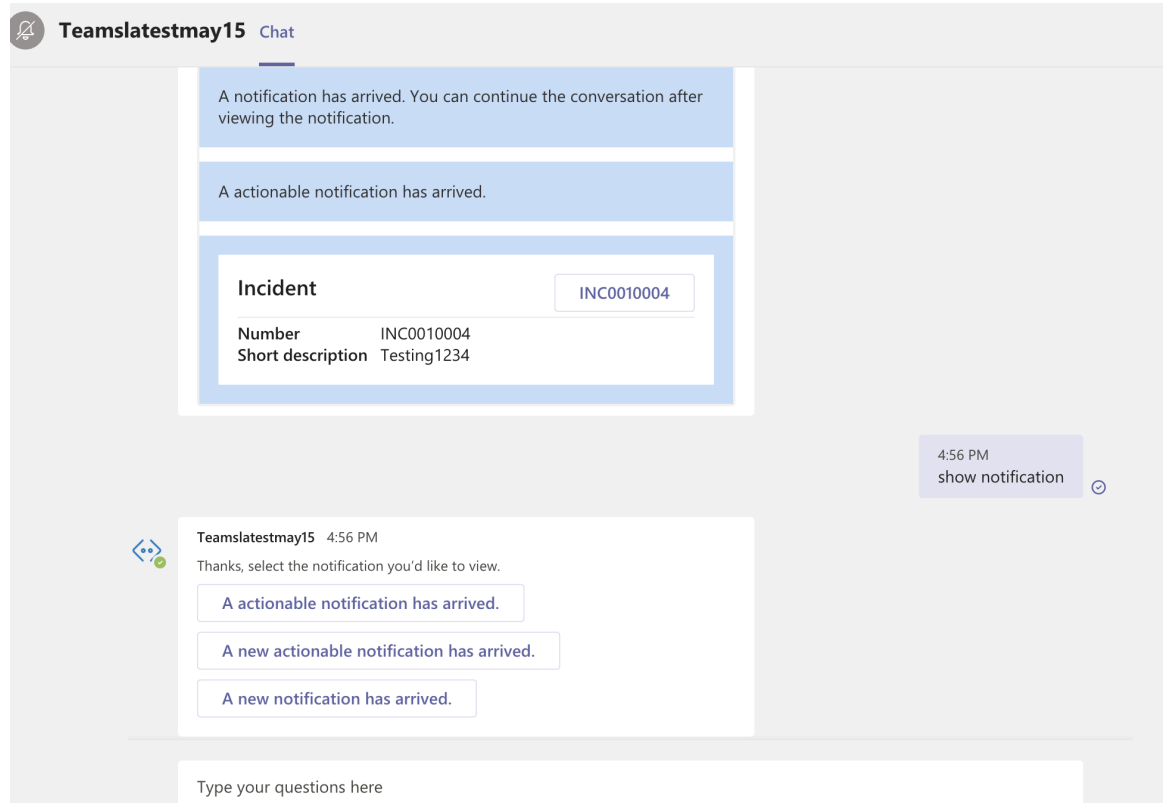
Virtual Agent notifications supported in Microsoft Teams

Microsoft Teams app supports Virtual Agent notifications during conversations.

- Subscription management
 - Requesters - Use the **notification** (or **notifications**) command to subscribe to or unsubscribe from notifications.
 - Admins - Enable notifications for messaging users in the Messaging Apps Integration page.
- Notification content - Create notifications with rich content, images, and action buttons. Actionable notifications enable recipients to perform certain actions and respond to the notification, such as adding a comment or requesting a live agent.
- Notification delivery
 - Message notifications are delivered immediately to end users, even if the user is chatting with a virtual or live agent.
 - Actionable notifications are delivered only when the user is not in an active conversation with a virtual or live agent. Users can do the following:

- Review the notifications later by using the **show notification** command.

Show notifications in Microsoft Teams



- Perform or skip the actions for the notification. If users decide to skip the actions, users can return later to the notification by using the **show notification** command.

For detailed information on Virtual Agent notifications, see [Configuring Virtual Agent notifications](#).

Unsupported Virtual Agent features in Microsoft Teams

Refer to the unsupported features of Virtual Agent in Conversational Integration with Microsoft Teams.

Unsupported features

Virtual Agent does not support the following functionalities during a conversation in Microsoft Teams.

- Connect Support
- Geo-location topic block

Capture common errors and provide resolution steps for Microsoft Teams using the Conversational Interfaces Diagnostic Tool

The Conversational Interfaces Diagnostic Tool runs a health report to define and capture information for different categories of the Conversational Integration with Microsoft Teams app, such as plugin details, configuration settings, system properties, integration failures, and so on, and lets the user validate and review these settings to start a bot-conversation.

When a user runs the health check scan and if there are issues that are shown on the report, then the user can take actions to resolve the issues based on the recommendations that the bot provides through the CI Diagnostic Tool.

Grouping common errors

To provide a health report of the various aspects of the Conversational Integration with Microsoft Teams application, the most common issues have been grouped into the following categories:

- Microsoft Teams not responding
- Notifications
- Automatic Linking
- Image/HTML
- Performance
- Installation
- Live Agent

Resolution

The Conversational Interfaces Diagnostic Tool is used to resolve the errors that users come across with their Microsoft Teams app. Knowledge Base articles are documented with resolutions to the issues and the records for these KB articles are created in the CI Diagnostic Tool.

i Note: Microsoft Teams requires the CI Diagnostics Tool of version 1.1.0 to make the diagnostic topic available for the user.

Resolving errors using the CI Diagnostic Tool includes the following steps:

1. Login into the chat widget and start the CI Diagnostic Tool.

The CI Diagnostic Tool presents the following groups to choose from:

- Error Message
- System Property Lookup
- Plugin/Functionality Issue
- General Question

2. Select **Plugin/Functionality Issue** and type `Conversational Integration with Microsoft Teams` or any related keyword to get the options of available plugins related to your search term.

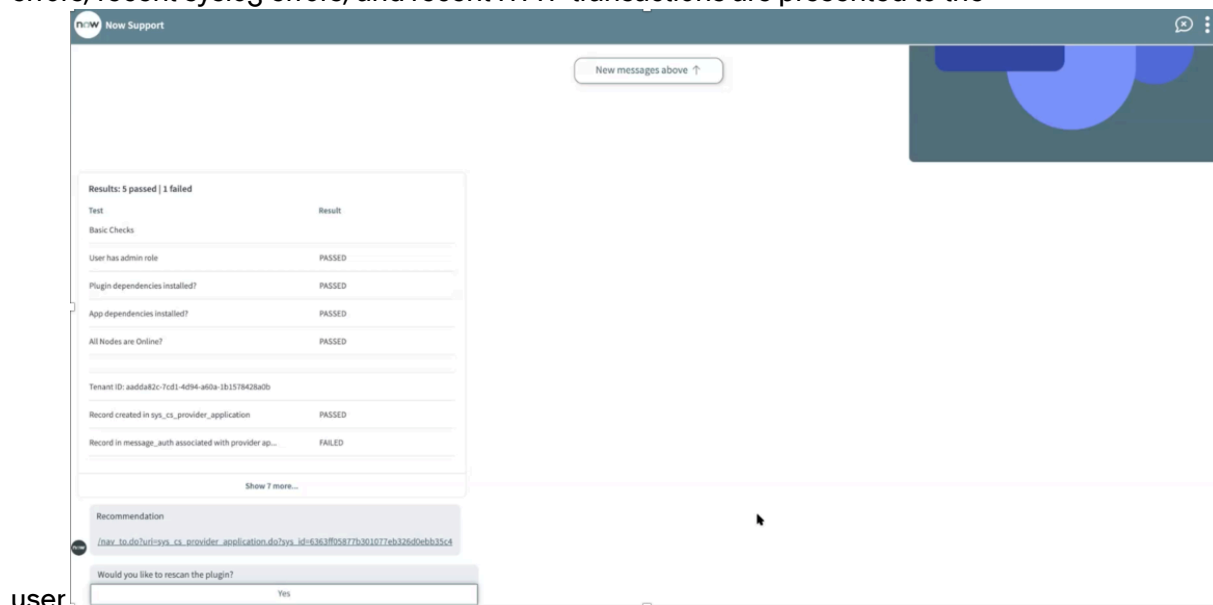
The Microsoft Teams application logo appears as a response.

3. After Microsoft Teams is provided as an input to the CI Diagnostic tool, a basic health check of the app gets executed and a report is generated for the user.

The health check is run to verify if:

- Microsoft Teams app plugin installed
- Provider application record verification.
- Message auth table has all the records
- Dependant plugins are available
- OIDC token verification records are available
- Provider reference is missing in the `[sys_cs_provider_application]` table

After successful health check scan, verifications such as recent installation errors, recent syslog errors, and recent HTTP transactions are presented to the



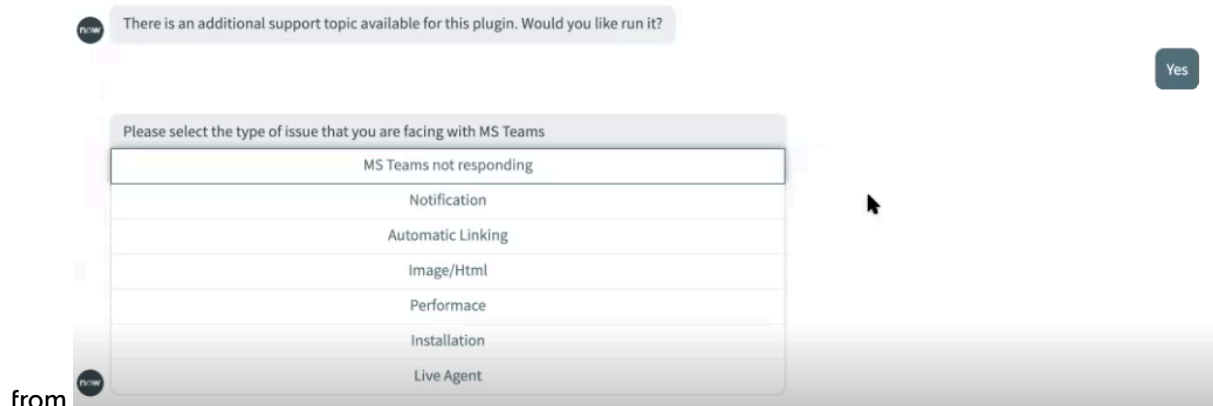
- The health check report also provides you with an option to view existing Knowledge Base articles that may be associated with your issue. Enter **Yes** and provide a few words to describe your issue.

For example, if you enter `image` as your issue description, then the CI Diagnostic tool presents you with the Knowledge Base articles related to images. Select the link to view the Knowledge Base article.

Select **No** to proceed for additional support.

- The CI Diagnostic Tool provides you with an additional support topic available for the Microsoft Teams plugin. Select **Yes** to proceed.

You are presented with the following issue types to select



For example, if you select any one of the issue types, the CI Diagnostic Tool provides you with the resolution steps pertaining to that issue type to identify the cause of the issue and to resolve it. You will also be presented with the relevant Knowledge Base articles to get further details about the issue.

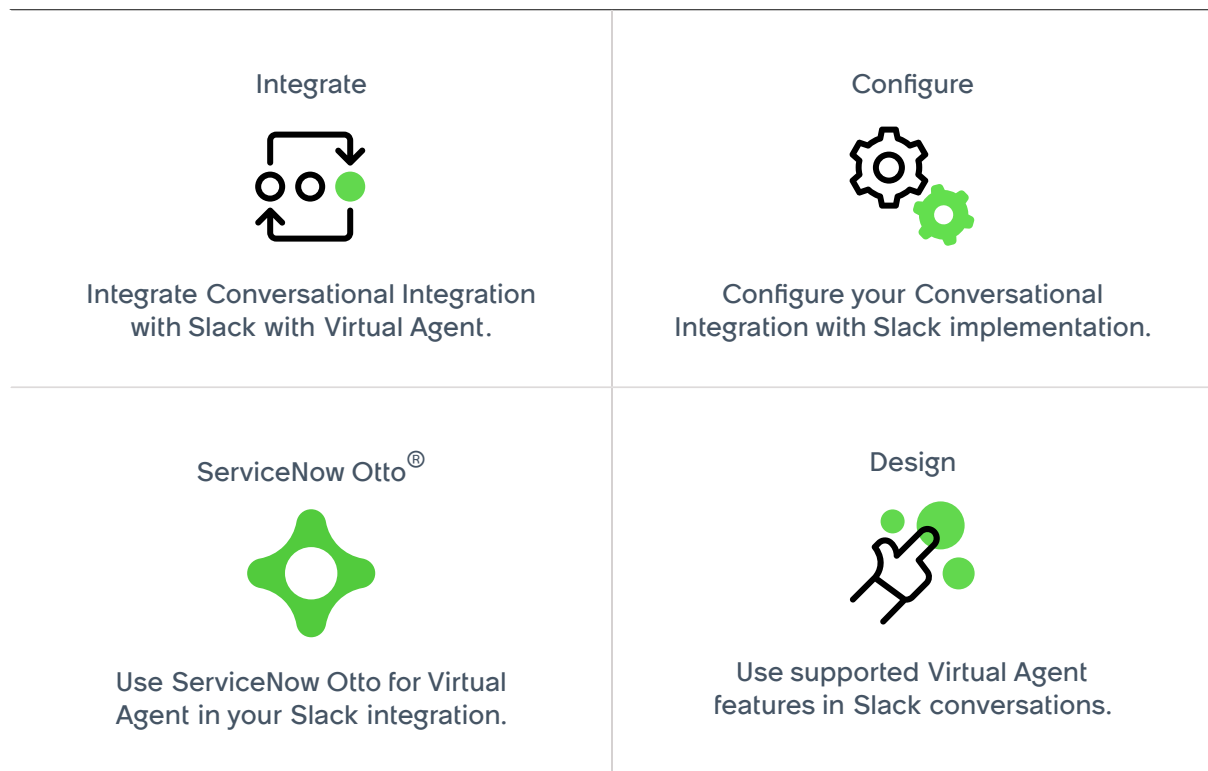
Finally, the CI Diagnostic Tool asks you to check if your issue is resolved. Select **Yes** if the issue is resolved.

Conversational Integration with Slack

Use the Conversational Integration with Slack application to connect your requesters with Virtual Agent or live agents through your company's Slack workspace.

Get started with Conversational Integration with Slack

Select a tile to get started.



Note: In earlier releases, the prebuilt Virtual Agent messaging integration for Slack was part of the Virtual Agent platform. This integration is now the Conversational Integration with Slack app, available from the [ServiceNow Store](#).

Request apps on the Store

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

Integrating Virtual Agent with Slack

The Virtual Agent integration with Slack creates a one-to-one association between the ServiceNow instance that you are installing from and the Slack workspace in which the integration runs. By default, Virtual Agent supports one-click installation that integrates one Slack workspace with one ServiceNow instance.

Install the Conversational Integration with Slack

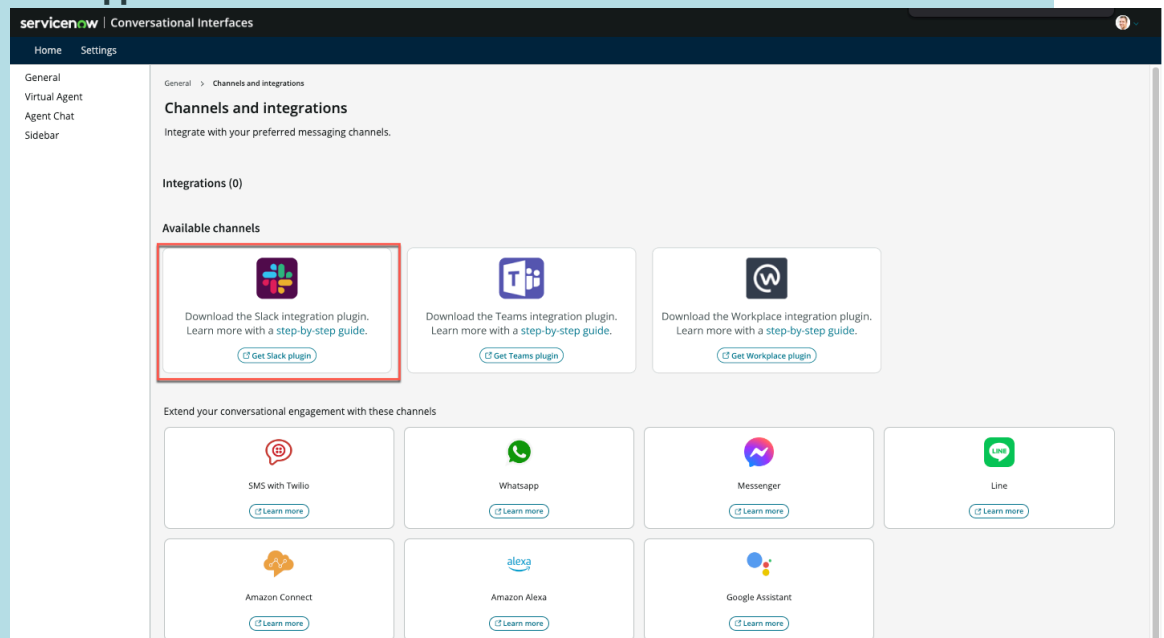
You can install the Conversational Integration with Slack (sn_va_slack) application if you have the admin role.

Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#).
- If you're using an earlier release of Virtual Agent, you must upgrade to the Brazil release to use the features supported in this channel integration.
- Conversational Integration with Slack requires the Glide Virtual Agent plugin (com.glide.cs.chatbot) to activate full functionality in Virtual Agent. This plugin must be activated before you install the integration.
- Install the Conversational Integration with Slack app from the ServiceNow® Store.

Important: Installing the Conversational Integration with Slack app from the ServiceNow Store activates the app for integration on your ServiceNow instance. If you have not installed the integration app, the Slack app is listed in the Available Channels section.

Channels and integrations page before Conversational Integration with Slack apps is installed



After you install the Conversational Integration with Slack plugin (sn_va_slack), Slack is displayed in the Integrations section, and you can proceed with the configuration.

Role required: virtual_agent_admin and external_app_install_admin or admin

About this task

Review these guidelines for using Virtual Agent with Slack or with Slack Enterprise Grid.

- The Slack app creates a one-to-one association between the ServiceNow instance that you are installing from and the Slack workspace in which the integration runs.
 - Use a separate Slack workspace for each instance that you plan to install the integration in.
 - If you use a non-production instance for testing, use a Self-configured bot.

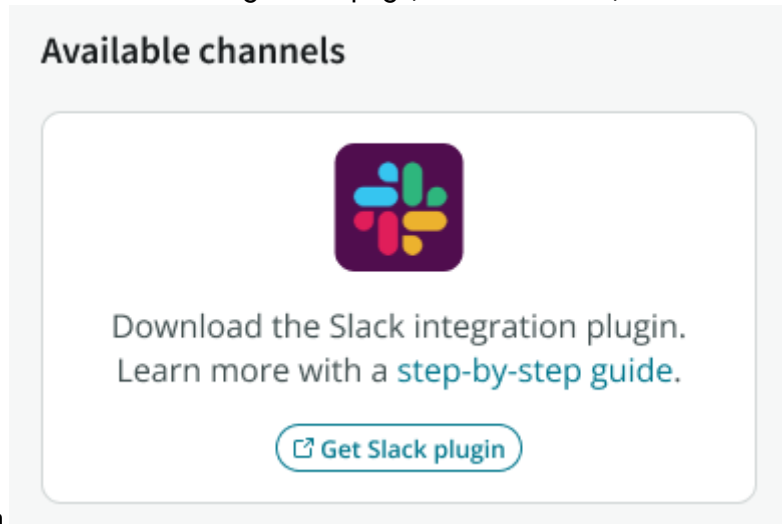
For more information, see [Integrate your ServiceNow instance with a self-configured bot](#).

- Slack Enterprise Grid – If you have Slack Enterprise Grid workspaces, your end users can move between workspaces and use the Virtual Agent bot from any workspace.

- If you use a non-production instance for testing, use a workspace in a different grid or use a non-grid workspace.
- After installing this store release:
 - Your messaging users are automatically linked to their ServiceNow accounts.
 - If you clone an instance for non-production testing, be sure to run the installation again on the cloned target.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. On the **General** settings page, under the **Channels and routing** section, select **View all** next to **Channels**.
3. On the Channels and integrations page, in the Slack tile, select **Get Slack**



plugin.

You are redirected to the Conversational Integration with Slack page in the ServiceNow Store.

4. On the top right corner for the screen, select **Get**.

Note: You must be logged into the ServiceNow Store portal to get the plugin.

5. On the Conversational Integration with Slack page, select **Request Install**.
6. On the Request Install screen, provide the **Instance Name** and **Reason for request**.
You can also validate the instance that you provided by selecting **Validate Instance**.
7. Select **Request**.
A message pops up on the Request Install screen that your request has been automatically approved.

What to do next

[Integrate Virtual Agent with Slack.](#)

Integrate Virtual Agent with Slack

Add the Virtual Agent bot to your ServiceNow[®] instance to integrate with Slack.

Before you begin

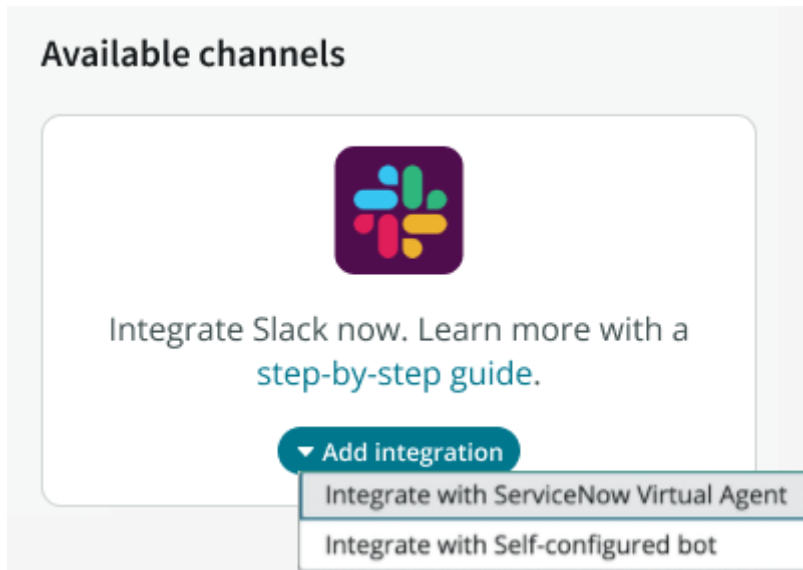
Ensure that you have installed the Conversational Integration with Slack plugin (sn_va_slack) on your instance before adding any integrations.

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In **General Settings** under **Channels and integrations**, select **View All**.
The Channels and integrations page opens.
3. Under the Available Channels section in the Slack tile, select **Add Integrations**, and select **Integrate with ServiceNow Virtual Agent**.

Note: The **Add Integrations** drop-down is available only after installing the Conversational Integration with Slack plugin (sn_va_slack) on your ServiceNow instance.



4. Enter your Slack workspace URL to sign into your Slack workspace, and select **Continue**.



Sign in to your workspace

Enter your workspace's Slack URL

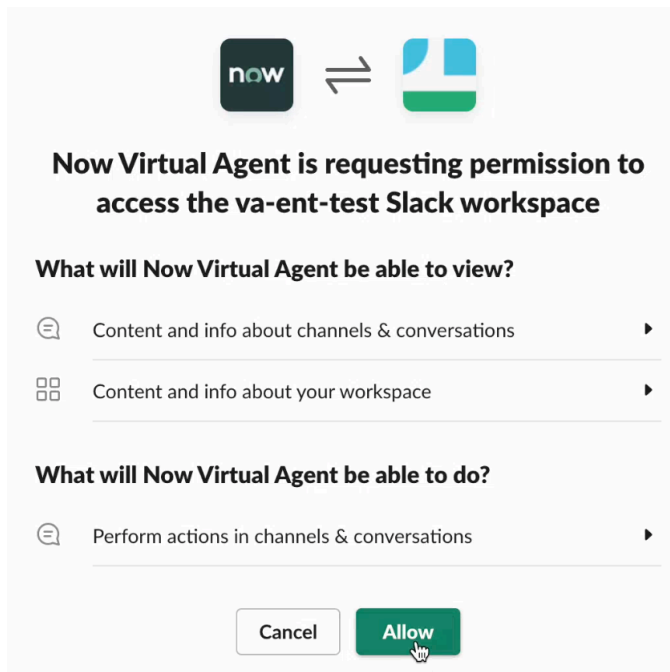
Continue

Don't know your workspace URL? [Find your workspaces](#)

Looking to create a workspace instead? [Create a new workspace](#)

Note: Ensure that you input the name of the Slack workspace for which you have access.

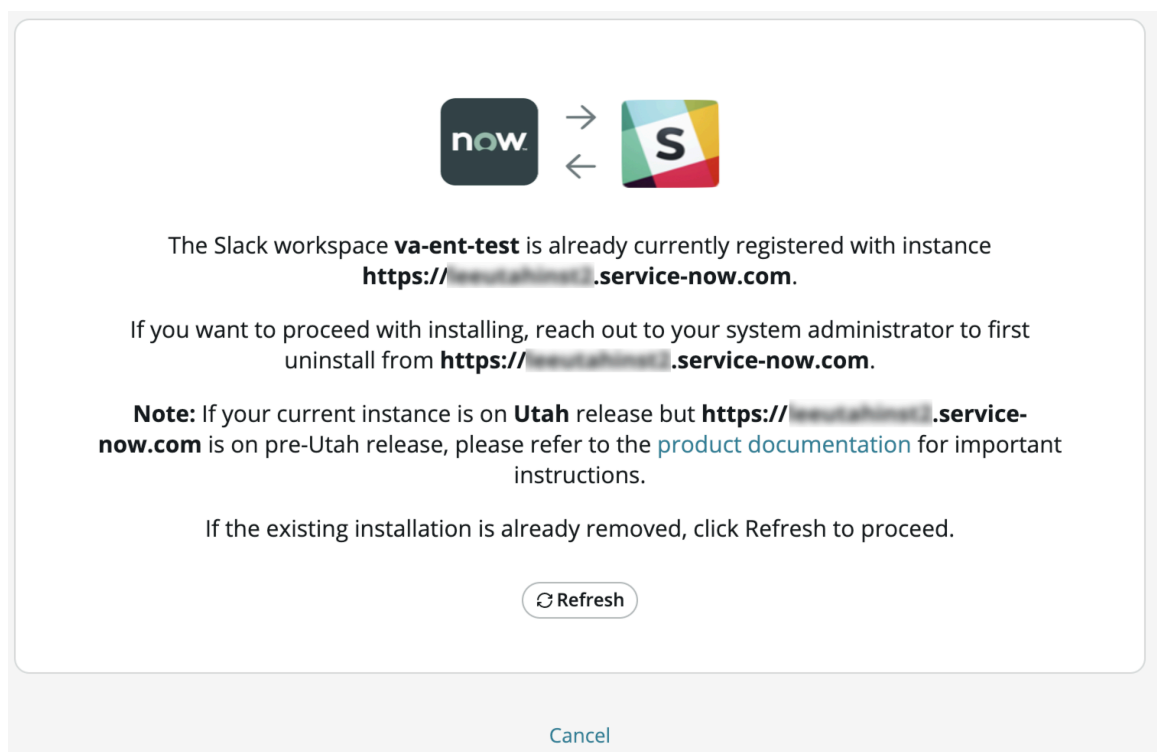
5. Sign in to your ServiceNow[®] instance.
6. Select **Allow** when Slack requests permission to access your workspace.



7. If the selected workspace has already been assigned to Virtual Agent, you must first uninstall from the previously associated instance.

Note:

Starting with the Utah release, if your Slack workspace is already associated with another ServiceNow instance, but you intend to associate it with a new instance, then you must reach out to the administrator to first uninstall it from the previously associated instance. For more information, see [Associate a Slack integration with a different instance](#).



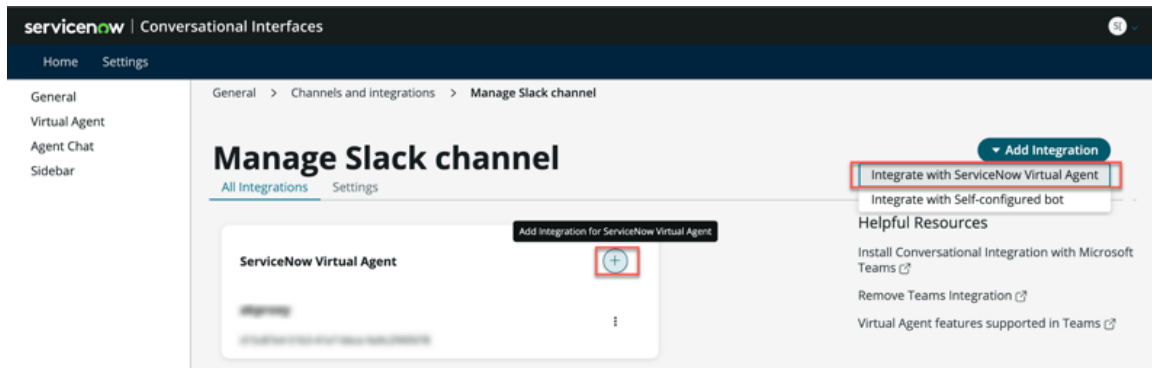
When Virtual Agent has been successfully installed on the Slack workspace, a completion message appears.

8. Select **Go to Slack** to manage the Slack app.
9. Select **Continue to manage channels and integrations** to manage the integration on your ServiceNow instance.

The Slack application appears in the list of integrations.

What to do next

If you want to integrate your ServiceNow instance with another Slack bot, select the plus icon in the Virtual Agent tile, or select the **Add integration** list on the Manage Slack channel page.



For more information, see [Manage the Virtual Agent integration with Slack](#).

Associate a Slack integration with a different instance

Override a Virtual Agent integration with Slack.

Before you begin

Role required: virtual_agent_admin or admin

About this task

Prior to the Utah release, an admin was able to associate a Slack installation that was already associated with an instance with a different ServiceNow instance.

Beginning with the Utah release, if your Slack workspace is already associated with a ServiceNow instance, but you want to associate it with a new instance, you must reach out to the administrator to first uninstall it from the previously associated instance.



The Slack workspace **va-ent-test** is already currently registered with instance **https://[redacted].service-now.com**.

If you want to proceed with installing, reach out to your system administrator to first uninstall from **https://[redacted].service-now.com**.

Note: If your current instance is on **Utah** release but **https://[redacted].service-now.com** is on pre-Utah release, please refer to the [product documentation](#) for important instructions.

If the existing installation is already removed, click Refresh to proceed.

Refresh

Cancel

Important: The instructions in [Remove Virtual Agent integration with Slack](#) are only applicable when both instances are compatible with Utah or more recent releases. If one of your ServiceNow instances is on the Utah release, and another is on a release prior to Utah, follow the steps below.

Procedure

1. Navigate to **All**, and enter `sys_properties_list` in the filter.
2. Search for and open the `sn_va_slack.enable_slack_override` system property.

Note: If you don't find this system property, you (as an admin) must create one.

3. Set the system property value to **true** to enable the **Override** button.
By default, the value of the system property is **false**.
4. Select **Override** to associate the instance with a new tenant.



Your workspace **va-ent-test** is currently registered with instance: **https://[redacted].service-now.com**.

Override

Cancel

Manage the Virtual Agent integration with Slack

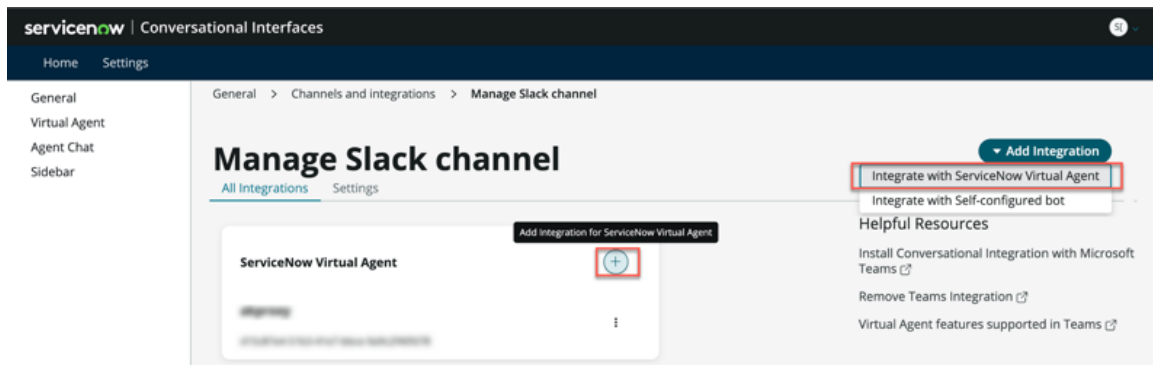
Manage your Conversational Integration with Slack application, its branding, and customize the bot-specific messages in your ServiceNow instance after integration.

Before you begin

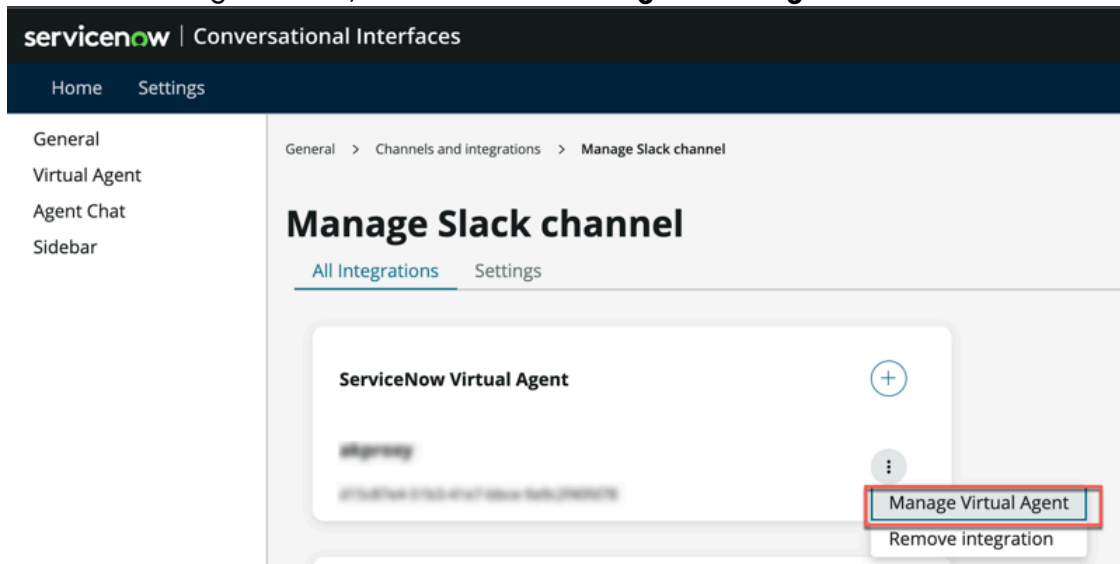
Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In **General Settings** under **Channels and integrations**, select **View All**.
3. Select **Manage** on the Slack tile.
The Manage Slack channel page displays.
4. To integrate your ServiceNow instance with another Slack bot, select the Add integration for ServiceNow Virtual Agent icon.
Alternatively, you can also select the **Add integration** drop-down menu, and then select **Integrate with ServiceNow Virtual Agent**.



5. Select the Manage Bot icon, and then select **Manage Virtual Agent**.



The Bot Configuration page displays.

6. Select the **Branding** tab.
For more information about branding your bot, see [Configure branding for your Virtual Agent bot in Slack](#).
7. Select the **Bot Messages** tab to create and edit a bot message.
For more information, see [Create bot messages](#).

Remove Virtual Agent integration with Slack

Remove the Virtual Agent integration from your ServiceNow instance to disassociate the Slack app.

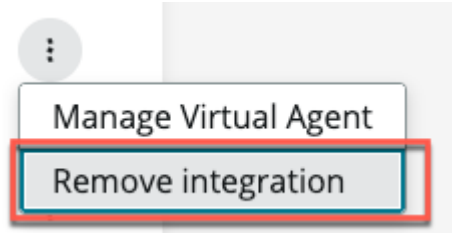
Before you begin

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In **General Settings** under **Channels and integrations**, select **View All**.
3. On the Channels and integration page, in the Slack tile, select **Manage**.
4. In the Manage Slack channel page, find the Virtual Agent integration to remove from your ServiceNow instance, and then select the manage bot icon .
5. Select **Remove integration**.

Remove integration with ServiceNow Virtual Agent



6. When prompted to confirm your choice, select **Remove**.
The Slack app directory displays.
7. Navigate to the **Configuration** tab, and then select **See All** against **1 authorized member**.
8. Select **Revoke** in the 1 Authorized member pop-up.
9. Select **Revoke** in the confirmation

Revoke Authorization



Are you sure you want to revoke your individual authorization?

Cancel

Revoke 

message.

A message displays that says: **You have successfully removed an authorization for Now Virtual Agent**

Virtual Agent integration with Slack is removed from your ServiceNow instance.

Integrating a self-configured bot with Slack workspace

Enables ServiceNow® Virtual Agent to allow multiple ServiceNow instances to integrate with single Slack workspace. This integration also supports GCC deployments.

The Virtual Agent integration with Slack creates a one-to-one association between the ServiceNow instance that you're installing from and the Slack workspace in which the integration runs. By default, Virtual Agent supports one-click installation that integrates one Slack workspace with one ServiceNow instance. However, by enabling this integration, Virtual Agent allows you to integrate multiple ServiceNow instances with a single Slack workspace. You can integrate multiple instances with a single Slack workspace by creating a bot for each of the instances on the targeted Slack workspace.

Create a bot in Slack

You must create a self-configured bot in the targeted workspace in Slack to be able to integrate with the Virtual Agent.

Before you begin

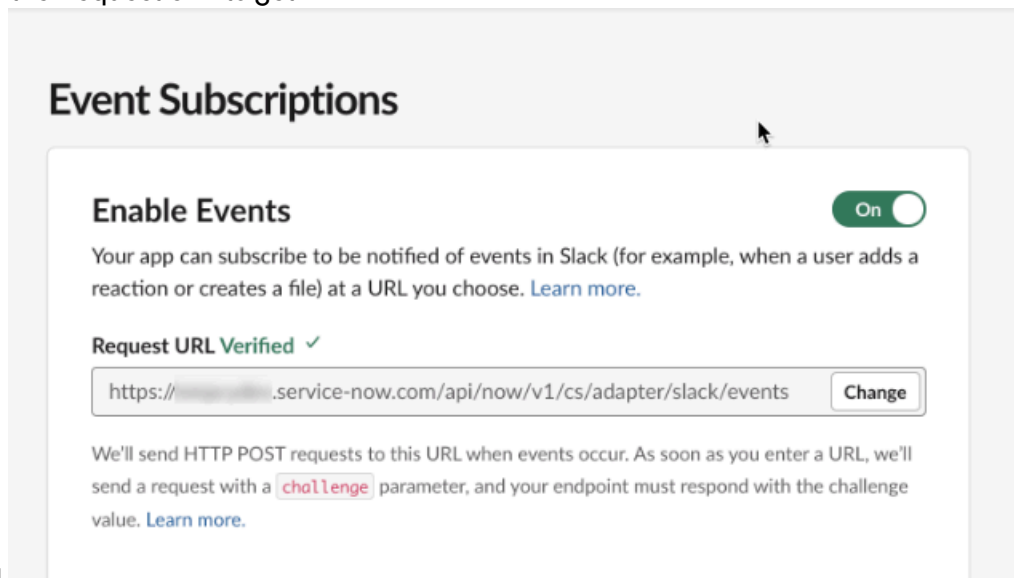
Role required: none

 **Note:** Users must have permissions to create a bot in the targeted workspace.

Procedure

1. Log in to [Slack API](#) .
2. Navigate to **Your Apps > Create New App**.
3. Enter an **App Name**, select your **Slack Workspace**, and then select **Create App**.
4. Configure interactive components.
 - a. Navigate to **Interactivity > Shortcuts** in the left menu and turn on **Interactivity**.
 - b. Update the **Request URL**.
If you are setting up your self-configured bot on a ServiceNow instance, then the request URL must be `https://<instance-name>/api/now/v1/cs/adapter/slack/actions`.
 - c. Select **Save**.
5. Configure event subscriptions.
 - a. select **Event Subscriptions** in the left menu and turn on **Enable Events**.
 - b. Update the **Request URL**.
If you are setting up your self-configured bot on a ServiceNow instance, then the request URL must be `https://<instance-name>.service-now.com/api/now/v1/cs/adapter/slack/events`.

c. Wait for the Request URL to get



verified.

- d. Under Subscribe to bot events, select **Add Bot User Event** and add message .im.
 - e. Select **Save**.
6. Navigate to the **Incoming Webhook** tab, and then slide the **Activate Incoming Webhooks** toggle switch to enable it.
 7. Configure OAuth and permissions.
 - a. Select OAuth & Permissions from the left menu and navigate to **Scopes > Bot Scopes**.
 - b. Select **Add an OAuth Scope** and add the following scopes:
 - chat:write
 - files:read
 - files:write
 - im.history
 - incoming-webhook
 - team:read
 - users:read
 - users:read.email

8. Navigate to **OAuth & Permissions**, select **Install to Workspace**, and then select **Allow**.



Test Bot is requesting permission to access the test-workspace-eif-demo Slack workspace

What will Test Bot be able to view?

-  Content and info about channels & conversations ▶
-  Content and info about your workspace ▶

What will Test Bot be able to do?

-  Perform actions in channels & conversations ▶

Where should Test Bot post?

- # Test Bot requires a channel to post to as an app
-  Slackbot Slackbot ▼

Retrieve self-configured bot details

Retrieve the details of the bot that you created in the Slack workspace to integrate with the ServiceNow instance.

Before you begin

Role required: admin

Procedure

1. Log in to [Slack API](#) .
2. Select **Your Apps**, select a bot and navigate to **Settings > Basic Information > Display Information** to copy the **App name** (Bot name).
3. Enter your **Bot User OAuth Access Token** in the token argument, select **Test Method**, and copy the **Team ID**.

 **Note:** You can find the access token in **OAuth & Permissions** in your Slack app.

Argument	Value
token Required	No token ▼ Or, provide your own token: xoxb-1557753420966-1632731908147-krt Need a token? Create and install a Slack app to begin.
team Optional	
Extra args	
Test Method	
URL https://slack.com/api/team.info?pretty=1 Authorization: Bearer xoxb-1557753420966-1632731908147-krt065eEJWnB17X7P811117 <pre>{ "ok": true, "team": { "id": "T01GDN5CCUE", "name": "test-workspace-eif-demo", "domain": "va-eifdemo", "email_domain": "", "is_verified": false, "icon": { "image_34": "https://a.slack-edge.com/80588/img/avatars-teams/ava_0009-34", "image_44": "https://a.slack-edge.com/80588/img/avatars-teams/ava_0009-44", "image_68": "https://a.slack-edge.com/80588/img/avatars-teams/ava_0009-68", "image_88": "https://a.slack-edge.com/80588/img/avatars-teams/ava_0009-88", "image_102": "https://a.slack-edge.com/80588/img/avatars-teams/ava_0009-102", "image_132": "https://a.slack-edge.com/80588/img/avatars-teams/ava_0009-132", "image_230": "https://a.slack-edge.com/80588/img/avatars-teams/ava_0009-230", "image_default": true } } }</pre>	

4. Navigate to Basic Information in your Slack workspace (in api.slack.com) and copy the **Signing Secret** under **App**

App Credentials

These credentials allow your app to access the Slack API. They are secret. Please don't share your app credentials with anyone, include them in public code repositories, or store them in insecure ways.

App ID
A01JDJS7VEJ

Date of App Creation
January 12, 2021

Client ID
1557753420966.1625638267494

Client Secret
..... [Show](#) [Regenerate](#)

You'll need to send this secret along with your client ID when making your [oauth.v2.access](#) request.

Signing Secret
71b31c20w2d4265336c6152fw12d4rc6 [Show](#) [Regenerate](#)

Slack signs the requests we send you using this secret. Confirm that each request comes from Slack by verifying its unique signature.

Verification Token
MYe4PAb76ZCF4hy9EO4UONZ4 [Regenerate](#)

This deprecated Verification Token can still be used to verify that requests come from Slack, but we strongly recommend using the above, more secure, signing secret instead.

Credentials.

5. Navigate to **OAuth & Permissions** in your Slack workspace and copy the **Bot User OAuth Access Token**.

Settings

- Basic Information
- Collaborators
- Socket Mode
- Install App
- Manage Distribution
- Submit to App Directory

Features

- App Home
- Org Level Apps
- Incoming Webhooks
- Interactivity & Shortcuts
- Slash Commands
- Workflow Steps
- OAuth & Permissions**
- Event Subscriptions
- User ID Translation
- Beta Features
- Where's Bot User ?

OAuth Tokens & Redirect URLs

Tokens for Your Workspace

These tokens were automatically generated when you installed the app to your team. You can use these to authenticate your app. [Learn more.](#)

OAuth Tokens for Your Team

Bot User OAuth Access Token

xoxb-1557753420966-1632731908147-krtmO64eTJRnB17X6P812MQ6 [Copy](#)

Access Level: Workspace

[Reinstall to Workspace](#)

Org-Wide Installation

Only an org admin has the option to install org-wide. When your app is ready to be installed on your organization, you have a couple of options on how you can get your org admin to install it for you:

- Send your admin a [shareable URL](#), your admin will be asked to authorize this app
- Add your org admin as a [collaborator](#) on your app, your admin will be able to directly

Result

You should now be able to interact with your self-configured bot.

If you don't see your bot under the Apps section, then select **Add Apps** and search for your bot and select it. You can type **hi** to receive a response.

Integrate your ServiceNow® instance with a self-configured bot

Add the self-configured bot to your ServiceNow instance to complete the integration with Slack.

Before you begin

Role required: virtual_agent_admin or admin and Slack workspace admin

This installation requires a ServiceNow instance other than the one integrated with the production bot to integrate one bot (of the multiple bots) with a single Slack workspace.

Note: The ServiceNow instance that you will use to integrate the self-configured bot with a single Slack workspace must not be an instance that you have used for integrating Virtual Agent.

Verify that you created a bot on the Slack workspace and fetched the bot details to complete the integration. For more information, see [Create a bot in Slack](#).

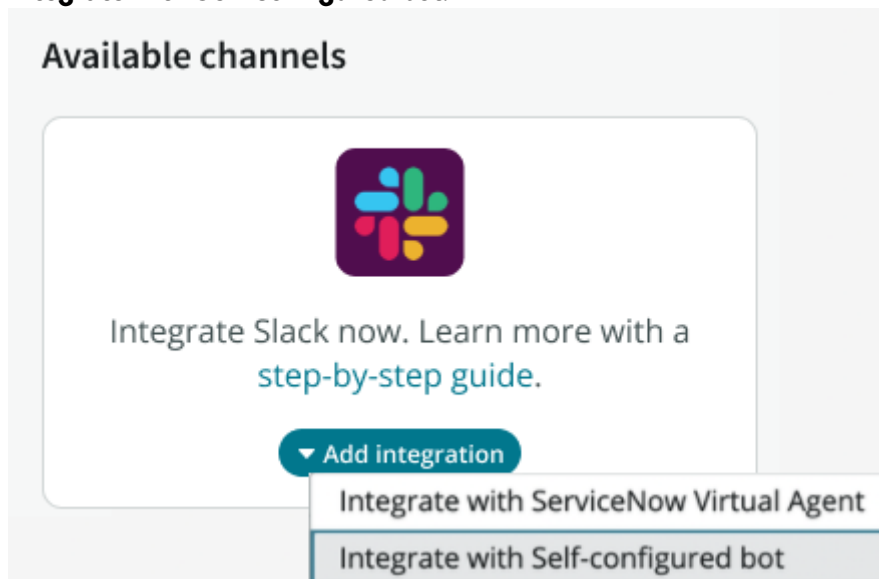
Fetch the Name of the bot, Team ID, Signing Secret, and Access Token details for your bot created in Slack. For more information, see [Retrieve bot details](#). Use this information when setting up the bot in your ServiceNow instance.

Procedure

As a ServiceNow admin, set up the bot on the ServiceNow instance in the global scope.

Note: The virtual_agent_admin can install bots with multiple instances or bots apart from the production bot in the instance. This role can also use all Virtual Agent features and integrate one of the multiple ServiceNow instances with a bot on a single Slack workspace.

- a. Log in to your ServiceNow instance and navigate to **All > Conversational Interfaces > Settings**.
- b. In **General Settings** under **Channels and integrations**, select **View All**.
The Channels and integrations page opens.
- c. Under the Available Channels section in the Slack tile, select **Add Integrations** and select **Integrate with Self-configured bot**.



Note: The **Add Integrations** button is available only after installing the Conversational Integration with Slack plugin (sn_va_slack) on your ServiceNow instance. For more information about getting the plugin installed, see [Install the Conversational Integration with Slack](#).

d. In the Integrate Slack with self-configured bot page, provide the following details for the Slack bot, and then select **Submit**.

- **Name of the bot**
- **Team ID**
- **Signing Secret**
- **Access Token**

For more information, see [Retrieve bot details](#).

Integrate Slack with self-configured bot page

General > Channels and integrations > Integrate Slack with self configured bot

Integrate Slack with self configured bot

Complete all information. To learn more, refer the [step-by-step guide](#).

Submit

Name of the bot ⓘ
VA HR Bot

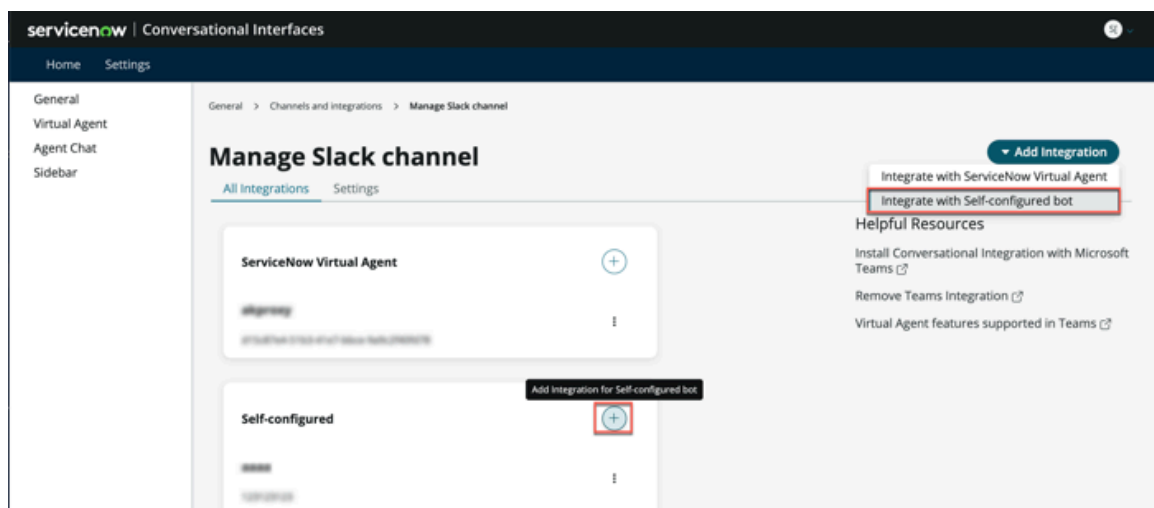
Team ID ⓘ
XXXXXXXXXX

Signing Secret ⓘ

Access Token ⓘ

Note: For each additional ServiceNow instance to be integrated, repeat steps 1 and 2.

If you want to integrate your ServiceNow instance with another Slack bot, select the plus icon in the Self-configured bot area, or use the **Add integration** drop-down menu and select **Integrate with Self-configured bot**.



You will receive a message that the installation is successful.

Manage the self-configured bot integration with Slack

Manage your Conversational Integration with Slack application, its branding, and customize the self-configured bot-specific messages in your ServiceNow instance after integration.

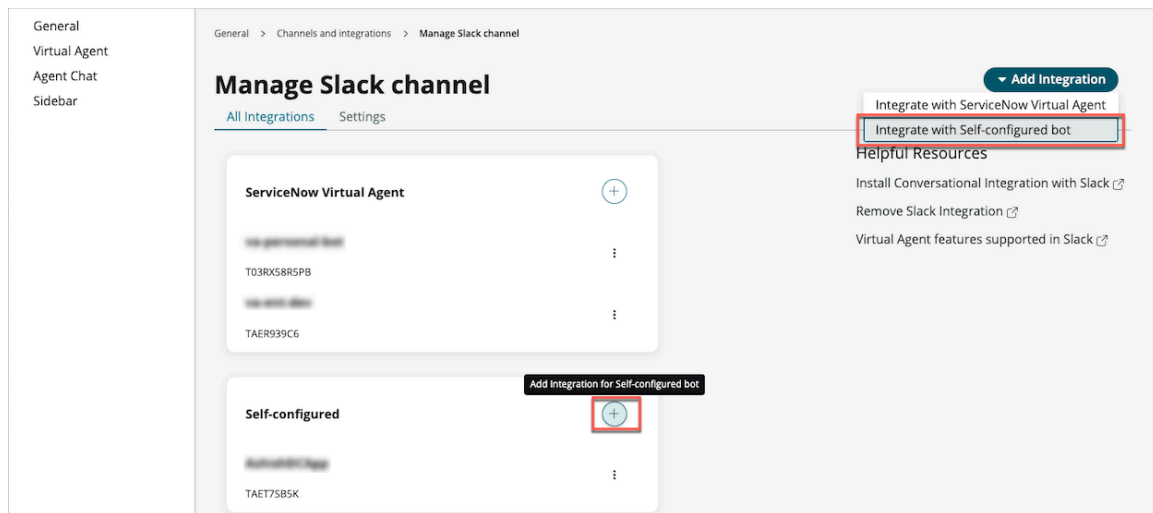
Before you begin

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In **General Settings** under **Channels and integrations**, select **View All**.
3. Select **Manage** on the Slack tile.

If you want to integrate your ServiceNow instance with another Slack bot, select the plus icon in the Self-configured bot area, or use the **Add integration** drop-down menu and select **Integrate with Self-configured bot**. For more information, see [Integrate your ServiceNow instance with a self-configured bot](#).



When you select **Manage**, you're redirected to the Manage Slack channel page where you can manage the bots.

4. Select the Manage Bot icon , and then select **Manage Bot**.
You're redirected to the Bot Configuration page for the selected bot.
5. Select the **Configuration** tab to brand your self-configured bot.
For more information about branding your self-configured bot, see [Configure branding for your self-configured bot](#).
6. Select the **Bot Messages** tab to create and edit a bot message.
For more information, see [Create bot messages](#).

Remove the self-configured bot integration with Slack

Remove the self-configured bot integration from your ServiceNow instance to disassociate the Slack app.

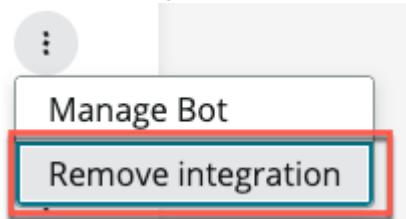
Before you begin

Roles required: virtual_agent_admin or admin

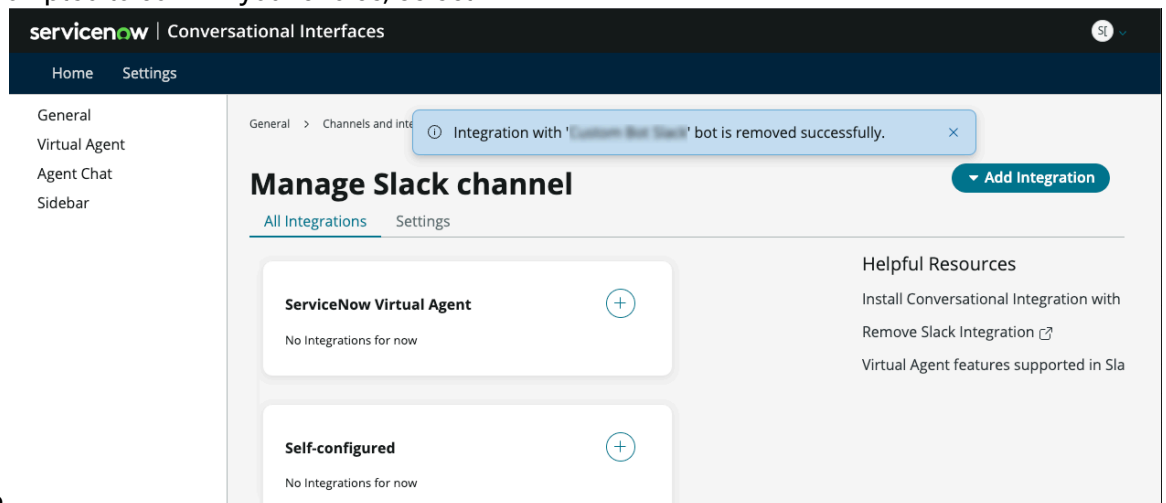
Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In **General Settings** under **Channels and integrations**, select **View All**.
3. On the Channels and integration page, in the Slack tile, select **Manage**.
4. In the Manage Slack Channel page, find the self-configured bot integration to remove from your ServiceNow instance.
5. Select the manage bot icon , and then select **Remove integration**.

Remove integration with Self-configured bot



6. When prompted to confirm your choice, select



Remove.

The self-configured bot integration with Slack has been removed successfully.

Configure Virtual Agent settings for Slack

Configure your Slack bots that are integrated with Virtual Agent to enable notifications, to link ServiceNow user profiles, and to set up system messages and contextual actions.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In **General Settings** under **Channels and integrations**, select **View All**.
3. On the Channels and integrations page, in the Slack tile, select **Manage**.
4. Select the **Settings** tab.
5. Slide the **Enable Notification for all users** toggle switch to disable notifications for the linked users.

Note:

- The **Enable Notification for all users** toggle switch is selected by default.
- The **Automatically Link ServiceNow user profiles** toggle switch is selected by default and turned off for any further change. This option links all of the active ServiceNow accounts automatically to the associated Slack bot.

6. Set up the Global Messaging Settings.

Note: Any changes made to these settings will reflect in all the channels.

- **System Messages:** Customize the default system messages displayed during Virtual Agent conversations.

For more information about changing or updating a system message, see [Change system messages](#).

- **Contextual Actions:** Customize the supported actions per user command inputs.

For more information about updating a contextual action, see [Contextual actions for custom chat integrations](#).

Configure branding for your Virtual Agent bot in Slack

You have the flexibility to customize the default branding for your Slack Virtual Agent. You can change the production bot's name and icon.

Before you begin

Role required: admin or virtual_agent_admin

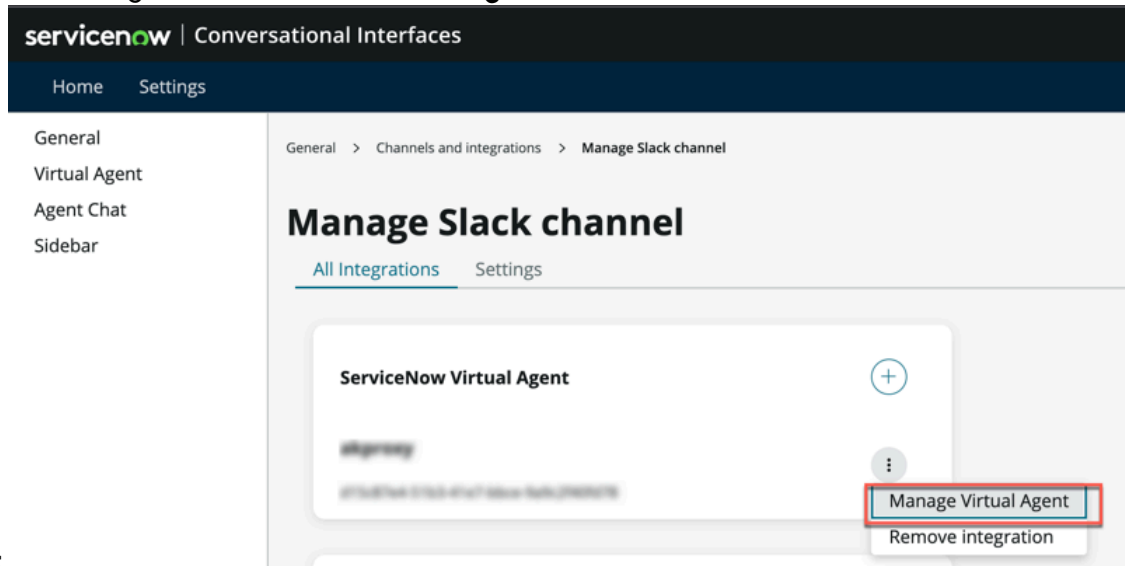
Note: The branding capability in Slack is available from the August 2022 store release and is compatible with the Tokyo release and later.

Ensure that you set the `com.glide.cs.enable_slack_branding` system property to true before configuring the branding settings for your bot.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. On the **General Settings** page under **Channels and integrations**, select **View All**.
3. On the Channels and integrations page, in the Slack tile, select **Manage**.

4. Select the Manage Bot icon and select **Manage Virtual**



Agent.

5. On the Branding tab, provide the following details:

- **Bot name:** Name that appears on the Slack conversation body.

On the Configure your bot integration in Slack page, change the default bot name to a bot name of your choice and select **Save**.

Note:

- If you ever want to change the bot name back to the default bot name, delete the bot name that you provided and select **Save**. The bot name will be taken from the available bot name on Slack admin center.
- If you want your bot name to be different from the header and the left pane, provide a different name.

- **App name:** Name that appears in the Slack header and left panel.

To change the app name on the Slack header and left panel, perform the following steps.

- Log in to [Slack admin center](#).
- Navigate to **Slack app directory** and find your Slack pre-published app.
- On your Slack app page, select the **Configuration** tab and navigate to the Bot User section.
- Select **Edit** to edit the bot name.
- In the Edit bot name pop-up, change the bot name to a name of your choice and select **Save Changes**.

Note: If you want the bot name to be consistent with the bot name in the conversation body, then provide the same bot name.

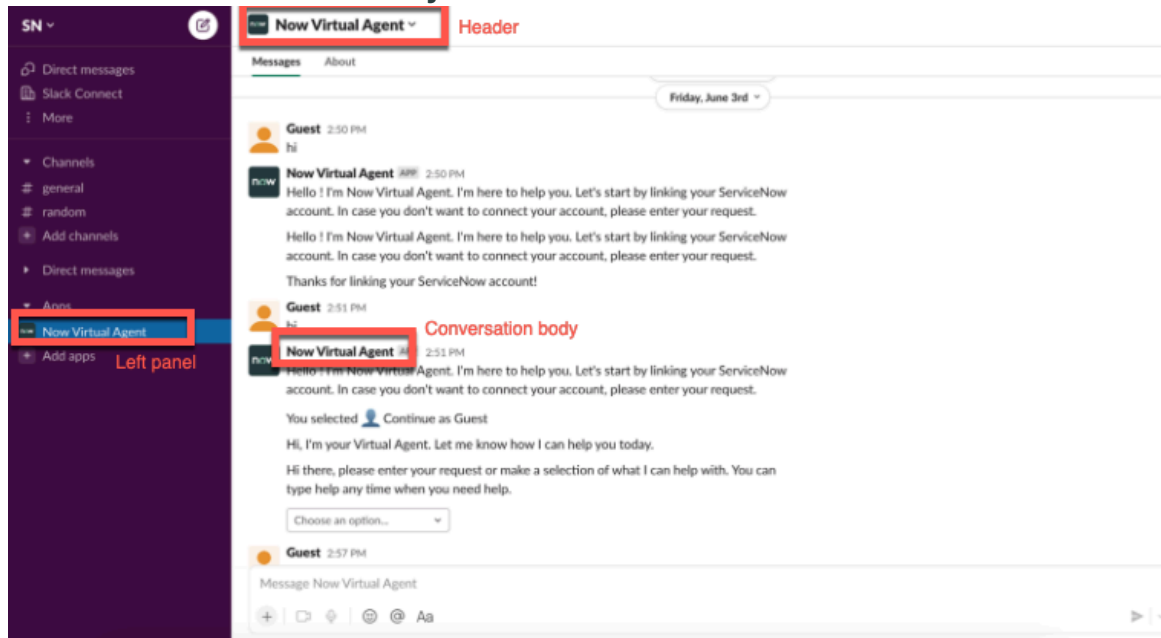
- **Slack bot icon:** Icon that appears in the Slack conversation body.
 - **Use default icon:** Select the **Use default icon** radio button and select **Save** to change the bot icon back to the default bot icon.
 - **Use custom icon:**

Select the **Use custom icon** radio button to change the Slack bot icon and select **Save**.

There are two ways to upload an image icon.

- Select **Attach image** to browse for an image icon and select **Save**.
- Select the **Use image URL instead** to provide a URL of the image icon and select **Save**.

Branded Slack conversation body



What to do next

Open your Slack bot chat and start a new conversation. You will notice that the bot name has been updated on the Slack conversation body, header, and in the left pane and the bot icon is updated only in the conversation body.

Configure branding for your self-configured bot

Configure your self-configured Slack app's branding. You have the flexibility to customize the default ServiceNow branding for the Slack self-configured bot name and icon.

Before you begin

Verify that you have completed integrating Virtual Agent with a self-configured bot in Slack before customizing the branding options.

Role required: admin

Procedure

1. Log in to the [Slack admin center](#).
2. Select **Your apps** and select a bot from for which you want to change the branding settings.
3. Navigate to **Settings > Basic Information > Display Information**.
4. In the Display Information section, you can update the following details:
 - a. **App name:** Name of your Self-configured bot.
 - b. **Short description:** A short sentence describing your Self-configured bot.
 - c. **App icon & Preview:** Image representing your Self-configured bot on the conversation body.

Note: Verify that the image you would like to upload as the app icon is a square between 512 px by 512 px and 2000 px by 2000 px.

d. Background color: Background color of your bot icon while on the conversation body.

e. Long description: Description of your self-configured bot to show on your App Detail page.

5. Select **Save Changes**.

Link Virtual Agent requesters before integration with Slack

Link your Virtual Agent requesters to a ServiceNow instance before they run the Conversational Integration with Slack. Batch linking lets your Virtual Agent users chat immediately and receive notifications without going through the initial authentication linking process.

Before you begin

- [Manage the Virtual Agent integration with Slack](#), with the **Automatically Link ServiceNow user profiles** option enabled.
- [Set up Slack Spoke](#) .

Roles required:

- virtual_agent_admin
- One of the following Slack administrator roles:
 - Global Administrator
 - Application Administrator
 - Cloud Application Administrator
- admin or schedule_admin to change the scheduled job script

About this task

When you enable the **Automatically Link ServiceNow user profiles** option, a batch of up to 10,000 users is linked automatically to a ServiceNow instance. Your existing users are linked during the initial run. Newly added users are linked during subsequent daily runs.

To prevent automatic batch linking, disable the **Automatically Link ServiceNow user profiles** option on the Messaging Apps Integration UI page.

Batch linking includes the following benefits:

- Notifications are proactively sent by Virtual Agent to users when their identity in Slack is associated with their identity in a ServiceNow instance. This is also true when the user is already linked with Virtual Agent.
- If a user is linked and Slack notifications are enabled in the app, notifications are pushed even when a user is not logged into a Slack account.

Batch linking happens automatically during the **Slack Daily Pre-Link Job** scheduled job.

This job runs by default at a scheduled time (time is displayed in the time zone of the system administrator), and you can change the time, if desired. To modify the default scheduled job run time or time zone, access the **Slack Daily Pre-Link Job** Scheduled Script Execution form.

Procedure

1. Navigate to **All > System Definition > Scheduled Jobs**.
2. Search for the **Slack Daily Pre-Link Job** scheduled job and select it to open the Scheduled Script Execution form for the record.
3. In the **Run** field, change the run time to your desired time.
4. For a description of the other fields that you can change in this form, including **Time zone**, see [Automatically run a script of your choosing](#).
5. Select **Save**.

Configure promoted topics for Conversational Integration with Slack

Configure promoted topics to push out important, common topics for users' quick consumption during a conversation with the Slack bot. You can configure up to six different promoted topics to be displayed on the Slack channel greeting message.

Before you begin

Role required: admin or virtual_agent_admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. On the Virtual Agent settings page, navigate to Custom greetings and setup, and then select **View All**.
The promoted topics that you have previously configured reside in the default chat experience. For more information, see [Promote or demote LLM conversational subflows, actions, and topics in Assistant Designer](#). If the default chat experience is the only record that you have on your instance, the promoted topics will be applied to the chat widget, Microsoft Teams, and Slack (unless you configure something unique for Slack as instructed in this topic.)

If you want to set up unique promoted topics for Slack that are different from the chat widget, continue to the next step.
3. On the Custom Greetings & Setup page, select **New**.
4. On the form, fill in the fields.

Create New Custom Greetings and Setup

Field	Description
Name	Name of the chat experience. For example, Slack chat experience.
Description	Description of the chat experience.
Active	Enable or disable the chat experience.
Order	Order for the promoted topics to appear on the chat.
Domain	Application scope of the chat experience.
Condition Mode	Situation in which your user gets this chat experience. Available condition modes:

Field	Description
	○ Advanced ○ Simple
Condition	Condition that defines the condition mode for the chat experience. Set up a simple condition with [devicetype] [is] [slack]. Note: If you set up [devicetype] [is] [teams] in the Condition pop up with a higher order than the default chat experience, then Slack picks up the setup topics and promoted topics defined in this experience. This change will not affect chat widget, which is still going to inherit the setup topics and promoted topics defined in the default chat experience.

5. Select **Create custom experience.**

6. Add promoted topics in the Slack chat experience form that you created.

Review the character length of your promoted topics before adding them for Slack. When the text in the topic gets closer to ~30 characters, the text may get truncated. For more information, see [Slack document](#).

- a. On the Slack chat experience form, select the **Promoted Topics** tab and select **Add topic**.
- b. On the form, fill in the fields.

Create New Promoted Topics

Field	Description
Topic	Name of the topic being chosen. Use the Search icon to choose a topic.
Order	Provide the order for the topic chosen.

Note: Similar to the chat widget, you can configure a maximum of six promoted topics for the Slack channel.

- c. Select **Save**.

What to do next

Start a conversation with the Slack bot and you should be able to see the promoted topics after the greeting message that you have setup for the Slack channel.

If you have not configured the promoted topics for Slack, then the promoted topics from the default chat experience are displayed.

Using ServiceNow Otto for Virtual Agent conversations with Slack

ServiceNow Otto provides a large language model (LLM)-based conversational experience in your conversations with a Virtual Agent bot or a self-configured bot that is integrated with Slack.

Integrating Slack with Virtual Agent

To enable a bot with ServiceNow Otto, you must first integrate your Virtual Agent bot or a self-configured bot with Slack.

- To integrate Slack with Virtual Agent, see [Integrating Virtual Agent with Slack](#).
- To integrate Slack with a self-configured bot, see [Integrating a self-configured bot with Slack workspace](#).

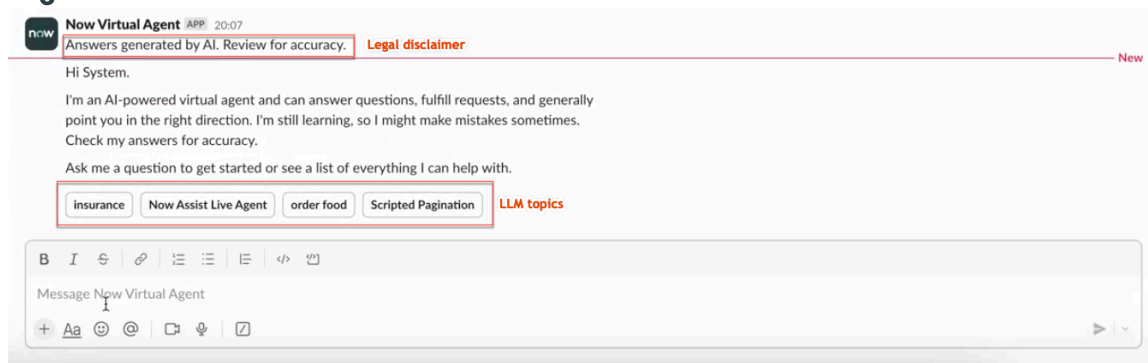
Conversational experience with ServiceNow Otto in Slack

ServiceNow Otto provides a new AI Search experience in channels with the following features:

• Legal Disclaimer

The first message in a conversation with ServiceNow Otto displays a legal disclaimer indicating that it is an AI-generated message followed by the ServiceNow Otto greeting message and LLM-enabled topics.

Legal Disclaimer



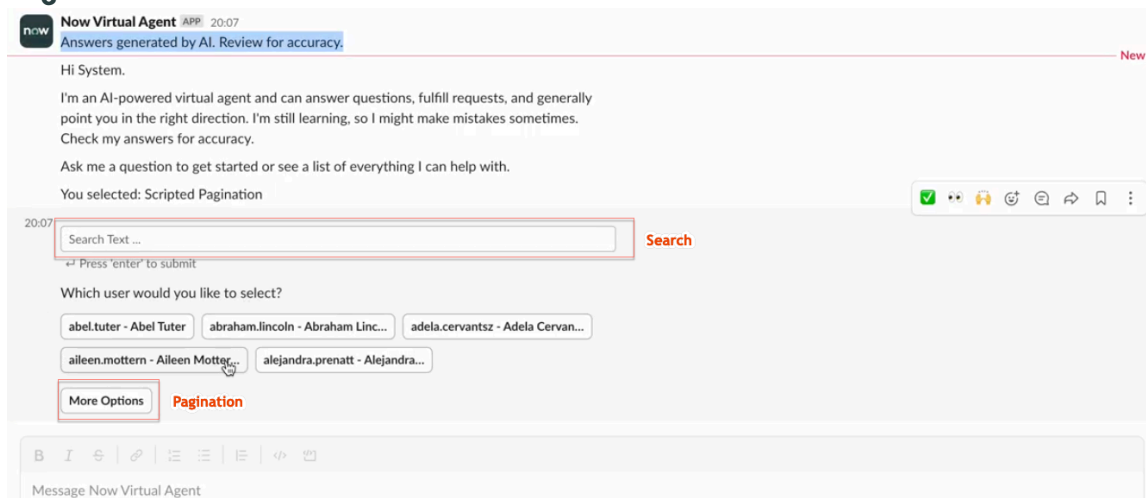
The Legal disclaimer message is managed by the *support - system - action* provider property defined in the [sys_cs_custom_adapter_property] table. By default, the value of the provider property is set to **true**.

• Pagination and Search

You can navigate through multiple pages of choices and search for specific items or users, using the Search bar.

When you select an LLM-enabled topic, the Search bar is displayed along with the available choices related to the selected topic and the **More options** button. You can either search for an item or user using the Search bar or pick an item or user from the choices available. If you want to look for more available options, you can navigate to the next page using the **More Options** button. If you would like to go back to the previously listed choices, you can use the **Previous Options** button.

Pagination and Search



If you have searched for a user or an item, the choices related to your search term are displayed. You can either select from the choices available or reset the search and pagination.

Tip: You can reset the pagination and search by selecting Enter in the Search bar.

The pagination and search capabilities are managed by the following provider properties:

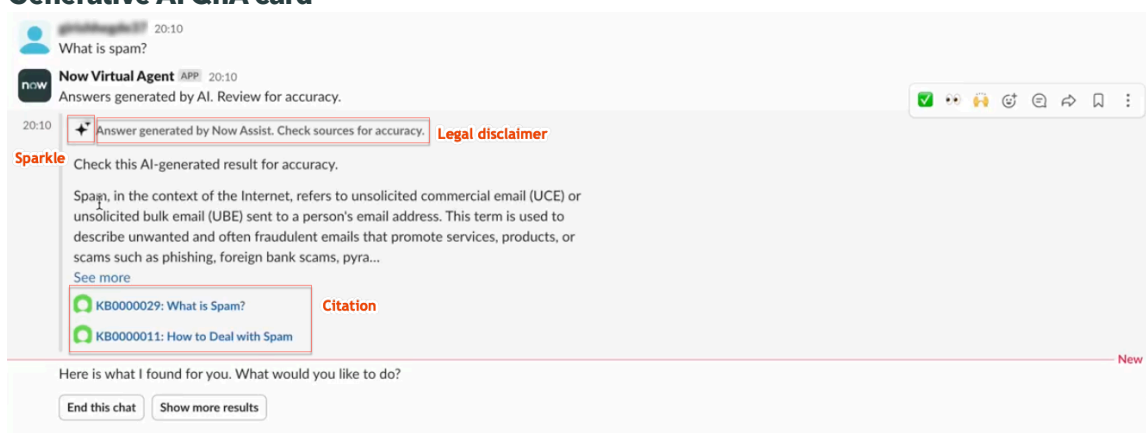
- *picker_pagination_experience_supported*: Enables the pagination experience in your LLM conversations with ServiceNow Otto. The default value of this property is **true**.
- *picker_pagination_limit*: Sets the page limit value for an adapter for displaying the choices. The maximum page limit value that can be set for an adapter is **100**.

For example, if a topic has fewer than 100 choices available and the limit is set to 100, then the **More Options** button is not displayed. If a topic has more than 100 choices available when the limit is set to 100, then the **More Options** button is displayed.

• Generative AI QnA card

Use this feature to ask questions and get answers from ServiceNow Otto in a card format. The response is displayed with a sparkle image, the legal disclaimer, and the citation about the question asked.

Generative AI QnA card



Note: When using ServiceNow Otto in Slack, users can provide quick feedback on the AI-generated Virtual Agent responses by selecting the thumbs up (👍) or thumbs down (👎) icons.

For more information about enabling LLM for your bots that are integrated with Slack, see [Enable ServiceNow Otto for Virtual Agent in Slack](#).

Enable ServiceNow Otto for Virtual Agent in Slack

Enable large language model (LLM) conversational experiences with ServiceNow Otto in your Slack integration.

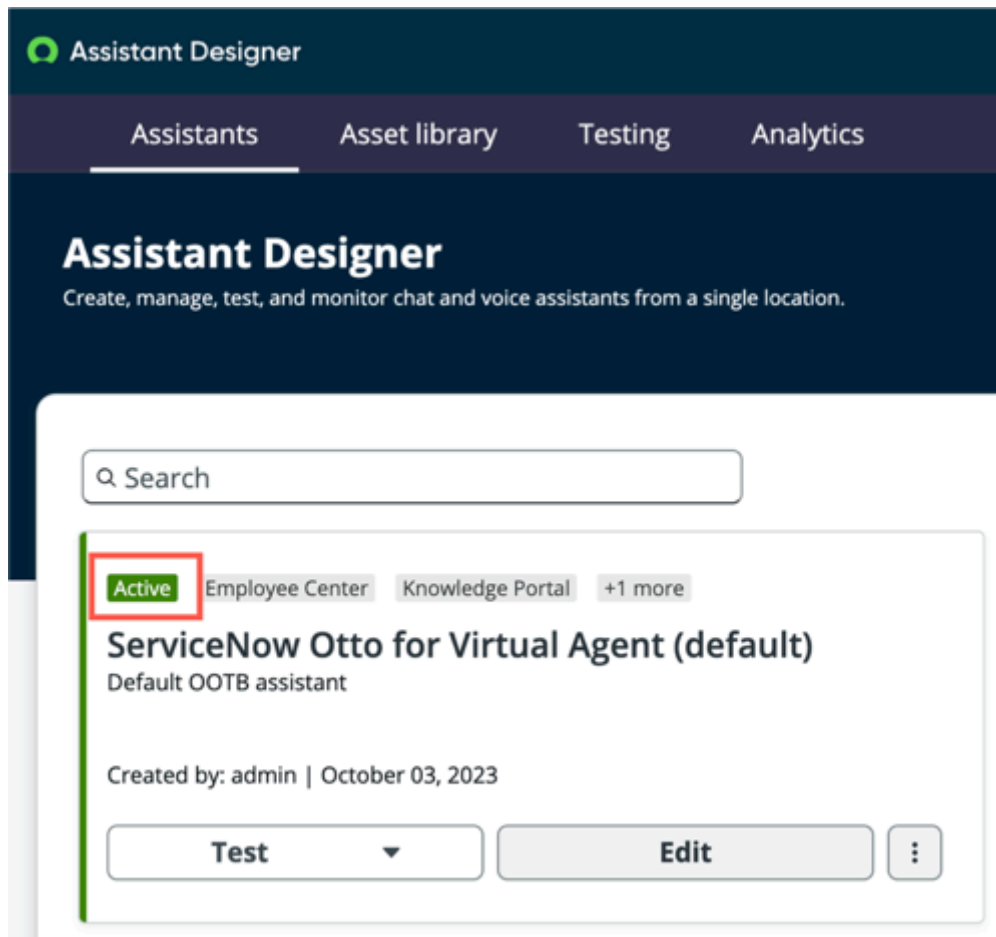
Before you begin

Ensure that you enable AI Search. For more information about enabling AI Search, see [Enable AI Search for Next Experience](#).

Role required: admin

Procedure

1. Log in to your ServiceNow instance and navigate to **All > Conversational Interfaces > Assistant Designer**.
2. On the Assistants tab, select **Edit** for an assistant that is integrated with Slack. For example, select **ServiceNow Otto for Virtual Agent (default)**.



Note: Verify that the assistant you choose is integrated with the Slack workspace before selecting it.

3. On the assistant configuration page, navigate to **Review display experiences > Channels**.

4. Select the Slack channels to integrate with ServiceNow Otto for Virtual Agent.

5. On the assistant configuration page, navigate to **Chat features**.

6. In the Response streaming section, select the **Allow response streaming** check box.

7. Select **Save and Continue**.

Synthesized response in Slack conversations

Synthesized responses in Slack conversations are results that are summarized as a single response, allowing users to see information in a conversational way.

With synthesized responses, the response contains the most relevant items and information, such as:

- Returning multiple Genius Results and topics in carousel format.
- Providing unified search across topics and catalog items.
- Providing a Knowledge Base Q&A pipeline that enables multiple snippets from multiple Knowledge Base articles to be passed to the LLM as the context for answer generation.

The overall synthesized response helps users experience a conversational flow that understands query intent, searches across records of various types, and summarizes results in a unified, easy-to-consume response.

When you ask a question in Slack with ServiceNow Otto enabled, you receive a summary of the response with catalog items and topics, followed by the citation links. For example, if you enter `laptop` in your conversations, you see the responses in a synthesized format.

Messages About

laptop 15:45 Today

GirishPersonalWorkspace APR 15:45
Answers generated by AI. Review for accuracy.

15:46 Here are some guidelines and conditions for laptop replacement and refresh:

- Laptop replacement is provided for ServiceNow employees under specific conditions 1
- A new laptop can be issued if it's deployed within three months to an end-user in need of immediate replacement, or if the current laptop is having issues and over two years old but less than three years 1
- A used, good condition laptop will be issued if the issue is caused by the user 1
- A new laptop replacement is not issued for reasons such as expecting a current model not available at the time, physical damage, or liquid damage 1
- If a laptop is lost or stolen, a police report is required, and a replacement device will be of comparable functionality 2
- If an asset cannot be repaired, it will be retired and used for spare parts or processed by an approved E-waste recycler 2
- Eligible ServiceNow employees can replace their laptop if it is older than 3 years 2

Here are some items that might be relevant:

- : Acer Aspire NX, the corporate standard laptop for sales employees.
- : Dell XPS 13, the corporate standard laptop for developers.
- : Macbook Pro, a high-powered laptop with a Retina display.
- : Apple MacBook Pro MD104LL/A 15.4-Inch Laptop.
- : x1 Carbon, Lenovo's lightest ThinkPad yet.

Sales Laptop Start request

Development Laptop (PC) Go to request

Developer Laptop (Mac) Start request

Apple MacBook Pro 15" Start request

Standard Laptop Start request

View other options View other options

Sources

- 1 Laptop Replacement & Refresh Process and Guidelines
- 2 Laptop / Computer Replacement Process and Guidelines

Message GirishPersonalWorkspace

When you select the **View other options** button, you get the list of available Knowledge Base articles and catalogs, which you can select and then view details.

Streaming synthesized response

Streaming synthesized responses in Slack conversations provides a faster interaction and more engaged user experience with real-time updates while the messages are processed. To learn more about response streaming, see [Chat streaming responses](#) and [Manage an assistant chat experience](#).

To enable response streaming in Slack conversations, see [Enable ServiceNow Otto for Virtual Agent in Slack](#). With response streaming enabled in Slack conversations, you can experience the following enhancements:

- Reduced latency in conversations
- Increased engagement
- Ability to handle longer or more complex queries effectively

Example of triggering AI agents through REST API

Example of using the sn_aia REST API endpoints to trigger agents through REST API calls.

```
{
  "jsonrpc": "2.0",
  "id": "{{ $guid }}",
  "method": "message/send",
  "params": {
```

```

"message": {
  "kind": "message",
  "role": "user",
  "parts": [
    {
      "kind": "text",
      "text": "Help me plan a calculator app"
    }
  ],
  "messageId": "{{ $guid }}"
}
}
}

```

Virtual Agent features supported in Slack conversations

Virtual Agent features, such as AI Search results, Virtual Agent notifications, and controls for creating Virtual Agent conversations are supported in Slack bot conversations.

Note: Conversational Integration with Slack is not supported for on-prem instances.

This section highlights key Virtual Agent features that are supported in the Conversational Integration with Slack app.

AI Search results

Virtual Agent can generate AI Search results that are displayed as Genius result cards and multiple-link outputs in conversations. The default AI Search configuration for Virtual Agent enables search results for Q&A (knowledge base) and catalog items.

For more information, see [ServiceNow Otto for AI Search](#).

Trusted domains

In custom chat integrations, the values specified in the Trusted media domains field of the Provider Channel Identities table [sys_cs_provider_application] take precedence over values in the Connections table [sys_cs_provider], and therefore overrides.

Chat localization into conversation language

Starting with version 5.0.1, chat gets localized into the customer-specified language set in the Slack UI, though the session language is different.

Translation of responses to the conversation language is done using the function `gs.getMessageLang(str, lang)`, where the language retrieved from Slack is passed through this function as a parameter. The translation process works with the following three use cases, as follows:

- The requested language plugin is available in the ServiceNow instance.

When the requested language plugin is available in the ServiceNow instance, the session language honors the conversation language set by the user.

- The requested language plugin is absent, but a fallback language is configured.

When the requested language plugin is absent, the fallback language specified in the [sys_language] table is used for the translation process. However, for the fallback mechanism

to work, you must enable the `glide_i18n.language_fallback_enabled` system property. By default, the value of the property is **false**. Set it to **true** to enable the fallback mechanism. For more information, see [Set a fallback language](#) .

- The requested language plugin is absent, but a fallback language is not configured.

When the requested language plugin is absent and fallback is not configured, the default translation language will be English.

Assistant Designer user input and bot response controls in Slack

The Assistant Designer user input controls and bot responses for creating conversation topics are supported in Slack conversations, including the table bot response and the card control that can display images.

Assistant Designer user input controls and bot responses

Starting with version 2.0.0, the card and video bot response controls are supported in Slack conversations. The video control displays a thumbnail image of the video that users select to open the video in their preferred web browser.

For more information about user input controls and bot responses, see [Assistant Designer user input controls](#) and [Assistant Designer bot responses](#), respectively.

Upload multiple file types

Starting with version 5.0.2, you can upload multiple image files (up to 10 files) from your desktop or by providing the valid link for an image picker topic in Virtual Agent. You can also share multiple files (up to 10 files) to a Virtual Agent topic via a link or by uploading it from your desktop.

To upload multiple image files or other attachments during your conversation with the bot, select **Image file types** or **All file types** respectively.

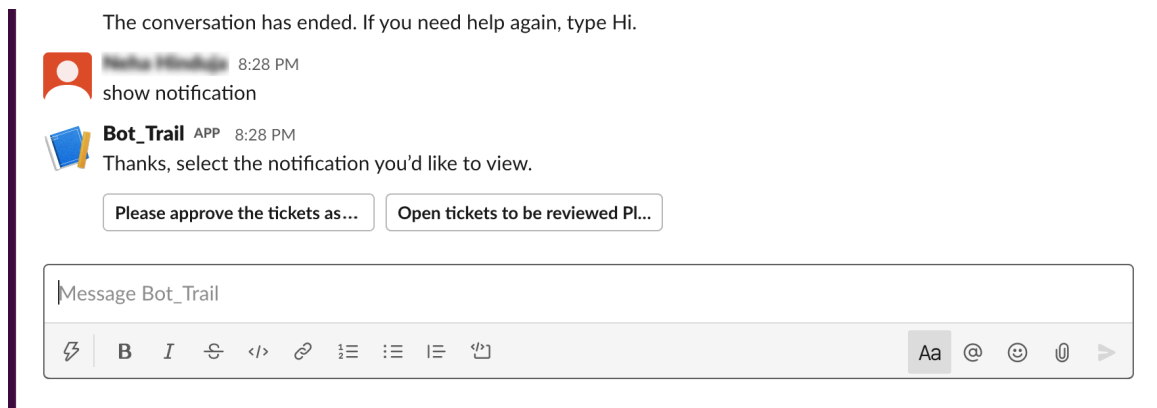
 **Note:** You can also share multiple files with a live agent from Slack.

Virtual Agent notifications supported in Slack

Slack app supports Virtual Agent notifications during conversations.

- Subscription management
 - Requesters - Use the **notification** (or **notifications**) command to subscribe to or unsubscribe from notifications.
 - Admins - Enable notifications for messaging users in the Messaging Apps Integration page.
- Notification content - Create notifications with rich content, images, and action buttons. Actionable notifications enable recipients to perform certain actions and respond to the notification, such as adding a comment or requesting a live agent.
- Notification delivery
 - Message notifications are delivered immediately to end users, even if the user is chatting with a virtual or live agent.
 - Actionable notifications are delivered only when the user is not in an active conversation with a virtual or live agent. Users can choose to:
 - Review the notifications later by using the **show notification** command.

For example, with the **show notification** command, users can select the notification they want to view.



- Perform or skip the actions for the notification. If users decide to skip the actions, users can return later to the notification by using the **show notification** command.

For detailed information on Virtual Agent notifications, see [Configuring Virtual Agent notifications](#).

Unsupported Virtual Agent features in Slack

Refer to the unsupported features of Virtual Agent in Conversational Integration with Slack.

Unsupported features

Virtual Agent does not support the following functionalities during a conversation in Slack:

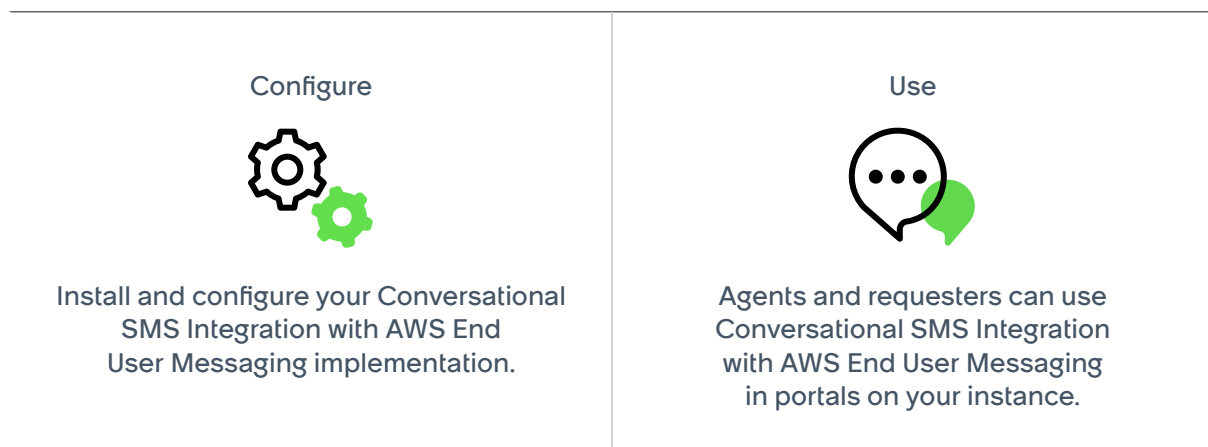
- Connect Support
- Geo-location topic block (legacy NLU)

Conversational SMS Integration with AWS End User Messaging

Install the Conversational SMS with AWS End User Messaging (sn_sms_aws_adapter) plugin from the ServiceNow Store to enable users to connect to customer support agents via SMS using the Amazon End User Messaging as the SMS provider.

Get started with Conversational SMS Integration with AWS End User Messaging

Select a tile to get started.



Configuring Conversational SMS Integration with AWS End User Messaging

Install and set up the Conversational SMS Integration with AWS End User Messaging application to enable requesters to interact with virtual and live agents.

Configuration overview

1. Install the Conversational SMS Integration with AWS End User Messaging application

Install the application from the ServiceNow Store.

2. Set up SMS End User Messaging Service and AWS resources

Set up conversational SMS with Amazon Web Services (AWS) end user messaging.

3. Set up SMS integration on a ServiceNow instance

Set up conversational SMS on a ServiceNow instance.

Install the Conversational SMS Integration with AWS End User Messaging application

You can install the Conversational SMS Integration with AWS End User Messaging application (sn_sms_aws_adapter) from the ServiceNow store and integrate it with AWS End User Messaging to enable customer support agent conversations via an SMS channel.

Before you begin

Role required: Admin or virtual_agent_admin

About this task

Ensure that the application and all of its associated ServiceNow store applications have valid ServiceNow entitlements.

Procedure

1. Navigate to **System Applications > All Available Applications > All**.

2. Find the Conversational SMS Integration with AWS End User Messaging application (sn_sms_aws_adapter) using the filter criteria and search bar.

You can search for the application by its name or ID.

3. Select the application and version from the list and select **Install**.

In the Install dialog box, all dependent plugins are displayed.

Set up SMS End User Messaging Service and AWS resources

Set up conversational SMS with Amazon Web Services (AWS) end user messaging to enable customers to seamlessly talk to virtual or live agents.

Before you begin

- Procure an Amazon Web Services (AWS) account with the administrative access to complete the setup of SMS integration. This step is not required, if you already have an AWS account. To learn how to create an AWS account, see [documentation](#) 

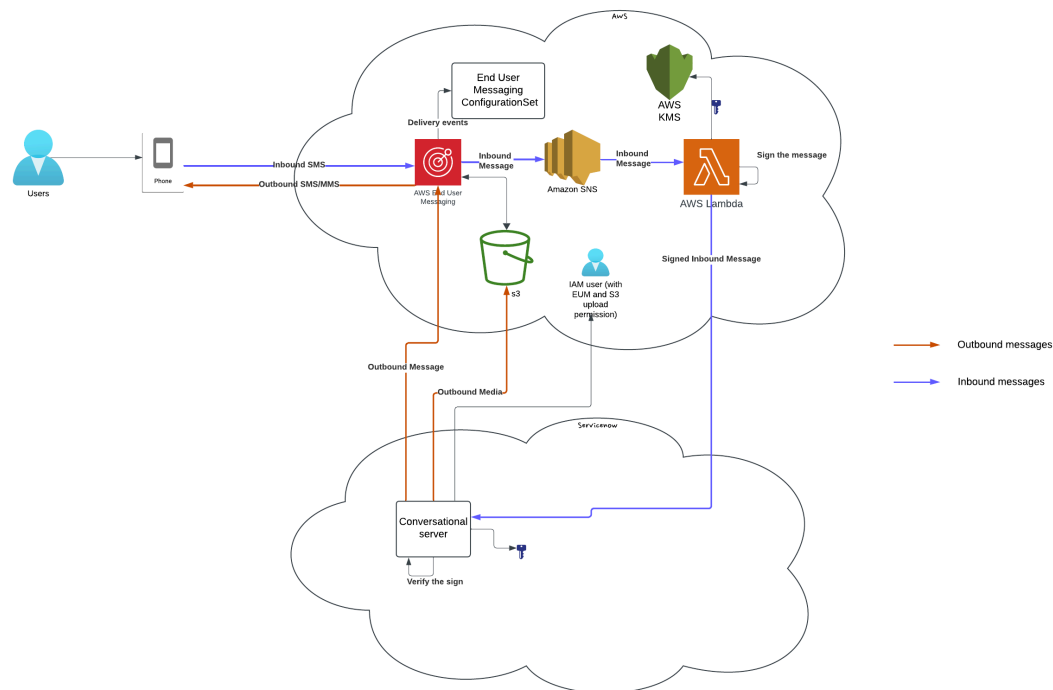
Role required: admin

About this task

To set up integration on AWS, you must procure a phone number and an AWS SNS topic that subscribes to the AWS End User messaging phone number. The Lambda function on AWS that subscribes to the SNS topic signs the SMS messages with a secret key to verify and validate the

messages that you receive. The Lambda function uses the Key Management Services (KMS) to create signatures using the SHA-256 algorithm.

This further enables IAM users to call the AWS End User Messaging APIs to send outbound SMS/MMS. You can also set up the S3 bucket to send media files to customers and store outbound media files.



Procedure

1. Navigate to AWS end user messaging and select **Manage SMS** to procure a phone number.

To learn how to procure a phone number, see [documentation](#)

2. Setup a collection of the required Amazon Web Services resources and properties using a CloudFormation template.

To learn how to deploy a stack, see [documentation](#) . You can download the ServiceNow CloudFormation template from the Conversational SMS Integration with AWS End User Messaging store application from the ServiceNow store. This template creates an External (Import key material) type of KMS (Key Management Service) with no key material. You must upload the wrapped key material separately.

3. Upload the wrapped key material to the key from step 2.

The key value must be 32-byte in length and must use the HMAC_256 algorithm. This key value is required for the setup on ServiceNow platform as well. To learn how to upload the wrapped key material to a KMS key, see [documentation](#) .

4. Link the phone number to enable Simple Notification Service (SNS) to support two-way SMS interaction between agents and customers.

To learn how to link phone numbers to SNS, see [documentation](#)

5. After you run the CloudFormation template, generate the credentials for the IAM user that is created.

The CloudFormation template creates an IAM user with permissions required to call the End User Messaging APIs, that enable outbound SMS and uploading media files to an S3 bucket.

You must create an access key for the IAM user. The access key ID and secret access key are required during the setup on the ServiceNow platform. To learn how to create an access key for an IAM user, see [documentation](#) .

Set up SMS integration on a ServiceNow instance

Set up conversational SMS on a ServiceNow instance to enable customers to seamlessly talk to virtual or live agents.

Before you begin

Role required: admin

About this task

Procure an Amazon Web Services (AWS) account with the administrative access to complete the setup of SMS integration and ensure to set up integration on Amazon Web Services before this. To learn how to set up integration on AWS, see [Set up SMS End User Messaging Service and AWS resources](#).

Procedure

1. Create a Hash Message Verification record.

- a. In the navigation filter, enter `hash_message_verification.list` and select **New**.
- b. On the form, fill in the fields.

Hash Message Verification form

Field	Description
Name	Name of the auth token, such as AWSSMSTestAppAuthToken
Description	Description of the auth token.
Secret	Key value generated while uploading the key material to KMS key during the AWS setup. To learn more about key value, see Set up SMS End User Messaging Service and AWS resources .
Domain	Domain of the hash message, such as global.

- c. Select **Update**.

2. Create a Message Auth record.

- a. In the navigation filter, enter `message_auth.list` and select **New**.
- b. On the form, fill in the fields.

Message Auth form

Field	Description
Name	Name of the message auth, such as VA AWS SMS App Message Auth.

Field	Description
Provider	Provider of the auth token. Enter Amazon.
Group name	Name of the recipient group. Leave this field blank.
Service portal	Portal that is associated with the message auth. Leave this field blank.
Inbound message verification	Hash message token that you created.
Outbound message verification	Hash message token that you created.
Outbound service token	Authorized outbound service token. Leave this field blank.

c. Select **Update**.

3. Create a provider channel identity record.

a. In the navigation filter, enter `sys_cs_provider.list` and select **New Custom**.

b. Select the Provider Channel Identity related list and select **New**.

Provider channel form

Field	Description
Name	Name of the provider channel identity record, such as VA SMS AWS Adapter Provider.
Channel	The communication channel of the record, such as AWS EUM.
Short Description	Description of the provider channel identity record.
Inbound ID	The phone number associated with Amazon Web Services that you created.
Message Auth	Name of the message auth, such as VA AWS SMS Test App Message Auth.
Default portal	Portal that is associated with the channel identity record.

4. Add the following provider properties in the Provider Properties related list.

Provider properties for a channel identity record

Property	Value	Description
aws_end_user_messaging_configuration	configuration_set_arn	Configuration to track the delivery of messages to the end user.
enable_outbound_media	true	Configuration to store the outbound media exchanged during a live or virtual chat.

Property	Value	Description
		Note: The value of the field is Empty by default. If the value of the property is set to True , a bucket name must be provided and media is sent in its original form. If the value of the property is anything but True , bucket name is optional, and media is sent as a link.
aws_eum_api_base_url	AWS URL	Base URL for the AWS End User Messaging APIs configured based on region. To learn how to create a base URL, see documentation
outbound_media_s3_destination_folder	optional	Destination folder to store media.
outbound_media_s3_bucket_name	required	S3 bucket name for storing outbound media.

Note: The provider properties' values can be provided at a provider channel. However, to override any property to make it specific to a provider channel identity record, then you must add the corresponding provider property at the provider channel identity.

5. Add the Identity Access Management (IAM) user credentials.

- In the navigation filter, enter **Connection & Credential Aliases** and add the **AWS credentials** for both **AWS_EUM** and **Amazon S3**.
- Select **New** to create a new credential.
- Select the type of AWS credentials from the list and select **Update** to open the AWS Credentials New record form.
- On the form, fill in the fields.

AWS Credentials New record form

Field	Description
Name	Name of the credential.
Active	Whether the credential is active or not.
Access Key ID	AWS Access Key ID
Secret Access Key	AWS Secret Key ID

Field	Description
Credential Alias	Alias for the credential, either EUM or S3. The credential alias is auto-selected.
Algorithm	AWS IAM Auth.

e. Select **Submit**.

Using Conversational SMS Integration with AWS End User Messaging

Enable a customer to converse with a live or virtual agent using the SMS integration with AWS End User Messaging.

Customers can message the phone number to speak to an agent and resolve their queries. A conversation is first initiated by a virtual agent that collects basic information about the issue and then transfers the chat to a live agent.

A live agent can accept SMS conversations as a work item from their Agent Workspace inbox and can converse with the customer through a series of text messages. A live agent can also share knowledge articles as a link, share any URLs, or even add images as attachments.

Conversational SMS Integration with Twilio

Use this ServiceNow Store application to host Virtual Agent conversations on Twilio SMS to chat with virtual agent or live agents.

Get started with Conversational SMS Integration with Twilio

Select a tile to get started.

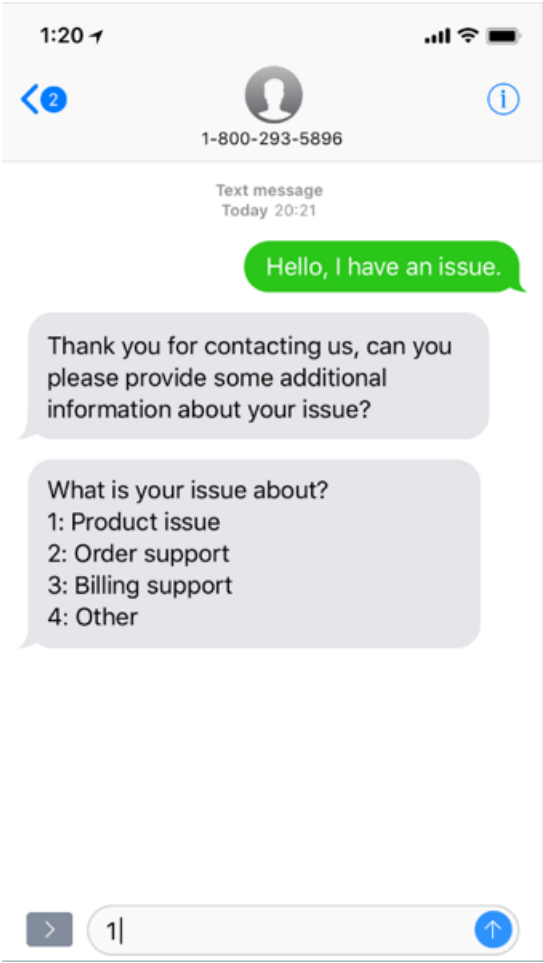
Explore  Integrate Conversational SMS Integration with Twilio with Virtual Agent.	Configure  Install and configure your Conversational SMS Integration with Twilio implementation.	Use  Agents and requesters can use Conversational SMS Integration with Twilio in portals on your instance.
--	---	---

Exploring Conversational SMS Integration with Twilio

Conversational SMS Integration with Twilio enables users to initiate conversations with Virtual Agent by messaging your Twilio phone number.

Note: Do not use the same ServiceNowTwilioDirect or Twilio Notify phone number for Conversational SMS Integration with Twilio. Instead, use separate Twilio numbers for Conversational SMS Integration with Twilio and ServiceNowTwilioDirect.

Example SMS conversation with Virtual Agent



If a bot transfers the conversation to a live agent, the agent can respond to SMS messages in Agent Workspace.

After you set up the Conversational SMS Integration with Twilio, you can create SMS conversation topics in Assistant Designer. For more information about using the tool, see [Build conversations in the Asset library in Assistant Designer](#).

Capturing information from a user in an SMS chat conversation

Supported controls

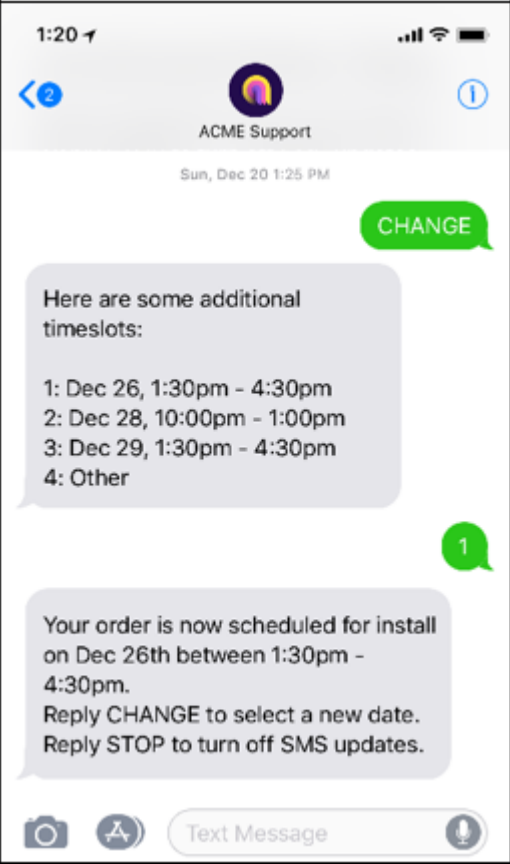
The Conversational SMS Integration with Twilio does not support all the available controls in Assistant Designer.

The following user input controls are supported in Twilio SMS conversations:

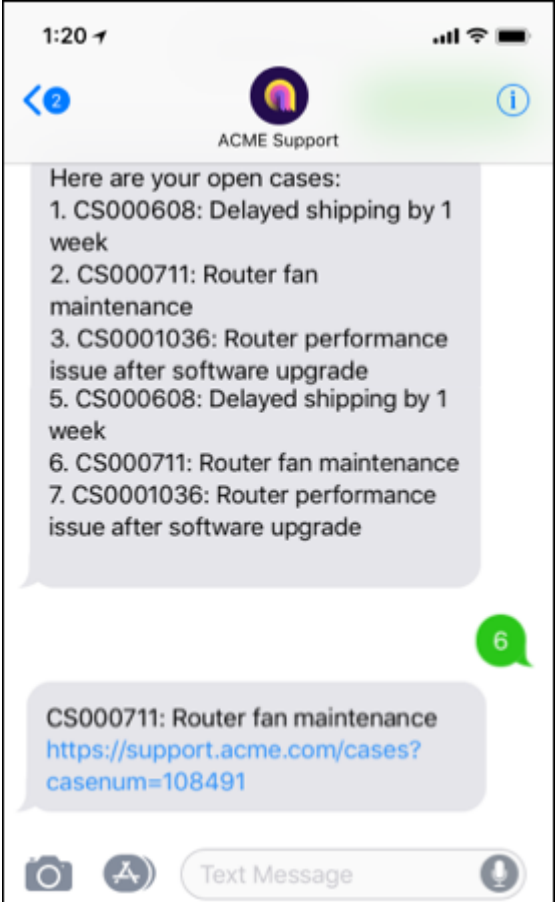
Supported user input controls

User input control	Description
Text	User enters a plain text string in the conversation.

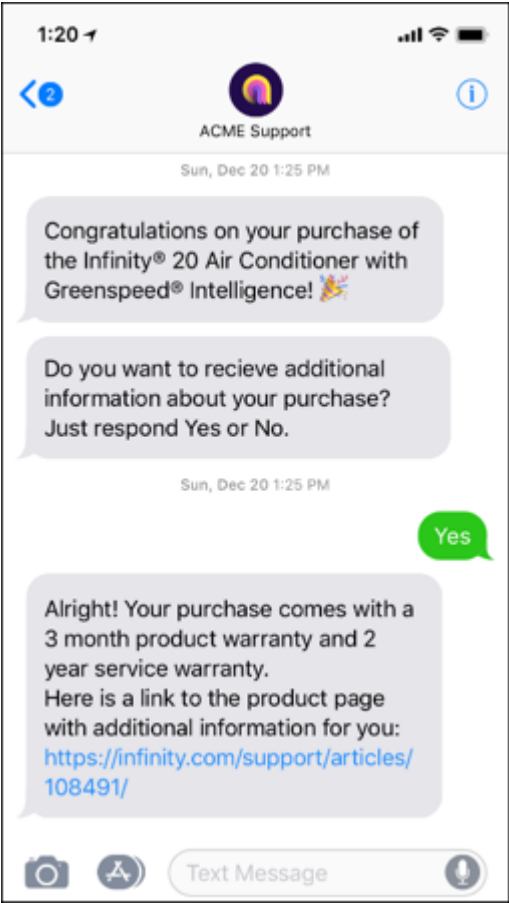
Supported user input controls (continued)

User input control	Description
	
Static Choice	User selects an item from a predefined list. 

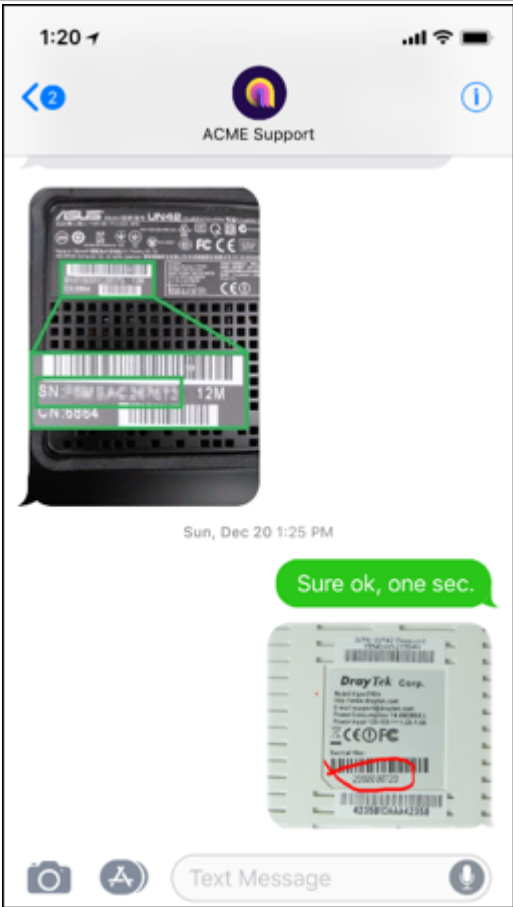
Supported user input controls (continued)

User input control	Description
Dynamic Choice	User selects an item from a list that is created dynamically. For example, the user can select from a list of cases that they opened.  The screenshot shows a mobile messaging interface. At the top, the status bar shows the time 1:20 and signal/battery icons. The contact name is 'ACME Support'. A bot message (in a light blue bubble) says 'Here are your open cases:' followed by a list of seven items. The user has responded with a green bubble containing the number '6'. The bot's response (in a light blue bubble) shows the selected case, 'CS000711: Router fan maintenance', followed by a blue hyperlink: https://support.acme.com/cases?casenum=108491. The bottom of the screen shows a 'Text Message' input field with icons for camera, attachments, and voice recording.
Boolean	User enters a Boolean response to the bot. For example, the user can reply "Yes" or "No" in the conversation.

Supported user input controls (continued)

User input control	Description
	
File picker	User sends a file to the bot. Note: Conversational SMS Integration with Twilio doesn't support all file types. Only images can be sent in an SMS conversation.

Supported user input controls (continued)

User input control	Description
	

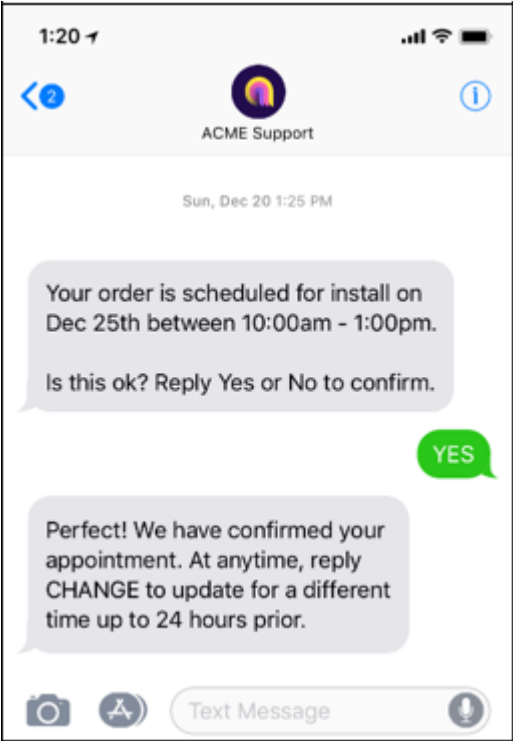
For more information on configuring user input controls, see [Assistant Designer user input controls](#).

The following bot responses are supported in Twilio SMS conversations:

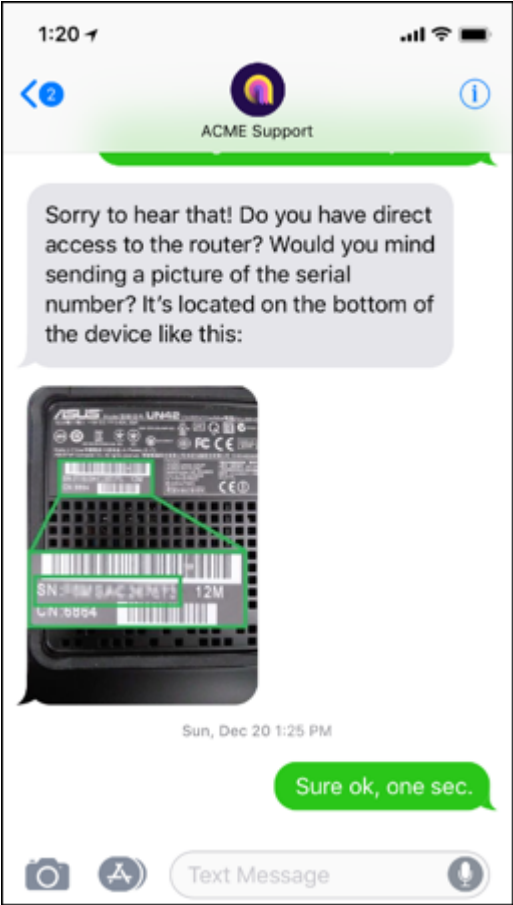
Supported bot responses

Bot response	Description
Text	Bot sends a plain text string to the user.

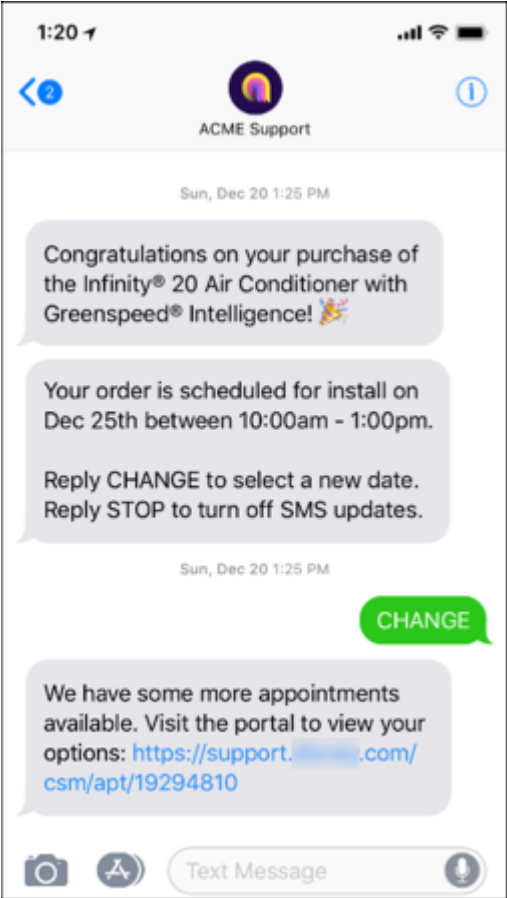
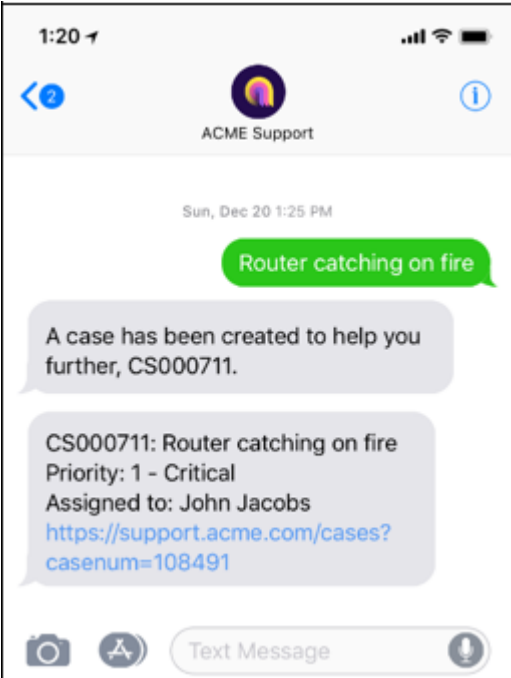
Supported bot responses (continued)

Bot response	Description
	 A screenshot of a mobile messaging app interface. At the top, the status bar shows the time 1:20, signal strength, Wi-Fi, and battery. The app header shows a back arrow with a '2' badge, a profile icon for 'ACME Support', and an information icon. A timestamp 'Sun, Dec 20 1:25 PM' is centered. The conversation shows a grey bubble from the bot: 'Your order is scheduled for install on Dec 25th between 10:00am - 1:00pm. Is this ok? Reply Yes or No to confirm.' Below it is a green bubble from the user: 'YES'. Another grey bubble from the bot follows: 'Perfect! We have confirmed your appointment. At anytime, reply CHANGE to update for a different time up to 24 hours prior.' The bottom of the screen shows a camera icon, an app store icon, a text input field with 'Text Message', and a microphone icon.
Image	Bot sends an image to the user.

Supported bot responses (continued)

Bot response	Description
	
Link	Bot sends a web link to the user.

Supported bot responses (continued)

Bot response	Description
	 1:20 ACME Support Sun, Dec 20 1:25 PM Congratulations on your purchase of the Infinity® 20 Air Conditioner with Greenspeed® Intelligence! 🎉 Your order is scheduled for install on Dec 25th between 10:00am - 1:00pm. Reply CHANGE to select a new date. Reply STOP to turn off SMS updates. Sun, Dec 20 1:25 PM CHANGE We have some more appointments available. Visit the portal to view your options: https://support.#####.com/csm/apt/19294810 Text Message
Card	 1:20 ACME Support Sun, Dec 20 1:25 PM Router catching on fire A case has been created to help you further, CS000711. CS000711: Router catching on fire Priority: 1 - Critical Assigned to: John Jacobs https://support.acme.com/cases?casenum=108491 Text Message

For more information on configuring bot responses, see [Assistant Designer bot responses](#).

Live agents can use the Text, Card, and Image response controls to reply to users in SMS conversations.

User subscriptions for SMS update notifications

Beginning with version 1.1.1, your users with ServiceNow accounts (sys_user profiles) can choose to start or stop receiving SMS updates in their conversations.

Note: Notifications in messaging channels can be sent to users with ServiceNow accounts. Other recipients, such as consumer and customer contacts, are considered to be guests and cannot receive notifications on messaging channels.

To comply with privacy regulations, user notifications are turned off by default. Users can opt in or change their settings in the following ways:

- To check SMS notification settings for the account, send this text: **Notification**
- To receive SMS notifications, send this text: **START**
- To stop receiving SMS notifications, send this text: **STOP**

Changing SMS notification settings

Hi, I'm your Virtual Agent. Let me know how I can help you today.

Show me everything

- 1: AI Search Fallback
- 2: Exposure
- 3: Live Agent Support.
- 4: Vaccine
- 5: Virtual Agent Feedback.

notifications

Your notification settings

Currently turned on
Reply STOP to turn off SMS updates

STOP

You have successfully been unsubscribed. You will not receive any more messages from this number.
Reply START to resubscribe.

START

You have successfully been re-subscribed to messages from this number. Reply HELP for help. Reply STOP to unsubscribe. Msg&Data Rates May Apply.

To learn more about Virtual Agent notifications, see [Configuring Virtual Agent notifications](#).

For details about creating content for a messaging notification, see [Define Virtual Agent notification contents](#).

What to explore next

To learn more about configuring and using Conversational SMS Integration with Twilio, see:

- [Configuring Conversational SMS Integration with Twilio](#)
- [Using Conversational SMS Integration with Twilio](#)

Configuring Conversational SMS Integration with Twilio

Install Conversational SMS Integration with Twilio from the ServiceNow Store, configure it, and then configure SMS authentication.

Configuration overview

1. [Install Conversational SMS Integration with Twilio.](#)

Install the application from the ServiceNow Store.

2. [Set up the Conversational SMS Integration with Twilio.](#)

Integrate Twilio with Virtual Agent.

3. [Configure SMS authentication.](#)

Set up user authentication.

Install Conversational SMS Integration with Twilio

You can install the Conversational SMS Integration with Twilio (sn_va_sms_twilio) application to host Virtual Agent conversations in the SMS Twilio application.

Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#) .
- Review the [Conversational SMS Integration with Twilio](#)  application listing in the ServiceNow Store for information on dependencies, licensing or subscription requirements, and release compatibility.

Role required: admin or virtual_agent_admin

Procedure

1. Navigate to **System Applications > All Available Applications > All.**

2. Find the Conversational SMS Integration with Twilio (sn_va_sms_twilio) application using the filter criteria and search bar.

You can search for the application by its name or ID.

If you cannot find the application, you may have to request it from the ServiceNow Store. Visit the [ServiceNow Store](#)  to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#) .

3. Select a version from the list and select **Install.**

In the Review Installation Details dialog box, any dependencies installed with your application are listed.

4. If you're prompted, follow the links to the ServiceNow Store to get any additional entitlements for dependencies.

What to do next

Set up the [Conversational SMS Integration with Twilio](#).

Set up the Conversational SMS Integration with Twilio

Integrate Twilio with Virtual Agent so that you can engage in SMS bot conversations.

Before you begin

Before you can set up the Conversational SMS Integration with Twilio, complete the following tasks:

1. Ensure that you have valid ServiceNow entitlements for the following products and applications:

- Integration Hub
- Twilio spoke
- Conversational SMS Service Channel
- Conversational SMS Integration with Twilio

For more information, see [Get entitlement for a ServiceNow product or application](#) .

2. Install the following applications on your instance:

- Integration Hub
- Twilio spoke
- Conversational SMS Service Channel
- Conversational SMS Integration with Twilio

3. [Set up Twilio spoke](#) .

4. Ensure that the Conversational Custom Chat Integration plugin (com.glide.cs.custom.adapter) is active on your instance.

Role required: external_app_install_admin or va_admin

Procedure

1. Create a Hash Message Verification record.

a. In the navigation filter, enter `hash_message_verification.list` and click **New**.

b. On the form, fill in the fields.

Hash Message Verification form

Field	Description
Name	Name of the auth token, such as TwilioSMSTestAppAuthToken.
Description	Description of the auth token, such as "Twilio SMS Testing application Auth Token."
Secret	Auth token that is associated with your Twilio phone number.

c. Click **Submit**.

2. Create a Message Auth record.

a. In the navigation filter, enter `message_auth.list` and click **New**.

b. On the form, fill in the fields.

Message Auth form

Field	Description
Name	Name of the message auth, such as VA Twilio SMS Test App Message Auth.
Provider	Provider of the auth token. Enter <code>Twilio</code> .
Group name	Name of the recipient group. Leave this field blank.
Service Portal	Service Portal that is associated with the message auth. Leave this field blank.
Inbound message verification	Hash message token that you created.
Outbound message verification	Hash message token that you created.
Outbound service token	Authorized outbound service token. Leave this field blank.

c. Click **Submit**.

3. Create a Messaging Provider Application record.

a. Navigate to **Conversational Interfaces > SMS integration with Twilio** and click **New**.

b. On the form, fill in the fields.

Messaging Provider Application form

Field	Description
Name	Name of the entity that users are contacting, such as IT Service Desk.
Phone Number	Twilio phone number that users are contacting. Note: Be sure to include the '+' symbol and the country code in front of the phone number. For example: +18185559485.
Message auth	Message auth that you created.

c. Click **Submit**.

4. In the Twilio Console, for the phone number that you specified in Step 3, update the SMS incoming web-hook.

To update the web-hook, navigate to the phone number in your Twilio console: **Phone Numbers > Manager > Active numbers**. Click on the phone number and enter the following address in the Messaging web-hook field:

```
https://<instance-name>.service-now.com/api/sn_va_sms_twilio/message
```

What to do next

After you set up the Conversational SMS Integration with Twilio, you can create SMS conversation topics in the Assistant Designer asset library. For more information, see [Build conversations in the Asset library in Assistant Designer](#).

Related topics

[Install Conversational SMS Integration with Twilio](#)

[Install a ServiceNow Store application](#) 

[Activate a plugin](#) 

Configure SMS authentication

Authenticate all users using Conversational SMS Integration with Twilio with Soft PIN (SN) and Google authenticators as the 2-factor authentication mechanisms for account linking.

Before you begin

Role required: virtual_agent_admin or admin

Procedure

1. On your ServiceNow instance, enter `sys_cs_provider.list` and open **VA SMS Twilio Adapter Provider** record.
2. In the VA SMS Twilio Adapter Provider record, select the **Allow account linking** check box. Selecting the **Allow account linking** check box populates the **Link account action** and **Account linking type** options.
3. Select **Verification question and MFA** from the **Allow account linking** drop-down.

When **Verification question and MFA** is selected, the **Automatic link action** field populates with the `sn_va_sms_twilio.va_sms_auto_link_account` value.

With **Verification question and MFA** selected, the end user is asked to enter the Soft Pin along with an MFA (Multi-factor Authentication) OTP (One Time Password) and Google authenticator is the default MFA method for SMS Twilio for enhanced security.

If there is an invalid input/failure, you can continue the conversation as a guest user. Upon success, the session is elevated to the authenticated user session.

Also, you can also look up the automatic link flow action from the Workflow Studio.

4. Navigate to the **Define the identity and messages for this connection** section on the SMS Twilio provider channel record and click the **Provider Properties** tab to configure the following mandatory MFA Provider Properties.
 - `verification_question_id`: Default `sys_id` for SoftPIN verification. The default value can be customized.
 - `two_factor_methods`: By default, Google authenticator is the two factor method if **Verification question and MFA** is selected.

google_autheticator or **sms** are the supported values.

Note: If this property value is updated, then the *mfa_question_id* property value must be updated to the *sys_id* of the corresponding verification Id.

- *mfa_question_id*: Corresponds to the two-factor method. The value is the default *sys_id* for the google authenticator verification type.

Note: If you set the value of *two_factor_methods* property to **sms**, then you must update the *sys_id* of this property to SMS verification type.

To get the SMS verification type *sys_id*, navigate to **Verification Types** and copy the **SMS Code Verification Type** *sys_id* record.

5. To use account linking in SMS Twilio, navigate to the User [*sys_user*] table by entering *sys_user.list*, pick a user, and update the user's mobile phone number with a valid incoming mobile phone number.
After the incoming phone number is authenticated, the system authenticates the user and links the phone number to the respective User [*sys_user*] ID.
6. To Enroll the Soft PIN, perform the following steps:
Setting up your Soft PIN enables you to use this PIN for identifying yourself when you try to have a conversation via SMS.
 - a. Impersonate the user that you picked in the Step 5 and navigate to **Password Reset > Enroll**.
 - b. In the Password Reset Enrollment record, under the Soft PIN Verification tab, enter the Soft Pin in the **Enter the Soft PIN** field.
 - c. Under the **Authenticator App Verification** tab, click **Generate a new QR code** to generate the QR code for your Google authenticator if you have downloaded one.
 - d. Click **Submit**.

When authentication is enabled for SMS, even when an actionable notification is triggered for the user in SMS conversation, user is expected to enter the Soft PIN and MFA to execute the action. For example, when an incident is updated, an actionable notification is triggered on the SMS app and you are asked to input your authentication code (Soft PIN or MFA code).

Rate limiting policy for SMS Authentication

Rate limiting policy locks out a user when an invalid or incorrect Soft PIN is entered consecutively for three times in a span of 24 hours.

Rate limiting policy

Rate limiting policy is enabled by default for SMS for better security. To configure it, navigate to **All**, and then enter *sys_cs_provider.list* in the filter. Open the SMS record, and configure the following properties on the **Provider Properties** tab.

- *softpin_lockout_enabled*: Enables Soft PIN lockout functionality. The default Value is **true**.
- *softpin_max_invalid_attempts_interval_hrs*: The window where users can make the maximum Soft PIN attempts.

Note: The maximum window is **24** hours.

- *softpin_max_retry_attempts*: Number of attempts for the user to enter an incorrect Soft PIN after the user account is locked out.

Note: The maximum number of attempts is **3**.

If your account is locked, you're treated as a guest user when you start a new conversation. The bot confirms that your account is locked. You're then provided with the public topics and you can also unlock the account using the **Setup/Reset Verification Profile** Virtual Agent topic to reset the Soft PIN and Google authenticator.

Provider Channel
VA SMS Twilio Adapter Provider

You are editing a record in the Conversational SMS Integration with Twilio application (cancel)

Trusted media domains: twilio.com

Define the identity and messages for this connection

Provider Channel Identity | Rich Control Mappings | **Provider Properties**

Define properties that you want to utilize in this channel.

for text Search

Custom Adapter Properties

Name	Value	Description
verification_question_id	06a5c9845302011017c3ddeff7b1229	Sys Id for Out of the Box SoftPIN Verif...
two_factor_methods	google_authenticator	Two factor method if "Account Linking T...
mfa_question_id	6d26f82187400300cfab6dd207cb0b80	Sys Id for Out of the Box Google Authent...
softpin_lockout_enabled	true	Enables Soft PIN lockout functionality.
softpin_max_invalid_attempts_interval_hrs	24	The window users have to make softpin_ma...
softpin_max_retry_attempts	3	Number of times a user can enter an inco...

Update Delete

Using Conversational SMS Integration with Twilio

Enable a requester to converse with an agent using SMS conversations with Twilio.

An administrator can configure Conversational SMS Integration with Twilio with a ServiceNow application.

A requester can initiate SMS conversations with a virtual agent or a live agent.

A live agent can do the following:

- Accept SMS conversations as work items from their Agent Workspace Inbox to converse with a requester.
- Initiate SMS chat conversations from interactions of type Chat from their Agent Workspace Inbox to converse with a requester.
- For logged in customers, the system automatically identifies the customer by matching their phone number against the customer contact.

Accepting SMS conversations

As a live agent interacting with a requester over the SMS service channel, you can do the following:

- Converse with the requester through text messages.
- Share a knowledge article displayed as a link to the requester.
- Share a record, for example, a customer service case.

- Share any URLs as links.
- Share any images as attachments.

Note: You accept a work item from the SMS conversation in your Agent Workspace Inbox when an administrator has configured the SMS service channel for transfer of chat conversations. For more information, see [Conversational SMS service channel](#).

Initiating SMS conversations

As a live agent, you can initiate an SMS conversation with a requester when the Agent-Initiated Messaging Interface application is configured for the SMS messaging channel. By default, the application is configured for agent to initiate SMS conversations with consumers and customer contacts. For more information, see [Initiate messaging conversations from the CSM Configurable Workspace](#) and [Initiate SMS conversations from CSM Agent Workspace](#).

Conversational Integration with WhatsApp (powered by Twilio)

Use this application to enable requesters to interact on WhatsApp chat with a virtual agent or live agent. The application connects a requester with a virtual agent or live agent using your company's WhatsApp-enabled Twilio phone number.

Get started with Conversational Integration with WhatsApp (powered by Twilio)

Select a tile to get started.

Configure	Use
 Install and configure your Conversational Integration with WhatsApp (powered by Twilio) implementation.	 Agents and requesters can use Conversational Integration with WhatsApp (powered by Twilio) in portals on your instance.

Request apps on the Store

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

Configure Conversational Integration with WhatsApp (powered by Twilio)

Install and set up the Conversational Integration with WhatsApp (powered by Twilio) application to enable requesters to interact with virtual and live agents.

Before you begin

Role required: admin

About this task

This task provides the general steps to integrate the WhatsApp messaging app with a ServiceNow application using the Conversational Integration with WhatsApp (powered by Twilio) application.

Procedure

1. [Install Conversational Integration with WhatsApp \(powered by Twilio\).](#)
2. [Set up Conversational Integration with WhatsApp \(powered by Twilio\).](#)
3. [Design virtual agent topics to capture information from a WhatsApp chat conversation.](#)
4. **Optional:** [Close idle WhatsApp chat conversations.](#)
5. **Optional:** [Integrate WhatsApp with other ServiceNow applications.](#)

Install Conversational Integration with WhatsApp (powered by Twilio)

Install the Conversational Integration with WhatsApp (powered by Twilio) so that your business can interact with requesters on the WhatsApp app. The application includes demo data and installs related ServiceNow Store applications and plugins if they are not already installed.

Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#).

Role required: admin

About this task

The following applications or plugins are installed with Conversational Integration with WhatsApp (powered by Twilio):

Twilio Spoke (sn_twilio_spoke)

Provides Integration Hub actions that may be used to create, update, delete, and look up records on the Twilio app.

For more information on activating this application, see [Twilio spoke](#).

Conversational Custom Chat Integration (com.glide.cs.custom.adapter)

Provides custom chat integration framework of scriptable APIs to enable the Virtual Agent application on any conversational interface.

For more information on this plugin, see [Creating conversational custom chat integrations in Virtual Agent](#).

ServiceNow IntegrationHub Runtime (com.glide.hub.integration.runtime)

Enables execution of Integration Hub actions and flows.

Complex Object (com.glide.cobject)

Enables complex objects.

Agent-Initiated Messaging Interface (sn_agent_initiated)

Provides configurations for the agent-initiated messaging capabilities.

Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.
2. Find the Conversational Integration with WhatsApp (powered by Twilio) application (sn_va_whatsapp_twi) using the filter criteria and search bar.

You can search for the application by its name or ID. If you cannot find the application, you might have to request it from the ServiceNow Store.

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

3. In the Application installation dialog box, review the application dependencies.

Dependent plugins and applications are listed if they will be installed, are currently installed, or need to be installed. If any plugins or applications need to be installed, you must install them before you can install Conversational Integration with WhatsApp (powered by Twilio).

4. **Optional:** If demo data is available and you want to install it, select the **Load demo data** check box.

Demo data are the sample records that describe application features for common use cases. Load the demo data when you first install the application on a development or test instance.

5. Select **Install**.

Set up Conversational Integration with WhatsApp (powered by Twilio)

Set up the Conversational Integration with WhatsApp (powered by Twilio) application so that you can engage requesters in bot conversations. Integrating with ServiceNow Virtual Agent enables you to interact on WhatsApp chat with a Virtual Agent or Live Agent.

Before you begin

Before you begin, do the following:

- Get ServiceNow entitlements for the following products and applications:
 - Integration Hub
 - Twilio spoke
 - Conversational Integration with WhatsApp (powered by Twilio)

For more information, see [Get entitlement for a ServiceNow product or application](#).

- Install the following applications on your ServiceNow instance:
 - Integration Hub
 - Twilio spoke
 - Conversational Integration with WhatsApp (powered by Twilio)
- [Connect your Twilio Number to your WhatsApp Business Profile](#).
- [Set up Twilio spoke](#).

Role required: external_app_install_admin or va_admin

Procedure

1. Connect your company's Twilio account with your ServiceNow instance.
 - a. Log in to your [Twilio Console](#).
 - b. From the Project Info pane of the Console Dashboard page, note down the authentication token.
You will later use this token to authenticate the Twilio account on your ServiceNow instance. For more information, see the [Twilio documentation](#).
 - c. To specify the webhook URL, in the Twilio console, navigate to **Programmable Messaging > Senders > WhatsApp Senders**.
To enable your Twilio account to send messages to your ServiceNow instance, enter the webhook URL in the following format: `https://<instance-name>.service-now.com/api/sn_va_whatsapp_twi/message`.
 - d. Click your WhatsApp-enabled Twilio phone number.
 - e. In the **A MESSAGE COMES IN** field of the Configure WhatsApp Number dialog box, enter the webhook URL of your ServiceNow instance and click **Configure**.
2. To authenticate incoming hash messages from the Twilio account, create a Hash Message Verification record that stores the Twilio authentication token.
 - a. In the navigation filter of your ServiceNow instance, enter `hash_message_verification.list`.
 - b. In the Hash Message Verifications list, click **New**.
 - c. On the form, fill in the fields.

Hash Message Verification form

Field	Description
Name	Name of the record in the Hash Message Verification [hash_message_verification] table that stores the authentication token that is associated with your company's WhatsApp-enabled Twilio phone number. For example, TwilioWhatsappTestAppAuthToken.
Description	Description of the record. For example, Twilio Whatsapp Testing application Auth Token.
Secret	Twilio authentication token that is associated with your company's WhatsApp-enabled Twilio phone number.

- d. Take note of the name of the Hash Message Verification record.
- e. Click **Submit**.

3. Associate inbound message records with a Message Auth record.

- a. In the navigation filter of your ServiceNow instance, enter `message_auth.list` and click **New**.
- b. On the form, fill in the fields.

Message Auth form

Field	Description
Name	Name of the record in the Message Auth [message auth] table. For example, VA Twilio WhatsApp Test App Message Auth.
Provider	Provider of the auth token. Enter Twilio.
Group name	Name of the group that you created.
Service Portal	Customer service portal that you created.
Outbound service token	A unique token used by the ServiceNow AI Platform to authenticate and authorize access to an external service or API. The token is a credential that allows the ServiceNow AI Platform to securely interact with other systems. This token is generated by the external service and provided to the ServiceNow AI Platform so that the platform can make requests and access resources.
Inbound message verification	Name of the Hash Message Verification record that you created for the inbound hash messages in step 2 .
Outbound message verification	Name of the Hash Message Verification record that you created for the inbound hash messages in step 2 . <i>i</i> Note: The values for the Inbound message verification and Inbound message verification fields are the same.

- c. Click **Submit**.

4. Associate the Message Auth record with the WhatsApp-enabled Twilio phone number.

- a. In the navigation filter of your ServiceNow instance, enter `sys_cs_provider.list`.
- b. In the Provider Channels list, click **Twilio** from the **Name** column corresponding to the **WhatsApp** channel.
If the **Twilio** entry is not present, enter `sys_cs_provider_application.list` in the navigation filter to create the list.
- c. In the Provider Channel Identity related list, click **New**.
- d. On the form, fill in the fields.

Provider Channel Identity form

Field	Description
Name	Name of the entity that users are contacting, such as IT Service Desk.
Inbound ID	Twilio phone number that users are contacting. Note: Be sure to include the '+' symbol and the country code in front of the phone number. For example: +18185559485.
Message auth	Message auth that you created in step 3 .

e. Click **Submit**.

Set the URL navigation for WhatsApp chat

When agents share links in their WhatsApp chat conversations, customize the portal that those links point to. For example, you can configure links to point to your brand's portal, or to the ServiceNow portal.

Before you begin

Install the Conversational Integration with WhatsApp (powered by Twilio) application on your ServiceNow instance.

Activate the Consumer Service Portal plugin (`com.glide.service-portal.consumer-portal`).

Role required: admin

Procedure

1. In the navigation filter of your ServiceNow instance, enter `sys_cs_provider_application_list.do` and click **New**.
2. On the form, fill in the fields.

Provider Channel Identity form

Field	Description
Name	Name of the channel you are using. Enter WhatsApp.
Provider	Name of the provider. Enter WhatsApp.
Default Portal	Portal to be used in the mapping. Select a portal from the list of portals.
Message Auth	Message auth that you created.
Inbound ID	Your WhatsApp phone ID. For example: +1415XXXXXXX

3. Click **Submit**.

What to do next

For more information on setting up URL navigation, see [\(Legacy\) Configure URL navigation for chat links](#).

Closing idle WhatsApp chat conversations

Enable agents to effectively manage their active WhatsApp chat conversations by automatically closing idle conversations after they have been inactive for a pre-configured amount of time.

The Virtual Agent conversations are configured for the WhatsApp messaging app. By default, any conversations abandoned by requesters remain open or idle until they are automatically closed daily by the *Time Out Abandoned VA Conversations* scheduled job. For more information, see [Closing Virtual Agent and Agent Chat conversations](#).

As an administrator, you can change the default timeout period for idle Virtual Agent conversations configured for the WhatsApp messaging app by setting the `com.glide.cs.whatsapp_idle_timeout` system property to the number of seconds that abandoned conversations remain open after the requester's last response. The system property value must be less than the time interval set for the *Time Out Abandoned VA Conversations* scheduled job, set to two hours (7200 seconds) by default. Because the `com.glide.cs.whatsapp_idle_timeout` system property isn't available by default, you must add it with the data type set to integer. For more information, see [Add a system property](#) .

Integrating the WhatsApp messaging app with other applications

Other ServiceNow applications and features can use the Conversational Integration with WhatsApp (powered by Twilio) application.

As a live agent, when you accept a request from the WhatsApp service channel, you can converse with the requester within the same channel.

Integrating with Customer Service Management

Integrate the Conversational Integration with WhatsApp (powered by Twilio) application with the ServiceNow[®] Customer Service Management application to enable your customer contacts and consumers to initiate a WhatsApp chat conversation with a virtual agent or live agent. An agent can initiate a conversation, or accept a conversation initiated from a WhatsApp chat conversation. For more information, see [Integrate WhatsApp with Customer Service Management through Twilio](#) .

Using Conversational Integration with WhatsApp (powered by Twilio)

Enable a requester to converse with an agent at their convenience using the WhatsApp chat conversations through Virtual Agent.

An administrator can configure the Conversational Integration with WhatsApp (powered by Twilio) application for integrating the WhatsApp messaging app with a ServiceNow application. For more information, see [Integrating the WhatsApp messaging app with other applications](#).

Agents and requesters can do the following:

- A live agent can initiate WhatsApp chat conversations with a requester.
- A requester can initiate WhatsApp chat conversations with a virtual agent or live agent.
- A live agent can accept WhatsApp chat conversations as work items from their Agent Workspace Inbox to converse with a requester.
- For logged in customers, the system automatically identifies the customer by matching their phone number against the customer contact.

Initiating WhatsApp chat conversations

As a live agent, you can initiate WhatsApp chat conversations with a requester in two ways:

- Send a message from either an active interaction record, a contact record, or a consumer contact record.
- Set up notifications to be sent to the requester when a business event occurs or when a record is updated. See [Create a provider notification](#).

Note: The requester must subscribe and opt in to receive notifications.

Accepting WhatsApp chat conversations

As a live agent interacting with a requester over the WhatsApp service channel, you can do the following:

- Converse with the requester through text messages.
- Share a knowledge article displayed as a link to the requester.
- Share a record. For example, a customer service case.
- Share any URLs as links.
- Share any files as attachments.

Note: If an administrator has configured the WhatsApp service channel for transfer of chat conversations, then you can accept a work item from the WhatsApp chat conversation in your Agent Workspace Inbox. For more information, see [Transfer WhatsApp chat conversations to live agents](#) and [Service channels](#).

Create a provider notification

Execute the following steps to create a provider notification for Virtual Agent and Workspace providers.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > System Notification > Provider > Notifications** and select **New**.
2. On the form, fill in the fields.

Notifications form

Field	Description
Name	Name of the notification.
Application	Application scope of the notification.
Active	Option to activate the notification. The notification is active by default.
Trigger	
Triggered By	System action that triggers the notification. You can send the notification after a record is changed or after an event is triggered.
Table	Table to receive notifications about.

Field	Description
Inserted	Option to send the notification after a record is inserted. This field appears when you select Record Change in the Triggered By field.
Updated	Option to send the notification after a record is updated. This field appears when you select Record Change in the Triggered By field.
Event	Event that triggers the notification. For example, to send a notification after an incident is closed or resolved, you would select the <i>incident.inactive</i> event. By default, this event is logged in the system each time a user resolves or closes an incident. Note: You can select only an event that shares the same table as the notification. This field appears when you select Event in the Triggered By field.
Conditions	Filter to specify the table records that users receive notifications about. For example, to send notifications about top-priority incidents, you would select Incident [incident] in the Table field and set the conditions to [Priority] [is] [1 - Critical].
Recipients	
Users	Users who receive the notification. Note: Notifications in messaging channels are sent only to users with ServiceNow accounts (sys_user profiles). Consumers and customer contacts are considered as guests and cannot receive notifications in messaging channels.
Recipients in fields	Record fields that include users who receive the notification. For example, to send the notification to the record assignee, select Assigned to. Note: This field shows up only if you select a table.
Is originating user included?	Option to include the user who changed the record or triggered the event.
Event Parm1 contains recipient(s)?	Option to select if Parm 1 contains a list of comma separated sys_ids
Event Parm2 contains recipient(s)?	Option to select if Parm 2 contains a list of comma separated sys_ids
Resolve Parm1 recipients from table	Table that is used to resolve the sys_id of the recipient Note: This field appears only when you select Event parm 1.

Field	Description
Resolve Parm2 recipients from table	Table that is used to resolve the sys_id of the recipient Note: This field appears only when you select Event parm 2.
Advanced event condition	Option to select when the recipients are from more than 2 tables. These are dynamic conditions.

3. Select **Submit**.

Note: Use the **Submit** button for Virtual Agent notifications. The **Submit and Add Common Content** button is for other use cases.

All the validation messages given by different providers are retained. Warning messages of one provider is not overridden by warning messages of another provider.

Transfer WhatsApp chat conversations to live agents

Configure the Advanced Work Assignment application to transfer a WhatsApp chat conversation initiated by a requester to a live agent.

Before you begin

Your administrator must have completed the following tasks:

- [Install Conversational Integration with WhatsApp \(powered by Twilio\)](#).
- [Activate Advanced Work Assignment](#).
- Set the application scope to Conversational Integration with WhatsApp (powered by Twilio) using the application picker. For more information, see [Application picker](#).
- Activate the Conversational Messaging plugin (com.glide.messaging.awa). For more information, see [Activate Conversational Messaging](#).

Role required: admin

About this task

Procedure

1. Enable the WhatsApp service channel.
 - a. Navigate to **Advanced Work Assignment > Settings > Service Channels**.
 - b. In the **Name** column of the Queues list, search for **WhatsApp**.
 - c. Select **WhatsApp**.
 - d. On the Service Channel form, select the **Active** check box.
 - e. Select **Update**.
For more information, see [Service channels](#).
2. Automatically route work items for WhatsApp chat conversations to agents by configuring the queue for the WhatsApp service channel.
 - a. Navigate to **Advanced Work Assignment > Settings > Queues**.
 - b. In the **Name** column of the Queues list, search for **Agent WhatsApp Queue**.
 - c. Select **Agent WhatsApp Queue**.

d. On the Queue form, select the **Active** check box.

e. Select **Update**.

Note: By default, the *WhatsApp - Most Capacity* assignment rule is associated with the Agent WhatsApp Queue. You can create another assignment rule and associate it with the queue. For more information, see [Configure agent assignment rules](#) and [Work item queues](#).

3. Configure agent presence states for the WhatsApp service channel.

a. Navigate to **Advanced Work Assignment > Settings > Presence States**.

b. In the **Name** column of the Presence States list, select an existing state.

c. In the Apply to groups section of the Presence State form, select the add icon to move the **Agent WhatsApp Group** group from the **Available** column to the **Selected** column.

Note: You can ignore this step if you have selected the **Apply to all groups** check box.

d. Select **Update**.

For more information, see [Configure agent presence states](#).

Capturing information from a user in a WhatsApp chat conversation

Use the collection of input controls provided by the Assistant Designer to prompt and capture information from a requester in a WhatsApp chat conversation.

The Assistant Designer Asset library contains a diagram tool for creating and managing topics, which are blueprints for conversations between a virtual agent and user. For more information, see [Build conversations in the Asset library in Assistant Designer](#).

User notification consent

Users must opt in to receive notifications. No notifications can be delivered until the user grants consent.

There are two ways for users to grant consent to receive notifications:

- The user can enter **Notification** into the WhatsApp chat with your business. The user gets a bot response with the option to subscribe or unsubscribe from receiving notifications for your business on WhatsApp.
- As the administrator, you can set up the option for users to subscribe or unsubscribe from notifications from your portal. See [Subscription-based notifications](#) for more information.

User input controls

The Conversational Integration with WhatsApp (powered by Twilio) application supports the following user input controls in Assistant Designer.

Supported user input controls

User input control	Description
Text	User enters a plain text string in the conversation.

Supported user input controls (continued)

User input control	Description
Static Choice	User selects an item from a predefined list.
Boolean	User enters a Boolean response to the bot. For example, the user can reply Yes or No in a chat conversation.
File Picker	User sends a file to the bot.
Date Time	User selects a calendar date, time (hours and minutes), or both.
Carousel	User selects a single item from the carousel.

For more information about configuring user input controls, see [Assistant Designer user input controls](#).

The Conversational Integration with WhatsApp (powered by Twilio) application supports the following bot responses in Assistant Designer.

Supported bot responses

Bot response	Description
Text	Bot sends a plain text string to the user.
Image	Bot sends an image to the user.
Link	Bot sends a web link to the user.
Web UI image card output	Bot sends content from a record in a compact format, including an image with text.
Table	Bot response is displayed as a table.

For more information about configuring bot responses, see [Assistant Designer bot responses](#).

Conversational Integration with WhatsApp (WhatsApp Cloud API)

Use this application to enable requesters to interact on WhatsApp chat with a Virtual Agent or live agent. The application connects a requester with a Virtual Agent or live agent using your company's WhatsApp business phone number.

Get started with Conversational Integration with WhatsApp (WhatsApp Cloud API)

Select a tile to get started.

Configure  Install and configure your Conversational Integration with WhatsApp (WhatsApp Cloud API) implementation.	Use  Install and configure your Conversational Integration with WhatsApp (WhatsApp Cloud API) implementation.
--	--

Request apps on the Store

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

Configure Conversational Integration with WhatsApp (WhatsApp Cloud API)

Install and set up the Conversational Integration with WhatsApp (WhatsApp Cloud API) application to enable requesters to interact with virtual and live agents.

Before you begin

Role required: admin

About this task

This task provides the general steps to integrate the WhatsApp messaging app with a ServiceNow application using the Conversational Integration with WhatsApp (WhatsApp Cloud API) application.

Procedure

1. [Install Conversational Integration with WhatsApp.](#)
2. [Set up Conversational Integration with WhatsApp.](#)
3. [Capturing information from a user in a WhatsApp chat conversation.](#)
4. **Optional:** [Close idle WhatsApp chat conversations.](#)
5. **Optional:** [Integrate WhatsApp with other ServiceNow applications.](#)

Install Conversational Integration with WhatsApp (WhatsApp Cloud API)

Install the Conversational Integration with WhatsApp (WhatsApp Cloud API) so that your business can interact with requesters on the WhatsApp app. The application includes demo data and installs related ServiceNow Store applications and plugins if they are not already installed.

Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#).

Role required: admin

About this task

The following applications or plugins are installed with Conversational Integration with WhatsApp (WhatsApp Cloud API):

Conversational Custom Chat Integration (com.glide.cs.custom.adapter)

Provides custom chat integration framework of scriptable APIs to enable the Virtual Agent application on any conversational interface.

For more information on this plugin, see [Creating conversational custom chat integrations in Virtual Agent](#).

ServiceNow IntegrationHub Runtime (com.glide.hub.integration.runtime)

Enables execution of Integration Hub actions and flows.

Agent-Initiated Messaging Interface (sn_agent_initiated)

Provides configurations for the agent-initiated messaging capabilities.

Note: This plugin is required only if agent-initiated messaging is required.

Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.
2. Find the Conversational Integration with WhatsApp (WhatsApp Cloud API) application (sn_va_whatsapp_tw) using the filter criteria and search bar.

You can search for the application by its name or ID. If you cannot find the application, you might have to request it from the ServiceNow Store.

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

3. In the Application installation dialog box, review the application dependencies.

Dependent plugins and applications are listed if they will be installed, are currently installed, or need to be installed. If any plugins or applications need to be installed, you must install them before you can install Conversational Integration with WhatsApp (WhatsApp Cloud API).

4. **Optional:** If demo data is available and you want to install it, select the **Load demo data** check box.

Demo data are the sample records that describe application features for common use cases. Load the demo data when you first install the application on a development or test instance.

5. Select **Install**.

Set up Conversational Integration with WhatsApp (WhatsApp Cloud API)

Set up the Conversational Integration with WhatsApp (WhatsApp Cloud API) application so that you can engage requesters in bot conversations. Integrating with ServiceNowVirtual Agent enables you to interact on WhatsApp chat with a Virtual Agent or live agent.

Before you begin

Before you begin, do the following:

- Get ServiceNow entitlements for the following products and applications:
 - Integration Hub
 - Conversational Integration with WhatsApp (WhatsApp Cloud API)

For more information, see [Get entitlement for a ServiceNow product or application](#).

- Set up the following applications on your ServiceNow instance:
 - Integration Hub
 - Conversational Integration with WhatsApp (WhatsApp Cloud API)

Role required: external_app_install_admin or va_admin

Procedure

1. Set up required on the meta developer account and Facebook business account.

a. Create a Meta developer app by completing the prerequisites and step 1 in the [WhatsApp Cloud API Get Started](#)  guide.

b. Copy the App Secret:

- On the Meta application dashboard, navigate to **App Settings > Basic**.
- Note the App Secret.

You would later use this token to authenticate the WhatsApp account on your ServiceNow instance.

c. Copy the Phone number ID:

- Navigate to **WhatsApp > API Setup**.
- From the Send and receive messages section, select your WhatsApp-enabled phone number from the **From dropdown** list.

You would need this ID to configure the provider record in your ServiceNow instance.

d. Create a system user access token in Meta Business Manager.

For more information on how to create a system user access token, see [Generating System User Access Tokens](#) . Grant the required permissions while creating the access token and copy the access token.

You would need this token to configure the Token Verification record in your ServiceNow instance.

2. To receive messages from WhatsApp in your ServiceNow instance, verify and configure the webhook URL.

a. In the navigation filter, enter `sys_properties.list`.

b. Locate and open the `sn_va_whatsapp.webhook_verify_token` property.

c. In the Value field, enter a chosen password or secret.

d. Select **Save**.

e. In the Meta developer console, navigate to **WhatsApp > Configuration > WhatsApp Configuration**.

f. Under the webhook section, in the callback URL field, enter the URL in the format `https://<instance-name>.service-now.com/api/sn_va_whatsapp/va_whatsapp_adapter`.

g. In the Verify token field, enter the chosen password you configured in the ServiceNow instance in step (c).

- h. Select **Verify and save**.
 - i. In the Webhook fields section, enable the **Subscribe** toggle switch to subscribe to messages.
3. To authenticate incoming hash messages from the WhatsApp account, create a Hash Message Verification record that stores the authentication token.
 - a. In the navigation filter of your ServiceNow instance, enter `hash_message_verification.list`.
 - b. In the Hash Message Verifications list, select **New**.
 - c. On the form, fill in the fields.

Hash Message Verification form

Field	Description
Name	Name of the record in the Hash Message Verification [hash_message_verification] table that stores the authentication token that is associated with your company's WhatsApp business phone number. For example, WhatsappTestAppInboundToken.
Description	Description of the record. For example, WhatsApp Testing application Auth Token.
Secret	App secret for the application that was set up in the Meta Developer Console.

- d. Make a note of the name of the Hash Message Verification record.
 - e. Select **Submit**.
4. To send messages with the required authentication headers to the WhatsApp account, create a Token Verification record that stores the system user access token.
 - a. In the navigation filter of your ServiceNow instance, enter `token_verification.list`.
 - b. In the Token Verifications list, select **New**.
 - c. On the form, fill in the fields.

Token Verification form

Field	Description
Name	Name of the record in the Token Verification [token_verification] table that stores the system user access token that is associated with your company's Meta business account. For example, WhatsappTestAppOutboundToken.
Description	Description of the record. For example, WhatsApp Business Testing Application Outbound Token.

Field	Description
Token	System user access token created in Meta Business Manager

- d. Make a note of the name of the Token Verification record.
 - e. Select **Submit**.
5. Associate outbound message records with a Message Auth record.
- a. In the navigation filter of your ServiceNow instance, enter `message_auth.list` and select **New**.
 - b. On the form, fill in the fields.

Message Auth form

Field	Description
Name	Name of the record in the Message Auth [message auth] table. For example, VA WhatsApp Test App Message Auth.
Provider	Provider of the auth token. Enter WhatsApp.
Group name	Name of the group that you created.
Service Portal	Customer service portal that you created.
Outbound service token	A unique token used by the ServiceNow AI Platform to authenticate and authorize access to an external service or API. The token is a credential that enables the ServiceNow AI Platform to securely interact with other systems. This token is generated by the external service and provided to the ServiceNow AI Platform so that the platform can make requests and access resources.
Inbound message verification	Name of the Hash Message Verification record that you created for the inbound hash messages.
Outbound message verification	Name of the Token Message Verification record that you created for the inbound hash messages. Note: The values for the Inbound message verification and Inbound message verification fields are the same.

- c. Select **Submit**.
6. Associate the Message Auth record with the WhatsApp-enabled phone number.
- a. In the navigation filter of your ServiceNow instance, enter `sys_cs_provider.list`.
 - b. In the Provider Channels list, select **VA Whatsapp Adapter Provider** from the **Name** column corresponding to the WhatsApp channel.
If the WhatsApp entry isn't present, enter `sys_cs_provider_application.list` in the navigation filter to create the list.
 - c. In the Provider Channel Identity related list, select **New**.

- d. On the form, fill in the fields.

Provider Channel Identity form

Field	Description
Name	Name of the entity that users are contacting, such as IT Service Desk.
Inbound ID	Phone number ID corresponding to your WhatsApp-enabled phone number.
Message auth	Message auth that you created.

- e. Select **Submit**.

7. Configure the provider channel identity properties.

- a. Select a provider channel identity that you created.
- b. From the Provider Channel Identity Properties section, select **New**.
- c. On the form, fill in the fields.

Provider Channel Identity form

Field	Description
Name	Name of the entity that users are contacting. Enter display_phone_number.
Value	Enter the actual phone number corresponding to the Phone Number ID that you created.
Description	Add a description for the provider channel.

- d. Select **Submit**.

8. Enable the server to download media content sent by you.

- a. In the navigation filter of your ServiceNow instance, enter `sys_cs_provider.list`.
- b. In the Provider Channels list, select **VA Whatsapp Adapter Provider** from the Name column corresponding to the WhatsApp channel.
- c. Enter `lookaside.fbsbx.com` in the trusted media domains field.
- d. Select **Update**.

Set the URL navigation for WhatsApp chat

When agents share links in their WhatsApp chat conversations, customize the portal that those links point to. For example, you can configure links to point to your brand's portal, or to the ServiceNow portal.

Before you begin

Install the Conversational Integration with WhatsApp (WhatsApp Cloud API) application on your ServiceNow instance.

Activate the Consumer Service Portal plugin (`com.glide.service-portal.consumer-portal`).

Role required: admin

Procedure

1. In the navigation filter of your ServiceNow instance, enter `sys_cs_provider_application_list.do` and select **New**.
2. On the form, fill in the fields.

Provider Channel Identity form

Field	Description
Name	Name of the channel you're using. Enter WhatsApp.
Provider	Name of the provider. Enter WhatsApp.
Default Portal	Portal to be used in the mapping. Select a portal from the list of portals.
Message Auth	Message auth that you created.
Inbound ID	Your WhatsApp phone ID. Enter the unique ID assigned to your WhatsApp phone number.

3. Select **Submit**.

What to do next

For more information on setting up URL navigation, see [\(Legacy\) Configure URL navigation for chat links](#).

Closing idle WhatsApp chat conversations

Enable agents to effectively manage their active WhatsApp chat conversations by automatically closing idle conversations after they've been inactive for a preconfigured amount of time.

The Virtual Agent conversations are configured for the WhatsApp messaging app. By default, any conversations abandoned by requesters remain open or idle until they're automatically closed daily by the *Time Out Abandoned VA Conversations* scheduled job. For more information, see [Closing Virtual Agent and Agent Chat conversations](#).

Integrating the WhatsApp messaging app with other applications

Other ServiceNow applications and features can use the Conversational Integration with WhatsApp (WhatsApp Cloud API) application.

As a live agent, when you accept a request from the WhatsApp service channel, you can converse with the requester within the same channel.

Integrating with Customer Service Management

Integrate the Conversational Integration with WhatsApp (WhatsApp Cloud API) application with the ServiceNow® Customer Service Management application to enable your customer contacts and consumers to initiate a WhatsApp chat conversation with a Virtual Agent or live agent. An agent can initiate a conversation, or accept a conversation initiated from a WhatsApp chat conversation. For more information, see .

Configure WhatsApp Cloud API provider properties

You can customize the behavior of the Conversational Integration with WhatsApp (WhatsApp Cloud API) application by configuring its provider properties.

Before you begin

Role required: admin

Procedure

1. In the filter navigator, enter `sys_cs_provider.list`.
2. In the Connections list, select **VA Whatsapp Adapter Provider**.
3. Select the **Provider Properties** tab.
4. In the Custom Adapter Properties list, select the property that you want to update.

Note: If a message appears about the application scope, select here to be able to edit the record.

5. Update the **Value** field and select **Update**.

Result

The provider property is updated with the new value.

Related topics

[WhatsApp Cloud API provider properties](#)

Using Conversational Integration with WhatsApp (WhatsApp Cloud API)

Enable a requester to converse with an agent at their convenience using the WhatsApp chat conversations through Virtual Agent.

An administrator can configure the Conversational Integration with WhatsApp (WhatsApp Cloud API) application for integrating the WhatsApp messaging app with a ServiceNow application. For more information, see [Integrating the WhatsApp messaging app with other applications](#).

Agents and requesters can do the following:

- A live agent can initiate WhatsApp chat conversations with a requester.
- A requester can initiate WhatsApp chat conversations with a Virtual Agent or live agent.
- A live agent can accept WhatsApp chat conversations as work items from their Agent Workspace Inbox to converse with a requester.
- For logged in customers, the system automatically identifies the customer by matching their phone number against the customer contact.

Initiating WhatsApp chat conversations

As a live agent, you can initiate WhatsApp chat conversations with a requester in two ways:

- Send a message from either an active interaction record, a contact record, or a consumer contact record.
- Set up notifications to be sent to the requester when a business event occurs or when a record is updated. See [Create a provider notification](#).

Note: The requester must subscribe and opt in to receive notifications.

Accepting WhatsApp chat conversations

As a live agent interacting with a requester over the WhatsApp service channel, you can do the following:

- Converse with the requester through text messages.
- Share a knowledge article displayed as a link to the requester.
- Share a record. For example, a customer service case.
- Share any URLs as links.
- Share any files as attachments.

Note: If an administrator has configured the WhatsApp service channel for transfer of chat conversations, then you can accept a work item from the WhatsApp chat conversation in your Agent Workspace Inbox. For more information, see [Transfer WhatsApp chat conversations to live agents](#) and [Service channels](#).

Enable WhatsApp channel notifications

Turn on notifications for the WhatsApp channel to send system-generated messages and automated communications.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > sys_cs_channel.list**.
2. Select the WhatsApp channel record.
3. Select **Enable notifications** check box.
4. Select **Update**.

Create a provider notification

Execute the following steps to create a provider notification for Virtual Agent and Workspace providers.

Before you begin

Enable the notifications for the WhatsApp channel. For more information, see [Enable WhatsApp channel notifications](#).

Role required: admin

Procedure

1. Navigate to **All > System Notification > Provider > Notifications** and select **New**.
2. On the form, fill in the fields.

Notifications form

Field	Description
Name	Name of the notification.
Application	Application scope of the notification.

Field	Description
Active	Option to activate the notification. The notification is active by default.
Trigger	
Triggered By	System action that triggers the notification. You can send the notification after a record is changed or after an event is triggered.
Table	Table to receive notifications about.
Inserted	Option to send the notification after a record is inserted. This field appears when you select Record Change in the Triggered By field.
Updated	Option to send the notification after a record is updated. This field appears when you select Record Change in the Triggered By field.
Event	Event that triggers the notification. For example, to send a notification after an incident is closed or resolved, you would select the <i>incident.inactive</i> event. By default, this event is logged in the system each time a user resolves or closes an incident. Note: You can select only an event that shares the table as the notification. This field appears when you select Event in the Triggered By field.
Conditions	Filter to specify the table records that users receive notifications about. For example, to send notifications about top-priority incidents, you would select Incident [incident] in the Table field and set the conditions to [Priority] [is] [1 - Critical] .
Recipients	
Users	Users who receive the notification. Note: Notifications in messaging channels are sent only to users with ServiceNow accounts (sys_user profiles). Consumers and customer contacts are considered as guests and can't receive notifications in messaging channels.
Recipients in fields	Record fields that include users who receive the notification. For example, to send the notification to the record assignee, select Assigned to. Note: This field shows up only if you select a table.
Is originating user included?	Option to include the user who changed the record or triggered the event.
Event Parm1 contains recipient(s)?	Option to select if Parm 1 contains a list of comma separated sys_ids

Field	Description
Event Parm2 contains recipient(s)?	Option to select if Parm 2 contains a list of comma separated sys_ids
Resolve Parm1 recipients from table	Table that is used to resolve the sys_id of the recipient Note: This field appears only when you select Event parm 1.
Resolve Parm2 recipients from table	Table that is used to resolve the sys_id of the recipient Note: This field appears only when you select Event parm 2.
Advanced event condition	Option to select when the recipients are from more than 2 tables. These are dynamic conditions.

3. Select **Submit**.

Note: Use the **Submit** button for Virtual Agent notifications. The **Submit and Add Common Content** button is for other use cases.

All the validation messages given by different providers are retained. Warning messages of one provider isn't overridden by warning messages of another provider.

Related topics

[Provider notifications](#)

[Create default content in a provider](#)

Transfer WhatsApp chat conversations to live agents

Configure the Advanced Work Assignment application to transfer a WhatsApp chat conversation initiated by a requester to a live agent.

Before you begin

Your administrator must have completed the following tasks:

- [Install Conversational Integration with WhatsApp \(WhatsApp Cloud API\)](#).
- [Activate Advanced Work Assignment](#).
- Set the application scope to Conversational Integration with WhatsApp (WhatsApp Cloud API) using the application picker. For more information, see [Application picker](#).
- Activate the Conversational Messaging plugin (com.glide.messaging.awa). For more information, see [Activate Conversational Messaging](#).

Role required: admin

About this task

Procedure

1. Enable the WhatsApp service channel.

- Navigate to **Advanced Work Assignment > Settings > Service Channels**.
- In the **Name** column of the Queues list, search for **WhatsApp**.
- Select **WhatsApp**.

- d. On the Service Channel form, select the **Active** check box.
- e. Select **Update**.
For more information, see [Service channels](#).
2. Automatically route work items for WhatsApp chat conversations to agents by configuring the queue for the WhatsApp service channel.
 - a. Navigate to **Advanced Work Assignment > Settings > Queues**.
 - b. In the **Name** column of the Queues list, search for Agent WhatsApp Queue.
 - c. Select **Agent WhatsApp Queue**.
 - d. On the Queue form, select the **Active** check box.
 - e. Select **Update**.

Note: By default, the *WhatsApp - Most Capacity* assignment rule is associated with the Agent WhatsApp Queue. You can create another assignment rule and associate it with the queue. For more information, see [Configure agent assignment rules](#) and [Work item queues](#).

3. Configure agent presence states for the WhatsApp service channel.
 - a. Navigate to **Advanced Work Assignment > Settings > Presence States**.
 - b. In the **Name** column of the Presence States list, select an existing state.
 - c. In the Apply to groups section of the Presence State form, select the add icon to move the **Agent WhatsApp Group** group from the **Available** column to the **Selected** column.

Note: You can ignore this step if you have selected the **Apply to all groups** check box.

 - d. Select **Update**.

For more information, see [Configure agent presence states](#).

Capturing information from a user in a WhatsApp chat conversation

Use the collection of input controls provided by the Assistant Designer to prompt and capture information from a requester in a WhatsApp chat conversation.

The Assistant Designer Asset library contains a diagram tool for creating and managing topics, which are blueprints for conversations between a virtual agent and user. For more information, see [Build conversations in the Asset library in Assistant Designer](#).

User notification consent

Users must opt in to receive notifications. No notifications can be delivered until the user grants consent.

There are two ways for users to grant consent to receive notifications:

- The user can enter **Notification** into the WhatsApp chat with your business. The user gets a bot response with the option to subscribe or unsubscribe from receiving notifications for your business on WhatsApp.
- As the administrator, you can set up the option for users to subscribe or unsubscribe from notifications from your portal. See [Subscription-based notifications](#) for more information.

User input controls

The Conversational Integration with WhatsApp (WhatsApp Cloud API) application supports the following user input controls in Assistant Designer.

Supported user input controls

User input control	Description
Text	User enters a plain text string in the conversation.
Static Choice	User selects an item from a predefined list.
Boolean	User enters a Boolean response to the bot. For example, the user can reply Yes or No in a chat conversation.
File Picker	User sends a file to the bot.
Dynamic choice	User selects an item from a dynamic list (partial support).
Date Time	User selects a calendar date, time (hours and minutes), or both.
Carousel	User selects a single item from the carousel.

For more information about configuring user input controls, see [Assistant Designer user input controls](#).

The Conversational Integration with WhatsApp (WhatsApp Cloud API) application supports the following bot responses in Assistant Designer.

Supported bot responses

Bot response	Description
Text	Bot sends a plain text string to the user.
Image	Bot sends an image to the user.
Link	Bot sends a web link to the user.
Card	Bot sends selected information from a record on your instance.

Supported bot responses

Bot response	Description
Text	Bot sends a plain text string to the user.
Image	Bot sends an image to the user.
Link	Bot sends a web link to the user.
Card	Record card: Bot sends content from a record in a compact format. Image card: Sends an image along with a caption. YouTube video card: Bot sends a YouTube video link with a title and description.
HTML	Not supported
Script	Not supported

Supported bot responses (continued)

Bot response	Description
Multi-response	Bot sends text, image, and link with an interactive button.
Video	Bot sends a video link with title, description, and interactive button.
Web UI image card output	Bot sends content from a record in a compact format, including an image with text.
Table	Bot response is displayed as a table.

For more information about configuring bot responses, see [Assistant Designer bot responses](#).

WhatsApp Cloud API provider properties

Use provider properties to customize the behavior of the Conversational Integration with Conversational Integration with WhatsApp (WhatsApp Cloud API) application.

WhatsApp Cloud API provider properties

Property	Description	Default value
<i>time_format</i>	Controls the time format used in WhatsApp messages. Accepted values are 12 (12-hour clock with a.m./p.m., for example 2:30 p.m.) or 24 (24-hour clock, for example 14:30).	24
<i>date_format</i>	Controls the date format used in WhatsApp messages. Supported formats: MM/DD/YYYY, DD/MM/YYYY, YYYY-MM-DD.	DD/MM/YYYY

Related topics

[Configure WhatsApp Cloud API provider properties](#)

Virtual Agent API

The ServiceNow® Virtual Agent API is a REST API built on ServiceNow's conversational custom chat integration framework, enabling integration with enterprise or third-party chat interfaces, or as a secondary bot in multi-bot environments.

Get started with ServiceNow Virtual Agent API

Explore  Learn about Virtual Agent API and its features.	Configure  Install and configure Virtual Agent API.
---	--

Use  Use Virtual Agent API.	Reference  Get additional information about Virtual Agent API.
--	---

Exploring Virtual Agent API

Use the ServiceNow[®] Virtual Agent API app to integrate any chat interface or a bot with ServiceNow[®] Virtual Agent or Agent Chat. The app is available from the ServiceNow[®] Store.

Overview of the Virtual Agent API

The Virtual Agent API is a REST API. This API is built on the conversational custom chat integration framework that is provided with Virtual Agent starting in the Paris release. The API enables ServiceNow developers, advanced users, and admins to use Virtual Agent in either of the following ways:

Standalone bot

Use Virtual Agent as a standalone bot that you integrate with enterprise or with any other third-party chat interface that supports conversational interfaces.

Your end users can interact with the Virtual Agent and Agent Chat through multiple channels by using this integration.

Secondary bot

Use Virtual Agent as a secondary bot in an environment that has multiple, specialized bots managed by a primary bot.

In this scenario, a primary bot manages communication with secondary bots on behalf of the end user. A primary bot could be IBM Watson Assistant or a homegrown primary bot.

Your secondary bots, such as the ServiceNow bot, might handle specific types of end-user requests, such as service tickets or reservations.

The Virtual Agent API is useful for creating server-to-server integrations. However, for integrations that require the transformation of unsupported controls that must be rendered in your existing chat interface, consider using the [Custom Chat Integration Framework](#).

For information about features such as the URL format and the supported request and response parameters in the Virtual Agent API, see [Virtual Agent Bot Integration API](#) .



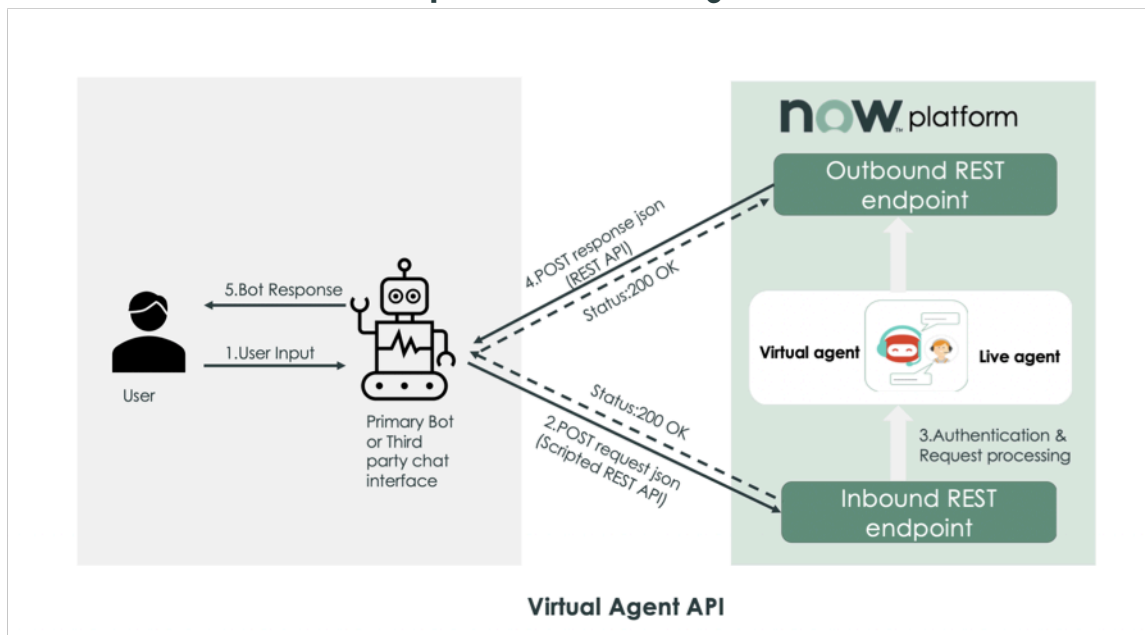
[Augment your experiences with the Virtual Agent API](#)  (Virtual Agent Academy video)

How the Virtual Agent API works

The following diagram shows how the REST API processes user input from a third-party chat interface or a primary bot, and then generates a bot response.

1. The user provides input to a primary bot or third-party chat interface.
2. The bot sends a POST request JSON to the inbound REST endpoint (via scripted REST API).
3. The ServiceNow AI Platform authenticates and processes the request, which is sent to Virtual Agent or a live agent.
4. The ServiceNow AI Platform sends a POST response JSON from the outbound REST endpoint (via REST API) back to the bot.
5. The primary bot or third-party chat interfaces displays the response to the user.

Inbound and outbound REST endpoints in the Virtual Agent API



Limitations

The Virtual Agent API does not support the following features:

- Chat branding through this Virtual Agent API integration.
- Now Assist capabilities are supported only in asynchronous mode.

Supported features in Virtual Agent API

You can use the Virtual Agent API to integrate many of the same features that are available in Virtual Agent and Agent Chat into your chat environment. Feature support varies depending on your ServiceNow release and the store app version number of the Virtual Agent API.

For information about the request and response templates for Virtual Agent API, as well as examples of common use cases, see [Virtual Agent Bot Integration API](#).

Version 4.1.1

Support for synthesized response in Virtual Agent API

- With synthesized response enabled through ServiceNow Otto, Virtual Agent API sends the response with citations to the primary bot. Citations are included in *citations* parameter along with separate citation links.
- Here's an example JSON for synthesized response with citations and citation links:

```
{
  "clientSessionId": "va_api_conv_16875",

```

```

"score": 1,
"interactionId": "0dce3e37ffe1f610f71afffffffffff8a",
"requestId": "1765195564288",
"streamActive": false,
"streamState": "END",
"message": {
  "typed": true,
  "text": "what is spam?"
},
"body": [
  {
    "feedback": {
      "messageId": "dcde7a7739e1f610beed69f9e5960355",
      "feedbackEnabled": true
    },
    "maskType": "NONE",
    "citations": [
      {
        "citationHref":
"http://10.160.66.170:8080/sp?
id=kb_article&sys_id=24d9243187032100deddb882a2e3ec33",
        "sysId": "24d9243187032100deddb882a2e3ec33",
        "icon": "sn_nowassist_va.source-kb-article.png",
        "header": "KB article",
        "description": "What is Spam?",
        "index": 0,
        "source": "internal",
        "category": "kb",
        "citationLabel": "What is Spam?",
        "table": "kb_knowledge",
        "citationRef": "[1]"
      },
      {
        "citationHref":
"http://10.160.66.170:8080/sp?
id=kb_article&sys_id=0b48fd75474321009db4b5b08b9a71c2",
        "sysId": "0b48fd75474321009db4b5b08b9a71c2",
        "icon": "sn_nowassist_va.source-kb-article.png",
        "header": "KB article",
        "description": "How to Deal with Spam",
        "index": 1,
        "source": "internal",
        "category": "kb",
        "citationLabel": "How to Deal with Spam",
        "table": "kb_knowledge",
        "citationRef": "[2]"
      },
      {
        "citationHref":
"http://10.160.66.170:8080/sp?
id=kb_article&sys_id=3020c9b1474321009db4b5b08b9a712d",
        "sysId": "3020c9b1474321009db4b5b08b9a712d",
        "icon": "sn_nowassist_va.source-kb-article.png",
        "header": "KB article",
        "description": "What are phishing scams and how can I
avoid them?\n\t\t",
        "index": 2,

```

```

        "source": "internal",
        "category": "kb",
        "citationLabel": "What are phishing scams and how can
I avoid them?\n\t\t",
        "table": "kb_knowledge",
        "citationRef": "[3]"
    }
],
    "streamId": "4fcef677ffe1f610f71afffffffffffffee",
    "uiType": "OutputText",
    "messageId": "dcde7a7739e1f610beed69f9e5960355",
    "relatedList": [],
    "value": "Spam refers to unsolicited commercial email
(UCE) or unsolicited bulk email (UBE), commonly known as junk
email. It often includes phishing scams, foreign bank scams,
pyramid schemes, quack health products, pornographic site
ads, offers for bulk emailing services, chain letters, and
pirated software. Most reputable marketers do not use spam
for advertising. To reduce spam:\n\n- Do not reply to spam,
as it confirms your address to spammers.\n- Be cautious when
sharing your email address online.\n- Adjust browser security
settings to limit personal information exposure.\n- Avoid
forwarding chain mail, as most are hoaxes.\n- Use judgment
when unsubscribing or responding to unfamiliar sources
\u200b[1]\u200b\u200b[2]\u200b.\n\nPhishing scams, a dangerous
form of spam, attempt to trick you into revealing personal
information by pretending to be legitimate organizations.
Always verify requests for sensitive information and avoid
clicking suspicious links \u200b[3]\u200b.\n\n[1] [What is
Spam?](http://10.160.66.170:8080/sp?
id=kb_article&sys_id=24d9243187032100deddb882a2e3ec33)\n[2]
[How to Deal with
Spam](http://10.160.66.170:8080/sp?
id=kb_article&sys_id=0b48fd75474321009db4b5b08b9a71c2)\n[3]
[What are phishing scams and how can I avoid
them?\n\t\t](http://10.160.66.170:8080/sp?
id=kb_article&sys_id=3020c9b1474321009db4b5b08b9a712d)",
    "group": "DefaultText"
}
],
    "userId": "admin",
    "clientVariables": {
        "bot": {
            "id": "va-bot-12345"
        },
        "channelId": "postman"
    }
}

```

- For more information, see [Enable synthesized response in Virtual Agent API](#).

Support for agentic response in Virtual Agent API

- Virtual Agent API supports agentic response through ServiceNow Otto. With agentic response enabled in Virtual Agent API, the output messages are shown to the user as loading or processing.
- Virtual Agent API sends message to the primary bot through a new *DynamicLoader* parameter.
- Here's an example JSON for agentic response:

```
{
  "clientSessionId": "va_api_conv_16875",
  "score": 1,
  "interactionId": "0dce3e37ffe1f610f71affffffffffff8a",
  "requestId": "1765195564288",
  "message": {
    "typed": true,
    "text": "what is spam?"
  },
  "body": [
    {
      "progressMessages": [
        {
          "message": "Searched for relevant documents and actions",
          "status": "COMPLETED"
        },
        {
          "message": "Generated the response",
          "status": "COMPLETED"
        }
      ],
      "actionType": "DynamicLoader",
      "defaultHeader": "View AI Steps",
      "uiType": "ActionMsg",
      "parentMessageId": "87cef677ffe1f610f71affffffffffff4d",
      "header": "View AI Steps",
      "messageId": "87cef677ffe1f610f71affffffffffff4d",
      "shouldUpdateParentMessage": true
    }
  ],
  "userId": "admin",
  "clientVariables": {
    "bot": {
      "id": "va-bot-12345"
    },
    "channelId": "postman"
  }
}
```

Support for response streaming in Virtual Agent API

- Virtual Agent API supports response streaming through ServiceNow Otto. To learn more, see [Enable ServiceNow Otto in Virtual Agent API](#).

Note: The primary bot must pass the streaming responses to the end user. For more information, see [Chat streaming responses](#).

- Virtual Agent API supports the following states for response streaming:

○ START

```
{
  "clientSessionId": "va_api_conv_16875",
  "requestId": "1762864530268",
  "streamActive": true,
  "streamState": "START",
  "message": {
    "typed": true,
    "text": "what is spam?"
  },
  "body": [
    {
      "streamId": "cb928c9f53097e10f71a6dc230e5e639",
      "uiType": "StreamStart",
      "streamSequence": 1,
      "value": "Looking into your request"
    }
  ],
  "userId": "admin",
  "clientVariables": {
    "bot": {
      "id": "va-bot-12345"
    },
    "channelId": "postman"
  }
}
```

○ INPROGRESS

```
{
  "clientSessionId": "va_api_conv_16875",
  "requestId": "1762864530268",
  "streamActive": true,
  "streamState": "INPROGRESS",
  "message": {
    "typed": true,
    "text": "what is spam?"
  },
  "body": [
    {
      "streamId": "cb928c9f53097e10f71a6dc230e5e639",
      "uiType": "StreamChunk",
      "streamSequence": 2,
      "value": "Spam refers to unsolicited commercial email (UCE) or unsolicited bulk email (UBE), commonly known as junk email. It often"
    }
  ],
  "userId": "admin",
  "clientVariables": {
    "bot": {
      "id": "va-bot-12345"
    },
    "channelId": "postman"
  }
}
```

○ END

```
{
  "clientSessionId": "va_api_conv_16875",
  "score": 1,
  "interactionId": "d592c89f53097e10f71a6dc230e5e68c",
  "requestId": "1762864530268",
  "streamActive": false,
  "streamState": "END",
  "message": {
    "typed": true,
    "text": "what is spam?"
  },
  "body": [
    {
      "feedback": {
        "messageId": "6f92cc9f34097e108001c582b67b2a1f",
        "feedbackEnabled": true
      },
      "maskType": "NONE",
      "citations": [
        {
          "citationHref":
            "http://192.168.29.27:8080/sp?
            id=kb_article&sys_id=24d9243187032100deddb882a2e3ec33",
          "sysId": "24d9243187032100deddb882a2e3ec33",
          "icon": "sn_nowassist_va.source-kb-article.png",
          "header": "KB article",
          "description": "What is Spam?",
          "index": 0,
          "source": "internal",
          "category": "kb",
          "citationLabel": "What is Spam?",
          "table": "kb_knowledge",
          "citationRef": "[1]"
        },
        {
          "citationHref":
            "http://192.168.29.27:8080/sp?
            id=kb_article&sys_id=0b48fd75474321009db4b5b08b9a71c2",
          "sysId": "0b48fd75474321009db4b5b08b9a71c2",
          "icon": "sn_nowassist_va.source-kb-article.png",
          "header": "KB article",
          "description": "How to Deal with Spam",
          "index": 1,
          "source": "internal",
          "category": "kb",
          "citationLabel": "How to Deal with Spam",
          "table": "kb_knowledge",
          "citationRef": "[2]"
        }
      ],
      "streamId": "cb928c9f53097e10f71a6dc230e5e639",
      "uiType": "OutputText",
      "messageId": "6f92cc9f34097e108001c582b67b2a1f",
      "relatedList": [],
    }
  ]
}
```

```

    "value": "Spam refers to unsolicited commercial email
    (UCE) or unsolicited bulk email (UBE), commonly known as
    junk email. It often includes phishing scams, foreign bank
    scams, pyramid schemes, \"get rich quick\" offers, quack
    health products, ads for pornographic sites, offers for
    bulk emailing services, chain letters, and pirated software.
    To reduce spam:\n\n- Do not reply to spam, as it confirms
    your address to spammers.\n- Be cautious when sharing
    your email address online or with companies.\n- Adjust
    browser security settings to limit personal information
    exposure.\n- Avoid forwarding chain mail, as most are
    hoaxes \u200b[1]\u200b\u200b[2]\u200b.\n\n[1] [What is
    Spam?](http://192.168.29.27:8080/sp?
    id=kb_article&sys_id=24d9243187032100deddb882a2e3ec33)\n[2]
    [How to Deal with
    Spam](http://192.168.29.27:8080/sp?
    id=kb_article&sys_id=0b48fd75474321009db4b5b08b9a71c2) ",
    "group": "DefaultText"
  }
],
"userId": "admin",
"clientVariables": {
  "bot": {
    "id": "va-bot-12345"
  },
  "channelId": "postman"
}
}

```

- Enable streaming in Virtual Agent API by the following configuration:

1. Ensure that **Allow response streaming** is selected in ServiceNow Otto for Virtual Agent. To learn more, see [Enable additional chat features](#).
2. Navigate to **All** and enter `sys_now_assist_channel_config.list` in the navigation filter.
3. In the ServiceNow Otto Channel configuration [`now_assist_channel_config`] table, set the **Streaming Ready** field value to `true` for Bot to Bot device.

ServiceNow Otto Channel Configs table

Now Assist Channel Configs for text Search									
All									
Active	Agentic Mode	Device Type	Doc QnA	Output Type	Result Type	Search Result Type	Send Markdown	Streaming Ready	Strip Html
☐	Search	Search	Search	Search	Search	Search	Search	Search	Search
☒	On	Now Assist Panel	Topic	Synthesized	All	Genius Search Result	false	true	None
☒	On	Web Client	Topic	Synthesized	All	Genius Search Result	true	true	None
☒	On	Android Device	Topic	Synthesized	All	Genius Search Result	true	true	Only Cards
☐	☒	☒	Not Supported	Synthesized	All	Genius Search Result	true	false	None
☒	On	iOS	Topic	Synthesized	All	Genius Search Result	true	true	Only Cards

Support for new outbound authentication

- Virtual Agent API is now configured to use Workflow Studio REST step instead of earlier ServiceNow AI Platform REST message.
- To learn more, see [Configure output response REST endpoint and outbound authentication for the Virtual Agent API \(v4.1 or above\)](#).

Version 4.0.0

- Virtual Agent API updates the message text and the delivery status for messages between the live agent and the primary bot.
- Virtual Agent API sends the interaction Id and message Id (agent Id for conversations with the live agent) in response to the primary bot.

Interaction record stores the *clientSessionId* parameter sent by the supported third-party chat application (or the primary bot) for each of its conversations with the end user. To learn more, see [Configure interaction record to store clientId in Virtual Agent API](#).

- The chat history from the primary bot's conversation with the end user includes timestamp of individual messages. The live agents can now see this chat history either in individual messages or in a single block. To learn more, see [Configure to support chat history in Virtual Agent API](#). You can customize your Agent chat interface by setting a logo for the primary bot that appears in the chat history. For more information, see [Setting logo for the primary bot in Virtual Agent API](#).

Version 3.0.x

Agent Chat enhancements in version 3.14.3

- When the primary bot transfers a chat to a live agent, Virtual Agent API sends the agent Id, in addition to agent name and avatar, to the primary bot.
- Virtual Agent API sends chat history from primary bot to live agent anywhere in the request during an ongoing conversation. This behavior is controlled by the following system property: *allow_storing_history_in_ongoing-conversation*. Set the value of the property to true to send chat history anywhere in the request.
- Interaction record contains transcript of chat history along with timestamp of individual messages.

Support for ServiceNow Otto

- ServiceNow Otto experience in Virtual Agent API offers generative AI skills across multiple provider channels.
- For more information, see [Enable ServiceNow Otto in Virtual Agent API](#).

Support for configuring multiple provider applications

- Virtual Agent API enables configuration of multiple provider applications to support use cases where there are multiple primary bots using Virtual Agent API and you need to distinguish between them.
- For more information, see [Configure multiple provider applications](#).

Support for transformation of Virtual Agent API request and response

- Virtual Agent API supports transformation of request and response payloads to and fro Virtual Agent API. This is helpful in cases where the primary bot has a common response template across all secondary bots.
- For more information, see [Transform Virtual Agent API request and response](#).

Secure file uploads from a private URL

- Virtual Agent API supports file uploads up to 1 GB in size from a private URL. The primary bot must pass the user ID, optional provider application ID, and the name of the file. Observe the following guidelines:
 - Provider application ID is optional.
 - The user ID and provider application ID should be sent before the file name in the payload.
 - The end user must have a role specified in the *glide.attachment.role* property. For more information, see [Require a role to attach files](#) .
 - Basic or OAuth authentication is supported, but Message Authentication is not.
- Example message payload from the primary bot:

```
curl -X POST \

https://instance.service-now.com/api/now/v1/cccif/media/upload \
-H 'authorization: Basic YWRtaW46YWRtaW4=' \
-H 'content-type: multipart/form-data; \
-F user_id=xxxxxx \
-F provider_application_id=optionalId \
-F 'file=@SomeFile.png'
```

- Virtual Agent API sends the following example JSON:

```
{
  "result": {
    "mediaUrl":
"http://123.456.7.8:8080//api/now/v1/cs/media/string",
    "name": "imagefile.png",
    "state": "pending",
    "attachmentId": "abcdefghijklmno12345"
  }
}
```

Support for silentMessage flag

- A silent message is a message that does not require a response. If Virtual Agent receives a request with *silentMessage=true*, all subsequent bot messages are suppressed until Virtual Agent receives a request to turn off silent mode (*silentMessage=false*).
- Example message payload from the primary bot:

```
{
  "token": "BOT_TOKEN",
  "botToBot": true,
  "clientSessionId": "884502214730301027f83ee4070f589a",
  "clientVariables": {},
  "requestId": "48450221d23030107300b7756770bc9b",
  "silentMessage": "true",
  "timestamp": 1623916324820,
  "timezone": "GMT",
  "userId": "abel.tuter",
  "emailId": "abel.tuter@example.com"
}
```

 **Note:** If *silentMessage=true*, notifications are not delivered.

Support for action messages

- In addition to passing messages to a ServiceNow® Virtual Agent secondary bot, the primary bot or chat client can pass messages to an agent through Agent Chat. Use the *action* parameter passed in the request body to specify how the content should be handled.
- Virtual Agent API supports the following action message types:

Supported action message types

actionType value	Description
ChatSubHeader	Outbound message indicating one of the following occurred: ◦ Dynamic translation failed. ◦ Live agent autopilot was initiated and completed.
StartSpinner	Outbound message that starts a spinner when a message is in the pending state due to asynchronous processes, such as AI Search or the profanity filter.
EndSpinner	Outbound message that stops the spinner that was sent previously.
StartTypingIndicatorActionMsg	Outbound message indicating that a user or agent has begun to type (after an agent has accepted the chat).
EndTypingIndicatorActionMsg	Outbound message indicating that a user or agent has stopped typing.
SubscribeToSupportQueue	Indicates that the conversation is set to the support queue.
SubscribeToChatPresence	Outbound message indicating that a live agent conversation has begun.
SwitchToLiveAgent	Outbound message indicating that a live agent has accepted the conversation.
SwitchToVirtualAgent	Outbound message indicating that the live agent session has ended, and the conversation is returned to Virtual Agent.
SwitchConversation	Outbound message indicating that a notification was sent. This creates a new conversation, so Virtual Agent switches to the new conversation.
System	Outbound message indicating one of the following: ◦ A live agent has entered the chat. ◦ Either the live agent or the user closed the chat. ◦ The conversation with a live agent has timed out.

Synchronous handshake enhancements

- Virtual Agent API can transfer to a live agent synchronously. When a user or agent finishes a conversation, the transfer back to Virtual Agent is done synchronously as well. Some system messages and wait time messages are also sent synchronously.
- To use synchronous transfer to a live agent, be aware of the following guidelines:
 - Configure the Virtual Agent response endpoint. Agent Chat messages will be delivered to the endpoint you specify.
 - You must manually turn off Notifications for the instance.

- If you are using synchronous transfer to a live agent, Virtual Agent API sends the typing indicator if it is enabled:

```
{
  "uiType": "ActionMsg",
  "actionType": "StartTypingIndicator",
}
```

- Topics that use the following features are not supported in synchronous mode: [file upload](#), the [Action utility](#), and the [Pause topic block](#).
- To disable these features and enable synchronous support, see [Enable synchronous support in Virtual Agent API](#).

Improved topic switching errors and troubleshooting

- Topic switching may fail for any of the following reasons:
 - The request includes both the topic name and topic ID (keyword topic discovery) or the topic intent name and topic intent ID (NLU topic discovery). Specify one or the other.
 - The request includes an invalid topic or intent name or ID.
 - The topic/intent name or ID is valid, but Virtual Agent can't run it because it's inactive or not a topic. For example, if the name or ID refer to a topic block or custom control asset.
 - The requested topic is already running.
 - The requested topic is valid, but a security condition is preventing access. For example, the topic may not be permitted to run in the channel or some other access-control condition may apply.
- If topic switching fails, Virtual Agent API responds in the following ways, whether you're using it synchronously or asynchronously:
 - If topic switching fails, the conversation is closed with a message stating that the conversation cannot continue. The conversation will no longer remain in an open state.
 - The previous request is marked as processed so that a new request can be made without waiting for a timeout.
 - The reason for the failure is logged in the system log table (**Automated Test Framework > System Logs > Errors**).

Improved Virtual Agent API response time

- Virtual Agent API responses include parameters like Take Control and NLU Score. These parameters are processed while preparing the response.
- Starting with version 3.9.0, you can exclude the Take Control and/or NLU Score parameters from the Virtual Agent API response to improve the response time.
- To exclude Take Control and NLU Score parameters from the Virtual Agent API response, complete the following steps:
 1. Navigate to **All > sys_cs_custom_adapter_property.list**.
 2. Search for *enable_take_control* and *send_nlu_score* properties.
 3. Set the value of *enable_take_control* property to false to exclude Take Control setting and *send_nlu_score* property to false to exclude NLU Score calculation while processing the response. These properties are set to true by default.

Ending abandoned Virtual Agent conversations

- If a conversation is incomplete due to an error, Virtual Agent can ask the primary bot to take control. If the *takeControl* flag is *true*, Virtual Agent (as the secondary bot) will close the conversation automatically. If the primary bot wants to start a conversation, it can send the following action message: "hi" /START_CONVERSATION.
- You can ask the primary bot to take control in the following situations:
 - Idle time out: Interaction State is Closed Abandoned. State Reason is No Activity.
 - Technical issues: Interaction State is Closed Abandoned. State Reason is Bot issues.
 - Invalid user input: Interaction State is Closed Abandoned. State Reason is Invalid user input.
- To request that the primary bot take control, send the *takeControl* flag in the body of the payload to the primary bot with a value of *true*.
- Example message payload:

```
{
  "requestId": "xxxx-xxxx-xxxx-xxxx",
  "clientSessionId": "xxx-xxx-xxx-xxx",
  "message": {
    "text": "invalid3",
    "typed": true
  }
  "body": [{
    "uiType": "OutputText",
    "group": "DefaultText",
    "value": "Sorry, I didn't get that. Could you help me by answering this?"
  },
  {
    "uiType": "Boolean",
    "group": "DefaultPicker",
    "required": true,
    "nluTextEnabled": false,
    "label": "Choose a value",
    "options": [
      { "label": "Yes" },
      { "label": "No" }
    ]
  }
  ],
  "takeControl": true,
  "score": 0
}
```

Supported versions and licensing requirements in Virtual Agent API

Get a quick overview of the important information that is related to the Virtual Agent API.

Version and release compatibility

Virtual Agent API version and release compatibility

Version	Compatible Releases
3.14.3	Yokohama

Virtual Agent API version and release compatibility (continued)

Version	Compatible Releases
3.14.2	Xanadu
3.14.1	Xanadu

Note: The Virtual Agent API requires a Pro/Enterprise license similar to that of Virtual Agent.

Configuring Virtual Agent API

Configure Virtual Agent API to connect ServiceNow Virtual Agent and Live Agent with any conversational interface.

Review these sections to configure Virtual Agent API.

1. [Install Virtual Agent API.](#)
2. [Review the inbound REST endpoint and configure inbound authentication.](#)
3. [Configure output response REST endpoint and outbound authentication for the Virtual Agent API \(v4.1 or above\).](#)
4. [Test your Virtual Agent API configuration.](#)

Install Virtual Agent API

Install the Virtual Agent API app to integrate any chat interface or a bot with ServiceNow® Virtual Agent or Agent Chat.

Before you begin

If you're upgrading from a version prior to version 2 and if authentication is required for your instance, you must revert the customization before upgrading. For these versions, the upgrade skips the Scripted REST Service when authentication is turned on. For more information, see [Revert a customization](#).

You must meet the following requirements:

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#).
- Review the [Virtual Agent API](#) application listing in the ServiceNow Store for information on dependencies, licensing or subscription requirements, and release compatibility.
- Ensure that you activated the Glide Virtual Agent (com.glide.cs.chatbot) plugin, which activates the Conversational Custom Chat Integration (com.glide.cs.custom.adapter) plugin.

For more information about this plugin, see [\(Legacy\) Activate Virtual Agent for NLU](#).

Note: The Virtual Agent API requires a Pro license similar to that of Virtual Agent.

Role required: admin or virtual_agent_admin

Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.
2. Find the Virtual Agent API application using the filter criteria and search bar.

You can search for the application by its name or ID. If you cannot find the application, you may have to request it from the ServiceNow Store.

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

3. Select a version from the list and select **Install**.

In the Review Installation Details dialog box, any dependencies installed with your application are listed.

4. If you're prompted, follow the links to the ServiceNow Store to get any additional entitlements for dependencies.

What to do next

[Review the inbound REST endpoint and configure inbound authentication](#)

Review the inbound REST endpoint and configure inbound authentication

After you install the Virtual Agent API, navigate to the Scripted REST API resource to review the endpoint and set up authentication.

Before you begin

Role required: admin

Procedure

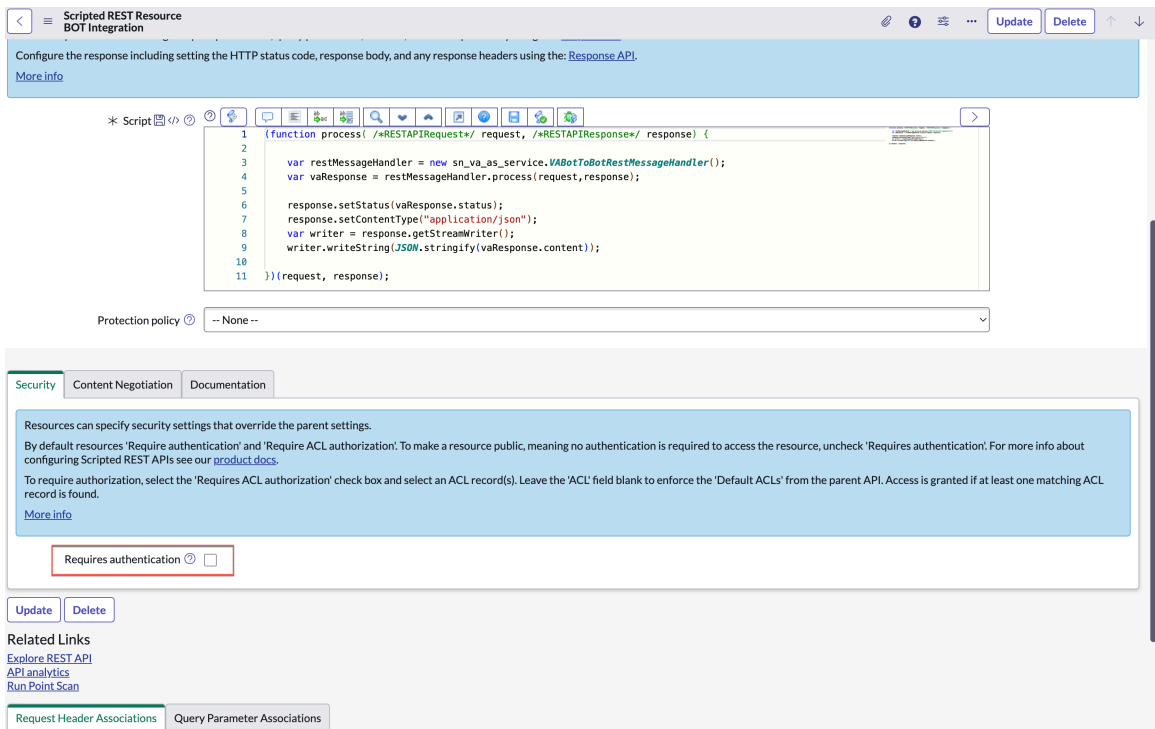
1. Navigate to **All > System Web Services > Scripted Web Services > Scripted REST APIs**.
2. Select the **VA Bot Integration** record to open it.
3. In the **Resources** tab, open the **BOT Integration** record.
4. Review the inbound REST API resource details.

The format is: `https://<customer instance>/api/sn_va_as_service/bot/integration`

* HTTP method	POST
Resource path	/api/sn_va_as_service/bot/integration

For a description of the request parameters and an example send request, see [Virtual Agent Bot Integration API](#).

5. In the **Security** tab on the same page, select the **Requires authentication** check box.



6. Set up Provider Authentication using any of these methods: Basic, OAuth, Hash, or Static Token.

Note: Guest usage via Basic or OAuth is already supported out-of-box when you select **Requires authentication**. To support user account linking, you must use Static or Hash token-based authentication. You can use token-based authentication (Static or Hash) with or without Basic or OAuth authentication. The token can be passed in either the request body or the header. If the token is specified in both places, the one in the header is accepted.

Do one of the following:

- Set up Basic or OAuth authentication.

To learn more about OAuth authentication and the possible security configurations for scripted REST APIs, see [Enable OAuth with inbound REST](#).

- Set up Message Authentication, which involves configuring either Static or Hash tokens, setting up Provider Authentication, and setting the channel identity. For details, see [Configure Message Authentication for inbound communication](#).

What to do next

If you are using Message Authentication, [Configure Message Authentication for inbound communication](#).

Configure Message Authentication for inbound communication

You can configure Message Authentication for the Virtual Agent API instead of Basic or OAuth. Message Authentication involves configuring either Static or Hash tokens, setting up Provider Authentication, and setting the channel identity.

Before you begin

Follow the steps in [Review the inbound REST endpoint and configure inbound authentication](#).

Role required: admin

Procedure

1. Configure the token by doing one of the following, depending on the token type:

- Static token:
 - a. Navigate to **All**, and then enter `token_verification.list` in the filter.
 - b. Click **New**.
 - c. On the Token Verifications form, fill in the fields.

Field	Description
Name	Name of the authentication token, such as B2BTestAppAuthToken.
Description	Description of the authentication token, such as B2B Testing application Auth Token.
Token	Enter an authentication token that you generated using any general programming or scripting language, or click Generate Secure Token in the Related Links.

d. Click **Submit**.

- Hash token:
 - a. Navigate to **All**, and then enter `hash_message_verification.list` in the filter.
 - b. Click **New**.
 - c. On the Hash Message Verification form, fill in the fields.

Fields	Description
Name	Name of the authentication token, such as B2BTestAppAuthToken.
Description	Description of the authentication token, such as B2B Testing application Auth Token.
Secret	Authentication token (random string).

d. Click **Submit**.

2. Set up Provider Authentication for token-based authentication.

- a. Navigate to **All**, and then enter `message_auth.list` in the filter.
- b. Click **New**.
- c. On the Message Auths form, fill in the fields.

Field	Description
Name	Name of the message authentication, such as B2B Auth token.
Provider	Name of the provider.
Group name	Not required.

Field	Description
Service Portal	Not required.
Inbound message verification	Select the Static token or Hash message token that you created.
Outbound message creation	This field is currently not supported in the Virtual Agent API. Select the Static token or Hash message token that you created.
Outbound service token	This field is currently not supported in the Virtual Agent API.

d. Click **Submit**.

3. Set the channel identity.

a. Navigate to **All**, and then enter `sys_cs_provider_application.list` in the filter.

b. Select the **VA Bot to Bot Provider Application** record to open it.

c. In the Provider Channel Identity form, locate the **Message auth** field and select the message auth that you set up previously.

d. Click **Update**.

4. For Hash token-based authentication only, send the **x-b2b-signature** in the request headers. The value is the *HmacSHA1* encoded value of the request payload, which uses the token created in the ServiceNow instance. For example, in Postman, follow these steps:

a. In the Headers, set the **x-b2b-signature** to `{{hashValue}}`.

KEY	VALUE	DESCRIPTION
☒ Content-Type	application/json	
☒ x-b2b-signature	{{hashValue}}	
Key	Value	Description

b. In the Pre-request Script area, set the token as follows:

```
pm.environment.set('hashValue',
  CryptoJS.HmacSHA1(JSON.stringify(JSON.parse(request.data)),
    '<insert your token>').toString(CryptoJS.enc.Hex));
```

Params Authorization Headers (11) Body ● Pre-request Script ● Tests ● Settings

```
1 pm.environment.set('hashValue', CryptoJS.HmacSHA1(JSON.stringify(JSON.parse(request.data)), '<insert your token>').toString(CryptoJS.enc.Hex));
```

What to do next

Configure output response REST endpoint and outbound authentication for the Virtual Agent API (v4.1 or above)

Specify the outbound endpoint URL to which the Virtual Agent responses are posted. Configure outbound authentication.

Before you begin

If needed, specify the Message Authentication for token validation in the Provider Channel Identities [sys_cs_provider_application] table.

Role required: admin

Procedure

1. Navigate to **All > System Definition > Tables**.
2. Select the **Bot to Bot Outbound Configurations** [sn_va_as_service_outbound_configuration] table and open it.
3. Select the **VA Bot to Bot Provider Application** record to open it.
4. Navigate to the **Rest connection** field and open the record.
5. In the **Connections** related tab, select **Bot Connection**.
6. In the **Credential** field, select or create an authentication profile.
7. In the **Connection URL** field, enter the response endpoint for the third-party bot.

This is the endpoint for the primary bot server, where the response will have to be sent from the ServiceNow bot to another bot or another ServiceNow instance.

For example: `http://<customer instance>/demo/rest/service/nowbot/processResponse`

8. Customize Connection timeout if you want to.
The default value for Connection timeout is 5000ms.
9. In the **Attributes** related tab, add headers and its values.

Note: You can add maximum 10 headers.

10. Select **Update**.

Test your Virtual Agent API configuration

Test your Virtual Agent API configuration using API testing tool.

Before you begin

Make sure you've setup Postman or Swagger or any other third-party application environment for API testing.

Role required: admin

About this task

API tests are a way to ensure that your API is behaving as you expect it to. To write a test, do the following:

Procedure

1. Select the environment that you've setup and navigate to tab where you can send your first API request.

2. Configure the payload.

For example, send the below request:

```
{
  "requestId": "requestid123",
  "userId": "testuser.1",
  "emailId": "admin@example.com",
  "action": "START_CONVERSATION",
  "message": {
    "text": "",
    "typed": true
  },
  "contextVariables": {
    "app_name": "test"
  }
}
```

3. Click **Send**.

You can check the response of your payload and your communication status in the response section.

- If your instance is on asynchronous mode, you have to check enabling Virtual Agent API logging. See [Common errors in Virtual Agent API](#) for more information.
- If your instance is on synchronous mode, you have to check the Body of the response.

Using Virtual Agent API

Virtual Agent API enables ServiceNow developers, advanced users, and admins to use Virtual Agent with an enterprise or any other third-party chat interface that supports conversational interfaces or as a secondary bot in an environment with multiple, specialized bots managed by a primary bot.

The following sections detail how to use Virtual Agent API to complete various tasks, such as closing an idle bot, enabling ServiceNow Otto experience, and various controls for the bot output response.

Enable synthesized response in Virtual Agent API

You can now enable synthesized response in the conversations with the primary bot.

Before you begin

Role required: admin

Procedure

1. Navigate to **All**, and then enter `sys_cs_provider.list` in the filter.
2. Select the VA Bot to Bot Provider record.
3. In the **Provider Properties** related tab, do the following:
 - a. Select and open the *synthesized_text_citation_strategy* system property to configure the output text.

synthesized_text_citation_strategy property form

Field	Description
Name	Name of the custom adapter property: <i>synthesized_text_citation_strategy</i> .
Value	Property value that controls how Virtual Agent API sends the synthesized text response with citation labels and links. If you want to configure the way citations are displayed in the response, then choose any of the following options: ▪ endnotes (default): With this selection, the citation label and links are displayed at the end of synthesized text response. ▪ inline-link: With this selection, the citation links are attached to the citation reference ([1], [2]..). ▪ inline-link-with-endnotes: With this selection, the synthesized response is displayed with both endnotes and inline-link. ▪ none: With this selection, the citation label and links aren't displayed in the synthesized text response. The third-party chat systems can use their own logic using <i>citations</i> to render the output text from the synthesized response.

- b. Select and open the *synthesized_carousel_strategy* system property to configure the picker.

synthesized_carousel_strategy property form

Field	Description
Name	Name of the custom adapter property: <i>synthesized_carousel_strategy</i> .
Value	Property value that controls how Virtual Agent API sends the synthesized text response with carousel.

Field	Description
	- replace-label (default): With this selection, Virtual Agent API sends the synthesized text response in labels. - separate-control: With this selection, Virtual Agent API sends the synthesized text response in a separate output text control and the carousel with the options.

c. Click **Update**.

Configure interaction record to store `clientId` in Virtual Agent API

You can configure to store `clientId` to support third-party chat applications.

Before you begin

Role required: admin

Procedure

1. Navigate to **All**, and then enter `sys_cs_provider_application.list` in the filter.
2. Select the **VA Bot to Bot Provider Application** record to open it.
3. In the Provider Channel Identity form, select the **Provider Identity Properties** related list and click **New**.
4. On the Custom Adapter Property form, fill in the fields.

Custom Adapter Property form

Field	Description
Name	Name of the customer adapter property, such as <code>third_party_chat</code> .
Value	Enter <code>true</code> .
Description	Enter an explanation for this property: The custom adapter property to contain the client sessions by the supported third-party application in the Interaction record.

5. Click **Submit**.

Configure to support chat history in Virtual Agent API

You can now support your live agents to see chat history in their conversations with the primary bot.

Before you begin

Role required: admin

Procedure

1. Navigate to **All**, and then enter `sys_cs_provider_application.list` in the filter.
2. Select the **VA Bot to Bot Provider Application** record to open it.
3. In the Provider Channel Identity form, select the **Provider Identity Properties** related list and click **New**.
4. On the Custom Adapter Property form, fill in the fields.

Custom Adapter Property form

Field	Description
Name	Name of the customer adapter property, such as <code>store_history_as</code> .
Value	Enter any one of the following inputs: ◦ <code>multi-text</code>: The chat history will be displayed in individual messages. ◦ <code>text</code>: The chat history will be displayed in a single block. ◦ <code>html</code>: The chat history will be displayed in HTML.
Description	Enter an explanation for this property: The custom adapter property to display the chat history between the primary bot and the end user with enhancements.

5. Click **Submit**.

Setting logo for the primary bot in Virtual Agent API

You can customize your agent chat interface by setting a logo for the primary bot that appears in the chat history.

Before you begin

Role required: admin

Procedure

1. Navigate to **All**, and then enter `live_profile.list` in the filter.
2. Select **New**.
3. On the Live Profile New Record form, fill in the fields.

Live Profile form

Field	Description
Name	Name of the live profile, such as <code>bot logo</code> .
Type	Type of the live profile. Enter <code>Other</code> .
Document	Table associated with the live profile.

Field	Description
	a. Select the Search icon . b. In the Select the document dialog box, specify the following information: ▪ Table name: Select Provider Channel Identity [sys_cs_provider_application]. ▪ Document: Select the provider application for your bot. Select VA Bot to Bot Provider Application. c. Select OK.
Photo	Image (logo) for the bot profile.
Short description	Text that describes the live profile.

4. Click **Update**.

Enable ServiceNow Otto in Virtual Agent API

Enable ServiceNow Otto in Virtual Agent API to support generative AI skills across multiple provider channels.

Before you begin

Set up ServiceNow Otto for Virtual Agent. See [Assistants overview](#) for more information.

Role required: admin

Procedure

1. Navigate to **All**, and then enter `sys_now_assist_deployment_channel.list` in the navigation filter.
2. Select **New**.
3. On the form, fill in the fields.

Field	Value
Document Table	Select Provider Channel Identity from the dropdown.
Document Id	Select the Provider Channel Identity [sys_cs_provider_application] record corresponding to Virtual Agent API.
Now Assist Deployment	Select Now Assist for Virtual Agent.
Active	Select the Active checkbox.

4. Select **Submit**.

Configure multiple provider applications

You can configure multiple provider applications to support AI agents where there are multiple primary bots using Virtual Agent API and you need to distinguish between them.

Before you begin

Role required: admin

Be sure you are in Virtual Agent API application scope.

Procedure

1. Navigate to **All > sys_cs_provider_application**.
2. Click **New** to create a new provider application.
3. On the form, fill in the fields.

Field	Description
Name	Name of the provider application, such as VA API Custom Bot.
Provider	Select the provider as VA Bot to Bot Provider .
Inbound Id	Unique inbound Id used in the request message, for example, custom_1.
Message Auth	Configure Message Authentication with a token for inbound communication. See Configure Message Authentication for inbound communication for more details.

4. Click **Submit**.
5. Navigate to **All > System Web Services > REST Message**.
6. Click **New** to create a new REST Message record.
7. In the REST Message record, fill in the form fields.

Field	Description
Name	Name of the REST Message record. This should be the same as the newly created provider application.
Endpoint	The response endpoint of the primary bot.

8. Click **Submit**.
9. In the HTTP Methods section, click New to create a new method or you can override the default GET method.

Field	Description
Name	Name of the HTTP Method. Enter postMessage.
HTTP method	Select POST .
Endpoint	Enter the response endpoint of the primary bot.
Authentication Type	Configure Basic or OAuth 2.0 authentication as per your requirement. For details about configuring basic authentication, see Configure a REST message with basic auth  . For information about configuring OAuth 2.0, see Configure a REST message with OAuth  .

10. To use the newly created provider application, pass the Inbound Id of the provider application in the *appInboundId* parameter of the Virtual Agent API request.

You need to pass the Inbound Id of the provider application in the *appInboundId* parameter for every Virtual Agent API request. The following is a sample Virtual Agent API request that uses the newly created provider application.

```
{
  "userId": "adminuser1",
  "emailId": "admin@example.com",
  "action": "START_CONVERSATION",
  "message": {
    "text": "",
    "typed": true
  },
  "appInboundId": "custom_1",
  "contextVariables": {
    "app_name": "test"
  }
}
```

You can test the configuration by viewing the outbound HTTP logs to verify that your response endpoint was called.

Transform Virtual Agent API request and response

You can transform Virtual Agent API request and response into supported formats through the scripted extension points provided in Virtual Agent API.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > System Extensions Points > Scripted Extension Points**

- The *sn_va_as_service.va_api_payload_transformation* extension point transforms primary bot payload into standard Virtual Agent API supported format before processing the request. The *sn_va_as_service.va_api_output_transformation* extension point transforms Virtual Agent API response into a format supported by the primary bot.
- Both the scripted extension points have two parameters: *shouldTransform* and *transform*. *shouldTransform* is used to determine whether the implementation is executed. *transform* is used to transform the request or response.

2. If you want to transform the request payload, complete the following steps.

- Select *sn_va_as_service.va_api_payload_transformation* extension point
- In the Related Links section, click **Create implementation**.
- Update the extension point script as per your requirements.
In *sn_va_as_service.va_api_payload_transformation* extension point, the request parameter is an object with two keys: *payload* and *headers*. *payload* is the request payload received from the primary bot, and *headers* are the headers sent in the request payload. The following is a sample implementation.

```
var va_api_payload_transformation = Class.create();
va_api_payload_transformation.prototype = {
  initialize: function() {},

```

```

shouldTransform: function(request) {
    return request.payload.caller === "examplebot";
},

/*
return object for transform function should be in the
following format
transformedRequest = {
payload: request.payload,
headers: request.headers
};
*/transform: function(request) {
var payload = request.payload;
var headers = request.headers;

var vaAPIPayload = {
"userId": payload.userId,
"emailId": payload.email,
"message": {
    "text": payload.message,
    "typed": true
},
"contextVariables": {
    "requester_session_language": payload.user_language
},
"appInboundId": "custom_1"
};

return {
payload: vaAPIPayload,
headers: headers
};
},

```

sn_va_as_service.va_api_payload_transformation extension point

Script Include

va_api_payload_transformation

Name

va_api_payload_transformation

Application

Virtual Agent API

API Name

sn_va_as_serviceva_api_payload_transformation

Accessible from

This application scope only

Client callable

☐

Active

☒

Description

Implements extension point sn_va_as_serviceva_api_payload_transformation

Script

```

1 var va_api_payload_transformation = Class.create();
2 va_api_payload_transformation.prototype = {
3     initialize: function() {},
4
5     shouldTransform: function(request) {
6         return request.payload.caller === "examplebot";
7     },
8
9     /*
10    return object for transform function should be in below format
11    transformedRequest = {
12        payload: request.payload,
13        headers: request.headers
14    };
15    */
16    transform: function(request) {
17        var payload = request.payload;
18        var headers = request.headers;
19
20        var vaAPIPayload = {
21            "userId": payload.userId,
22            "emailId": payload.email,
23            "message": {
24                "text": payload.message,

```

Protection policy

-- None --

Update

Delete

d. Click **Update**.

3. If you want to transform the response payload, complete the following steps.

- a. Select `sn_va_as_service.va_api_output_transformation` extension point
- b. In the Related Links section, click **Create implementation**.
- c. Update the extension point script as per your requirements.
 In `sn_va_as_service.va_api_output_transformation` extension point, the response parameter is an object with two keys: `inputPayload` and `responsePayload`. *inputPayload* is the request payload received from Virtual Agent API, and *responsePayload* is the response from Virtual Agent API which you can use to build the transformed response. Use the `applnboundId` field of the request payload to determine whether to return true or false. The following is a sample implementation.

```
var va_api_output_transformation = Class.create();
va_api_output_transformation.prototype = {
  initialize: function() {},

  shouldTransform: function(response) {
    return (response.inputPayload.appInboundId === 'custom_1');
  },

  /*
   input object param for transform function should be in
   the following format
   response = {
     inputPayload: response.inputPayload,
     responsePayload: response.responsePayload
   };
   */
  transform: function(response) {
    //return only transformed payload
    return {
      'custom_structure': response.responsePayload
    };
  },

  type: 'va_api_output_transformation'
};
```

sn_va_as_service.va_api_output_transformation extension point

Name:

API Name:

Application:

Accessible from:

Client callable: ☐

Active: ☒

Description:

Script:


```

1 var va_api_output_transformation = Class.create();
2 va_api_output_transformation.prototype = {
3   initialize: function() {},
4   shouldTransform: function(response) {
5     return (response.inputPayload.appInboundId === 'custom_1');
6   },
7   /*
8   input object param for transform function should be in below format
9   response = {
10     inputPayload: response.inputPayload,
11     responsePayload: response.responsePayload
12   };
13   */
14   transform: function(response) {
15     //return only transformed payload
16     return {
17       'custom_structure': response.responsePayload
18     };
19   },
20   type: 'va_api_output_transformation'
21 };
22
23 
```

Protection policy:

d. Click **Update**.

Enable synchronous support in Virtual Agent API

You can support synchronous mode for your conversation with primary bot.

Before you begin

Role required: admin

Ensure to exclude the Bot to Bot channel from Agent Chat.

1. Navigate to **All**, and then enter `sys_properties.list` in the filter.
2. Select the `com.glide.cs.exclude.liveagent.support` system property to open it.
3. Add *Bot To Bot* to the **Value** field.

Exclude the Bot To Bot channel from Agent Chat

Name:

Application:

Description:

Choices:

Type:

Value:

4. Click **Update**.

Procedure

1. Navigate to **All**, and then enter `sys_cs_channel.list` in the navigation filter.
2. Select the Bot to Bot record.

3. Clear the **Enable Notifications** check box to disable it.
4. Clear the **Support typing indicator** check box to disable it.
5. Select the **Synchronous** check box.

Bot to Bot channel with synchronous support enabled

The screenshot shows the configuration page for a 'Bot to Bot' messaging channel. The 'Enable Notifications' checkbox is unchecked and highlighted with a green box. The 'Support typing indicator' checkbox is also unchecked and highlighted with a green box. The 'Synchronous' checkbox is checked and highlighted with a green box. The 'Store app page link' field contains a long URL. The 'Application' is set to 'Global' and the 'Type' is 'Chat'. The 'Conversation Idle Timeout' is empty. The 'Secure' checkbox is unchecked. The 'Icon' is a green speech bubble icon. The 'Update' and 'Delete' buttons are visible at the top right and bottom left.

Note: If the **Synchronous** field is not visible, you can [configure the form layout](#) to show it.

6. Click **Update**.

Virtual Agent bot-to-bot integration

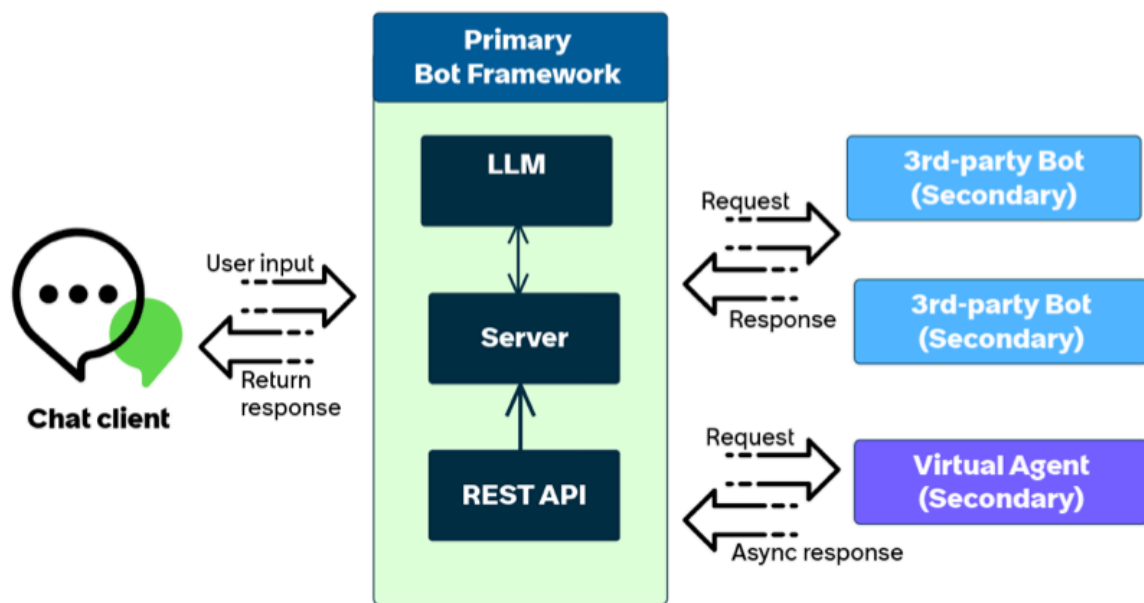
The Virtual Agent API supports environments that use multiple bots. In this situation, a primary bot communicates with third-party secondary bots, such as a ServiceNow bot.

There are two types of bot communication with the primary bot:

- If the primary bot understands an end user's request (intent), the primary bot routes the request to the appropriate secondary bot, which displays the corresponding topic.
- If the primary bot cannot determine where to route a user request, the primary bot can broadcast a user's request to all secondary bots. Each secondary bot returns a prediction confidence score for determining the end user's intent. The primary bot then routes the request to the secondary bot with the highest prediction confidence score.

In both scenarios, the ServiceNow bot informs the primary bot when the request is completed or when it cannot continue handling the request. The primary bot can then determine whether to inform the end user that the conversation is complete or provide further assistance.

Bot-to-Bot ecosystem with ServiceNow Virtual Agent as a secondary bot



The ServiceNow secondary bot uses a standard request and response through REST endpoints. When the request is received through the Bot Framework or an enterprise app seeking to integrate with the ServiceNow bot, the response for a request is sent asynchronously via the API to the requesting system. Virtual Agent supports Live Agent in the channel as well.

Properties for bot-to-bot integrations

You can [add system properties](#)  to configure the following:

- Number of times that the Virtual Agent bot tries to get a response
- Bot normalization score

Bot-to-bot properties

Property	Description	Default value
va.bot.to.bot.take.control_times	Number of times that Virtual Agent tries to get a response, after which control is returned to the primary bot.	2
va.bot.to.bot.score.normalization_factor	A value used to normalize the prediction confidence score returned by Virtual Agent, if the primary bot does not use intents to route requests to the appropriate bot.	1

Closing idle bot-to-bot conversations

In bot-to-bot integrations (Virtual Agent API), abandoned conversations that are "idle" for more than an hour are automatically closed by the scheduled job, *Time Out Abandoned B2B Conversations*. This job runs hourly each day.

The default timeout period for abandoned bot-to-bot conversations is one hour (3600 seconds). The *Time Out Abandoned B2B Conversations* job closes any bot-to-bot conversations that have been open longer than one hour (3600 seconds). You (admins)

can change the default timeout period for idle bot-to-bot conversations by [adding the system property](#) `com.glide.cs.b2b_conversation_idle_timeout`.

The timeout value that you specify in this property applies to all bot-to-bot conversations involving the Virtual Agent.

Change the timeout period for idle bot-to-bot conversations

Add the `com.glide.cs.b2b_conversation_idle_timeout` property to the System Property [sys_properties] table to specify the length of time that an abandoned bot-to-bot conversation remains open (idle). When the *Time Out Abandoned B2B Conversations* job runs hourly, it closes any bot-to-bot conversations that have been idle longer than the specified time.

1. Navigate to **All**, and then enter `sys_properties.list` in the navigation filter.
2. Click **New**.
3. On the form, fill in the fields.

Field	Value
Name	Enter the system property name: <code>com.glide.cs.b2b_conversation_idle_timeout</code>
Description	Enter an explanation for this property: Idle timeout period (in seconds) for all bot-to-bot conversations
Type	Select <code>integer</code> .
Value	Enter the number of seconds that the abandoned bot-to-bot conversations remain open, after the requester's last response. For example, a value of 1800 seconds (30 minutes) means that an abandoned bot-to-bot conversation remains open for 1800 seconds (30 minutes). When the <i>Time Out Abandoned B2B Conversations</i> job runs, it closes any conversations that have been idle longer than 1800 seconds.

4. Click **Submit**.

Change the Time Out Abandoned B2B Conversations scheduled job

To change the time that this hourly scheduled job runs or to make other adjustments to the scheduled job:

1. Navigate to **All > System Definition > Scheduled Jobs** and open the Time Out Abandoned B2B Conversations record.
2. In the Scheduled Script Execution form, change the Time at which the scheduled job runs. Or, depending on how you want to adjust the timing, change other fields in the form as needed.

For example, to change the interval at which the job runs, in the **Run** field, select **Periodically**. You then specify the **Repeat Interval (Days and Hours)** that the job runs and the **Starting** date for the interval. For a description of the other fields that you can change in this form, see [Automatically run a script of your choosing](#).

3. Click **Update**.

The job runs at the specified time and frequency.

Controls in Virtual Agent API

Virtual Agent API provides you various controls to manage the responses in your conversation.

The available controls in Virtual Agent API are:

Output Text

```
{
  "uiType": "OutputText",
  "group": "DefaultText",
  "value": "***bold**\n*italic*\n***bold
italic***\n[Google](https://empcygiraffe6.service-now.com/va_li
nk.do?token=77ee77ef77eSZGF1MTc3OWU5NzY2MTExMDUyNjFiMzQ3MTE1M2Fm
YjTvt6zvt5Qx77es77etWE1nSOZLOElhU1FQYzhIajh2dmNmZz09WHdPTDYZV3Zp
UWF1MGJwRlB0ZktUY29wVWt1UGVueUNIS1FkRHRyUW9idH1mVFZ1RWJ0ODZyRjZY
NOVQamxnWUV5WkhZSDRJawFGWmJRZU1CaXZLYWhudnkwbDdvNFZsM1MzUUw4Q3VR
TUJWMMHhvTW1RLXZOQnh5M0hveVBue1lNVmJCbG1kaORqNTAzVFVUQm10MTZzSn1U
TVJoakdZektldXdoYX1M77eu77ev&target_url=https%3A%2F
%2Fwww.google.co.in)\n\n- ***u1***\n- ***u2***\n\n\n1. o11\n2.
o12\n\n",
  "maskType": "NONE | SECURE"
}
```

Field	Description
value	Contains the output text value.
maskType	'NONE' indicates normal text and 'SECURE' indicates secure output text.

Output Html

```
{
  "uiType": "OutputHtml",
  "group": "DefaultOutputHtml",
  "style": "inline",
  "height": 0,
  "width": 0,
  "value": "<html>      <body>      <table>      <tr>
      <th>Company</th>      <th>Contact</th>
      <th>Country</th>      </tr>      <tr>      <td><a
href=\"https://www.google.co.in\">Alfreds Futterkiste</a></td>
      <td>Maria Anders</td>      <td>Germany</td>      </tr>      <tr>
      <td>Centro comercial Moctezuma</td>      <td>Francisco
Chang</td>      <td>Mexico</td>      </tr>      <tr>      <td><a
href=\"https://www.google.co.in\">Ernest Handel</a></td>
      <td>Roland Mendel</td>      <td>Austria</td>      </tr>
      <tr>      <td>Island Trading</td>      <td>Helen Bennett</td>
      <td>UK</td>      </tr>      <tr>      <td>Laughing Bacchus
Winecellars</td>      <td>Yoshi Tannamuri</td>      <td><a
href=\"https://www.google.co.in\">Canada</a></td>      </tr>
      <tr>      <td>Magazzini Alimentari Riuniti</td>      <td>Giovanni
```

```

Rovelli</td>      <td>Italy</td>    </tr> </table>      </body>
</html> ",
  "imageUrl":
  "https://empcygiraffe6.service-now.com//api/now/v1/cs/media/zKF
qUx0NJyVaFRJqzeRhFgeMsMo9211mCvrMgKzrRpTWqFJDrXLOadoYGC5CQnwr",
  "imageHeight": 217,
  "imageWidth": 501,
  "links": [
    {
      "link": "https://www.google.co.in",
      "label": "Alfreds Futterkiste"
    },
    {
      "link": "https://www.google.co.in",
      "label": "Ernest Handel"
    },
    {
      "link": "https://www.google.co.in",
      "label": "Canada"
    }
  ]
}

```

Field	Description
value	Contains the html value.
imageUrl	Contains the image of html if 'Html to image conversion required' is enabled on sys_cs_provider.
imageHeight	Contains the image height if 'Html to image conversion required' is enabled on sys_cs_provider.
imageWidth	Contains the image width if 'Html to image conversion required' is enabled on sys_cs_provider.
links	Contains links in the given html if 'Html to image conversion required' is enabled on sys_cs_provider.

Output Image

```

{
  "uiType": "OutputImage",
  "group": "DefaultOutputImage",
  "value": "https://adaptivecards.io/content/cats/1.png",
  "altText": "Image alt text"
}

```

Field	Description
value	Contains the image url.

Field	Description
altText	Contains the alt text for the image (not mandatory).

Output Link

```
{
  "uiType": "OutputLink",
  "group": "DefaultOutputLink",
  "label": "ServiceNow",
  "header": "The world works with ServiceNow",
  "type": "link",
  "value": {
    "action":
    "https://empcygiraffe6.service-now.com/va_link.do?token=<token>
    &target_url=https%3A%2F%2Fwww.servicenow.com",
    "target": "_blank"
  }
}
```

Field	Description
header	Link Header
label	Link label
value->action	Link url

Multi Link

```
{
  "uiType": "GroupedPartsOutputControl",
  "group": "DefaultGroupedPartsOutputControl",
  "groupPartType": "Link",
  "header": "Multilink Header",
  "values": [
    {
      "action":
      "https://empcygiraffe6.service-now.com/va_link.do?token=<token>
      &target_url=https%3A%2F%2Fwww.link1.com",
      "description": "a short desc",
      "label": "link 1 label",
      "context": "KB",
      "target": "_blank"
    },
    {
      "action":
      "https://empcygiraffe6.service-now.com/va_link.do?token=<token>
      &target_url=https%3A%2F%2Fwww.link2.com",
      "description": "a short desc",
      "label": "link 2 label",
      "context": "ITSM",
      "target": "_blank"
    }
  ]
}
```

Field	Description
header	MultiLink control header
values	Links array

Link structure in links array:

Field	Description
label	Link label
action	Link url
description	Link Description
context	Context or Taxonomy

Output Card

```
{
  "uiType": "OutputCard",
  "group": "DefaultOutputCard",
  "templateName": "<card-template>",
  "data": "<card-data-json>",
}
```

Field	Description
templateName	Card type or Card name
data	json representing card data. <i>Note:</i> The data field will be of type string. You need to parse it to use the data.

Large Image With Text

```
{
  "uiType": "OutputCard",
  "group": "DefaultOutputCard",
  "templateName": "Large image with text",
  "data":
    "{ \"image\": \"https://adaptivecards.io/content/cats/1.png\",
    \"description\": \"Large image description\",
    \"dataNowSmartLink\": \"W9F4Ld8z\", \"title\": \"Large image\",
    \"imageAlt\": \"large image alt text\", \"url\": \"\", \"target\": \"_blank\" }",
  "smartLinksMetadata": {
    "W9F4Ld8z": {
      "type": "standard",
      "source": "",
      "target": "_blank"
    }
  }
}
```

```
}
}
```

Small Image With Text

```
{
  "uiType": "OutputCard",
  "group": "DefaultOutputCard",
  "templateName": "Small image with text",
  "data":
    "{ \"image\": \"https://adaptivecards.io/content/cats/1.png\",
  \"description\": \"Small image with text
description\", \"dataNowSmartLink\": \"i6CL61tN\", \"title\":
\"Small image with text\", \"imageAlt\": \"small image alt
text\", \"url\": \"\", \"target\": \"_blank\" }",
  "smartLinksMetadata": {
    "i6CL61tN": {
      "type": "standard",
      "source": "",
      "target": "_blank"
    }
  }
}
```

Youtube

```
{
  "uiType": "OutputCard",
  "group": "DefaultOutputCard",
  "templateName": "Youtube Video Card",
  "data":
    "{ \"link\":
\"https://empcygiraffe6.service-now.com/va_link.do?token=<token>
&target_url=service-now.com\", \"description\": \"The world works
with
ServiceNow\", \"id\": \"IWsGk-Kh5ko\", \"title\": \"ServiceNow\",
\"url\": \"\", \"target\": \"_blank\" }"
}
```

Record

```
{
  "uiType": "OutputCard",
  "group": "DefaultOutputCard",
  "templateName": "Card",
  "data":
    "{ \"sys_id\": \"0c5f3cece1b12010f877971dea0b1449\", \"subtitle\":
\"INC0008001\", \"dataNowSmartLink\": \"VLzQTN88\", \"title\":
\"Incident\", \"fields\": [ { \"fieldLabel\": \"Number\",
\"fieldValue\": \"INC0008001\" }, { \"fieldLabel\": \"Short
description\", \"fieldValue\": \"ATF:TEST2\" }, { \"fieldLabel\":
\"Caller\", \"fieldValue\": \"survey
user\" } ], \"table_name\": \"incident\", \"url\":
\"https://empcygiraffe6.service-now.com/va_link.do?token=<token>
target_url=https%3A%2F
%2Fempcygiraffe6.service-now.com%2Fsp%3Fsys_id%3D0c5f3cece1b1201
0f877971dea0b1449%26id%3Dticket%26table%3Dincident\", \"target\":
\"_blank\" }",
}
```



```

    "smartLinksMetadata": {
      "VLzQTN88": {
        "type": "standard",
        "source":
"https://empcygiraffe6.service-now.com/sp?sys_id=0c5f3cece1b12010f877971dea0b1449&id=ticket&table=inciden
t",
        "target": "_blank"
      }
    }
  }
}

```

Multipart Output

```

{
  "uiType": "MultiPartOutput",
  "group": "DefaultMultiPartOutput",
  "navigationBtnLabel": "Click for more",
  "content": {
    "uiType": "OutputText",
    "value": "multipart text output",
    "maskType": "NONE"
  }
}

```

Field	Description
navigationBtnLabel	Navigation Button label
content	Represents the control defined with multipart. Note: - Content can be OutputText or OutputImage or OutputHtml or OutputLink or OutputCard. - You must send 'click_for_more' as response to move to the next part.

InputText

```

{
  "uiType": "InputText",
  "group": "DefaultText",
  "required": true,
  "nluTextEnabled": false,
  "entityType": "Text",
  "label": "enter something",
  "maskType": "NONE"
}

```

Field	Description
label	Input text label

Field	Description
required	True or false that indicates whether the control can be skipped or not.
maskType	NONE or SECURE. - NONE indicates normal input. - SECURE indicates secure input.
entityType	The input is text or email or IP address.
nluTextEnabled	Whether NLU is enabled at this node or not.

Boolean

```
{
  "uiType": "Boolean",
  "group": "DefaultPicker",
  "required": true,
  "nluTextEnabled": false,
  "entityType": "Boolean",
  "label": "select yes/no",
  "options": [
    {
      "label": "Yes",
      "value": "yes",
      "renderStyle": "data"
    },
    {
      "label": "No",
      "value": "no",
      "renderStyle": "data"
    }
  ]
}
```

Field	Description
label	Boolean control prompt
required	True or false that indicates whether the control can be skipped or not.
maskType	NONE or SECURE. - NONE indicates normal input. - SECURE indicates secure input.
entityType	Boolean
nluTextEnabled	Whether NLU is enabled at this node or not.
options	Boolean options

Option structure in options array:

Field	Description
label	Option label
value	Option value
renderStyle	Data or button

Picker

```
{
  "uiType": "Picker",
  "group": "DefaultPicker",
  "required": true,
  "nluTextEnabled": false,
  "label": "Select an option",
  "itemType": "List",
  "style": "list",
  "multiSelect": false,
  "options": [
    {
      "label": "option 1",
      "value": "option 1",
      "renderStyle": "data",
      "enabled": false
    },
    {
      "label": "option 2",
      "value": "option 2",
      "renderStyle": "data",
      "enabled": false
    },
    {
      "label": "option 3",
      "value": "option 3",
      "renderStyle": "data",
      "enabled": false
    }
  ],
  "scriptedData": {
    "cardData": "{ \"title\": \"Choice - Large image with text\", \"description\": \"Choice - Large image with text description\", \"image\": \"https://adaptivecards.io/content/cats/1.png\", \"imageAlt\": \"alt text\" }",
    "cardName": "Large image with text",
    "cardTemplate": "",
    "renderStyle": "card"
  }
}
```

Field	Description
label	Picker control prompt

Field	Description
style	List or carousel. Carousel indicates carousel control.
required	True or false that indicates whether the control can be skipped or not.
maskType	NONE or SECURE. - NONE indicates normal input. - SECURE indicates secure input.
entityType	Boolean
nluTextEnabled	Whether NLU is enabled at this node or not.
options	Boolean options
scriptedData	Represents a card to be displayed along with picker.

Option structure in options array:

Field	Description
label	Option label
value	Option value
renderStyle	data or button

scriptedData structure:

Field	Description
cardName	Template name
cardData	Card data as json string.

Carousel

```
{
  "uiType": "Picker",
  "group": "DefaultPicker",
  "required": true,
  "nluTextEnabled": false,
  "label": "select an image",
  "itemType": "Picture",
  "style": "carousel",
  "multiSelect": false,
  "options": [
    {
      "label": "name1",
      "description": "a description of value_1 item",
      "attachment":
        "https://adaptivecards.io/content/cats/1.png",
      "value": "value_1",
      "renderStyle": "data",

```

```

    "enabled": false
  },
  {
    "label": "name2",
    "description": "a description of value_2 item",
    "attachment":
"https://adaptivecards.io/content/cats/1.png",
    "value": "value_2",
    "renderStyle": "data",
    "enabled": false
  },
  {
    "label": "name3",
    "description": "a description of value_3 item",
    "attachment":
"https://adaptivecards.io/content/cats/1.png",
    "value": "value_3",
    "renderStyle": "data",
    "enabled": false
  }
],
"scriptedData": null
}

```

Field	Description
label	Picker control prompt
style	List or Carousel. Carousel indicates carousel control.
required	True or false that indicates whether the control can be skipped or not.
maskType	NONE or SECURE. - NONE indicates normal input. - SECURE indicates secure input.
entityType	Boolean
nluTextEnabled	Whether NLU is enabled at this node or not.
options	Boolean options

Option structure in options array:

Field	Description
label	Option label
value	Option value
description	description for the option
attachment	Picture or image for the option

Date

```
{
  "uiType": "Date",
  "group": "DefaultDate",
  "required": true,
  "nluTextEnabled": false,
  "entityType": "Date",
  "label": "test date"
}
```

Field	Description
label	Date control prompt
required	True or false that indicates whether the control can be skipped or not.
entityType	Date
nluTextEnabled	Whether NLU is enabled at this node or not.

Time

```
{
  "uiType": "Time",
  "group": "DefaultDate",
  "required": true,
  "nluTextEnabled": false,
  "entityType": "Time",
  "label": "Select time"
}
```

Field	Description
label	Time control prompt
required	True or false that indicates whether the control can be skipped or not.
entityType	Time
nluTextEnabled	Whether NLU is enabled at this node or not.

DateTime

```
{
  "uiType": "DateTime",
  "group": "DefaultDate",
  "required": true,
  "nluTextEnabled": false,
  "entityType": "Time",
  "label": "Select time"
}
```

Field	Description
label	Date and Time control prompt
required	True or false that indicates whether the control can be skipped or not.
entityType	Time
nluTextEnabled	Whether NLU is enabled at this node or not.

StartConversation

```
{
  "uiType": "ActionMsg",
  "actionType": "StartConversation",
  "conversationId": "e0494b2187332550326d0d05dabb350d"
}
```

Field	Description
uiType	ActionMsg
actionType	StartConversation

Indicates that the conversation has started in Virtual Agent API.

Virtual Agent API reference

Reference topics provide information about troubleshooting common errors, logs, and debugging while using Virtual Agent API.

Common errors in Virtual Agent API

This section describes some common errors in Virtual Agent API and how they can be resolved.

Virtual Agent API structure validation

Request structure:

Virtual Agent API expects the following JSON structure:

```
{
  "requestId": "any-unique-request-id",
  "clientSessionId": "any-unique-session-id",
  "userId": "any-unique-user-id",
  "emailId": "user@example.com",
  "action": "",
  "message": {
    "text": "User message text",
    "typed": true
  },
  "contextVariables": {},
  "history": [
    {
      "isBotMessage": true,
      "value": "How can I help you?",
      "displayName": "Bot",

```

```

    "type": "text"
  }
],
"clientVariables": {
  "id": "va-bot-12345",
  "timestamp": "1687527831786"
}
}

```

Field definitions

Field	Required	Description
requestId	No	Pass-through variable returned in responses
clientSessionId	No	Pass-through session identifier
userId	Yes	Unique user identifier (mandatory)
emailId	No*	User email for linking (*required for user linking)
action	No	Optional action parameter
message.text	Yes	User message content (mandatory)
message.typed	No	true for search text, false for value selection
contextVariables	No	Optional context data
history	No	Bot conversation history (first request only)
clientVariables	No	Pass-through client variables

Note: Only *userId* and *message.text* are mandatory fields in the request.

File upload issues

Virtual Agent API supports two file upload modes, such as Synchronous and Asynchronous.

File upload request structure:

```

{
  "userId": "{{user_id}}",
  "message": {
    "attachment": {
      "clientAttachmentId": "{{request_id}}",
      "contentType": "video/mp4",
      "fileName": "sample.mp4",
      "url":
        "https://sample-videos.com/video123/mp4/720/big_buck_bunny_720p_1mb.mp4",
      "headers": {
        "header 1": "value 1"
      }
    }
  }
}

```



```

    },
    "text": "along with text",
    "typed": true
  }
}

```

Field definitions

Field	Required	Description
contentType	Yes	MIME type (e.g., video/mp4, image/png)
fileName	Yes	Name of the file with extension
url	Yes	Accessible URL to download the file
clientAttachmentId	No	Unique identifier for tracking
headers	No	Authentication headers for file download

File upload in synchronous mode:

To upload a file in synchronous mode, follow the below steps:

1. Upload the file by using Media API. For more information, see [CCCIF Media Resource API](#).

Media API returns a url. An example of the response is:

```

{
  "result": {
    "mediaUrl":
    "<instance>/api/now/v1/cs/media/JOBBfkqSq6kDiFzxyinvHhke7304TZ
    Oj",
    "name": "image.png",
    "state": "available",
    "attachmentId": "e8671b9193209210a755b8e86cba104b"
  }
}

```

2. Use the media url in Virtual Agent API request. A JSON example is:

```

{
  "userId": "user123",
  "message": {
    "attachment": {
      "contentType": "image/png",
      "fileName": "image.png",
      "url":
      "<instance>/api/now/v1/cs/media/JOBBfkqSq6kDiFzxyinvHhke7304TZ
      Oj"
    },
    "text": "Here is the image",
    "typed": true
  }
}

```

File upload in asynchronous mode:

You can upload a file in asynchronous mode in two ways:

1. Use the file url in the Virtual Agent API request.

- Direct file url:

```
{
  "userId": "user123",
  "message": {
    "attachment": {
      "contentType": "application/pdf",
      "fileName": "report.pdf",
      "url": "https://publicserver.com/files/report.pdf"
    },
    "text": "Document attached",
    "typed": true
  }
}
```

- Protected file url:

```
{
  "userId": "user123",
  "message": {
    "attachment": {
      "contentType": "application/pdf",
      "fileName": "confidential.pdf",
      "url": "https://secureserver.com/files/confidential.pdf",
      "headers": {
        "Authorization": "Bearer eyJhbGciOiJIUzI1NiIsInR5cCI6IkpXVCJ9...",
        "X-Custom-Header": "custom-value"
      }
    },
    "text": "Secure document attached",
    "typed": true
  }
}
```

2. Using the Media API (as followed in synchronous mode).**User linking issues**

Virtual Agent API supports automatic user linking only out-of-the-box. Manual linking is not enabled by default in Virtual Agent API.

Prerequisites for user linking:**1. Message Auth is mandatory.**

- Without message auth in `sys_cs_provider_application`, user linking doesn't work.
- You must configure Message auth properly. (See the authentication section.)

2. Required request fields.

- `userId` must be present and unique.
- `emailId` must be present and valid.

User record requirements:

The emailId must match a sys_user record that meets all of the below conditions:

- Record exists in the sys_user table.
- Email field matches exactly.
- User is active. (active=true)
- User is not locked out. (locked_out=false)
- Only one user record matches these conditions.

Note: If multiple users have the same email, linking fails.

Auto linking configuration:**1. Verify the provider configuration.**

- Navigate to the sys_cs_provider table and open the **"VA Bot to Bot Provider"** record.
- **Required setting**

Field	Expected Value
automatic_link_enabled	true
automatic_link_action	sn_va_as_service.virtual_agent__bot_to_bot
link_account_enabled	true

2. Check the provider user map.

- Navigate to the provider_user_map table.
- Filter by: active=false AND channel_user_id={userId from request}.
- Issue: If record exists with active=false, the user cannot be linked automatically.
- Solution: Admin must manually delete the inactive record and retry the linking request.

3. Check for customizations.

- Review customizations by running the sn_va_as_service.virtual_agent__bot_to_bot_auto_link_account script.
- Check for the common customization issues:
 - Logic preventing automatic linking
 - Additional validation checks
 - Modified field mappings

User linking troubleshooting checklist:

- Configuration:
 - Message auth exists and is active.
 - userId is present in request.
 - emailId is present in request.
 - automatic_link_enabled = true

- `automatic_link_action` points to correct script.
- `link_account_enabled = true`
- User record:
 - User exists in `sys_user`.
 - Email matches exactly (case-sensitive).
 - User is active.
 - User is not locked out.
 - Only one user matches the email.
- Provider user map:
 - No inactive records for this `userId`.
 - Check for duplicate mappings.
- Customizations:
 - Review auto-link script for modifications.
 - Test with OOB script if customized.

Using Virtual Agent Bot Interconnect in your configuration

Use Virtual Agent Bot Interconnect to create a unified chat experience across multiple channels. You can support secondary bots, such as Google Dialogflow, Microsoft Power Virtual Agents, and ServiceNow® Virtual Agent.

Virtual Agent Bot Interconnect functions as the primary bot in a diverse chat environment. It can help you reduce complexity and create a unified chat experience for your end users. Virtual Agent Bot Interconnect gives your end users access to multiple channels and a wide variety of enterprise tasks that are available from ServiceNow.

Bot Interconnect provides the following benefits:

- Ready integration with third-party bots such as Google Dialogflow and Microsoft Power Virtual Agents.
- Easy integration with ServiceNow Virtual Agent bots on other instances.
- The ability to add any other third-party bot as a secondary bot in the system.
- User authentication and account linking in Bot Interconnect.
- Intent discovery in Bot Interconnect across all skills that are supported by the primary and secondary bots.
- LLM topic conversations across primary and secondary bots
- Conversations occur with one bot at a time.
- Bot Interconnect provides a common conversation model and data storage, which unifies reporting and analytics.

Note: The Virtual Agent Bot Interconnect requires a Pro license similar to that of Virtual Agent.

Supported Controls

All input controls and bot response controls are supported.

Features and default behavior

Language support

Responses in Bot Interconnect are not translated. Bot Interconnect passes the user language to the secondary bot and expects the secondary bot to return any responses in that language. For example, if the primary bot has a German-speaking user and the secondary instance is localized in German, then German responses are returned to the primary bot.

Timeout value from the secondary bot

The timeout value is the maximum time the primary bot waits for a response from the secondary bot. You can pass a custom timeout value (in milliseconds) in the Bot Interconnect Topic Block properties to override this.

1. Select the **Bot Interconnect Topic Block** node in the shell topic on your primary instance.
2. In the **Additional Params (String)** area, select the script icon .
3. Add the following script:

```
return JSON.stringify({ timeout : 30000 })
```

In this example, 30000 equals 30 seconds.

4. Save and publish the topic.

Closed conversations

Conversations are closed on the secondary bot when a user closes the conversation on Bot Interconnect or when the Bot Interconnect conversation times out.

Note: Conversations always remain open in Microsoft Power Virtual Agents.

Debug logs

To enable debug logs in the Bot Interconnect instance, set the `sn_va_bot_ic.bot_interconnect.enable_logging` system property to `true`. You will see a conversation ID attached to most logs, as well as the file name.

Pass output from the secondary bot topic to the primary bot

You can apply custom logic to the output of the secondary bot conversation in the Bot Interconnect shell topic.

Support for custom transformation maps

Developers can pass a custom transformation map using the `getTransformerMap` method. A custom transformation map lets you override the default transformation logic.

Example in the `DialogflowInboundTransformer` script include for Google Dialogflow:

```
/** Custom transformation map based on control types in
DialogFlow messenger */

getTransformationMap: function() {
  return {
    'text': 'transformText',
    'info': 'transformInfoCards2',
    'description': 'transformDescription',
    'button': 'transformButtonLink',
```

```

    'image': 'transformImage',
    'chips': 'transformChips',

    /* fallback logic in case VA API response format is
    mentioned in Dialogflow custom response payload */
    'servicenow': 'transformServiceNowResponse'
  };
},

```

In this example, `text`, `info`, `description`, and so forth are the control types that correspond to the secondary bot. The specified method (such as `transformText`) is called to do the transformation for the control type. For each secondary bot response, Virtual Agent uses the `getControlType` method to return the control type specified in the transformation map for the secondary bot message. The inbound transformer in Google Dialogflow provides a good example for how to use this.

If the transformation method called does not exist, Virtual Agent API logs it as an error.

Live agent connection

You can enable live agent connection to route a Virtual Agent interaction in the primary instance to a live agent on the secondary instance. The following are the possible connection scenarios.

- If there are no matching agents available in the primary instance to cater to the interaction, Bot Interconnect will evaluate the matching conditions configured in the live agent connection and route the interaction to the appropriate live agent in the secondary instance.
- If there is only one matching connection, the interaction is routed to that connection and agent availability is checked in the secondary instance.
- If there are multiple matching connections, the user is presented with options in the order defined and is connected to the selected connection.
- If there are no matching agents available in the secondary instance, the following message is displayed: "There are no agents available. Please try again later."
- If there are matching agents available in the secondary instance, the user is redirected to the available live agent who can cater to the interaction.

Autopilot mode is currently not supported in the secondary instance when the conversation is initiated on the primary instance. Live agent connection in the secondary instance works only when the secondary instance is in asynchronous mode.

Install Virtual Agent Bot Interconnect

You can install the Bot Interconnect application if you have the admin role. The application is available from the ServiceNow® Store.

Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#).
- Review the Bot Interconnect application listing in the ServiceNow Store for information on dependencies, licensing or subscription requirements, and release compatibility.

Role required: admin

Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.

2. Find the Bot Interconnect application (sn_va_bot_ic) using the filter criteria and search bar.

You can search for the application by its name or ID. If you cannot find the application, you might have to request it from the ServiceNow Store.

In the list next to the **Install** button, the versions that are available to you are displayed.

3. Select a version from the list and select **Install**.

In the Review Installation Details dialog box, any dependencies installed with your application are listed.

4. If you're prompted, follow the links to the ServiceNow Store to get any additional entitlements for dependencies.

5. Select **Install**.

Using Google Dialogflow as a secondary bot with Virtual Agent Bot Interconnect

With Bot Interconnect, you can use ServiceNow[®] Virtual Agent as the primary bot with a Google Dialogflow secondary bot. All of the skills and topics available to Google Dialogflow are made available to and executable from channels that are configured for ServiceNow[®] Virtual Agent.

Prerequisites

This bot configuration requires the following:

- A Brazil ServiceNow instance
- Virtual Agent Bot Interconnect Store application
- A Google Dialogflow account

Create a new agent in Google Dialogflow

To use Google Dialogflow with Virtual Agent Bot Interconnect, you must first create a new agent in Google Dialogflow.

Before you begin

Role required: admin

Procedure

1. Create a new agent in Google Dialogflow: <https://dialogflow.cloud.google.com/#/newAgent>

The screenshot shows the 'Create Agent' interface in Google Dialogflow. On the left is a sidebar with 'Dialogflow Essentials' and a 'Global' dropdown. Below it are links for 'Create Agent', 'Docs', 'Dialogflow CX', 'Support', 'Account', and 'Logout'. The main area has the agent name 'my_agent' and a 'CREATE' button. Below this are sections for 'DEFAULT LANGUAGE' (English - en), 'DEFAULT TIME ZONE' (GMT-8:00 America/Los_Angeles), 'GOOGLE PROJECT' (New GCP project will be automatically linked to the agent after saving), and 'AGENT TYPE' (Set as Mega Agent, which combines multiple Dialogflow agents into a single agent).

This also creates a new Google project.

2. Select the agent settings icon, and then find the project ID on the **General** tab.

The screenshot shows the 'my_agent' settings page in Google Dialogflow. The left sidebar now includes a gear icon for settings. The main area has tabs for 'General', 'Languages', 'ML Settings', 'Export and Import', 'Environments', 'Speech', and 'Share'. The 'General' tab is active, showing a description field, a default time zone dropdown (GMT-8:00 America/Los_Angeles), an 'AGENT AVATAR URI' field, and a 'GOOGLE PROJECT' section with a 'Project ID' field containing the value 'my-agent-ukpy'.

3. Select the Project ID.
The project dashboard opens.

Create a service account and private key for the Google Dialogflow project

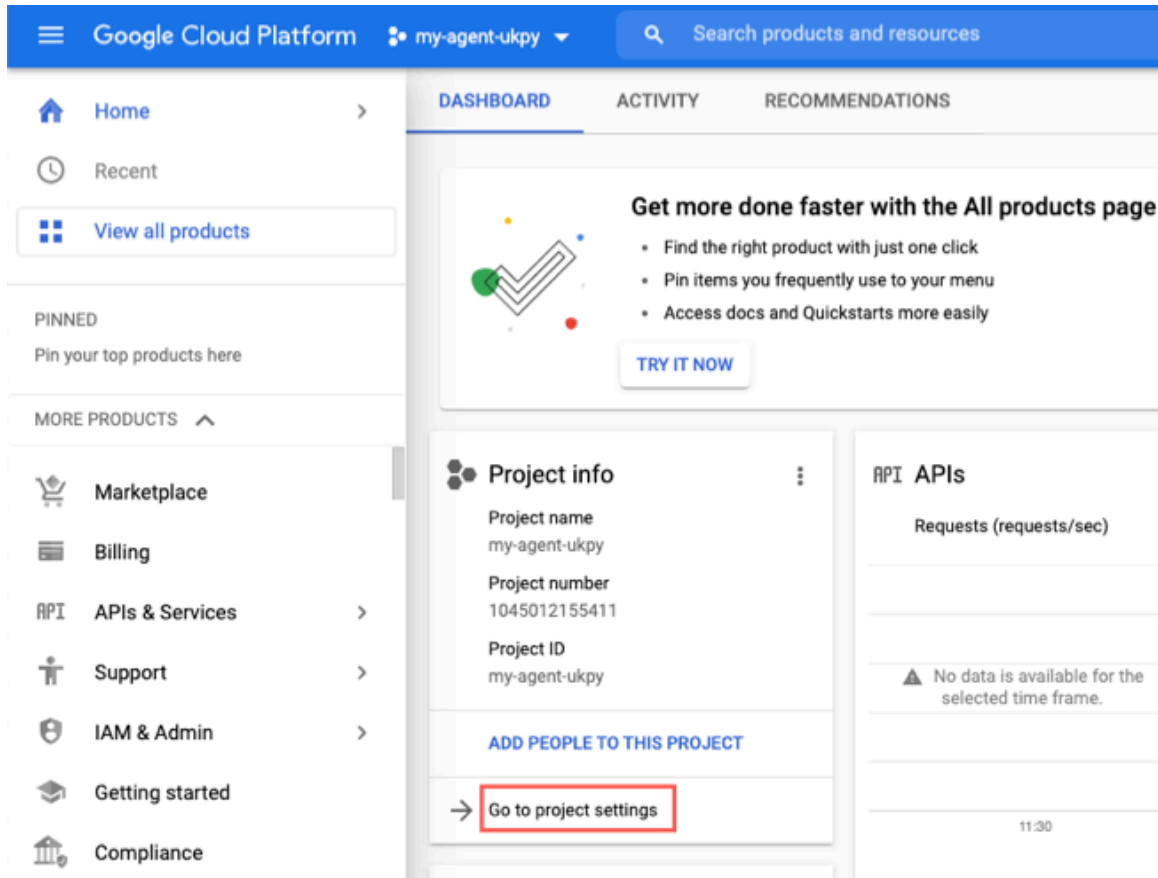
To use Google Dialogflow with Virtual Agent Bot Interconnect, the second step is to create a service account and private key for the new agent in Google Dialogflow.

Before you begin

Role required: admin

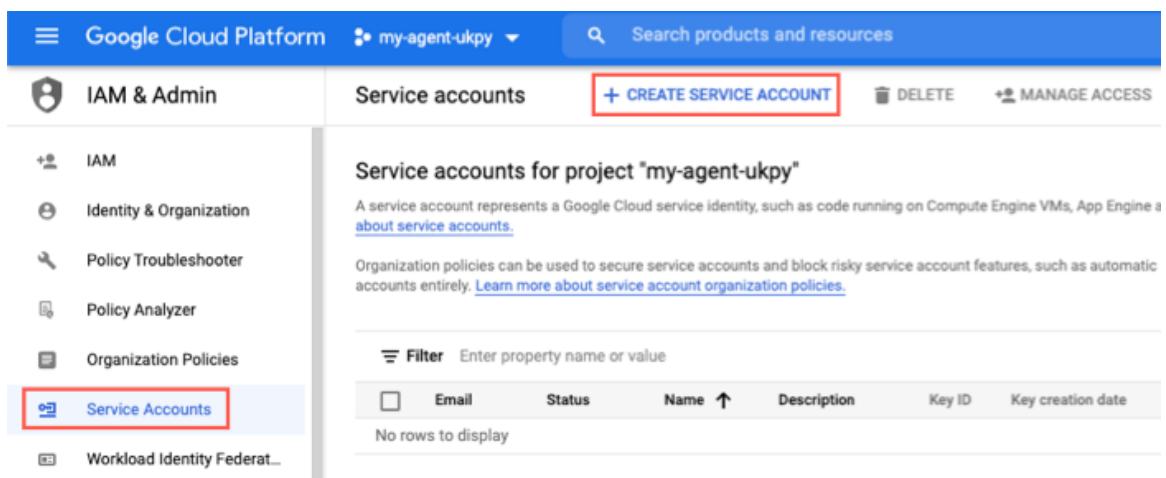
Procedure

1. On the project dashboard page, click **Go to project settings**.



2. On the IAM & Admin page, click **Service Accounts**.

3. Click **+ Create Service Account**.



4. Provide a name, and then click **Create and Continue**.
5. Under Select a role, select **Dialogflow > Dialogflow API Client**.
6. Click **Continue**.

Create service account

1 **Service account details**

2 **Grant this service account access to project (optional)**

Grant this service account access to my-agent-ukpy so that it has permission to complete specific actions on the resources in your project. [Learn more](#)

Role **Dialogflow API Client** Condition [Add condition](#)

Can call all methods on sessions and conversations resources as well as their descendants.

[+ ADD ANOTHER ROLE](#)

CONTINUE

7. Click **Done**.
8. Click the link for the record in the **Email** column.

Service accounts [+ CREATE SERVICE ACCOUNT](#) [DELETE](#) [+ MANAGE ACCESS](#)

Service accounts for project "my-agent-ukpy"

A service account represents a Google Cloud service identity, such as code running on Compute Engine VMs, App Engine apps, or systems running outside Google. [Learn more about service accounts.](#)

Organization policies can be used to secure service accounts and block risky service account features, such as automatic IAM Grants, key creation/upload, or the creation of service accounts entirely. [Learn more about service account organization policies.](#)

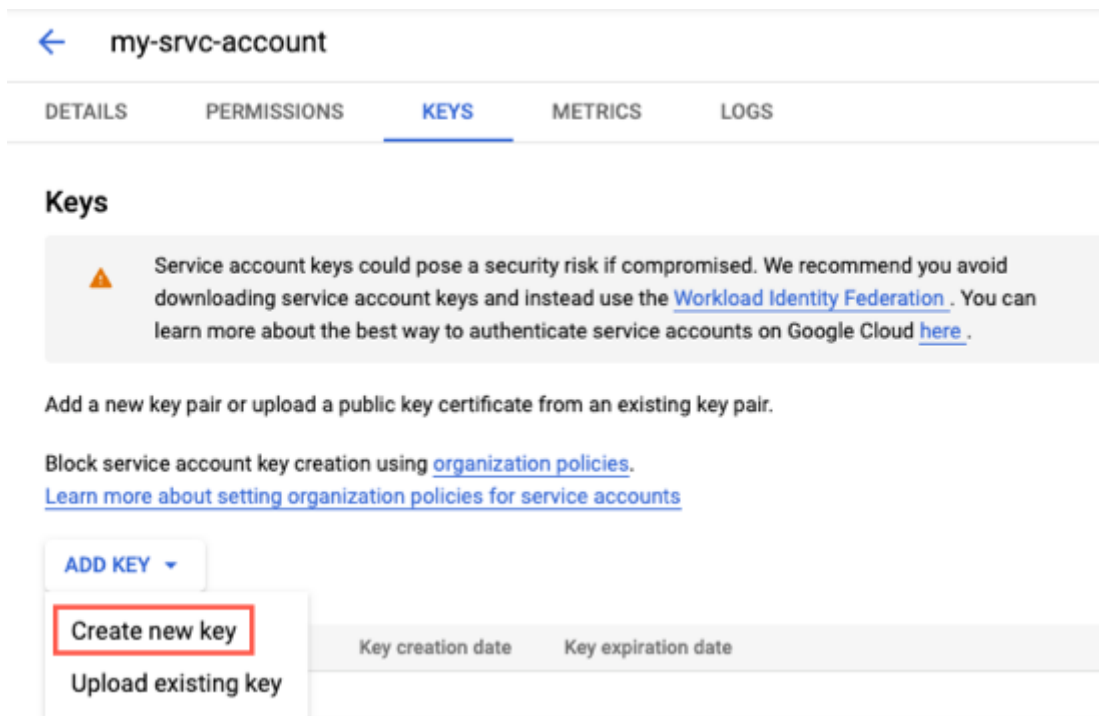
Filter

Enter property name or value

☐	Email	Status	Name ↑	Description	Key ID	Key creation date	OAuth 2 Client ID	Actions
☐	 my-srvc-account@my-agent-ukpy.iam.gserviceaccount.com		my-srvc-account		No keys		110222494929018	

The Service account details page opens.

9. Click the **Keys** tab.
10. Click **Add Key > Create new key**.



11. When prompted for the key type, select **JSON**, and then click **Create**.
The JSON file is downloaded to your computer.

Generate a Java Keystore file from the JSON private key file

To use Google Dialogflow with Virtual Agent Bot Interconnect, the third step is to generate a JKS file from the JSON private key you created in the previous step.

Before you begin

Role required: admin

Procedure

1. In a text editor, open the JSON private key file you downloaded in the previous procedure.
2. Copy the private key text, starting with the BEGIN PRIVATE KEY section and ending with the END PRIVATE KEY section.

```

1 {
2   "type": "service_account",
3   "project_id": "my-agent-ukpy",
4   "private_key_id": "8347eb542980d21e0c22a3bd6cc577ce0ac3a1a1",
5   "private_key": "-----BEGIN PRIVATE KEY-----
6     \nMIIEvglBADANBgkqhkiG9w0BAQEFAASCBAgEAAoIBAQCDuaahOdwI77EvnJ02K2hROliWX5UrZnRb
7     SPNQZ1O3elYiBKsXR9WZsK3fvGAbGyhjnZTDRA9DUCClp/nR+fv8GFRxJ6nDbvln+RE3nvAg2aCmmRg+R1Ri0Jf
8     ejF1saCHM9yvWJ9pqtfj5cKv0fBibZUuFO6Z5A0tikHKmzvVOyE2yaPzbd+HOQWfSFExDN1QmeiS4Mu8FTvGTQ
9     hfVnoufMGx6xpEuZfakWh3bacwc6wmEKQvh3DRlyD/Jm4E3Fzs/
10    WqRNx1xhSt+IZevo0vnlYxdyvvZ6yKmmcn5rZTCVd3jy2Fd+QnQ6rWiTs5BbCylMK+P+A/PJ4qN4W/
11    bnu/nG1JLAD7FagMBAECCggEABJN8xTGalwxDHMPjxvzcAzne9feugcBaFFwuHyadS+QE/nfb5Dal+eqwFYjwsV4y
12    6Orm0+XKu68b7F14U6usRuURWkUfFi9wyGNnI0c+Ozi84/nOQE2gkfsqrvUHANDENIOYo54YUgqxwiHmtcL13e9p
13    6eCmUJYixp4PmZlfrzplBQ/nWhQJUMb7DwR7bRgQVOnG2kQbI/
14    IPTQzmZGqz63EB9zsJyc0qBY0D+contmGnw6K7nHhzh7IG4/
15    S1oI7ZPUXDSrObHW3eiCi9zFxe4P91z033JvC1qxURzUSMj2ZVc7ug/nxdPDQbfiUrPiWFRpIkOj7XFAYE12VpKsd
16    JAE+TvXGQKBgQC5VLi2hR0hXT1UO8U/nBKhj5i6bCXA8je5+izav5BNQAQYKx2VKLyYp2bYLP861rle0QBZO5zU
17    PwndsfqnfngBPWihabXdl/pl4QHE5hcOHmPO9SaH6AvaYPoOpT8SVLpVidMa/
18    12snZ5yUirSWwvns17uoljql+Uga6jx0QJrxwpWQKBgQC19CT7RNINtr/
19    53t8cillQLp3FIB7bU5w/nGZB4izDQQRaXTkm14WPXW5cFcisJDuwY28Oxhnm5esHNpH5dVIRvXuT+7APvEfN
20    Dk+N8nTBnEMJ9LLInQyTbjJH+
21    +ByYM1XglZXDewLTQVXwKsBLfBwka2qUpkexSr/nlittAvgnTQKBgHQ3rgQ2EkezfNFIDE9oUFQ8/
22    xLYx1sdweX21Ldd9cJhUnql6V2oVnzWzHCoJpY+3IQ1VULukR0dNiJkiR8WLAwphhDAHZ4U9L+4ZsybYO/
23    InNmWHSByo/nQyVfyjTcUjLhMhGm+44IVVpL9MzpocOqCi9hFk6nD3Mj1ZzQPYmAZA0GBAKu7n46vFKP0Im6/
24    9K/APST0oGdaK4zmb0Yy8ID8yILb+d/
25    QXUR5cDQdj+YikWVQTYYO/nU6P+FJR4jXwhZWw9eglj7r7R2TsA1M3Lp8rWEfk1OFws83lbRk5yMAUBFrb5v
26    HnRGFDSMxf3ejN4/8tllMKMO3HsFur/
27    wGKzZ1dclhuBAoGBALJB5MTCrwsSKg1P1Syu/nPavQIK1CBNygCZDYTCZIUHWYosQNxuuQxZq2/
28    knRcZyzl2LsQN1J3jp5KnbZlgrncBxxhzU8Y9NQTVB3HJzyzywUcewGBbWbFthUnuSHnjX3J1/4CkMqrkhJOq8v8
29    pVnpMCiC/B3zxJ6BGTbN7MTVqfEvn-----END PRIVATE KEY-----\n",
30   "client_email": "my-srv-account@my-agent-ukpy.iam.gserviceaccount.com",

```

3. Remove the line return characters (\n) from the key:

- Paste the key text in a text editor, such as TextEdit or Notepad.
 - Click **Edit > Find > Find & Replace** or **Edit > Replace**.
 - In the **Find** field, type \n.
 - In the **Replace** field, press **Ctrl + Enter** or **Alt + Enter**.
 - Click **Replace All**.
- The key text will be formatted with line breaks.

4. Save the formatted private key text as a .pem file.

For example, `privatekey.pem`.

5. In a web browser, open the URL that is listed in the JSON file for the `client_x509_cert_url` parameter.

For example, <https://www.googleapis.com/robot/v1/metadata/x509/my-srv-account%40my-agent-ukpy.iam.gserviceaccount.com>. The certificates page opens.

6. Copy the certificate that has the same private key ID that appears in the JSON file.

7. Replace \n with line breaks in the certificate, as described in step 3.

8. Save the formatted certificate as a .pem file.

For example, `certificate.pem`.

9. Navigate to the folder that contains both the private key and certificate files.

10. Open a terminal window:

- In Mac OS, right-click or ctrl-click the folder and select **New terminal at folder**.
- In Windows, right-click the folder and select **Open in terminal**.

11. At the terminal's command prompt, create the JKS file as follows:

a. Enter the following command:

```
openssl pkcs12 -export -in [certificate file name] -inkey
[private key file name] -certfile [certificate file name] -out
testkeystore.p12
```

For example, if certificate.pem is the name of the certificate and privatekey.pem is the name of the private key:

```
openssl pkcs12 -export -in certificate.pem -inkey
privatekey.pem -certfile certificate.pem -out testkeystore.p12
```

b. When prompted for a password, enter the password of your choice using a minimum of six characters.

A PKCS 12 file is created with the name testkeystore.p12.

c. Enter the following command:

```
keytool -importkeystore -srckeystore testkeystore.p12
-srcstoretype pkcs12 -destkeystore dialogflow.jks
-deststoretype JKS
```

You will be prompted for a password multiple times. Use the same password you created in the previous step.

Result

A JKS file is created.

Configure connections to Google Dialogflow in your Virtual Agent Bot Interconnect instance

To use Google Dialogflow with Virtual Agent Bot Interconnect, the fourth step is to configure the connection in your ServiceNow® instance.

Before you begin

[Generate a Java Keystore file from the JSON private key file.](#)

Role required: admin

Procedure

1. Navigate to **All > Connections & Credentials > Connection & Credential Aliases**.
2. On the Connection & Credential Aliases page, click the **Bot Interconnect Dialogflow Integration** record.
3. Under Related Links, click **Create New Connection & Credential**.
4. Use the JSON file you downloaded in a [previous step](#) to fill in the form.

Connection & Credential Aliases New record form

Field	Description
Connection Name	A name for your credential. For example, Dialogflow Connection.

Field	Description
Project ID (project_id)	The value that corresponds with the <i>project_id</i> parameter in the JSON file. For example, <i>my-agent-ukpy</i> .
Service Account Email (client_email)	The value that corresponds with the <i>client_email</i> parameter in the JSON file. For example, <i>my-srv-account@my-agent-ukpy.iam.gserviceaccount.com</i> .
Private Key ID (private_key_id)	The value that corresponds with the <i>private_key_id</i> parameter in the JSON file. For example, <i>8347eb542980d21e0c22a3bd6cc577ce0ac3a1a1</i> .
Keystore Password	The password that you used when you created the Java Keystore (JKS) file in a previous step .
Keystore	Select the JKS file you created in a previous step.

5. Click **Create and Get OAuth Token**.

Create a Virtual Agent Bot Interconnect shell topic to call Google Dialogflow topics

To access topics in the Google Dialogflow secondary bot, you must create at least one Virtual Agent Bot Interconnect topic.

Before you begin

Create one or more intents in Google Dialogflow. For details, refer to the [Dialogflow documentation](#).

[Configure connections to Google Dialogflow in your Virtual Agent Bot Interconnect instance.](#)

Role required: virtual_agent_admin or admin

About this task

There are two ways to integrate Google Dialogflow intents with Bot Interconnect

- Create one Virtual Agent Bot Interconnect topic per Dialogflow intent.

In case of NLU topics, each Virtual Agent topic has the same name as a single Dialogflow intent. For example, if you have two Dialogflow intents named **order a drink** and **book a ticket**, then you would create two Virtual Agent topics also named **order a drink** and **book a ticket**.

In case of LLM topics, each Bot Interconnect topic has the same name and description as the corresponding Google Dialogflow topic.

- Map multiple Dialogflow intents to a single Virtual Agent Bot Interconnect topic. This scenario is applicable only for NLU topics.

Create a Virtual Agent topic for your Dialogflow intents and name it accordingly. For example, **DG ordering issues**. In this scenario, the Dialogflow intents are mapped to the topic as either keywords or utterances, depending on your method of topic discovery. So if you have two Dialogflow intents named **order a drink** and **book a ticket**, you would add both phrases to the topic as keywords or you would add them as utterances to the topic's corresponding intent.

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.

3. Create a topic for your Dialogflow intents.

In case of NLU topics, include the Dialogflow intent names as either keywords or utterances in the corresponding ServiceNow Virtual Agent intent. In case of LLM topics, the topic name and description of the Bot Interconnect topic should match the topic name and description of the Google Dialogflow topic.

4. On the **Flow** tab, drag a Topic Block utility node onto the canvas.

5. Select the node, and then fill in the form as follows:

Topic Block Properties form

Property	Description
Topic Block	Select Bot Interconnect topic block for NLU topics and Bot Interconnect - LLM topic block for LLM topics.
Action Name	Enter: <code>sn_va_bot_ic.dialogflow_bot_interconnect_integration</code>
Action Type	Enter subflow.

6. Click **Save**.

7. Click **Publish**.

What to do next

Test your configuration. You can execute the topics that are available in the secondary bot from channels where Bot Interconnect is deployed.

Using Microsoft Power Virtual Agents as a secondary bot with Virtual Agent Bot Interconnect

With Bot Interconnect, you can use ServiceNow[®] Virtual Agent as the primary bot with a Microsoft Power Virtual Agents secondary bot. All of the skills and topics available to Power Virtual Agents are made available to and executable from channels that are configured for ServiceNow[®] Bot Interconnect.

Prerequisites

This bot configuration requires the following:

- A Brazil ServiceNow instance
- Virtual Agent Bot Interconnect Store application
- A Microsoft Power Virtual Agents account for testing

Create a JavaScript function in Microsoft Azure using Visual Studio Code

To use Power Virtual Agents with Virtual Agent Bot Interconnect, you must create a JavaScript function in Microsoft Azure using the sample code files in Bot Interconnect.

Before you begin

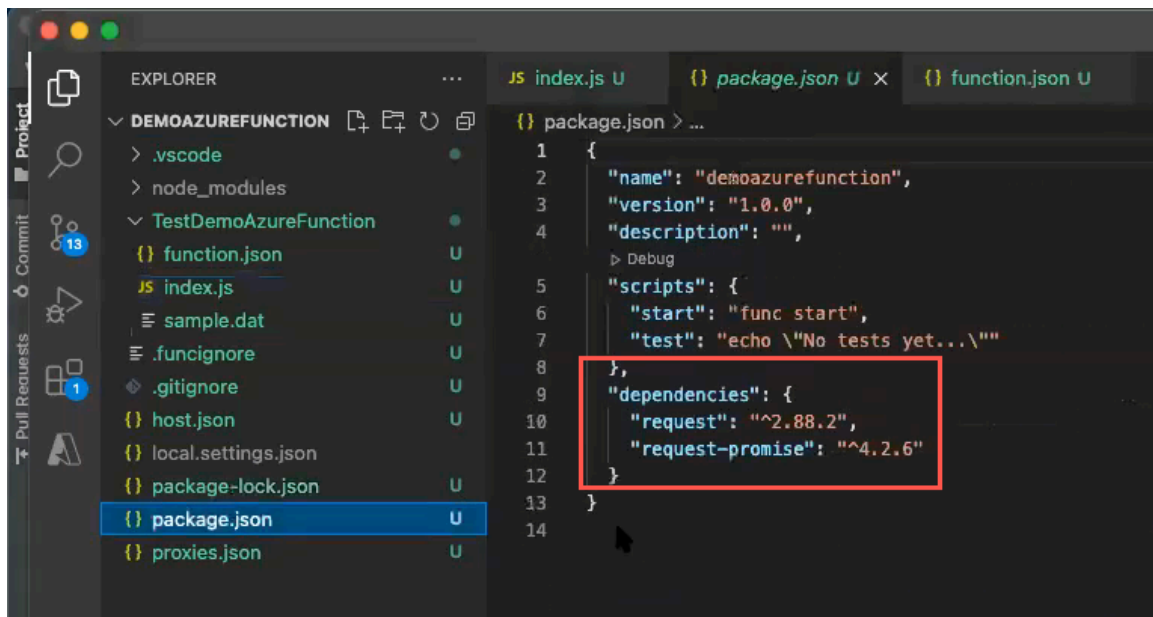
You will need a Microsoft Azure account.

Role required: admin

Procedure

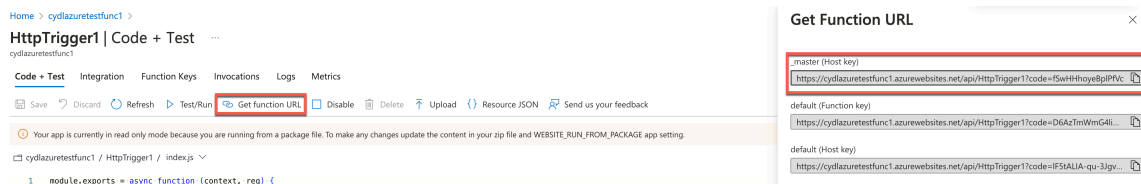
1. Sign into Microsoft Azure and create a JavaScript function.
This involves configuring your environment and creating a local project. Refer to the [Microsoft documentation](#)  for details.
2. Go to [Create an Azure Function for Microsoft Power Virtual Agents as Secondary bot with ServiceNow Bot Interconnect setup \(KB1112368\)](#) , and then do the following:
 - a. Copy the code in the attached `index.txt` file into the `index.js` file in your Azure project.
 - b. Copy the code in the attached `function.txt` file into the `function.json` file in your Azure project.
 - c. Save both files.
3. Install the *request-promise* libraries.
 - a. In a command line window, change directories to the folder where you created the Azure project.
For example, enter `cd DemoAzureFunction`.
 - b. At the prompt, enter: `npm install --save request`
 - c. At the prompt, enter: `npm install --save request-promise`

The dependencies are added to the `package.json` file in your project.



4. Deploy the project to Azure as described in the [Microsoft documentation](#) .
5. From the Azure portal, navigate to **All Resources**.
6. Select the name of the function app that you've created.
7. On the Overview page, select the function you've created in the Functions tab, and copy the function URL from the Get function URL option.

The Azure function URL will be used as the secondary bot endpoint in your ServiceNow instance.



Locate and copy the Direct Line secret key in Microsoft Power Virtual Agents

To use Power Virtual Agents with Virtual Agent Bot Interconnect, you must locate and copy the Direct Line security key in your Power Virtual Agents account.

Before you begin

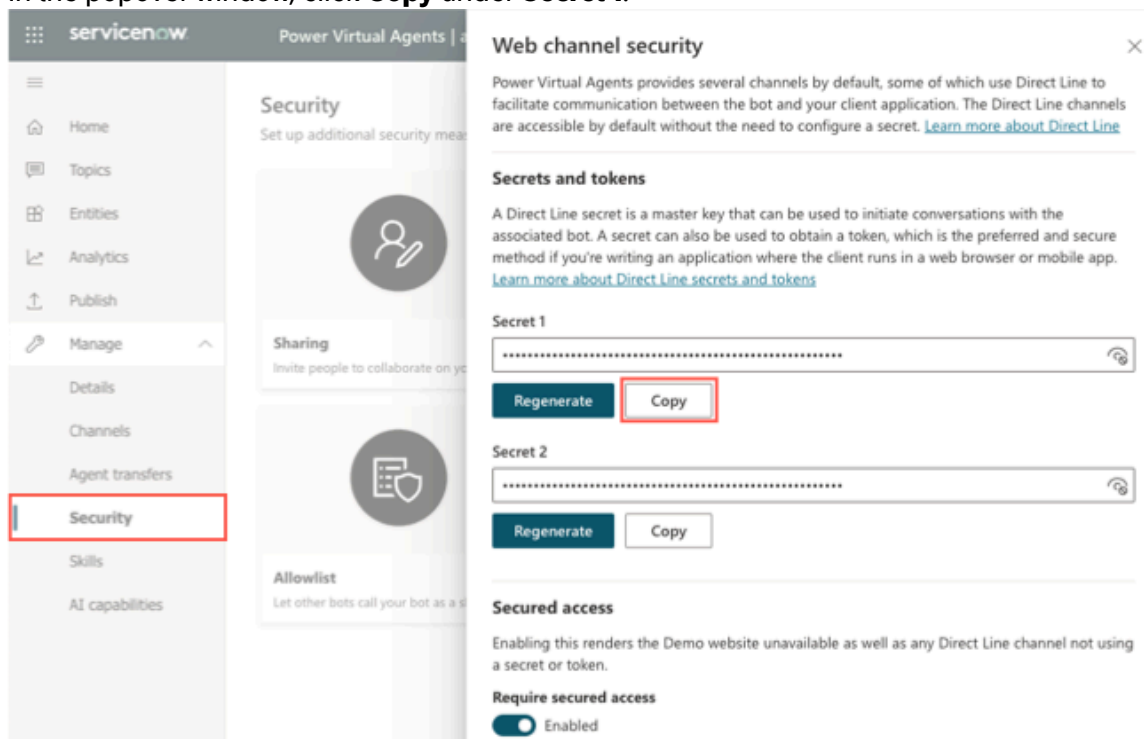
You must have a Microsoft Power Virtual Agents account with at least one bot.

Create a JavaScript function in Microsoft Azure using Visual Studio Code.

Role required: admin

Procedure

1. Log into your Microsoft Power Virtual Agents account.
2. Navigate to **Manage > Security**.
3. Click the **Web channel security** tile.
4. In the popover window, click **Copy** under **Secret 1**.



Add the Direct Line secret key to your Virtual Agent Bot Interconnect instance

To use Power Virtual Agents with Virtual Agent Bot Interconnect, you must add the Direct Line security key as a credential in your Bot Interconnect instance.

Before you begin

Locate and copy the Direct Line secret key in Microsoft Power Virtual Agents.

Role required: admin

Procedure

1. Navigate to **All > Connections & Credentials > Connection & Credential Aliases**.
2. Click the **Bot Interconnect DirectLine Credentials** record to open it.
3. On the Credentials related list, click **New**.
4. When prompted for the type of credential to create, click **Bot Interconnect Static Token Credential**.
5. On the form, fill in the fields as follows:

Field	Description
Name	Any unique name for the credential, such as Power VA Direct Line key.
Header	Leave as Authorization .
Static Token	Enter Bearer , with a white space, followed by the Direct Line secret key from Power Virtual Agents. For example, enter: <pre>Bearer 4km3D8s_6lY.rDVmxVm3k123nWibx3ciJeed2AKled9_ADuwsaN5 uCA</pre>

6. Click **Submit**.
7. Return to **All > Connections & Credentials > Connection & Credential Aliases**.
8. Click the **Bot Interconnect DirectLine Fetch Msgs** record to open it.
9. Under Related Links, click **Create New Connection & Credential**.
10. In the dialog box, fill in the form.

Field	Description
Secondary Bot Name	Any unique name that refers to the Power Virtual Agents bot.
Secondary Bot Endpoint	The Azure function URL that you copied in a previous step. For example, enter <code>https://demoazurefunctionreceivemsgapp.azurewebsites.net</code>.
Header	Enter: <code>dlsecret</code>
Static Token	The Direct Line key that you copied from Power Virtual Agents in the previous step.

11. Click **Create**.

Create a Virtual Agent Bot Interconnect shell topic to call Microsoft Power Virtual Agents topics

To access topics in the Power Virtual Agents secondary bot, you must create at least one Virtual Agent Bot Interconnect topic.

Before you begin

Create one or more topics in Microsoft Power Virtual Agents.

Add the [Direct Line secret key](#) to your Virtual Agent Bot Interconnect instance.

Role required: virtual_agent_admin or admin

About this task

There are two ways to integrate Microsoft Power Virtual Agents topics with Bot Interconnect:

- Create one Virtual Agent Bot Interconnect topic per Power Virtual Agents topic.

In case of NLU topics, each Virtual Agent topic has the same name as a single Power Virtual Agents topic. For example, if you have two Power Virtual Agents topics named **order a drink** and **book a ticket**, then you would create two Virtual Agent topics also named **order a drink** and **book a ticket**.

In case of LLM topics, each Bot Interconnect topic has the same name and description as the corresponding Power Virtual Agents topic.

- Map multiple Power Virtual Agents topics to a single Virtual Agent Bot Interconnect topic. This scenario is applicable only for NLU topics.

Create one Virtual Agent topic for your Power Virtual Agents topics and name it accordingly. For example, **PVA ordering issues**. In this scenario, the Power Virtual Agents topics are mapped to the topic as either keywords or utterances, depending on your method of topic discovery. So if you have two Power Virtual Agents topics named **order a drink** and **book a ticket**, you would add both phrases to the topic as keywords or you would add them as utterances to the topic's corresponding intent.

Procedure

1. Navigate to **All > Conversational Interfaces > Assistat Designer**.
2. Select the **Asset library** tab.
3. In the Asset library, [Create a topic](#) for your Power Virtual Agents topics.
In case of NLU topics, include the Power Virtual Agents topic names as either keywords or utterances in the corresponding ServiceNow Virtual Agent intent. In case of LLM topics, the topic name and description of the Bot Interconnect topic should match the topic name and description of the Power Virtual Agents topic.
4. On the **Flow** tab, drag a Topic Block utility node onto the canvas.
5. Select the node, and then fill in the form as follows:

Topic Block Properties form

Property	Description
Topic Block	Select Bot Interconnect topic block for NLU topics and Bot Interconnect - LLM topic block for LLM topics.
Action Name	Enter: <code>sn_va_bot_ic.direct_line_bot_interconnect_integration_handler</code>

Property	Description
Action Type	Enter subflow.
Additional Params (String)	Follow these steps: - Select the script icon . - In the Additional Params (String) window, add this code: <pre>(function execute() { return JSON.stringify({'quick': false}); })();</pre> - Select Save.

6. Select **Save**.

7. Select **Publish**.

What to do next

Test your configuration. You can execute the topics that are available in the secondary bot from channels where Bot Interconnect is deployed.

Note: Conversations always remain open in Power Virtual Agents.

Using ServiceNow Virtual Agent as a secondary bot with Virtual Agent Bot Interconnect

Virtual Agent Bot Interconnect enables you to use ServiceNow® Virtual Agent as the primary bot with a ServiceNow Virtual Agent secondary bot.

Prerequisites

In order to configure ServiceNow Virtual Agent as a secondary bot with Virtual Agent Bot Interconnect, you require the following setup:

- Two Brazil ServiceNow instances.
- On the primary instance: Virtual Agent Bot Interconnect Store application
- On the secondary instance:
 - Virtual Agent API v3.8.x or later
 - Virtual Agent API on the secondary instance must be in synchronous mode or asynchronous mode.

Use ServiceNow Virtual Agent as a secondary bot in synchronous or asynchronous mode

Use ServiceNow Virtual Agent as a secondary bot in synchronous or asynchronous mode with Bot Interconnect.

You can use ServiceNow Virtual Agent as a secondary bot in synchronous or asynchronous mode. See [Enable synchronous mode on the secondary ServiceNow Virtual Agent instance](#) or [Enable asynchronous mode on the secondary ServiceNow Virtual Agent instance](#).

Enable synchronous mode on the secondary ServiceNow Virtual Agent instance

Enable synchronous mode on the secondary ServiceNow Virtual Agent instance to use ServiceNow® Virtual Agent as a secondary bot with Virtual Agent Bot Interconnect.

Before you begin

Role required: admin

Procedure

1. On the secondary instance, navigate to **All**, and then enter `sys_cs_channel.list` in the navigation filter.
2. Select the Bot to Bot record.
3. Select the **Synchronous** check box.
4. Click **Update**.

Enable asynchronous mode on the secondary ServiceNow Virtual Agent instance

Enable asynchronous mode on the secondary ServiceNow Virtual Agent instance to use ServiceNow® Virtual Agent as a secondary bot with Virtual Agent Bot Interconnect.

Before you begin

Role required: admin

Procedure

1. On the secondary bot instance, navigate to **All > System Web Services > Outbound > REST Message**.
2. Select the VA Bot to Bot record.
3. In the Endpoint field, specify the outbound endpoint URL of the primary ServiceNow® instance to which the Virtual Agent responses are posted. `http://<primary instance>/api/sn_va_bot_ic/bot_interconnect/va_api_response`
4. In the Authentication tab, set the Authentication type field to either Basic or OAuth 2.0. For more information on configuring a basic authentication profile and OAuth 2.0 profile, see [Configure a REST message with basic auth](#) and [Configure a REST message with OAuth](#) respectively.
5. Click **Update**.
6. In the HTTP Methods section, select the `postMessage` method and specify the endpoint URL. `http://<primary instance>/api/sn_va_bot_ic/bot_interconnect/va_api_response`
7. Click **Update**.

Create a connection and credential in Virtual Agent Bot Interconnect

To use ServiceNow® Virtual Agent as a secondary bot with Virtual Agent Bot Interconnect, configure the connection and credential records in the Bot Interconnect (primary) instance.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Connections & Credentials > Connection & Credential Aliases**.
2. Click the **Bot Interconnect VA API Integration** record to open it.

3. In the Connections related list, click **New**.

4. On the form, fill in the fields.

Field	Description
Name	Enter a unique name, such as SNow Secondary Bot.
Credential	Leave this blank for now.
Connection alias	Use the default value.
Connection URL	Enter the URL for Virtual Agent API on your secondary instance. For example, enter <code>https://secondary-instance-name.service-now.com/api/sn_va_as_service/bot/integration</code> .

5. Click **Submit**.

6. Navigate to **All > Connections & Credentials > Credentials**.

7. On the Credentials page, click **New**.

8. Click either **Bot Interconnect Hash Token Credential** or **Bot Interconnect Static Token Credential** as the type.

9. On the form, fill in the fields.

Field	Description
Name	Enter a unique name for the credential. For example, SNowSecondaryBotToken.
Static token	
Header	Enter Token.
Static Token	Enter a password.
Hash token	
Header	Enter x - b2b - signature.
Algorithm	Select HmacSHA1 .
Hash Secret	Enter the hash secret.
Authorization Algorithm	Select the algorithm to use. For example, Secondary Bot Hash Token Auth .

10. Click **Submit**.

11. Navigate to **All > Connections & Credentials > Connection & Credential Aliases**.

12. Click the **Bot Interconnect VA API Integration** record to open it.

13. In the Connections related list, open the new connection record you created in an earlier step.

14. In the **Credential** field, enter the name of the record that contains the static token or hash token.
For example, SNowSecondaryBotToken.

Connection and credential record in the ServiceNow Bot Interconnect instance

< HTTP(s) Connection SNowSecondarybot

* Name SNowSecondarybot

Credential SNowSecondaryBotToken Newly created credential record

A connection alias resolves your connection and credential at runtime. Only one Connection is active per Connection Alias at a time. [More Info](#)

* Connection alias sn_va_bot_ic.VA_API_SecondaryBot

Manually enter your connection URL or use the URL builder to build the connection string. [More Info](#)

URL builder ☐

* Connection URL https://[redacted].service-now.com/api/sn_va_as_service/bot/integration VA API installation on the secondary bot instance

Use MID server ☐

Connection timeout

15. Click **Update**.

Create a connection and credential in Virtual Agent Bot Interconnect

Create a connection and credential in Virtual Agent Bot Interconnect (primary instance) to enable uploading of attachments in the secondary bot.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Connections & Credentials > Connection & Credential Aliases**.
2. Click the **Bot Interconnect VA API Attachment** record to open it.
3. In the Connections related list, click **New**.
4. On the form, fill in the fields.

Field	Description
Name	Enter a unique name, such as SNowSecondaryBotAttachment.
Credential	Leave this blank for now.
Connection alias	Use the default value.
Connection URL	Enter the URL of your secondary instance. For example, enter <code>https://secondary-instance-name.service-now.com/</code> .

5. Click **Submit**.
6. Navigate to **All > Connections & Credentials > Credentials**.
7. On the Credentials page, click **New**.
8. Click either **Basic Auth Credentials** or **OAuth 2.0 Credentials** as the type.
9. On the form, fill in the fields.

Field	Description
Name	Enter a unique name for the credential. For example, SNowSecondaryBotAttachmentToken.
Basic Auth Credentials	
Username	Enter the username you want to send as basic authentication credential..
Password	Enter the password you want to send as basic authentication credential.
OAuth 2.0 Credentials	
OAuth Entity Profile	In the OAuth profile field, select the OAuth 2.0 profile that specifies the credentials you want to send.

10. Click **Submit**.
11. Navigate to **All > Connections & Credentials > Connection & Credential Aliases**.
12. Click the **Bot Interconnect VA API Attachment** record to open it.
13. In the Connections related list, open the new connection record you created in an earlier step.
14. In the **Credential** field, enter the name of the record that contains the static token or hash token.
For example, SNowSecondaryBotAttachmentToken.

Connection and credential record in the ServiceNow Bot Interconnect instance

<

≡

HTTP(s) Connection
 SNowSecondaryBotAttachment

* Name

SNowSecondaryBotAttachment

Credential

SNowSecondaryBotAttachmentToken

Q

A connection alias resolves your connection and credential at runtime. Only one Connection is active per Connection Alias at a time. [More Info](#)

* Connection alias

sn_va_bot_ic.Bot_Interconnect_VA_API_Att

Q

ⓘ

Manually enter your connection URL or use the URL builder to build the connection string. [More Info](#)

URL builder

☐

* Connection URL

https://.service-now.com

Use MID server

☐

Connection timeout

15. Click **Update**.

Create an auth token in the ServiceNow secondary instance

To use ServiceNow® Virtual Agent as a secondary bot with Virtual Agent Bot Interconnect, create an authentication token in the secondary instance.

Before you begin

Create a connection and credential in Virtual Agent Bot Interconnect.

Role required: admin

About this task

Ensure that the type of authentication (Static or Hash) and token or hash secret in the secondary instance is the same as the type and token or hash secret in the Bot Interconnect instance.

Procedure

1. Navigate to **All**, and then enter `token_verification.list` in the filter.
2. On the Token Verifications page, click **New**.
3. On the form, fill in the fields.

Token Verification form

Field	Description
Name	A unique name for the authentication token, such as <code>SNSecondaryBotToken</code> .
Token	The static token or hash secret you provided in the Bot Interconnect (primary) instance.

4. Click **Submit**.
5. Navigate to **All**, and then enter `message_auth.list` in the filter.
6. On the Message Auth page, click **New**.
7. On the form, fill in the fields.

Message Auth form

Field	Description
Name	Name of the message authentication, such as <code>SNtoSNAuthToken</code> .
Provider	Name of the provider, such as <code>ServiceNowProvider</code> .
Group name	Name used to classify the provider.
Service Portal	Set this field to link users on Virtual Agent integrations such as Slack and Microsoft Teams to a service portal login page. If the field is empty, Virtual Agent redirects the users to the instance login page.
Inbound message verification	The name of the authentication token you created in the secondary instance. For example, <code>SNSecondaryBotToken</code> .
Outbound message creation	The name of the authentication token you created in the secondary instance. For example, <code>SNSecondaryBotToken</code> .

Field	Description
Outbound service token	The name of the authentication token you created in the secondary instance. For example, SNSecondaryBotToken.

8. Click **Submit**.
9. Navigate to **All**, and then enter `sys_cs_provider_application.list` in the filter.
10. Open the VA Bot to Bot Provider Application record.
11. In the **Message auth** field, select the name of the message authentication record you created. For example, select **SNtoSNAuthToken**.
12. Click **Update**.

Create a Virtual Agent Bot Interconnect shell topic to call Virtual Agent secondary topics

To use ServiceNow® Virtual Agent as a secondary bot with Virtual Agent Bot Interconnect, you must create at least one shell topic in Bot Interconnect.

Before you begin

Create and publish topics in the secondary instance of ServiceNow Virtual Agent.

Enable synchronous or asynchronous mode on the secondary ServiceNow Virtual Agent instance.

Role required: virtual_agent_admin or admin

About this task

There are two ways to integrate secondary Virtual Agent topics with Bot Interconnect:

- Create one Virtual Agent Bot Interconnect topic per secondary Virtual Agent topic.

In case of NLU topics, each Bot Interconnect topic has the same name as the corresponding secondary Virtual Agent topic. For example, if you have two secondary Virtual Agent topics named **order a drink** and **book a ticket**, then you would create two Virtual Agent Bot Interconnect topics also named **order a drink** and **book a ticket**.

In case of LLM topics, each Bot Interconnect topic has the same name and description as the corresponding secondary Virtual Agent topic.

- Map multiple secondary Virtual Agent topics to a single Virtual Agent Bot Interconnect topic. This scenario is applicable only for NLU topics.

Create one Virtual Agent Bot Interconnect topic and name it accordingly. For example, **SVA ordering issues**. In this scenario, the secondary Virtual Agent topics are mapped to the Bot Interconnect shell topic as either keywords or utterances, depending on your method of topic discovery. So if you have two secondary Virtual Agent topics named **order a drink** and **book a ticket**, you would add both phrases to the Bot Interconnect topic as keywords or you would add them as utterances to the Bot Interconnect topic's corresponding intent.

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. In the Asset library, [Create a topic](#) in your primary instance of Virtual Agent.

In case of NLU topics, include the secondary Virtual Agent topic names as either keywords or utterances in the corresponding Bot Interconnect intent. In case of LLM topics, the topic name and description of the Bot Interconnect topic should match the topic name and description of the secondary Virtual Agent topic.

4. On the **Flow** tab, drag a Topic Block utility node onto the canvas.
5. Select the node, and then fill in the form as follows:

Topic Block Properties form

Property	Description
Topic Block	Select Bot Interconnect topic block for NLU topics and Bot Interconnect - LLM topic block for LLM topics.
Action Name	○ If the secondary bot is configured in synchronous mode, enter <code>sn_va_bot_ic.va_api_bot_interconnect_integration_handler</code> ○ If the secondary bot is configured in asynchronous mode, enter <code>sn_va_bot_ic.va_api_bot_interconnect_async_integration_handler</code>
Action Type	Enter subflow.
Async Response Transformer	If the secondary bot is configured in asynchronous mode, enter <code>sn_va_bot_ic.va_api_bot_interconnect_async_response_handler</code>

6. Select **Save**.
7. Select **Publish**.

Enable live agent connection on the primary instance

Enable live agent connection on the primary instance to route an interaction to a live agent on the secondary instance.

Before you begin

Be sure to enable `com.glide.cs.external.agent.chat.enabled` system property. It's not enabled by default.

Role required: admin or virtual_agent_admin

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Live Agent Connections**.
2. Select **New** to create a connection.
3. On the form, fill in the fields.

Live Agent Connection form fields

Field	Description
Name	Name of the connection
Active	Check box to enable the connection
Order	If there are multiple matching live agent connections, the value entered in this field

Field	Description
	determines the order in which the matching connections are displayed to the user.
Advanced	Selecting this check box opens the Script field. You can specify conditions using JavaScript in the script editor.
Condition Table	Table used for selecting the matching condition. Interaction table is selected by default.
Matching Condition	Conditions to route the interaction to this live agent connection. Use the condition builder to add conditions. The fields used in the condition are from the Interaction table.
Script	JavaScript script that specifies the conditions for the interaction to be routed to this live agent connection. The condition in the script editor must evaluate to true. This field is enabled only when you select the Advanced check box.
Subflow	Subflow transforms the request into the secondary instance request format and routes the request to the secondary instance. Select VA API Bot Interconnect Integration Handler .

The screenshot shows the configuration page for a Live Agent Connection. The fields are as follows:

- Name:** VASecondary Bot Live Agent
- Application:** Global
- Active:** ☒
- Advanced:** ☐
- Condition Table:** Interaction [Interaction]
- Matching Condition:**
 - Context.devicetype starts with mweb
 - AND
 - Context.devicetype starts with Teams
- Subflow:** VA API Bot Interconnect Integration Handler

4. Click **Submit**.

Debug Virtual Agent Bot Interconnect with a ServiceNow Virtual Agent secondary bot

Debug Workflow Studio executions of your Virtual Agent Bot Interconnect and Virtual Agent secondary bot integration.

Before you begin

Enable the following system properties:

- `sn_va_bot_ic.bot_interconnect.enable.logging=true`
- `glide.outbound_http_log.override=true`
- `glide.outbound_http_log.override.level=all`

For more information, see [Add a system property](#).

Role required: admin

Procedure

1. In the Bot Interconnect instance, modify the shell topic you created in Virtual Agent:

- a. Navigate to **All > Conversational Interfaces > Assistant Designer**.
- b. Select the **Asset library** tab.
- c. In the Asset library, open the shell topic you created in a previous step.
- d. On the **Flow** tab, select the Bot Interconnect Topic Block.
- e. In the **Additional Params (String)** field, select the Script icon , and then add the following code:

```
(function execute() {
  return JSON.stringify({quick: false});
})();
```

- f. Select Save.
 - g. Save the topic.
2. Enable execution context debugging in Workflow Studio.

- a. Navigate to **All > Process Automation > Process Automation Designer > Flow Administration > Settings**.
- b. On the Settings page, select **New**.
- c. In the **Flow/Subflow/Action** field, select the Search icon .
- d. On the Select the document form, fill in the fields.
Add the following Flow Designer document settings if your secondary bot is in synchronous mode.



Select the document

Table name:
Flow

Document:
VA API Bot Interconnect Integration Handler

Cancel OK

Add the following Flow Designer document settings if your secondary bot is in asynchronous mode.

Select the document

× Select the

Table name:

Flow

Document:

VA API Bot Interconnect Async Integration Handler

Cancel

OK

e. Select Ok.**f. In the Reporting field, select Developer Trace.****g. Select Submit.****Result**

You can view additional logs and Workflow Studio executions for debugging purposes.

(Legacy) Virtual Agent for NLU

Use ServiceNow® Virtual Agent with Natural Language Understanding (NLU) topic discovery.

Starting with the Brazil release, Virtual Agent for NLU and Virtual Agent Lite are being prepared for future deprecation. It will be hidden and no longer activated on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support Knowledge Base.

Get started with Virtual Agent for NLU

Select a tile to get started.

Explore



Learn how employees, customers, and agents use Virtual Agent.

Activate

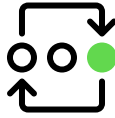
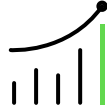


Activate Virtual Agent.

Plan and configure



Plan and configure your Virtual Agent implementation.

Build and deploy  Design and build automated conversations and reusable topic components.	Integrate and maintain  Extend Virtual Agent capabilities by integrating with other applications.	Analyzing Virtual Agent performance  Analyze and improve Virtual Agent interactions using insights into conversational data.
	Reference  Get Virtual Agent Designer interface descriptions and Virtual Agent technical details.	

Additional resources

- [Virtual Agent and Natural Language Understanding \(NLU\) community forum](#) 
- [Conversational Interfaces Academy](#) 

Note: We improve performance and the user experience by tracking aggregate in-app activity, including interaction with our app. This tracking is focused on aggregated technical information rather than personal information.

(Legacy) Exploring Virtual Agent for NLU

The ServiceNow Virtual Agent platform provides user assistance through conversations within an intelligent messaging interface. Design and build automated conversations with an out-of-the-box system that help your users quickly obtain information, make decisions, and perform common work tasks with Virtual Agent.

Starting with the Brazil release, Virtual Agent for NLU and Virtual Agent Lite are being prepared for future deprecation. It will be hidden and no longer activated on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#)  article in the Now Support Knowledge Base.

Virtual Agent and Virtual Agent Lite

The Virtual Agent platform is available as a professional subscription or in a limited version (Virtual Agent Lite).

Virtual Agent Professional provides all the core functionality for creating and deploying NLU Virtual Agent conversations. Virtual Agent includes the following features, which are automatically installed with the Glide Virtual Agent plugin (com.glide.cs.chatbot):

- Virtual Agent Designer (supports Natural Language Understanding (NLU) in Virtual Agent conversations)
- Virtual Agent chat widget
- Virtual Agent notifications
- Conversational custom chat integration framework
- Conversational Interfaces console for admin configuration
- Topic Recommendations
- Conversational Analytics

Related topics

[\(Legacy\) Virtual Agent Lite](#)

(Legacy) Monitoring and managing Conversational Interfaces applications

Use the Conversational Interfaces Home page to monitor the performance of recent Virtual Agent conversations or test your bot. Plugin update notices will alert you when a feature update is ready.

Monitor your Virtual Agent performance

Review the performance of recent Virtual Agent conversations from the Conversational Interfaces console. For more details, select **See details in Conversational Analytics** to open the [Conversational Analytics dashboard](#).

Monitor your NLU Virtual Agent

Last 7 days ▼

Active VA users

6

Conversations

16

Issues deflected

5

↑ 5 since July 1

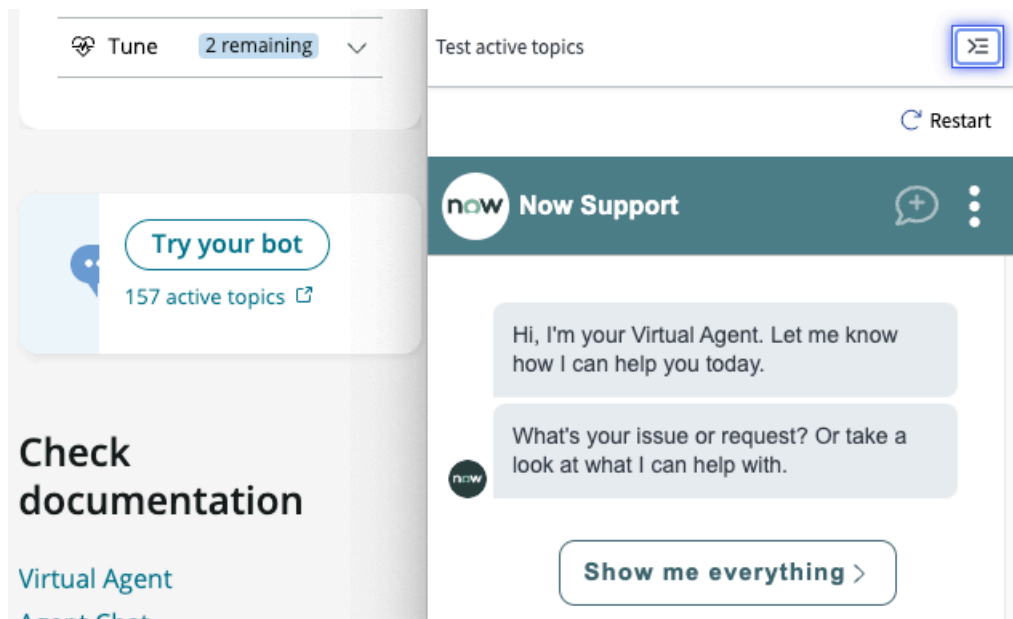
Virtual Agent success

100.00%

[See details in Conversational Analytics](#)

Test your bot

Select **Try your bot** to open a conversation in a new window and test the active topics. Enter a request and send it to start a conversation with the bot. The number of active topics is indicated for your information.



Update plugins

Notifications on the Conversational Interfaces console let you know when to update an installed plugin. Select **Update plugin** to update it from the ServiceNow Store.



(Legacy) Natural Language Understanding (NLU) topic discovery in Virtual Agent

Apply Natural Language Understanding (NLU) models that enable Virtual Agent to process user statements in automated conversations. An NLU model provides information that your virtual agent uses to determine what users want to do and to extract relevant values from their input. With NLU, Virtual Agent can offer a more natural and engaging conversational experience.

NLU components

ServiceNow NLU can learn the syntax, semantics, and vocabulary of your company using the data in your ServiceNow instance. Use NLU Workbench, the NLU model builder, and the NLU inference service to enable the system to learn and respond to user intent.

The following elements work together to identify what the user wants to do so that a solution can be found:

• Model groups

A model group supports a given application, user roles, and languages. For example, you may have a model that supports the Search feature and another model that supports . Typically, a model group contains multiple intents. For more information, see [Model management](#) .

• Intents

Intents represent actions. They describe what the user wants to do or what your application can handle. Intents can pertain to any of the following:

- Functions, such as resetting a password or ordering an item.
- Domains, such as healthcare, financial, or government.
- Customers, such as the US Army, Wells Fargo, or Boeing.

In Virtual Agent, a single intent is mapped to one conversation topic.

For more information, see [NLU intents](#) .

• Utterances

Instead of keywords, you enter natural language examples, called utterances. Utterances help NLU to evaluate word meanings and contexts so it can infer user or system actions. Example utterances might include the following:

- Reset my password.
- Change password.
- I don't remember my password.
- Forgot my password.
- My password needs to be reset.

• Entities

Entities represent the object of (or context for) the action. You can define them for individual intents. NLU can match defined entities with user input to slot-fill the values. Slot-filling can eliminate the need to ask some questions within a topic flow. There are three basic types of entities that you can define:

- Common or system entities, such as date, time, currency, location, quantity, people, or organization.
- Entities based on ServiceNow records, such as a case number.
- Company- or domain-specific entities, such as meeting rooms, company policies, and so forth.

For more information, see [NLU entities](#) .

How NLU models work in Virtual Agent

When you create or update topics in Virtual Agent Designer, you specify the NLU model and intent that Virtual Agent uses to find the appropriate conversation topic for fulfilling the intent.

Virtual Agent supports models from different services. You can use the following providers:

- ServiceNow NLU models that you create using NLU Workbench.

ServiceNow provides pre-built (read-only) NLU models and topics for various ServiceNow business applications, such as Customer Service Management, HR Service Delivery, and

ITSM. You can use the intents defined in these pre-built models and reuse them when you create your own models.

- If you're using IBM Watson Assistant as your NLU service provider, NLU intents and entities are created in IBM Watson Assistant.
- If you're using Google Dialogflow ES as your NLU service provider, NLU intents and entities are defined in the Google Cloud platform.

Note: Virtual Agent supports only one NLU service provider per instance.

With NLU models, your virtual agent can do the following:

- Perform topic discovery.
- Designate backup keywords in case an intent is not matched.
- Extract entity values.
- Handle conversation switching in a conversation session.

These capabilities are explained in the following sections.

Topic discovery

When users provide an utterance, the utterance is a statement that is associated with a specific intent. Virtual Agent processes these utterances to launch the appropriate conversation topic. Each topic has a single intent that you specify in Virtual Agent Designer.

During the topic discovery process, intents are matched to topics. Virtual Agent returns the most relevant topics for a user's request. The topic discovery process returns the following results to a user:

- **Single match:** When a user utterance directly matches an intent (topic), the topic runs automatically.
- **Multiple matches:** When a user utterance matches more than one intent, Virtual Agent returns a choice list of the relevant matches so that the user can choose the appropriate topic.

Note: If there are multiple matches, Virtual Agent returns three intents by default. You can change the number of topics returned by using the `com.glide.cs.max_number_display_topics` system property.

- **No matches:** When Virtual Agent can't find a matching intent, it uses AI Search to generate search results that display relevant links to Q&A knowledge articles, Service Catalog items, or person (user) records.

This feature is controlled by the AI Search Fallback setup topic and the Virtual Agent search configurations, which are enabled by default in [chat experiences](#). To learn more about the AI Search results generated, see [Virtual Agent integration with AI Search](#).

If you disable the AI Search Fallback setup topic, Virtual Agent automatically displays a fallback error message that enables the user to select a topic or enter a different request.

Example fallback message

I am sorry but I didn't understand your request.

Please try giving me your request in a different way. I'm currently better at understanding short sentences.



What's your issue or request? Or take a look at what I can help with.

Show me everything

For details about how the AI Search Fallback setup topic and the fallback response (the fallback setup topic) work, see [Customizing a Virtual Agent chat experience](#).

For detailed information about NLU topic discovery, see [\(Legacy\) Natural Language Understanding topic discovery logic in Virtual Agent](#).

Topic discovery with backup keywords

When you create or update topics, you can also optionally specify keywords that Virtual Agent uses to determine the topic if NLU doesn't return a matching intent and topic. Virtual Agent uses keywords in the following situations:

- No topics (intents) are discovered.
- The appropriate topic (intent) can't be determined because too many topics (intents) are discovered.
- The language of the topic and intent is not currently supported in NLU.

i Note: If Virtual Agent can't determine the topic based on NLU or the keyword, it falls back on the AI Search capability to deliver relevant results. The AI Search capability must be enabled.

Entity extraction

With NLU models, Virtual Agent can determine when user statements in a conversation contain important information to fulfill a task or goal. Entities identify the information that Virtual Agent can extract from the conversation, such as an object or a person's name. To extract the appropriate values, Virtual Agent uses the entity information that is associated with an intent that is defined in the NLU model.

When designing your topic, you can use entities as follows:

- [Associate an entity with a user input node](#) on the **Flow** tab. You can specify whether Virtual Agent asks the user to confirm the slot-filled entity value or to skip the node.
- [Add nodeless NLU entities as input variables to a topic](#). These variables can be slot-filled from NLU service provider predictions or provided outside of the scope of the topic.

Conversation switching

Users engaged in a Virtual Agent conversation can switch topics anytime during the conversation. For example, a user might be updating an item in the user's employee profile. But before completing the update, that user might ask to order an item instead. Virtual Agent can find and run the appropriate topic based on the user's request. You can enable users who switched topics to resume the original conversation.

Another example is when a user might ask a casual question or engage in small talk. The question might be unrelated to the original request. By reviewing the intents defined in the NLU model, Virtual Agent can match and launch the appropriate conversation for the switched topic.

ServiceNow NLU multi-language support and integration with Virtual Agent Designer

If you're using ServiceNow NLU, you can map an NLU model group and an associated intent to a topic. You can also update, train, and test the associated NLU model from within Virtual Agent Designer. As you work on a topic, you can also improve or modify the utterances and the associated entities for an intent without leaving the interface.

ServiceNow NLU model groups contain a primary language and secondary languages. Use the primary language to author your topic, which can then be translated into the secondary languages within the group. For more information, see [Multilingual model management](#) .

As you work on your topics, Virtual Agent Designer provides language-mapping views for previewing and testing topics with their associated language-specific models. For more information, see [\(Legacy\) Localizing Virtual Agent NLU conversations](#).

(Legacy) Advantages of natural language models over keywords

Natural language models help Virtual Agent to process human language based on context and your company's data. In this way, what the user needs can be more accurately matched with a corresponding topic. Virtual Agent supports large language models (LLMs) and Natural Language Understanding (NLU).

Language is difficult

Keyword matching has its limitations. For example, sometimes an apple is a piece of fruit, and sometimes it's an electronic device. Context matters, and so does intent. Natural language models are designed to deal with the following problems:

- There are multiple ways to describe the same thing.

Examples: `Office password reset` or `Reset my password for Office`

- Expressions can be ambiguous.

Example: `Server reporting mail missing after migration`. What is missing, the server or the mail?

- Contextual information is essential.

Example: `activate London instance in staging`

- Words can acquire new meanings over time.

For example, a `cell` can pertain to biology or a cell phone.

- Slang, acronyms, and industry idioms can be difficult to interpret.

Example: set up SSO on the dev instance

- Error messages are often hard to understand.

Virtual Agent provides two kinds of natural language topic discovery. You can use both in your instance, but only one at a time in any given chat.

LLM topic discovery in Virtual Agent

Use LLMs to discover topics and access generative AI capabilities without building complex models, intents, or entities.

(Legacy) Natural Language Understanding (NLU) topic discovery in Virtual Agent

Use ServiceNow NLU or a supported provider to discover topics.

(Legacy) Dialog Acts for Virtual Agent

As part of the Vancouver release, the Dialog Acts feature expands natural language communication with Virtual Agent, leading to more fluid conversations between user and agent.

How Dialog Acts works

Dialog Acts interprets and applies user inputs during a Virtual Agent conversation. With this feature active, you engage with Virtual Agent in your own natural language, instead of selecting replies based on prompts in the topic.

For example, if you request a laptop in a Virtual Agent conversation, you use the topic prompts to select a manufacturer, screen size, and amount of RAM. Without Dialog Acts, you change specifications only by following the prompts in the topic, potentially taking more time to loop through a Virtual Agent conversation as you reset your options. With Dialog Acts, if you change your mind about any of the laptop's specifications before finishing the request, you can input an utterance such as, "Actually, I need 8 GB of RAM." If your input matches the Natural Language Understanding (NLU) model closely enough, the specifications are changed immediately, even if you're on a different point in the topic. If the input doesn't match, it's added to a list of ignorable utterances.

User utterances are stored in the Open NLU Predict State Tracking [open_nlu_predict_state_tracking] table, while feedback is tracked by the Open NLU Predict Dialog Act Feedback [open_nlu_predict_dialog_act_feedback] table. Languages are tracked in the Open NLU Driver Languages [open_nlu_driver_language] table. In the current release, English is the sole language support for Dialog Acts.

Activating Dialog Acts

Activate Dialog Acts by toggling the **Enable Dialog Acts** switch in the [Create a topic form](#) or the [Topic Properties tab](#). When activated, a second **Confirm modified values** toggle appears. Use this switch to provide a prompt confirming that a variable is to be changed based on your utterances.

Considerations for implementing Dialog Acts

The Dialog Acts feature is available as long as NLU is active for the instance and the topic. However, at least one of the preconfigured responses must be Active for the Dialog Acts toggles in the [Topic Properties tab](#) to be available. Dialog Acts can work without a model intent, but it can't select an entity if the topic is not associated with that model or intent.

Decision nodes can be modified by a condition or script to skip reprompting by Dialog Acts. However, the **Modify Dialog Acts** toggle doesn't work if there are multiple date-time nodes on a topic.

Available Dialog Acts responses

The current release includes the following types of responses, stored in the Open NLU Dialog Acts [open_nlu_dialog_act] table:

Dialog Acts response types

Type	Description
Modify	Alter a variable recorded previously.
Affirm	Confirm a variable.
Negate	Decline confirming a variable.

(Legacy) Implement NLU in Virtual Agent

Create and maintain NLU model groups and intents that map to your conversation topics in Virtual Agent. You can create and edit model groups in NLU Workbench or from topics in Virtual Agent Designer.

Before you begin

Activate the plugins for [Glide Virtual Agent](#) and any [pre-built topics](#) that you want to use.

Role required: virtual_agent_admin or admin

About this task

When authoring conversations for an NLU instance, be aware of the following guidelines:

- Verify that you are in the appropriate application scope before you create or update a topic. For example, if you are creating ITSM topics, verify that you are in the **ITSM Virtual Agent Conversations** scope, and not the scope for the ITSM NLU Model for Virtual Agent Conversations.
- Specify the **NLU Model** and **Associated Intent** for the topic in the [Topic Properties tab](#). If you want to allow topic switching in the conversation session, enable **Resume topic flow**.

Note: A topic can map to only one intent in an NLU model. Once you select an intent for a topic, the intent is no longer available for use in other topics.

- Set the NLU entity properties in the property sheet for each [input control](#) that you add to the conversation flow. The entity properties identify the entity associated with the node, a switch for allowing text input for the control (prompt), and another switch for confirming the slot-filled entity value that Virtual Agent extracts.

Procedure

1. [View the Virtual Agent General Settings](#), and change your NLU service provider, if needed.

If you're using a different NLU service provider supported by Virtual Agent, configure it as described in one of the following topics:

- [IBM Watson Assistant Intent and Entity integration](#)
- [Google DialogFlow Essentials \(ES\) Intent and Entity integration](#)

2. **Optional:** If you're supporting conversations in other languages, [enable NLU languages in Virtual Agent settings](#).

3. Associate a model group and intent with each Virtual Agent topic in your instance. You can do this in the following ways:

- [Add NLU to an existing Virtual Agent keyword topic](#).
- Create or map model groups and intents when you [create a new topic](#).
- [Preview](#) and test the pre-built ServiceNow topics in Virtual Agent Designer.

Determine whether you want to use any of the topics, then [duplicate](#) them as needed.

- [Run Topic Recommendations reports for your instance](#) to identify pre-built Virtual Agent topics and intents that you can quickly implement in your organization.

4. Test the topic.

5. When you're ready to deploy a topic, [publish the topic](#).

Result

The topic state changes to **Active**.

(Legacy) Virtual Agent chat widget interface for NLU

The Natural Language Understanding (NLU) Virtual Agent chat widget interface captures an automated messaging session between Virtual Agent and the user. Users can see a list of all the topics that the bot can help with, enter a request, request a transfer to a live agent, send and receive attachments, and receive visual and/or audio notifications.

The chat widget interface uses the Service Portal web widget, which you can configure for custom service portals. This widget is available in the CSM, HR Service Delivery, and ITSM Service Portals.

Note: The information in this content is applicable to only Natural Language Understanding (NLU) Virtual Agent. For more information about the LLM Virtual Agent end-user experience, see [Using ServiceNow Otto for Virtual Agent](#).

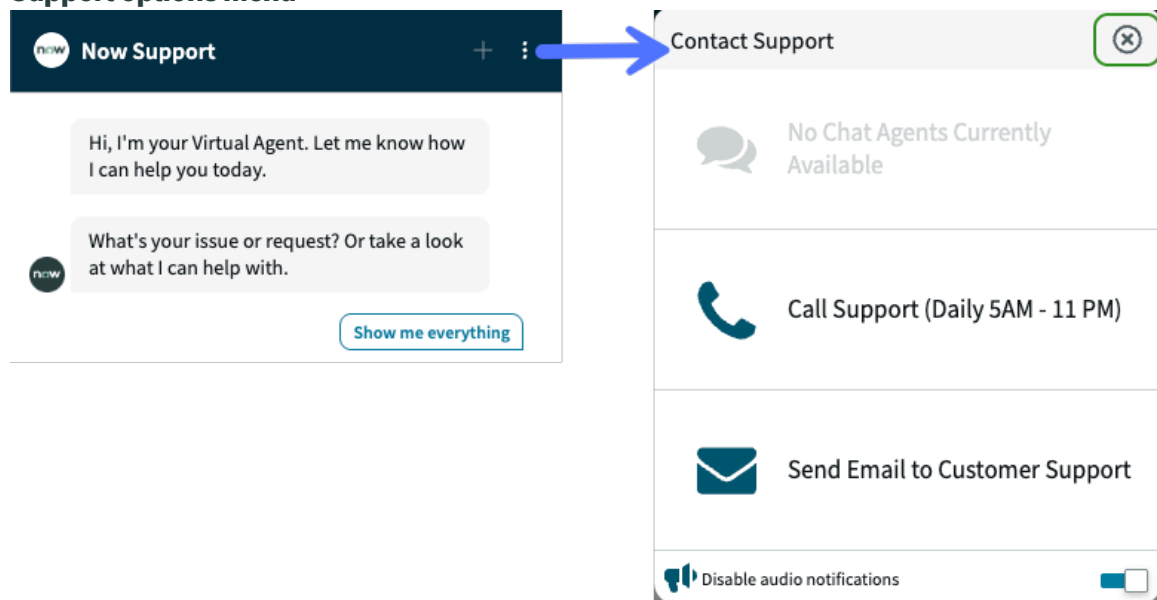
A simple conversation typically includes the following elements:

- Default welcome message from the virtual agent, followed by the first prompt for the conversation. The initial prompt asks the user to type a question or to choose from a list of available topics.
- User response to the first prompt. In this example, the user chooses the topic for checking an IT ticket.
- Series of prompts, acknowledgments, and responses exchanged between the virtual agent and the user until the users reach their goals or complete their tasks. You can use different rich controls in bot prompts, for example, choice lists with buttons or a carousel of images to select an item.
- Closing message to end the conversation.

When your users start a conversation with the bot, they can enter a request or see a list of everything that the bot can help with. If they choose to see everything, the chat window displays all topics available to the user. Your users can use the search box to filter the list of topics.

The conversational interface offers your users several options to manage the conversation. Users can stop the current conversation and start a new one, contact support to access a live agent for immediate assistance, and control audible alerts for chats.

Support options menu



When users transfer to a live agent, the chat window header changes to indicate that they are now interacting with a live agent. The attachment and send icons are available in the chat window for uploading an image, text, or PDF file and sending it to the agent.

During live chat, users can attach a file of any type (for example an image, text, or PDF file) and send it to the agent. The system automatically performs a virus scan on the file attachment. If the scan is successful, the file is sent to the agent.

- If the scan fails, a message informs the user that the scan did not pass so that the user can correct the file and then upload the file again.
- If the upload and virus scan process times out (the upload takes too long), a message tells the user that the file couldn't be processed and to try the file upload again.

Note: Most chat clients support file attachment uploads. However, the mobile chat client only supports file attachment uploads in bot conversations. Users cannot upload files in mobile chat with a live agent.

Your users automatically receive audio and visual alerts when they receive a message from a live agent or virtual agent.

- The visual indicator displays the number of messages received, next to the chat icon in the Service Portal window. When the user opens the chat, the indicator number closes.
- Your authenticated end users can enable or disable audible alerts of chats through the toggle switch on the chat menu (Contact Support).
- Authenticated end users can also enable or disable the delivery of notifications through the toggle switch on the chat menu (Contact Support).
- The default sound notification uses the `sn_va_web_client_alert.mp3` audio file.
 - You can change the sound that requesters hear by uploading your own audio file. For details, see [Manage audio files](#).
 - To turn off the audio notification for your instance, use the system parameter `sysparm_disable_audio_notifications=true`. For example:
`https://<your-instance name>.service-now.com/nav_to.do?sysparm_disable_audio_notifications=true`

(Legacy) Example Asset Refresh Virtual Agent for NLU conversation with notifications

Virtual Agent can automate many workflows, and a number of common solutions are available when you install Virtual Agent and related plugins, such as ITSM Virtual Agent Conversations.

Prebuilt components in Virtual Agent

Virtual Agent comes with a basic configuration that includes common greetings, NLU intents, reusable logic, and prebuilt conversations. Using these building blocks, you can quickly put together workflows to handle some of the most common organizational needs, including the following:

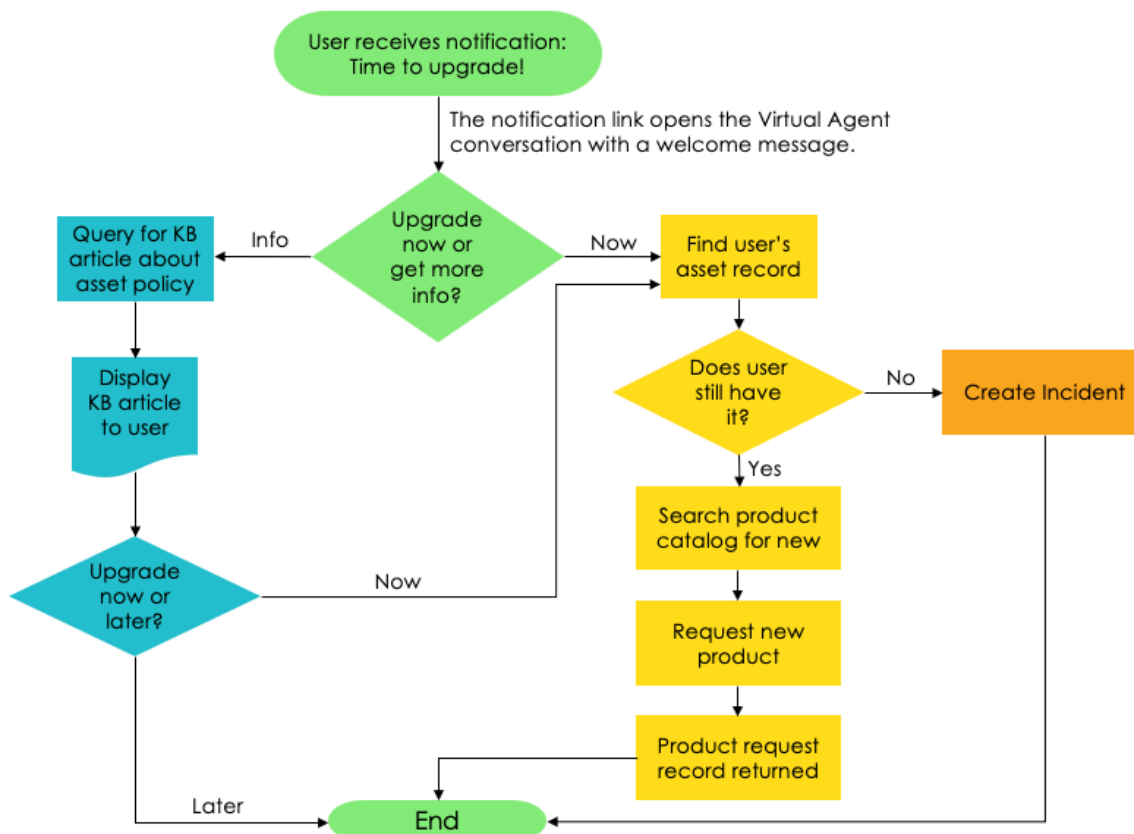
- [Resetting a password](#) 
- [IT Self-Service](#) 
- [IT troubleshooting](#) 
- [HR queries and employee profile updates](#) 
- [Customer Service queries and requests](#) 

To help you understand the possibilities, the Asset Refresh example uses prebuilt topic blocks that are included in the [ITSM Virtual Agent Conversations](#)  plugin. These topic blocks do most of the "heavy lifting" in the topic.

Asset Refresh workflow

The purpose of the Asset Refresh topic is to automate hardware upgrades for your employees. If your organization's policy is to replace computers or tablets every two years, then you can create a business rule that says when a user has had an asset for two years, the asset should move to the *In maintenance* state. You can create a notification that is triggered by this change of state in the Hardware table. In our example, the asset owner receives the notification and is instructed to upgrade their asset.

The Asset Refresh Virtual Agent topic provides the action for the notification. When the user selects the link in the notification, they proceed to the workflow in Virtual Agent. This example topic contains the primary flow (helping the user upgrade their hardware) and two secondary flows that ensure that the user's needs are met.



After a greeting message, Virtual Agent asks the user if they want to upgrade now or get more information. If they choose to upgrade now, they are directed through the primary flow. Virtual Agent uses the Lookup utility to find the expiring asset that is assigned to the user. Then Virtual Agent makes sure the user still has the asset. If they do not, Virtual Agent uses the Create Incident topic block to open an Incident to resolve the problem. If the user still has the asset, Virtual Agent uses the Search Catalog Item topic block to find a replacement. The Request Catalog Item topic block is used to request it. The request is sent to the user, and the workflow ends.

If the user chooses to get more information, the AI Search topic block returns one or more specific KB articles that explain the organization's policy. Once the user has viewed these, they are given the option to upgrade now or later. If they choose to upgrade now, they are redirected through the primary workflow; otherwise, the conversation ends.

Creating the Asset Refresh example workflow

The following topics describe how to use Virtual Agent Designer and actionable notifications to create the Asset Refresh workflow. Follow these steps in order.

1. Create the Asset Refresh topic in Assistant Designer Asset library.
2. Create the Open Incident workflow in the Asset Refresh topic.
3. Create the More Information workflow in the Asset Refresh topic.
4. Create the notification for the Asset Refresh topic.
5. Associate content with the Asset Refresh notification.

Create the Asset Refresh topic in Assistant Designer Asset library

Create the topic in Assistant Designer Asset library using topic blocks that come with the ITSM Virtual Agent Conversations plugin. When the user receives a notification that it's time to upgrade, they will be directed to this topic.

Before you begin

Install the following applications:

- Glide Virtual Agent plugin (com.glide.cs.chatbot)

You must have a subscription for Virtual Agent before you can activate the Glide Virtual Agent plugin.

- [Enable Natural Language Understanding \(NLU\)](#), if not already enabled (recommended).
- [ITSM Virtual Agent Conversations](#)  (available in the ServiceNow® Store)

If this application is already installed, check the ServiceNow Store for an updated version before you begin.

Determine the application scope for your Virtual Agent topic and actionable notification. They don't have to reside in the same application scope, but it can be easier to maintain if they do.

Publish the following ITSM Virtual Agent components. If you're using an application scope other than ITSM Virtual Agent Conversations, you should duplicate and publish these topic blocks in the scope you intend to use. To do this, change your application scope, and then duplicate the topic blocks in Assistant Designer Asset library.

- Create Incident topic block
- Request Catalog Item topic block
- AI Search topic block
- Search Catalog Item topic block

Role required: virtual_agent_admin or admin

About this task

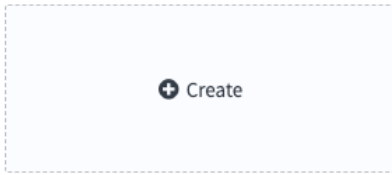
For more information about building topics and the Assistant Designer Asset library interface, see the following topics:

- [Build conversations in the Asset library in Assistant Designer](#)
- [Creating a Virtual Agent topic](#)
- [Assistant Designer controls](#)
- [Assistant Designer interface reference](#)

 **Tip:** Look through existing conversations to ensure you are not duplicating effort, and familiarize yourself with Virtual Agent and the flow of topics. Additionally, it may be helpful to outline the flow of a conversation before building it in Assistant Designer Asset library.

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. On the Asset library page, select **Create**.



4. On the Create a topic form, set up your topic.

- a.** Enter a name, such as `Asset Refresh`.
- b.** If NLU is enabled, select an existing model, or create a new one.
- c.** Select or create an intent for the NLU model.

Natural Language Understanding (NLU) (recommended)

Help end users discover this topic with NLU. Mapping a model and intent enables your VA to understand what your users say. You can also come back later and use keywords now. [Learn about NLU models.](#)

NLU Model

ACME IT assets (English) X ▼

* Associated Intent

Select or create an intent ▼

Q

Create intent

Activate PC

Order replacement PC

For descriptions of all field values, see [Create a topic form](#).

d. Select **Create**.

The **Flow** tab appears with Start and End nodes. For an overview of this screen and its components, see [Topic Flow tab](#).

5. Create your initial message to greet the user.

- a.** From the Components area, drag a Text bot response node onto the canvas.
- b.** Select the node to view the properties palette.

c. Enter a name for the node and the response you want to display to the user.

The screenshot shows a flow designer canvas on the left and a properties palette on the right. The canvas has a 'Start' node (blue rounded rectangle) connected to an 'Initial Message' node (blue rounded rectangle with an orange message icon), which is then connected to an 'End' node (red rounded rectangle). The 'Initial Message' node is highlighted with a blue border. The properties palette on the right is titled 'Text response' and contains the following sections:

- Text Response is not supported on: mweb**
- Display a bot response to the user as text. [Learn more](#)**
- * Node name**: A text input field containing 'Initial Message'.
- * Response message [i](#)**: A text area containing 'You're eligible to upgrade your device! How exciting! 🥳'. To the right of the text area are two icons: a circular arrow and a code icon.
- + Add alternate message**: A button with a plus icon.
- Advanced (optional)**: A section with two expandable options:
 - Make this response secure** (with a downward arrow icon)
 - Hide this node** (with a downward arrow icon)

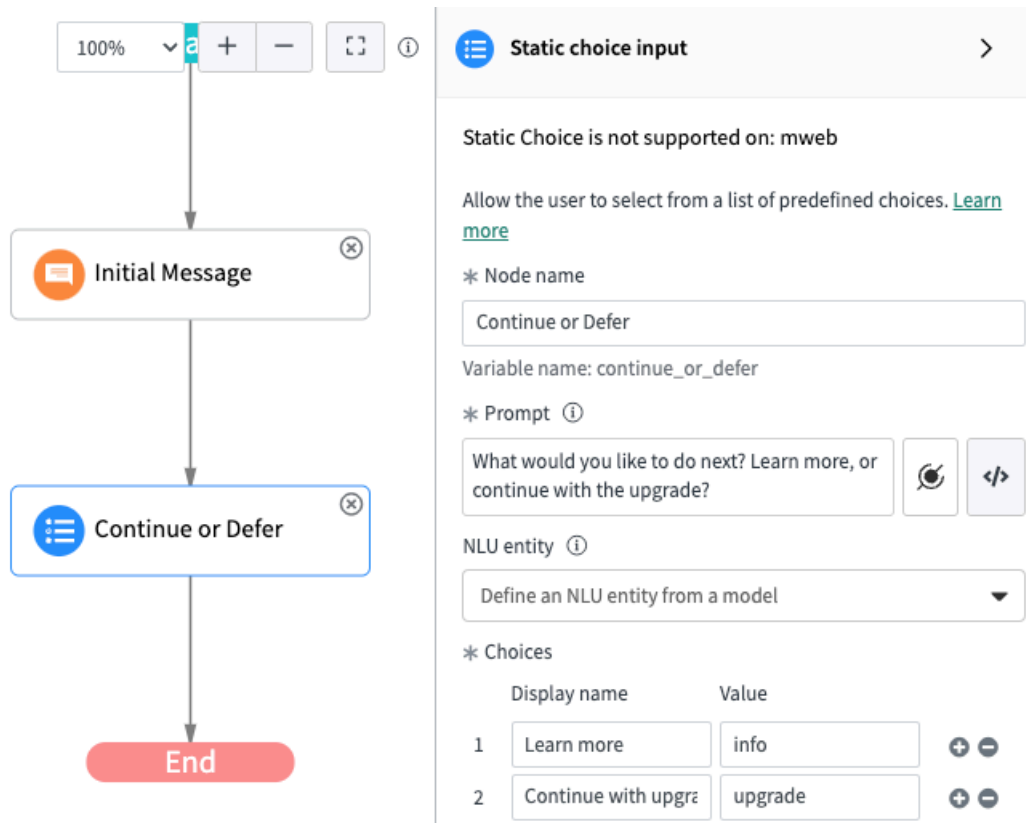
6. Ask the user if they want to proceed with the asset refresh.

a. From the Components area, drag a Static choice input node onto the canvas.

b. In the properties palette, enter the following information:

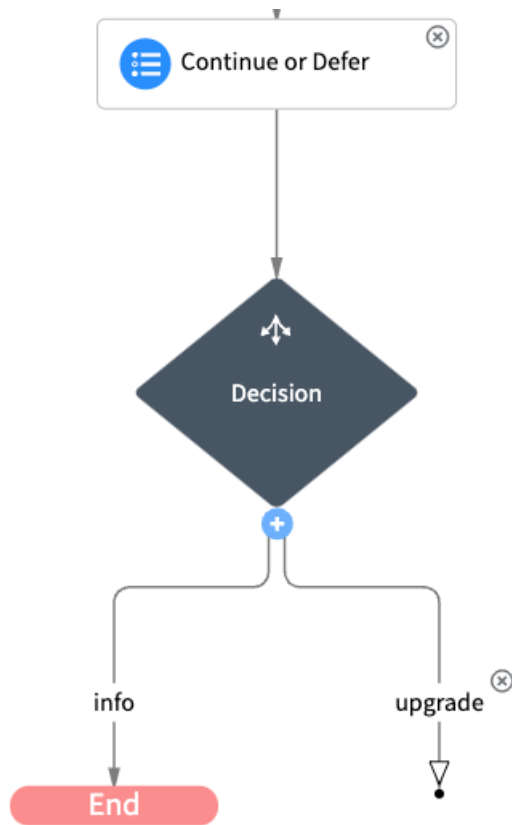
- A unique name, such as `Continue` or `Defer`.
- A text prompt, such as `What would you like to do next? Learn more, or continue with the upgrade?`
- In the Choices area, provide a text prompt for each choice and a value for that choice, so you can refer to it later on.

For example, your choices might be `Learn more` and `Continue with upgrade`. The values should make sense as variable names. For example, `info` and `upgrade`.



7. Add a Decision utility to handle the user's choice.

- a.** From the Components area, drag a Decision utility onto the canvas.
- b.** Select the plus icon to add a second branch.
- c.** Name each branch to correspond with the decisions (info and upgrade).



- d. For each branch, select it and then use the Branch Condition area to indicate which option the branch will follow.

Condition ✕

All of these conditions must be met

Continue Or Defer	is	Continue with upgrade	✕	🔍	⊖	or	and
-------------------	----	-----------------------	---	---	---	----	-----

or

New Criteria

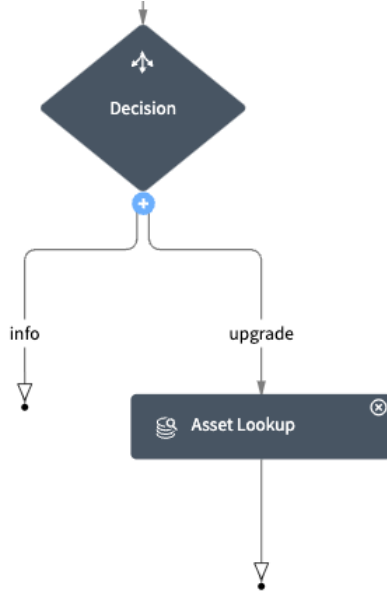
↑
Node name

↑
Node choice

Cancel
Save

8. For the upgrade branch, add a Lookup utility node to confirm that the user still has the asset.

- a. From the Components area, drag a Lookup utility onto the canvas.



- b. In the properties palette, specify the following information:

- A unique name, such as **Asset Lookup**.
- The table name: **Asset [alm_asset]**
- In the Condition builder, select **Assigned to**, and then dot-walk to **Input Variables > User**. Select **and** to include **State > is > In maintenance**.

The asset state will tie into the notification you send the user for this asset refresh.

Assign Condition
✕

All of these conditions must be met

Assigned to

is

Input Variables>User

✕

🔍

State

is

In maintenance

✕

🔍

or

and

or

New Criteria

Cancel
Save

9. Ask the user if they still have the asset.

- a. From the Components area, drag a Boolean input node onto the canvas.
The Boolean node automatically asks if you want to add a Decision utility with two paths. Select **Yes**. A Decision node appears in the flow with values of **true** and **false**. Both are already mapped to the Boolean node.

- b. Add a user prompt.

Use dot-walking to refer to the asset found by the Asset Lookup node.

* Node name
Asset Check

Variable name: asset_check

* Prompt ⓘ
Do you still have this device in your possession:
Input Variables > Asset Lookup > Dis...

Asset Check Boolean
Asset Lookup
Continue Or Defer Choice
User Reference

Depreciation effecti... glide_date_time
Display name string
Disposal reason string
Domain domain_id
Domain Path domain_path
Due glide_date_time
Due in choice
Expenditure type choice

10. If the user still has the asset (the Boolean response is **true**), we want to search for it in the catalog.
 - a. From the Components area, drag the Topic Block utility onto the Asset Check **true** branch on the canvas.
 - b. In the properties palette, select **Search Catalog Item** for the Topic block.
 - c. Under Input mapping, use dot-walking to specify the **query_term** parameter from the Asset Lookup node (Input Variables > Asset Lookup > Display name).
The catalog search will provide these output variables by default, shown under Output mapping.

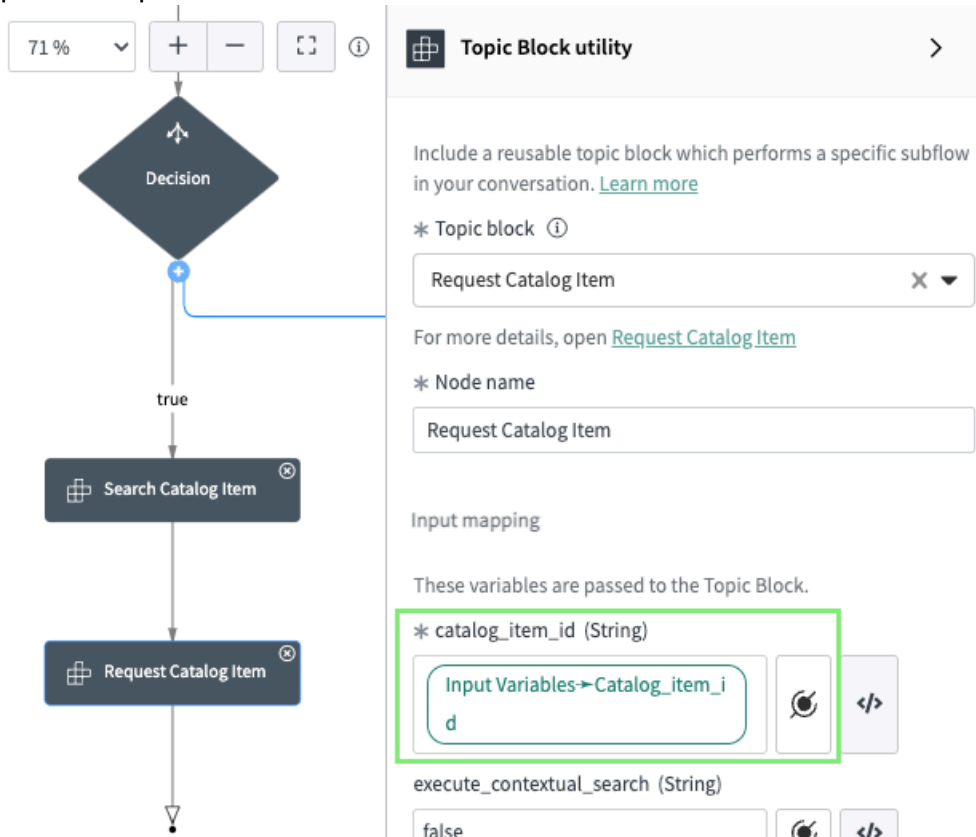
Output mapping

These variables are returned from the Topic Block.

Enable	Name	Variable Name ⓘ
☒	catalog_item_id	catalog_item_id
☒	item_type	item_type
☒	is_conversational	is_conversational

11. Request the upgraded item.
 - a. From the Components area, drag the Topic Block utility onto the canvas beneath the Search Catalog Item topic block.
 - b. In the properties palette, select **Request Catalog Item** for the Topic block.

- c. In the Input mapping area, use dot-walking to specify the `catalog_item_id` that the previous topic block returned.



This topic block returns output variables as well. The user will be able to select variables for their new device, as well. You can configure these variables in [Service Catalog](#).

12. Ask the user to confirm their choice of device.

- From the Components area, drag the Card bot response node onto the canvas beneath the Request Catalog Item topic block.
- In the properties palette, specify the following information:
 - A unique name, such as `Device Request Record`.
 - Card type: **Record**
 - Populate this card by referencing: **Table**
 - Table name: **Requested Item [sc_req_item]**
 - In the Condition builder, add **Sys ID is Input Variables>Record_id**.

Assign Condition

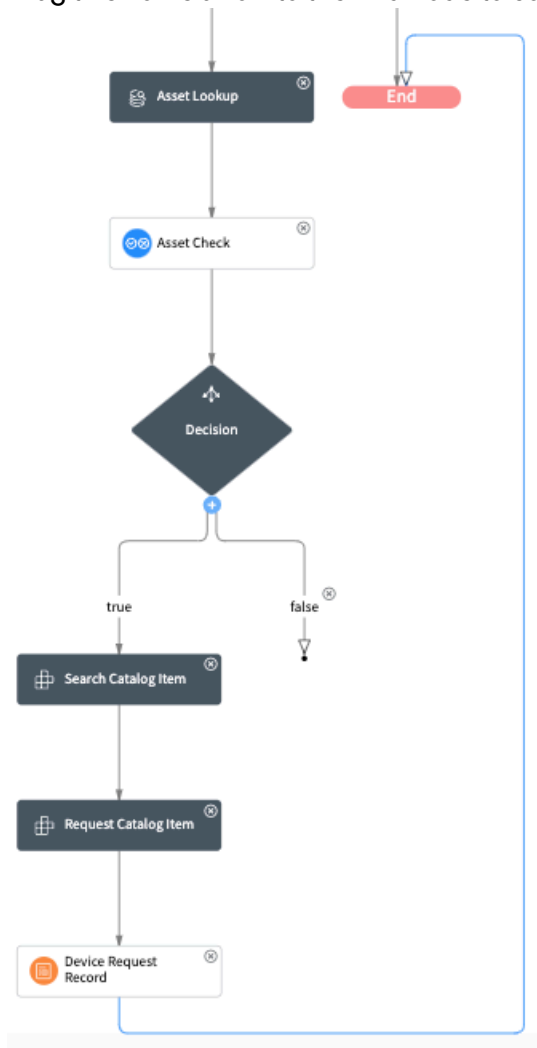
All of these conditions must be met

Sys ID is Input Variables>Record_id

- In the **fields** area, select the record columns to display in the card to the user.

For example, specify **Number**, **Short description**, and **Estimated delivery**.

13. Drag this flow's arrow to the End node to complete this part of the workflow.



14. Select **Save**.

What to do next

[Create the Open Incident workflow in the Asset Refresh topic](#)

Related topics

[Maximizing code reuse with topic blocks](#)

Create the Open Incident workflow in the Asset Refresh topic

Each Decision branch introduces additional workflows. After creating our main Asset Refresh workflow, we need to ensure that the user can get help if something goes wrong. In this example, we will help the user create an incident.

Before you begin

[Create the Asset Refresh topic in Assistant Designer Asset library](#)

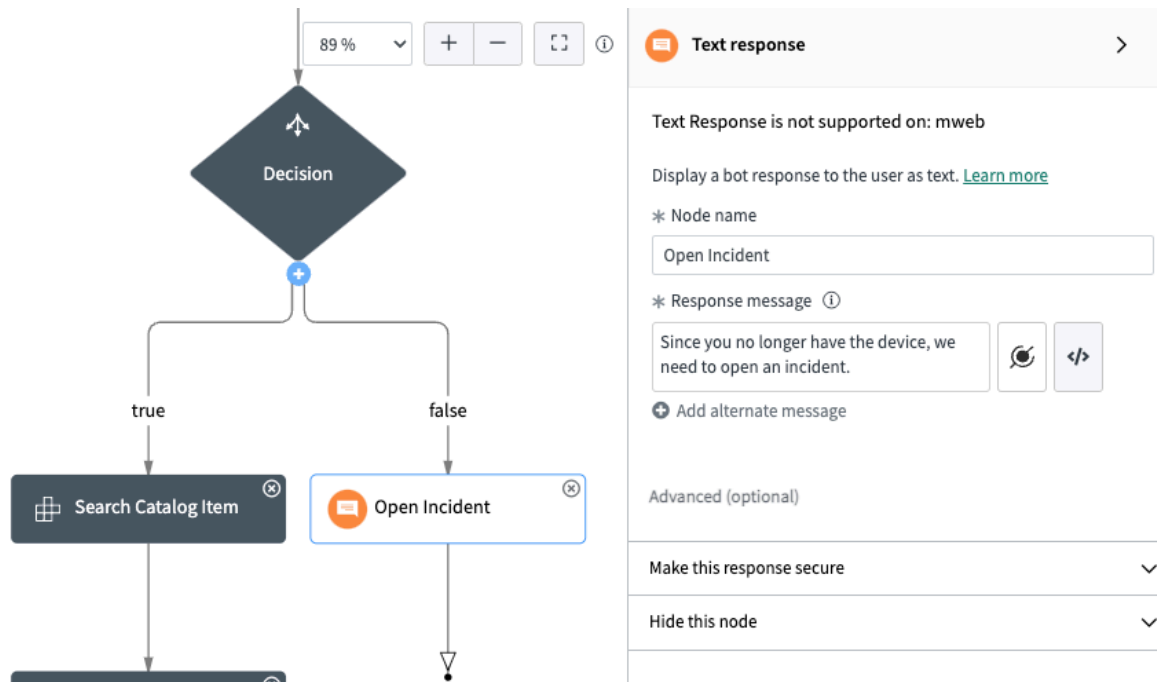
Role required: virtual_agent_admin or admin

Procedure

1. Open the Asset Refresh topic in Virtual Agent Designer.
2. Return to the **false** decision branch after the Asset Check Boolean question that you asked the user.

- a. From the Components area, drag a Text bot response node onto the **false** branch on the canvas.
- b. Select the node to view the properties palette.
- c. Enter a name for the node and the response you want to display to the user.

For example, name the node `Open Incident`. For the **Response message**, type `Since you no longer have the device, we need to open an incident.`



3. Add a Topic Block utility to node to create the incident.

- a. From the Components area, drag a Topic Block utility node onto the canvas.
- b. In the properties palette, select **Create Incident** for the Topic block.
- c. Under Input mapping, use dot-walking to specify the **caller** and **short_description** parameters.
 - For the caller, specify Input Variables > User.
 - For the short description, specify Input Variables > Asset Lookup > Asset tag.

Input mapping

These variables are passed to the Topic Block.

* caller (String)

Input Variables→User

🎯

</>

* short_description (String)

Input Variables→Asset Lookup
→Asset tag

🎯

</>

d. Under Output mapping, make sure to enable the created_incident_sys_id variable.

Output mapping

These variables are returned from the Topic Block.

Enable	Name	Variable Name ⓘ
☒	created_incident_sys...	created_incident_sys

4. Drag this flow's arrow to the End node to complete this part of the workflow.

5. Select **Save**.

What to do next

[Create the More Information workflow in the Asset Refresh topic](#)

Create the More Information workflow in the Asset Refresh topic

In our example, we must provide the workflow for the "more information" Decision branch. If the user wants to learn more before upgrading, we can point them to a specific KB article explaining how your organization's policy works.

Before you begin

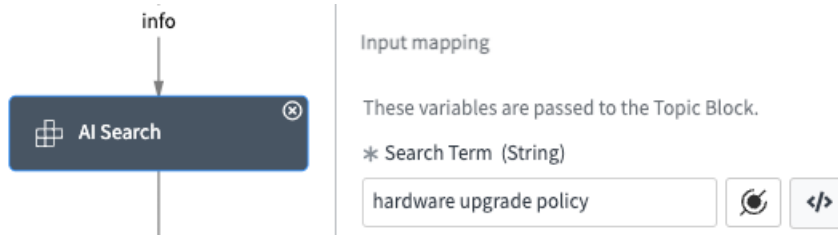
- [Create the Asset Refresh topic in Assistant Designer Asset library](#)
- [Create the Open Incident workflow in the Asset Refresh topic](#)

Role required: virtual_agent_admin or admin

Procedure

1. Open the Asset Refresh topic in Virtual Agent Designer.
2. Return to the **info** decision branch after the Continue or Defer static choice node where you first prompted the user to continue or get more information.
 - a. From the Components area, drag a Topic Block utility node onto the canvas.
 - b. In the properties palette, select **AI Search** for the Topic block.
 - c. Under Input mapping, specify the search term.

For example, enter `hardware upgrade policy`.



3. Show the results of the search to the user.

- a. From the Components area, drag a Card bot response node onto the canvas.
- b. In the properties palette, specify the following information:
 - A unique name, such as `Upgrade KB Articles`.
 - Card type: **Record**
 - Populate this card by referencing: **Table**
 - Table name: **Knowledge Article [sn_km_mr_st_kb_knowledge]**
 - In the Condition builder, restrict the results to specific internal KB numbers that describe the policy, such as **Number is KB000000456**.

All of these conditions must be met

Number	is	KB000000456			or	and
--------	----	-------------	--	--	----	-----

- In the **fields** area, select **Content** for a single KB article, or **Short description** if multiple records are returned.

4. Once the user has read the KB article, give them the option to continue with the upgrade.

- a. From the Components area, drag a Static choice input node onto the canvas.
- b. In the properties palette, enter the following information:
 - A unique name, such as `Upgrade Next Steps`.
 - A text prompt, such as `Would you like to upgrade now?`

- In the Choices area, provide a text prompt for each choice and a value for that choice, so you can refer to it later on.

For example, your choices might be Yes , upgrade now and No , maybe later. The values should make sense as variable names. For example, yes and no.

Static choice input

Static Choice is not supported on: mweb

Allow the user to select from a list of predefined choices. [Learn more](#)

* Node name
Upgrade Next Steps

Variable name: upgrade_next_steps

* Prompt ⓘ
Would you like to upgrade now?

NLU entity ⓘ
Define an NLU entity from a model

* Choices

	Display name	Value	
1	Yes, upgrade now	yes	+ -
2	No, maybe later	no	+ -

5. Add a Decision utility to handle the user's choice.

- From the Components area, drag a Decision utility onto the canvas.
- Select the plus icon to add a second branch.
- Name each branch to correspond with the static choice node decisions (yes and no).
- For each branch, select it and then use the Branch Condition area to indicate which option the branch will follow.

Condition

All of these conditions must be met

Upgrade Next Steps is Yes, upgrade now

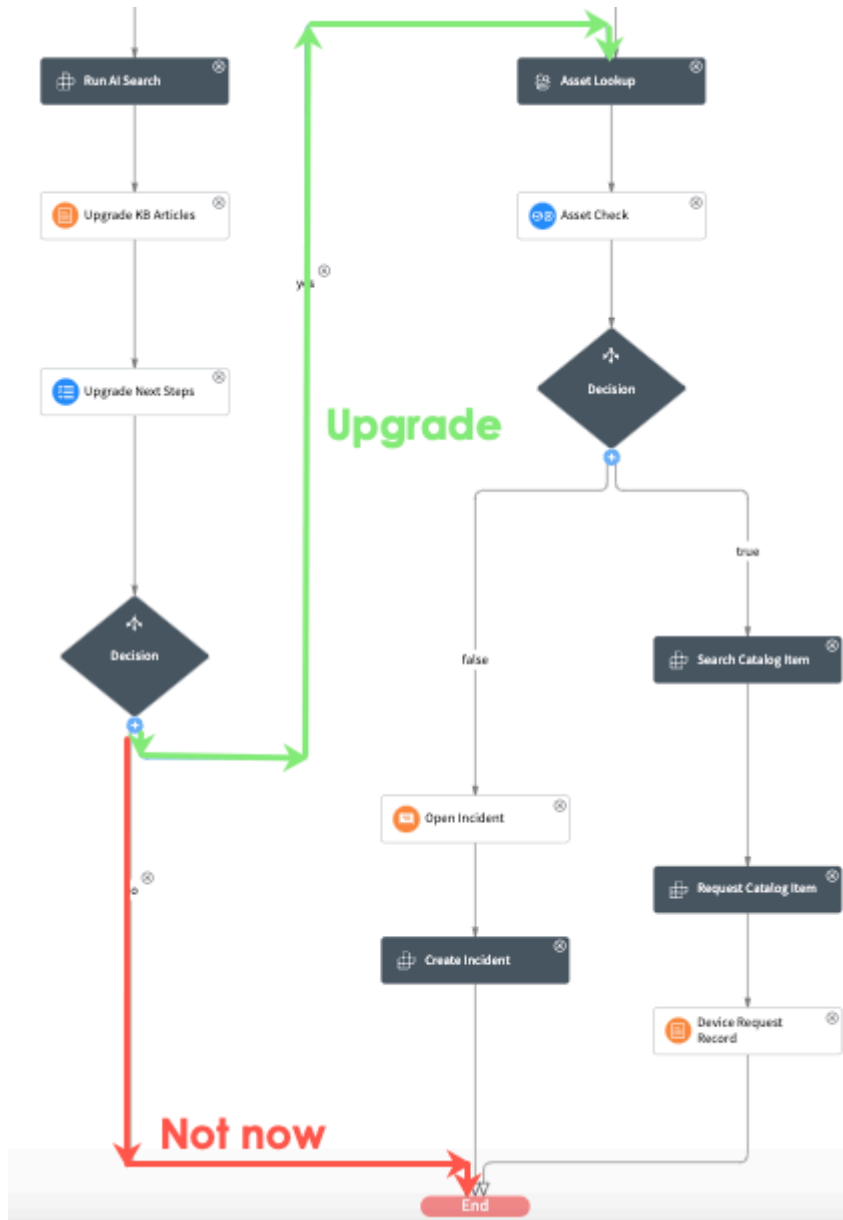
or

New Criteria

Cancel Save

- Drag the no flow's arrow to the End node to complete this part of the workflow.

f. Drag the yes flow's arrow to the Asset Lookup node to bring the user to the upgrade workflow.



6. Select **Save**.

Result

Your topic is ready to test. Test the topic, making sure you go through each possible workflow in the conversation and make any needed adjustments.

For more information about testing topics, see [\(Legacy\) Testing NLU/Keyword topics](#). If you're using NLU discovery, [add utterances](#) to the intent and [train and test your NLU model](#).

When you're finished, [publish the topic](#).

What to do next

[Create the notification for the Asset Refresh topic](#)

Related topics

[\(Legacy\) Implementing AI Search in NLU](#)

Create the notification for the Asset Refresh topic

Create an actionable notification to trigger the Asset Refresh Virtual Agent example topic you just created. The user will automatically receive the notification when it's time for them to order a new hardware asset.

Before you begin

Publish the Asset Refresh topic. [Change the application scope](#) in your instance to the same application you used to create your Asset Refresh topic. Ideally, the notification should be in the same application scope as your Virtual Agent topic.

Role required: virtual_agent_admin or admin

About this task

The ServiceNow AI Platform and ITSM Virtual Agent Conversations come with pre-built actionable notifications, and you can also create your own. For more information, see [Notifications](#).

Tip: On the Notifications page, you can view only the actionable notifications that come with ITSM Virtual Agent Conversations by filtering the list on **Application is ITSM Virtual Agent Conversations**.

Procedure

1. Navigate to **All > System Notification > Provider > Notifications**.
2. Select **New**.
3. In the **Name** field, provide a unique name, such as **Asset Refresh Notification**.
4. On the **When to send** tab, specify the trigger that will send the notification.
 - a. For the Trigger, specify **Record Change**.
 - b. For the Table, specify the **Hardware [alm_hardware]**.
 - c. For the Conditions, specify **State > is > In maintenance**.
When assets in the hardware table are available for refresh, they're moved to the *In maintenance* state on this example instance. You can specify filter conditions based on the business rules for your instance.

5. Select the **Who will receive** tab to configure the recipient of the notification.

- a. Select the lock icon next to **Recipients listed in fields**.
- b. In the **Available** list, select **Assigned to**, and then select the right arrow icon to move it to the **Selected** column.

Notification
New record

* Name

Category

When to send **Who will receive**

Users ☐ ☐

Recipients listed in fields

Available		Selected
Asset tag	+	Assigned to
Model category (		
Display name	>	
Assigned to (+)		
Company (+)	<	
State		
Substate		
Cost		
Configuration Itc		

Include the person whose action triggered the notification ☒

Submit

6. Select **Submit**.

What to do next

[Associate content with the Asset Refresh notification](#)

Related topics

[ITSM Virtual Agent pre-built actionable notifications](#)

Associate content with the Asset Refresh notification

After creating the actionable notification for the Asset Refresh topic, go back into the notification and add content. This links the notification with the Virtual Agent topic that you created.

Before you begin

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > System Notification > Provider > Notifications**.
2. Select the Asset Refresh Notification to open the record.
New fields for content are available in the record.

3. Select the **Contents** tab and create the content for the notification.

a. Select **New Provider Content**.

b. When prompted for the type of notification content, select **Virtual Agent Content - Chat**.

c. On the form, fill in the fields.

Notification Content - Virtual Agent form

Field	Description
Name	Unique name for the content. For example, enter <code>Asset Refresh Notification Content</code> .
Notification	By default, Asset Refresh Notification .
Format tab	
Type	Select Simple .
Table	Specify Hardware [alm_hardware] .
Message tab	
Advanced	Leave this option unselected.
Message heading	A suitable heading for the notification, such as <code>Upgrade your device</code> .
Message	The contents of your message letting the user know that it's time for them to upgrade. You can customize the message using variables in the record for a more personal touch.
Channels tab	
Delivery channels	Select mweb , which is the default channel for Virtual Agent. You can configure other channels to run Virtual Agent as well. For more information, see Conversational Integration apps for Virtual Agent .

d. Select **Submit**.

Additional Recipients **Contents (1)** Actions Link Actions to Content Logs

≡ 🔍 Name Search ⚙️ — Actions on selected rows... **New Provider Content**

Notification = Asset Refresh Notification

☐	🔍 Name ▲	Class
☐	Asset Refresh Notification Content	Notification Content - Virtual Agent

« 1 to 1 of 1 »

4. On the Asset Refresh Notification record, select the **Actions** tab and create the action.

a. Select **New Provider Action**.

b. When prompted for the type of notification action, select **Virtual Agent**.

c. On the form, fill in the fields.

Notification Action - Virtual Agent form

Field	Description
Name	Unique name for this action. For example, enter Asset Refresh Notification Action .
Notification	By default, Asset Refresh Notification .
Active	Ensure this option is selected.
Topic	The name of the published Asset Refresh Virtual Agent topic you created in previous steps.

d. Select **Submit**.

Additional Recipients Contents (1) **Actions (1)** Link Actions to Content Logs

≡ 🔍 Name Search ⚙️ — Actions on selected rows... **New Provider Action**

Notification = Asset Refresh Notification

☐	🔍 Name ▲	Active	Class
☐	Asset Refresh Notification Action	true	Notification Action - Virtual Agent

« 1 to 1 of 1 »

5. On the Asset Refresh Notification record, select the **Link Actions to Content** tab to map the actions to the content.

a. Select **New**.

b. On the form, fill in the fields.

Actionable Content form

Field	Description
Name	Unique name for the actionable content. For example, enter Asset Refresh Actionable Content .
Notification	By default, Asset Refresh Notification .

Field	Description
Actions	Select the lock icon  , and then type in the search field or select the search icon  to locate the action you created on the Actions tab in the previous step.
Content	The name of the Asset Refresh provider content record you created on the Contents tab in a previous step.
Disable skip	Leave this option unselected.
Active	Leave this option selected.

<

≡

Actionable Content

New record




* Name

Asset Refresh Actionable Content

Notification

Asset Refresh Notification

ⓘ

* Actions


Asset Refresh Notification Action

* Content

Asset Refresh Notification Cont

🔍

ⓘ

Disable skip

☐

Active

☒

Submit

c. Select **Submit**.

(Legacy) NLU channels in Conversational Interfaces

The various ways in which your end users engage with virtual and live agents are called channels. In Conversational Interfaces, users and agents converse through channels that have specific communication modes: chat mode for real-time conversations and messaging mode for long-running conversations.

Conversation channels provide your end users and agents with different options for interacting. These options are based on when your users and agents are available to connect, and the chat applications used in your business environment. There are two types of channels: chat channels and messaging channels.

Chat channels

Chat channels support two-way conversations in real time. These conversations may involve a user and a live agent or a user and a virtual agent. This mode of conversation is synchronous, and the user is guaranteed a response. Supported chat channels let your end users and agents interact based on the chat applications (clients) that they're using and when they're available to connect.

The following channels are supported for synchronous chat:

- Service Portal (mweb) chat widget
- Mobile web (mweb) client
- [\(Legacy\) Conversational Integration with Alexa](#)
- [Conversational Integration with Apple Messages for Business](#)
- [Conversational Integration with Google Chat](#)
- [Conversational Integration with LINE](#)
- [Conversational Integration with Microsoft Teams](#)

- [Conversational Integration with Slack](#)
- [Conversational SMS Integration with AWS End User Messaging](#)
- [Conversational Integration with WhatsApp \(powered by Twilio\)](#)
- [Conversational Integration with WhatsApp \(WhatsApp Cloud API\)](#)

Messaging channels

Messaging channels let end users and agents communicate over longer periods of time, especially when one party isn't online. This mode of chat is asynchronous and happens at the parties' convenience.

When your end users and agents must communicate over longer periods without being online concurrently, pre-built messaging channels let them chat asynchronously, at their convenience.

The following channels are available for asynchronous chat:

- Mobile web (mweb) client: Configure this channel for iOS, Android, and desktop devices for [asynchronous chat](#)
- [ServiceNow Otto panel](#) : Used by [ServiceNow Otto panel](#) .
- SMS channel: Used by [Conversational SMS Integration with Twilio](#)

Messaging Channels table

Messaging channels are defined in the Messaging Channels table [sys_cs_channel]. If you're using the [custom chat integration framework](#) to create custom chat integrations, you can specify the channel mode for those integrations—either chat or messaging. For channels such as the mweb channel, you can choose either chat or messaging as well.

Configured channels for an instance

Messaging Channels				
	Name		Search	Actions on selec
<i>i</i> You can use the channels that are preconfigured in your instance or add a new one				
All				
☐	<i>q</i> Name ▲	Type	Opted in all topics by default	Secure
	AI Agent	Chat	true	false
	AI Agent A2A Channel	Chat	true	false
	AI Agent Background	Chat	true	false
	AI Voice Agent	Phone	false	false
	Alexa	Chat	false	false
	Amazon Connect	Phone	false	false
	Bot to Bot	Chat	true	false
	CC Voice	Phone	false	false
	Contact Center	Phone	false	false
	Facebook Messenger	Messaging	true	false
	Google Assistant	Chat	false	false
	mweb	Chat	true	true
	NASS	Chat	true	true
	Now Assist Panel	Chat	true	false
	Slack	Chat	true	false
	SMS	Messaging	false	false
	Teams	Chat	true	false
	Teams Copilot	Chat	true	false
	Workplace	Chat	true	false

Live agent support by channel

Not all channels may be suitable for live agent support. For example, you may want to disable support for the Bot-to-Bot and voice channels. Live agent support is enabled by default, but admins can change this setting in the Messaging Channels [sys_cs_channel] table. For details, see [Disable live agent support for a channel](#).

Chat and messaging features

The Conversational Interfaces channels offer basic features that make it easy for your agents and end users to stay connected:

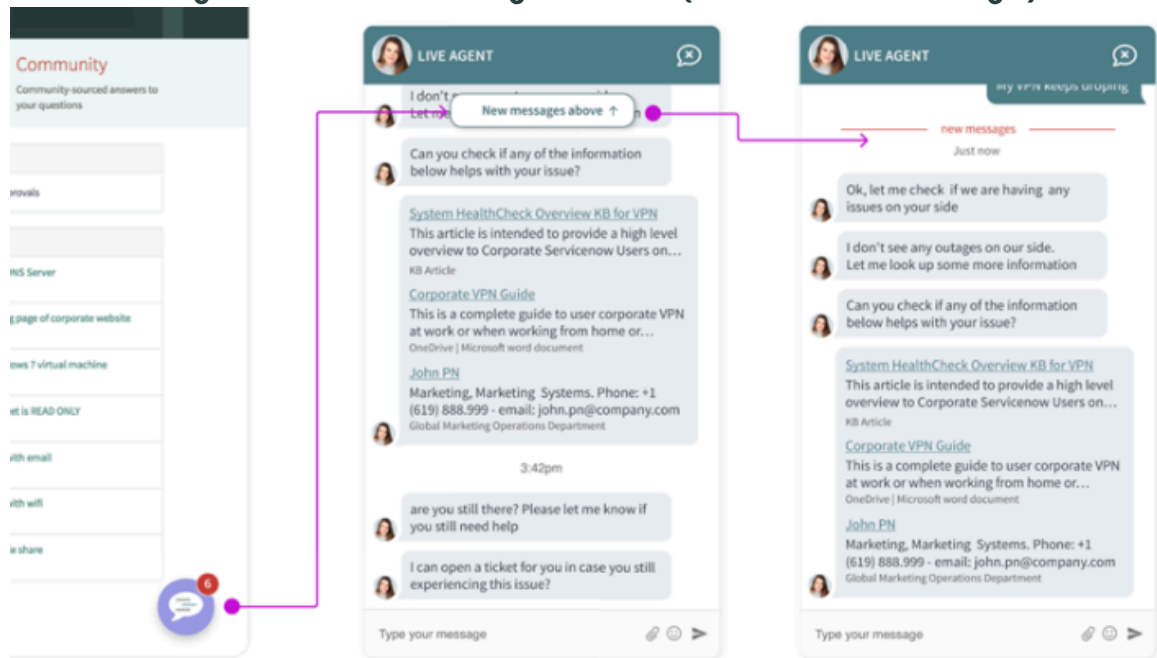
- Message indicators that inform your users of new and unread messages received when they're away from chat or when they've been offline.
- Typing indicators that show a chat participant is responding.
- System messages, displayed to users and agents that provide information about the conversation state.
- Secure handling of sensitive data, such as passwords or account numbers. This data is masked when users enter the information, and it cannot be viewed by others.
- Automatic closing of [idle chat or messaging conversations](#).

New and unread message indicators

End users receive new message indicators on chat and messaging channels when they're offline. Users can be anonymous (guests) or known (authenticated). The unread message count is displayed on the chat widget.

In asynchronous chat, the unread message count reflects the number of any offline messages sent by a live agent and any simple notifications received.

Unread message count and new message indicators (Service Portal chat widget)



Message indicators are displayed as follows:

- There is no limit on the number of unread messages. Up to 50 unread messages can be viewed at a given time. Messages can span multiple conversations, either open (current) or closed (past) conversations.
- When users open the chat client, they're shown the last message received. They can scroll up or down to read the unread messages, as directed by the **New messages above** button or **New messages below** button.
- A new messages separator line is displayed between the read and unread messages.
- When a user closes and reopens the chat window, the messages displayed are considered as "read" even though the user might not have reviewed them.

System messages

During active conversations with live or virtual agents, certain system messages inform users and agents about the conversation state. For example, if a user is engaged in live chat, but doesn't respond within a certain amount of time, a conversation timeout message is displayed: `The conversation is timing out, are you still there?`

You can change base system messages by editing their related system properties in Chat Settings in the Conversational Interfaces console.

(Legacy) Virtual Agent Lite

Virtual Agent Lite is a limited version of Virtual Agent that is available to ITSM standard customers.

Starting with the Brazil release, Virtual Agent Lite is being prepared for future deprecation. It will be hidden and no longer activated on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#)  article in the Now Support Knowledge Base.

About Virtual Agent Lite

Use Virtual Agent Lite, to implement a virtual agent that provides IT service assistance using several pre-built ITSM conversations. As with Virtual Agent, you can set up and configure the chat clients for your end users. Use Virtual Agent Designer to review, duplicate, and publish the pre-built conversation topics for your end users.

Virtual Agent Lite is preinstalled in your instance. To use it, you must install ITSM Virtual Agent Conversation Topics Lite, which provides several pre-built conversations for common IT support requests. These keyword-based conversations run in the web chat client and also in Virtual Agent messaging integrations for the following channels:

- Slack
- Microsoft Teams
- Facebook Messenger

Virtual Agent Lite features

For Brazil, the Virtual Agent Designer features available in Virtual Agent Lite include the following:

- Localization Framework integration.

The Localization Framework is used in multi-language topic authoring and translations. The Localization Framework is installed automatically with Virtual Agent. Activate the ServiceNow®  plugin for each language you want to support. For more information, see [Activate a language](#) .

In Virtual Agent Lite, information in the **Languages** tab is read-only.

- Control topic discovery and visibility.

The **Active** option of the header includes two options (toggle switches). Admins and topic authors can use these options to do one or both of the following:

- Enable Virtual Agent to discover topics for use in chats.
- Include a topic in the **All Topics** menu. This menu lists all of the topics that are available for use.

For more information about using these options, see [Control topic discovery and visibility](#).

After using Virtual Agent Lite, you can upgrade to Virtual Agent to access all of the features. Contact your ServiceNow account representative for upgrade information.

Virtual Agent Lite limitations

Virtual Agent Lite has the following limitations:

- Virtual Agent Designer limitations: Virtual Agent Lite only supports conversation topics in the ITSM self-service category (including related topic blocks) and the platform setup topics. This means you can't do the following:
 - Create new topics, topic blocks, or custom controls.
 - Specify the conditions that control how or when the topics are used.
 - Specify the Live Agent (chat) variables that provide context for conversations.
 - Enable the **Available for Agent Autopilot** toggle switch.

 **Note:** A lock icon displays next to the Virtual Agent Designer fields that are not available in Virtual Agent Lite.

- Keyword-based conversations: Virtual Agent Lite only supports keyword-based conversations. Natural Language Understanding (NLU) models and NLU-enabled topics aren't supported. This means that related NLU features, such as topic switching and multi-language NLU models, are also not supported. Language support is available for conversations through ServiceNow AI Platform [language internationalization](#) .
- Virtual Agent tables: Virtual Agent tables are read only for admins and Virtual Agent admins.
- Localized content: Translated content is read-only. You can't add new translations or localize content. The **Languages** tab displays a banner asking users to contact their Account Executive for more information about upgrading to the latest release.
- Custom channels: You can't run Virtual Agent Lite topics in any custom chat channels (created through custom chat integrations), except for the supported Virtual Agent integrations for Slack, Microsoft Teams, Workplace by Facebook, and Facebook Messenger applications.
- Virtual Agent notifications: You can receive only simple and non-actionable notifications. Actionable notifications are not supported with Virtual Agent Lite.
- Virtual Agent Analytics Dashboard: This feature is not available in Virtual Agent Lite.

What to do

Set up and configure Virtual Agent Lite. For details, see [\(Legacy\) Quick start for Virtual Agent Lite](#).

(Legacy) Quick start for Virtual Agent Lite

Virtual Agent Lite comes pre-installed, so all you have to do to try it is activate the ITSM Virtual Agent Conversation Topics Lite plugin and set it up.

Before you begin

If you plan to integrate Virtual Agent Lite with Slack, Microsoft Teams, Workplace, or Facebook Messenger apps, you must be an administrator for those messaging apps.

Role required: virtual_agent_admin or admin

Procedure

1. Activate the ITSM Virtual Agent Conversation Topics Lite plugin:
 - a. Navigate to **All > Plugins**.
 - b. In the Search field, type **ITSM Virtual Agent**.
 - c. Find the entry for ITSM Virtual Agent Conversation Topics Lite (com.snc.itsm.virtualagent.lite), and then select **Activate**.
2. **Optional:** Configure Virtual Agent Lite for additional portals.

Virtual Agent Lite appears in the Service portal by default. For more information about configuring the Service portal, see [Service Portal events](#) .

3. Preview and test ITSM Virtual Agent Lite topics in Virtual Agent Designer.

Two topics are available for use with Virtual Agent Lite.

4. Duplicate and publish ITSM Virtual Agent Lite topics.

Users can now access Virtual Agent Lite topics.

(Legacy) Preview and test ITSM Virtual Agent Lite topics

Run a pre-built IT Service Management (ITSM) Virtual Agent Lite topic to decide whether you want to deploy it to your end users.

Before you begin

Activate the plugin. For more information, see [ITSM Virtual Agent Conversation Topics Lite](#)  (com.snc.itsm.virtualagent.lite).

Role required: virtual_agent_admin or admin

Procedure

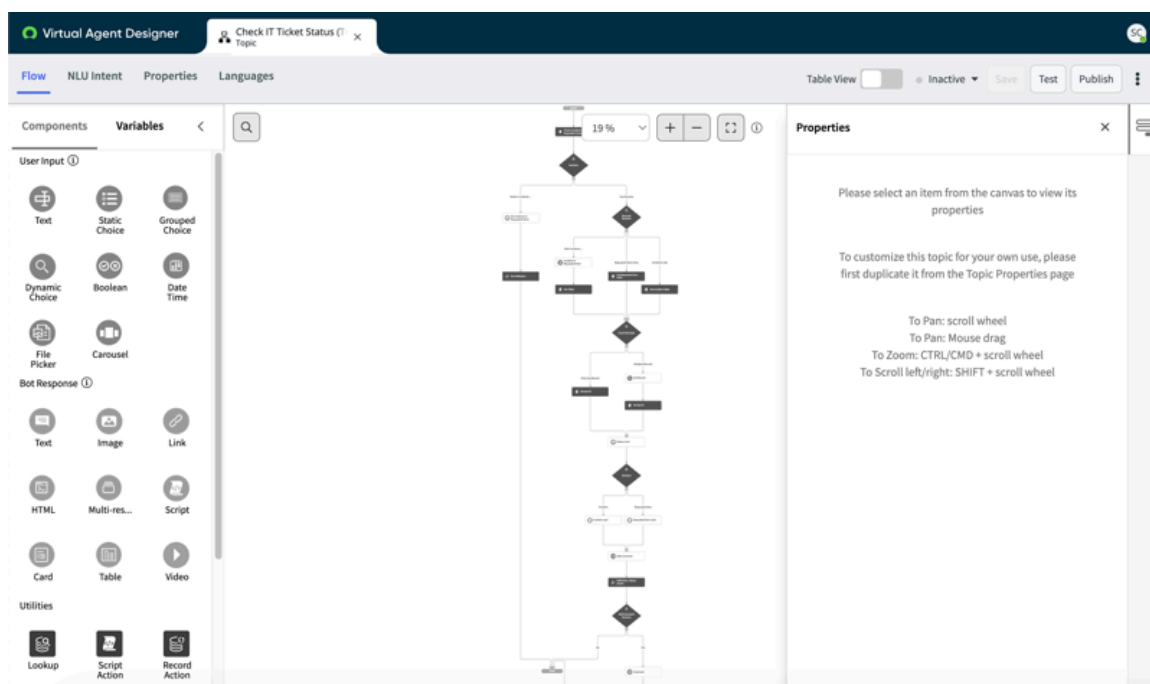
1. Navigate to **All > Conversational Interfaces > Assistant Designer.**

2. Select the **Asset library tab.**

3. In the Asset library, select the filter icon , and build a condition with the field **Category, and **ITSM Self Service Lite** as the type to show only ITSM Virtual Agent Lite conversations.**
Two pre-built topics are available: Check IT Ticket Status and Report IT Issue.

4. Select the topic that you want to preview.

In the **Flow** tab, the Virtual Agent Designer canvas opens with a read-only view of the topic flow. You can resize the canvas to see the nodes in the flow, but you can't add or change controls and their related property sheets.



5. Select **Test to run the conversation in a test chat window.**

For example, if you're testing the Check Ticket Status topic, the test chat window runs the conversation and lets you respond to the prompts displayed. You can also view the test logs to

see the messages logged and conversation tasks performed during the conversation, as well as the variables used in the conversation.

The screenshot displays the ServiceNow Virtual Agent Designer interface. On the left, a conversation log shows a user asking about open incidents and requested items. The virtual agent responds with an incident summary for 'INC0010111'. The summary includes the short description 'ATF : Test1', the state 'New', and the update time '2019-07-22 14:05:48'. The user is then prompted to add a comment, with 'Yes' and 'No' options. On the right, a 'Logs' tab is selected, showing a list of messages with timestamps and context. The messages include topic updates, task primary messages, and new task instance creations.

Test this topic | Create test case | ☰

Analyze test phrases | Variables | Context | **Logs**

12:42:37.928 [Context] TopicId: 01ab994ddc1d1010f877653c9898f97f [ConversationImpl] _PRVW__90abd54d371d1010de579c6cc578ded5 Updated topic title to system-01ab994ddc1d1010f877653c9898f97f, conversationId 01ab994ddc1d1010f877653c9898f97f

12:42:37.927: _PRVW__90abd54d371d1010de579c6cc578ded5 Updated topic title to system-01ab994ddc1d1010f877653c9898f97f, conversationId 01ab994ddc1d1010f877653c9898f97f

12:42:37.767 [Context] TopicId: 01ab994ddc1d1010f877653c9898f97f [ConversationImpl] _PRVW__90abd54d371d1010de579c6cc578ded5 topic received message for task primary, message type Picker

12:42:37.765: _PRVW__90abd54d371d1010de579c6cc578ded5 topic received message for task primary, message type Picker

12:42:25.547 [Context] TopicId: 01ab994ddc1d1010f877653c9898f97f [TaskStateManager] Task primary sent greeting message

12:42:25.546: Task primary sent greeting message

12:42:25.542 [Context] TopicId: 01ab994ddc1d1010f877653c9898f97f [TaskStateManager] New task instance created for task primary

12:42:25.541: New task instance created for task primary

Incident

OK, here is your incident:

Incident INC0010111

Short description ATF : Test1

State New

Updated 2019-07-22 14:05:48

Would you like to add a comment?

Yes

No

Please pick an option.

What to do next

If you'd like to deploy a topic, [duplicate and publish the topic](#) so that it's available to your users.

(Legacy) Duplicate and publish Virtual Agent Lite topics

Copy and publish a pre-built ITSM Virtual Agent Lite topic to deploy it to your users.

Before you begin

[Preview \(test\) the pre-built ITSM Virtual Agent Lite topics.](#)

Role required: virtual_agent_admin or admin

Procedure

1. In the topic that you've tested, select **Duplicate** in the triple-dot icon on the Virtual Agent Designer header bar.
 - a. In the pop-up window, enter the name of your duplicated topic.
 - b. Select **Save**.

The **Topic Properties** page (**Properties** tab) for your duplicated topic opens.

Note: You can duplicate a pre-built topic but you can't duplicate a copy of a pre-built topic.

2. Change these property fields as needed:

Property	Description
Description	A brief explanation of the topic.
Keywords	A word or phrase that is associated with and activates the topic. You can add, change, or delete keywords.
Roles	Roles that an end user must have to view and run the topic. If a topic is public (available to users, including guest users, who are not authenticated in ServiceNow), select only the Public role.

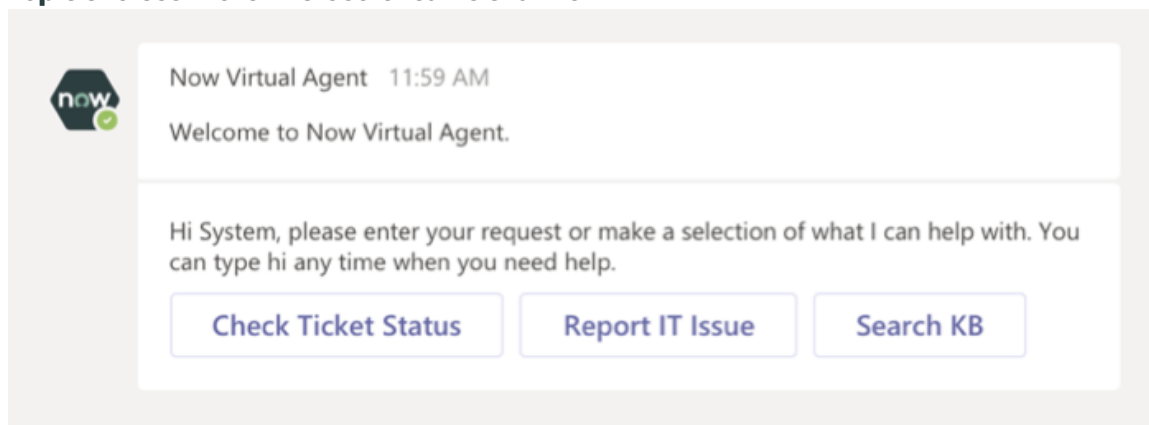
3. Select **Save**, and then select the triple-dot icon followed by **Publish**, to make the topic active and available in your chat clients.

Result

When your users run Virtual Agent, the chat client displays the published topics in the topic selection menu. If there are three or fewer topics available to the user, the menu items (topics) are displayed as buttons.

For example, in the Microsoft Teams integration, the topic selection menu displays these three topics as buttons.

Topic choices in the Microsoft Teams channel



(Legacy) Activating Virtual Agent NLU and getting started

Using the Conversational Interfaces console, you can quickly add Virtual Agent to a portal, configure branding, personalize the greeting, and begin to use pre-built ITSM Virtual Agent conversations.

Starting with the Brazil release, Virtual Agent for NLU and Virtual Agent Lite are being prepared for future deprecation. It will be hidden and no longer activated on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support Knowledge Base.

Before you begin

If you have a license for Virtual Agent, the following sections will help you get started and create conversations for your organization quickly.

If you do not have a license for Virtual Agent, you can try Virtual Agent Lite, which comes preinstalled. For information about getting started with Virtual Agent Lite, see [\(Legacy\) Quick start for Virtual Agent Lite](#).

Get started with Virtual Agent

1. Activate Virtual Agent for NLU

You can activate the Glide Virtual Agent plugin (com.glide.cs.chatbot) if you have the admin role. This plugin automatically activates other necessary plugins if they are not already active.

2. Install NLU conversational plugins

Install predefined conversations for your business applications, NLU tools, and the Conversational Analytics dashboard.

3. Add Agent Chat to a portal

Add a chat entry to the menu of your web portal. You can add Virtual Agent to additional portals later.

For conversations based on generative AI large language models (LLMs), you can quickly set up Now Assist in Virtual Agent and add it to a portal. For information about adding Now Assist in Virtual Agent to a portal, see [Assistants overview](#).

4. Set up your Virtual Agent bot's branding

Change the way Virtual Agent looks to the end user. You can change the colors, add your company logo, and change the icon that represents your bot.

5. Get recommended topics for your instance

Use the Topic Recommendations app to identify prebuilt Virtual Agent topics that can be quickly implemented in your organization.

Explore further

As you work with Virtual Agent, you can expand its capabilities by implementing other features. For example, you can do the following:

- [Set up chat experiences for Virtual Agent NLU users](#)
- [Create new Virtual Agent NLU topics](#)
- [Change Virtual Agent and Agent Chat system messages](#)
- [Enable AI Search](#)
- [Implement Natural Language Understanding \(NLU\)](#)
- [Use Virtual Agent with a live agent](#)
- [Use language detection and dynamic machine translation in Virtual Agent](#)
- [Localize Virtual Agent topics](#)

(Legacy) Activate Virtual Agent for NLU

You can activate the Glide Virtual Agent plugin (com.glide.cs.chatbot) if you have the admin role. This plugin automatically activates other necessary plugins if they are not already active.

Before you begin

Role required: admin

About this task

You must have a subscription for Virtual Agent before you can activate the Glide Virtual Agent plugin.

Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.
2. Find the Glide Virtual Agent plugin (com.glide.cs.chatbot) using the filter criteria and search bar.

You can search for the plugin by its name or ID. If you cannot find a plugin, you might have to request it from ServiceNow personnel. For more information, see [Request a plugin](#) .

3. Select **Install**, and then in the Activate Plugin dialog box, select **Activate**.

Note: When domain separation and delegated admin are enabled in an instance, the administrative user must be in the **global** domain. Otherwise, the following error appears: Application installation is unavailable because another operation is running: Plugin Activation for <plugin name>.

What to do next

Activate [additional Virtual Agent for NLU plugins](#) for related features, such as the plugins for predefined Virtual Agent topics.

(Legacy) Configuring Virtual Agent for NLU

Configure the Virtual Agent features, components, and integrations that you need to provide support to your employees, IT teams, and customers.

Starting with the Brazil release, Virtual Agent for NLU and Virtual Agent Lite are being prepared for future deprecation. It will be hidden and no longer activated on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#)  article in the Now Support Knowledge Base.

Conversational Interfaces Console

Use the Conversational Interfaces Console to activate and configure Virtual Agent. Some of the general settings in the console are shared with other applications, such as Agent Chat.

Virtual Agent settings

I want to...	See these topics
Get recommendations for Virtual Agent topics based on my data	(Legacy) Quick start for Topic Recommendations
Configure performance tracking for Virtual Agent topics	(Legacy) Create deflection configurations and patterns

Virtual Agent settings (continued)

I want to...	See these topics
Use Natural Language Understanding (NLU) for topic discovery	(Legacy) Configure Natural Language Understanding in Virtual Agent Creating models  (using NLU Workbench)
Create custom greetings and setup topics	(Legacy) Configure a Virtual Agent NLU chat experience
Determine which issues are routed to Virtual Agent first	(Legacy) Configure and run an Issue Auto Resolution simulation
Send notifications to users in Virtual Agent	Configuring Virtual Agent notifications Enable Virtual Agent notifications
Use AI Search to return fallback results for Virtual Agent	(Legacy) Implementing AI Search in NLU
Detect and dynamically translate Virtual Agent topics into a different language	Language detection and dynamic machine translation in Virtual Agent in enhanced chat

Virtual Agent security

Platform hardening for your instance is leveraged by Virtual Agent, so you should follow the overall platform hardening recommendations. For details, see [Secure your instance](#) .

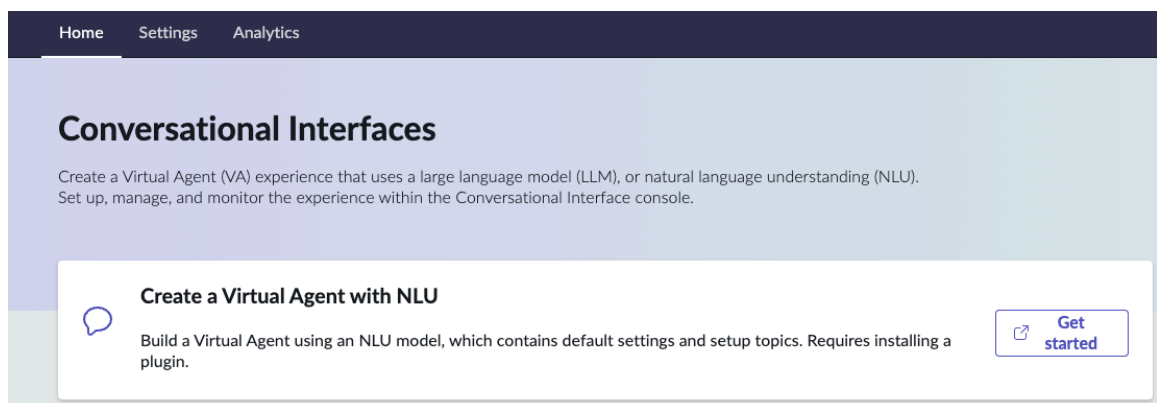
(Legacy) Installing Conversational Interfaces NLU components

Use the Conversational Interfaces Home page to install Virtual Agent and related plugins. Once installed, select a card to customize your bot or set up Agent Chat.

If you've never installed Virtual Agent, the Conversational Interfaces console prompts you to do so first. The layout of the **Home** page may vary, depending on which features you have installed and configured.

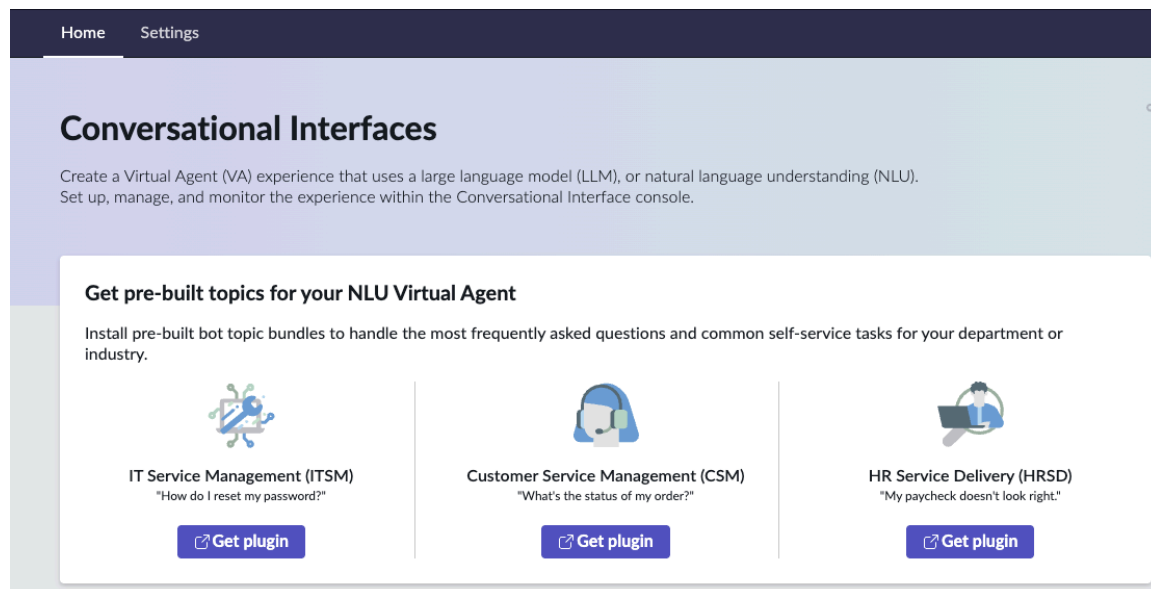
Install Virtual Agent

To begin, you must install the Virtual Agent plugin. Select **Get started** to install it.



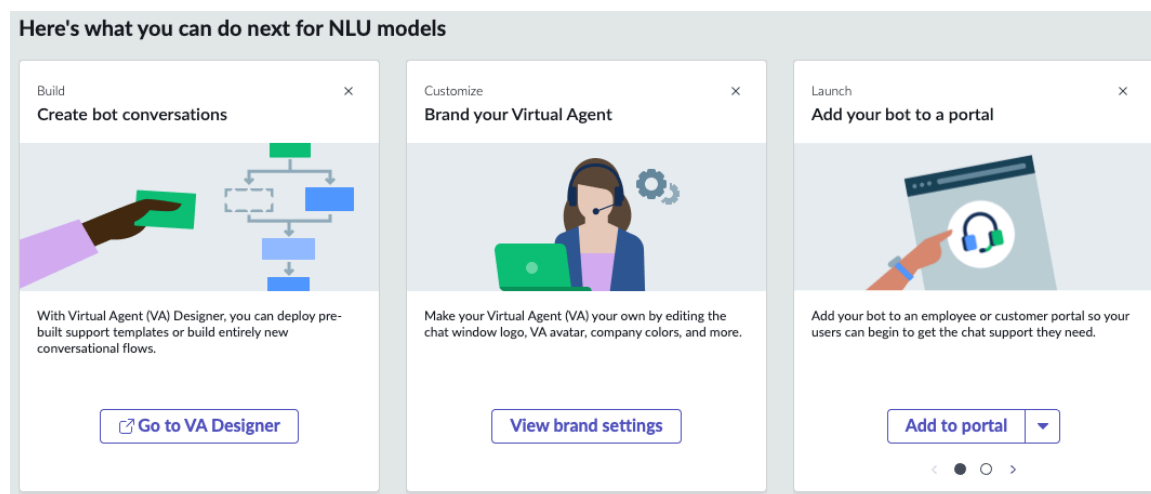
Get pre-built bot topics

Activate plugins that provide the pre-built topic conversations you want to use to handle common user requests. For example, IT-related support issues, such as resetting a password or HR-related issues such as requesting a leave of absence. For more information, see [\(Legacy\) Prebuilt Virtual Agent topics, topic blocks, and ServiceNow NLU models](#).



Here's what you can do next

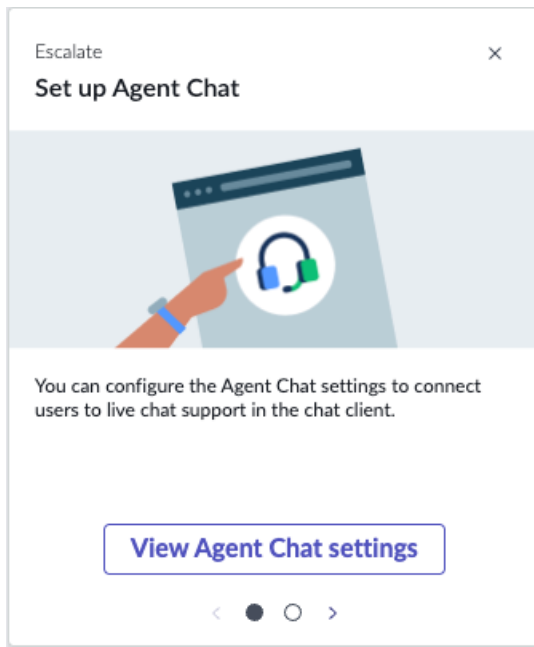
Explore popular Virtual Agent settings from the Conversational Interfaces Home page. Next steps typically include branding your bot, adding it to a portal that your users can access, and creating conversations in Virtual Agent Designer.



Before implementing your Conversational Interfaces, take some time to ask and answer a few important questions meant to help you envision the Conversational Interfaces experience you need and want for your business. Browse the **Get the essentials for your Virtual Agent** section for more options.

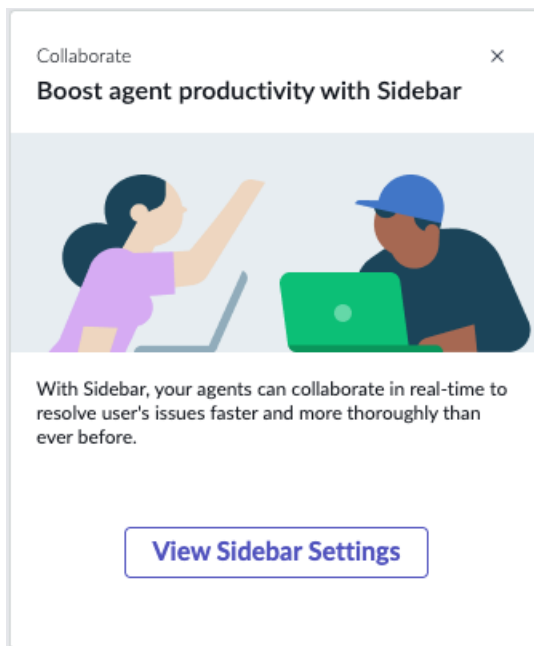
Set up Agent Chat

Activate and set up Live Agent support. Set up agent names and avatars, set agent status messages, and determine whether agents can view user chat history.



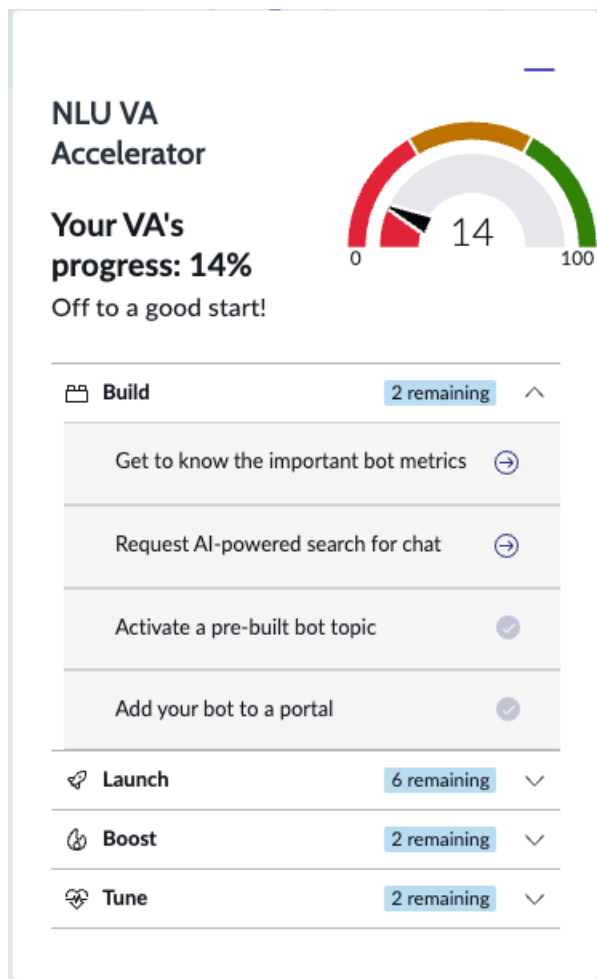
Install Sidebar

Provide live agents with a way to collaborate with others while they work on a Workspace record.



NLU VA Accelerator progress panel

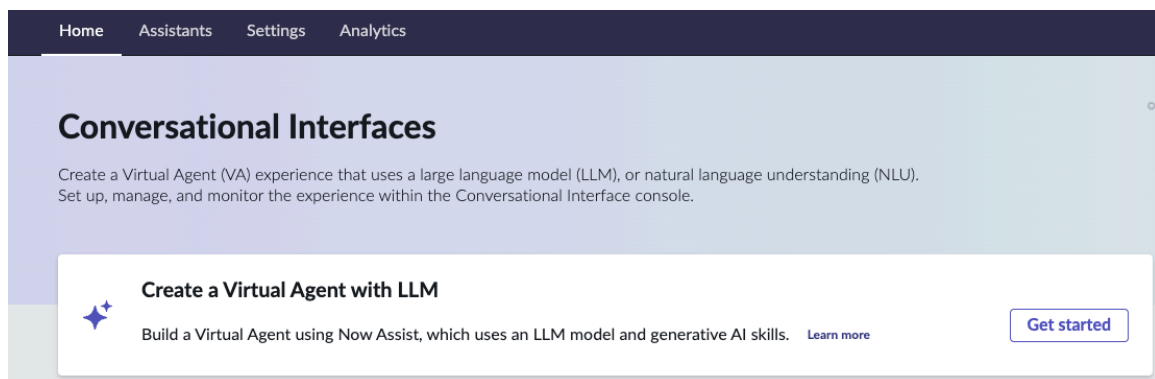
The progress panel quickly shows you what has been configured and what tools remain unconfigured or inactive.



Create a Virtual Agent with LLM

If you have installed a Now Assist product, you can use the guided setup to install Now Assist in Virtual Agent. You can then activate the Now Assist Topics skill and create Virtual Agent topics that use LLM discovery. Select **Get started** to use the guided setup.

For more information, see [Exploring Virtual Agent](#).



(Legacy) Plugins installed with Virtual Agent for NLU

Various types of components are installed with activation of the Glide Virtual Agent [com.glide.cs.chatbot] plugin, including tables and user roles.

Note: The Application Files table lists the components that are installed with this application. For instructions on how to access this table, see [Find components installed with an application](#).

Plugins installed

The following table lists the plugins that are installed when you activate Virtual Agent.

Plugins automatically installed with Glide Virtual Agent

Plugin	Description
Conversational Analytics [com.sn.conversational.analytics]	Enables the ServiceNow Conversational Analytics app. Note: Subsequent updates for the Conversational Analytics app must be installed from the ServiceNow Store.
Integration - Multiple Provider Single Sign-On Installer [com.snc.integration.sso.multi.installer]	Enables authentication for multiple identity providers (IDPs) using SAML or OpenID connect(OIDC).
Localization Framework Installer [com.glide.localization_framework.installer]	Provides the framework for localization of Virtual Agent conversations.
NLU Model for Virtual Agent Setup Topics [com.glide.cs.nlu.topics]	Installs the NLU model for Virtual Agent Setup topics.
Proxy Agent to the ServiceNow Natural Language Understanding Server [com.glide.nlu.intent.discovery]	Activates the connection to the ServiceNow NLU server for NLU intent discovery. Used by Virtual Agent and other clients. Activates: - NLU Workbench - Core [com.glide.nlu] - Predictive Intelligence [com.glide.platform_ml] - Proxy agent for connecting to NLU providers [com.glide.nlu.proxy] - Proxy agent for connecting to NLU providers
Proxy Agent to the IBM Watson Natural Language Understanding server [com.glide.nlu.ibmwatson.intent.discovery]	Activates the IBM Watson Assistant Intent and Entity integration, which enables Virtual Agent to use intents, entities, and utterances defined in IBM Watson Assistant.
Proxy Agent to the Google Dialogflow ES Natural Language Understanding server [com.glide.nlu.googledialogflow.es.intent.discovery]	Activates the Google Dialogflow ES integration, which enables Virtual Agent to use intents, entities, and utterances defined in Google Dialogflow ES.

Plugins automatically installed with Glide Virtual Agent (continued)

Plugin	Description
Topic Recommendations [com.snc.va_topic_recommender]	Enables the ServiceNow Topic Recommendations app. Note: Subsequent updates for the Topic Recommendations app must be installed from the ServiceNow Store.
Virtual Agent integration with actionable notifications com.glide.cs.actionable.notification	Enables ServiceNow actionable notifications on Virtual Agent channels.

Roles installed

With the Virtual Agent administrator [virtual_agent_admin] role, users can create and manage topics (bot conversations), using Virtual Agent Designer.

- If using Natural Language Understanding, the NLU admin role is included.
- If the Virtual Agent admin is granted access to AI Search-related tables, the search application administrator role [search_application_admin] is included.
- If the Virtual Agent admin is granted access to Entity View Action Mapper tables, the EVAM admin role [evam_admin] is included.
- For multilanguage support, the localization_requestor role is included by default. For more information, see [Localization Framework roles](#) .
- For more information on the roles contained in virtual_agent_admin, see [Components installed with Virtual Agent](#).

Users installed

The Glide Conversation Server plugin (com.glide.cs) automatically installs a virtual agent user (virtual.agent) in the User [sys_user] table. Ongoing [Virtual Agent interactions](#) are assigned to this virtual agent user. If you're using Advanced Work Assignment (AWA), interactions assigned to the virtual agent user are not routed by AWA. The virtual agent user is also used in the default web chat branding settings to associate a virtual agent user profile with a bot avatar.

Tables installed

Table	Description
Adapter Configurations [sys_cs_adapter_configuration]	Stores records for default keywords, labels, and message values for third-party messaging integrations.
Adapter Configuration Page [sys_cs_adapter_configuration_page]	Stores the configuration for third-party messaging integrations. This table is the root table for:

Table	Description
	- Configurations - Slack Integration [sys_cs_adapter_configuration_page_slack] - Configurations - Teams Integration [sys_cs_adapter_configuration_page_teams] - Configurations - Workplace Integration [sys_cs_adapter_configuration_page_workplace] - Configurations - Facebook Messenger Integration [sys_cs_adapter_configuration_page_messenger]
Adapter Message [sys_cs_adapter_message]	Stores adapter messages.
Brandings [sys_cs_branding_setup]	Stores different branding configurations for the web-based chat client used in an instance.
Client Adapter [sys_cs_client_adapter]	Stores each adapter state.
Consumer Channel [sys_cs_consumer_channel]	Stores consumer channel information.
Consumer Device Context [sys_cs_consumer_device_context]	Stores consumer device context information.
Context Topics [sys_cs_context_topic]	Stores different configurations for determining the appropriate conversation topic displayed to end users based on their pre-chat survey answers.
Conversation [sys_cs_conversation]	Stores a record for each conversation on the instance. Each record includes the Conversation Task [sys_cs_conversation_task] and Conversation Message [sys_cs_message] related lists, which show all the topics run and associated messages presented in the conversation.
Conversation Consumer [sys_cs_consumer]	Stores a record representing the user in a conversation, and references the associated sys_user record for that user.
Conversation Server Field Script Validators [sys_cs_field_script_validator]	Stores text format validation rules and default error messages. Read-only.
Custom Controls [sys_cs_custom_control]	Identifies custom controls.

Table	Description
Custom Control Definitions [sys_cs_custom_control_definition]	Binds a client type (for example, web or mobile) to a custom control.
Conversation Media [sys_cs_media]	Media attached to conversations are stored in sys_attachment, and associated to this table.
Conversation Message [sys_cs_message]	Stores a record for each message in a conversation. Shows the messages displayed for each topic in the conversation flow.
Conversation Server Connect Hand-off [sys_cs_connect_handoff]	Stores mapping of Virtual Agent conversations and Connect/Workspace conversations.
Conversation Session [sys_cs_session]	Stores a record for each conversation.
Conversation Task [sys_cs_conversation_task]	Stores a record for each conversation task. Each record shows the conversation flow, which can include multiple topics that are run during the conversation.
Conversation Task FDIH Invocations [sys_cs_fdi_h_invocation]	Tracks the state of a call to a Workflow Studio action or subflow in a conversation.
Conversation Vendor [sys_cs_vendor]	Stores vendor information.
CS Consumer Account [sys_cs_consumer_account]	Stores third-party user information.
Custom Greetings and Setup [sys_cs_context_profile]	Stores a profile record for context-driven chat experiences. Contains customizations in the following child tables: • Setup topics [sys_cs_context_profile_topic] - Stores the setup topics used for each setup topic type. • Promoted topics [sys_cs_context_profile_promotion] - Stores the topics that are highlighted in the Virtual Agent client. • Search Profiles [sys_cs_context_profile_search] - Stores the AI search profile for the associated chat experience.
Custom Controls [sys_cs_custom_control]	Stores the custom input and response controls.

Table	Description
Custom Control Definitions [sys_cs_custom_control_definition]	Binds a client type (for example web chat client) to a custom control. Stores the channel, domain, and user interface component defined for a custom control.
General Settings [sys_cs_general_settings]	Stores the records for the NLU configuration.
Live Agent Setup [sys_cs_live_agent_setup]	Stores the Live Agent setup with queue information.
Live Agent Support Queue Cache [sys_cs_support_queue_cache]	The database cache used for support queue wait times.
Open NLU Drivers [open_nlu_driver]	Stores the records of the NLU service providers used in the instance. Identifies the base system NLU provider and other services installed, such as IBM Watson NLU.
Open NLU Driver Http Connections [open_nlu_driver_http_connection]	Stores all the HTTP connection references for the NLU service provider.
Open NLU Driver Languages [open_nlu_driver_language]	Lists the language codes for the NLU service providers (ServiceNow NLU and IBM Watson Assistant). Identifies the driver codes and associated languages.
Open NLU Predict Entity Feedbacks [open_nlu_predict_entity_feedback]	Stores the disposition taken by an application in response to an NLU entity prediction result. For example, in Virtual Agent the goal is to map a predicted NLU entity to an input variable in a Virtual Agent topic.
Open NLU Predict Intent Feedbacks [open_nlu_predict_intent_feedback]	Stores the disposition taken by an application in response to an NLU intent prediction result. For example, in Virtual Agent the goal is to map a predicted NLU intent to a Virtual Agent topic.
Published Topic [sys_cb_design_topic]	Stores design topic definitions and references the runtime topic.
Session Binding [sys_cs_session_binding]	Stores session binding and AMB channel information.
Configurations - Slack Integration [sys_cs_adapter_configuration_page_slack]	Extends the sys_cs_adapter_configuration_page table. Stores the configuration for the Slack messaging application.
Configurations - Facebook Messenger Integration	Extends the sys_cs_adapter_configuration_page table. Stores the configuration for the Facebook Messenger messaging application.

Table	Description
[sys_cs_adapter_configuration_page_messenger]	
Teams Adapter Configuration Page [sys_cs_adapter_configuration_page_teams]	Extends the sys_cs_adapter_configuration_page table. Stores the adapter configuration for the Microsoft Teams messaging application.
Workplace Adapter Configuration Page [sys_cs_adapter_configuration_page_workplace]	Extends the sys_cs_adapter_configuration_page table. Stores the adapter configuration for the Workplace messaging application.
Vendor Client Adapter Configuration [sys_cs_vendor_client_adapter_configuration]	Stores the adapter configuration for third-party messaging applications.
Topic [sys_cb_topic]	Stores a record for each topic (design-time definition).
Topic [sys_cs_topic]	Stores an instance of a topic from sys_cb_topic at run time. Records on this table are cleaned every 12 hours.
Topic Category [sys_cb_topic_category]	Stores all the categories that identify the different types of topics, such as setup topics and small talk topics. Also includes custom categories defined by admins.
Topic Library Usages [sys_cs_topic_library_usage]	Stores references to published topic blocks.
Vendor Context Configuration [sys_cs_vendor_context_configuration]	Stores vendor-specific device context information.
Virtual Agent Context [sys_cs_virtual_agent_context]	Stores Virtual Agent context variables.

Properties installed

Property	Description
com.glide.cs.branding.msg_delay	Minimum delay between bot messages
com.glide.cs.branding.type_presence_delay	Minimum delay before displaying typing animation
com.glide.cs.conversation_faulted_reason	Message that displays the following default message when a conversation has faulted: It seems that you have left the conversation.
com.glide.cs.general.error_message	Generic error message

Property	Description
com.glide.cs.general.live_agent_handoff_error_message	Message when no live agent has been set up
com.glide.cs.general.live_agent_handoff_message	Message to display when handing over to a live agent
com.glide.cs.general.support_email	General support email
com.glide.cs.general.support_hours	General support hours
com.glide.cs.general.support_phone	General support phone
com.glide.cs.global_configuration	The sys_id of the default configuration page (sys_cs_configuration_page)
com.glide.cs.javascript.reserved_words	Reserved words in JavaScript that should not be used as variable names or variable names
com.glide.cs.live_agent_queue	The chat queue that users transfer to when a conversation transitions from a virtual agent to a live agent. This default queue is used unless the topic specifies a specific queue to use.
com.glide.cs.suggest.minimum_characters	The minimum number of characters the user must enter in a keyword search before partial matching, phonetic matching, and spellcheck begin to function.
com.glide.cs.suggest.enable_partial_search	Enables partial matching searches on topic searches when set to true.
com.glide.cs.suggest.enable_phonetic_search	Enables phonetic searching on topic searches when set to true.
com.glide.cs.suggest.enable_spell_check	Enables alternate search spellings on topic searches when set to true.

(Legacy) Install NLU conversational plugins for Virtual Agent

Install Virtual Agent plugins for your business areas. These plugins contain predefined conversations and Virtual Agent assets that help users with common self-service tasks, such as creating or updating cases or providing answers to frequently asked questions.

Before you begin

(Legacy) [Activate Virtual Agent for NLU](#).

Role required: admin or virtual_agent_admin

Procedure

1. Navigate to **All > Conversational Interfaces > Home**.
2. Under Choose what type of requests you want your bot to support, select an available plugin, such as **Get ITSM plugin**.

Install the ITSM Virtual Agent Conversations plugin



IT-related support issues (like resetting a password)

[Get ITSM plugin](#)

3. Follow the directions in the ServiceNow Store and select **Opt-in** when prompted.

4. **Optional:** Repeat these steps to install additional plugins.

What to do next

For more information about available Virtual Agent plugins, see [\(Legacy\) Additional plugins for NLU Virtual Agent](#) and [\(Legacy\) Prebuilt Virtual Agent topics, topic blocks, and ServiceNow NLU models](#).

(Legacy) Additional plugins for NLU Virtual Agent

After activating Virtual Agent, you can activate additional plugins to enable other features for conversation design.

You must have the admin role to activate these additional plugins. For details, see [Activate a plugin](#).

Plugin	Description
- Human Resources Service Delivery: HR Service Delivery Virtual Agent Conversations [sn_hr_va] available through the ServiceNow Store - ITSM Virtual Agent conversations [sn_itsm_va] available through the ServiceNow Store - CSM Virtual Agent conversations [com.sn_csm.virtualagent]	Enables predefined Virtual Agent conversations, reusable topic blocks, and prebuilt ServiceNow NLU models for the Customer Service Management, HR Service Delivery, and IT Service Management applications. - Requires the Glide Virtual Agent (com.glide.cs.chatbot) plugin to be activated. - Automatically activates the NLU Workbench (com.snc.nlu_studio) plugin. - Automatically activates the Service Management Virtual Agent Topic Blocks (com.glideapp.cs.sm_topic_blocks) plugin. Includes common topic blocks such as contextual search.
NLU Workbench [com.snc.nlu_studio]	Enables the creation of custom ServiceNow Natural Language Understanding (NLU) models used by Virtual Agent.
NLU Workbench - Advanced Features [com.snc.nlu.workbench.advanced]	Expands the functionality of NLU Workbench by providing conflict review, batch testing, and

Plugin	Description
	model performance features. Available from the ServiceNow® Store.
Conversational Analytics Dashboard [com.sn.conversational.analytics]	Provides insights into user interactions so you can see how well Virtual Agent understood and resolved user issues.

(Legacy) Conversational Interfaces Home for NLU

You can use the Conversational Interfaces console and the **Chat Settings** option in the **Home** page to explore and configure general chat functionality and set up Virtual Agent and Agent Chat features.

Conversational Interfaces cards

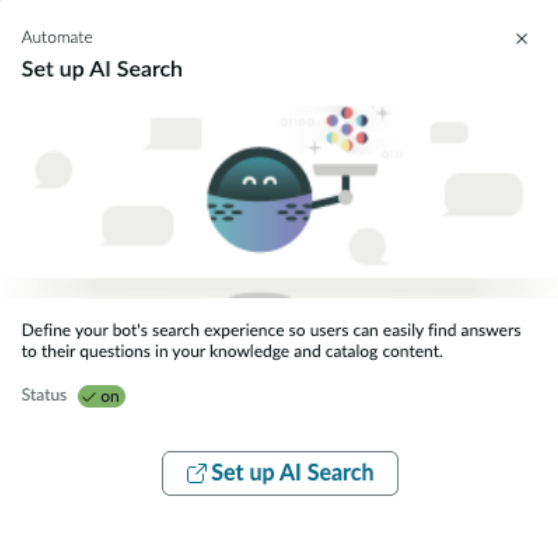
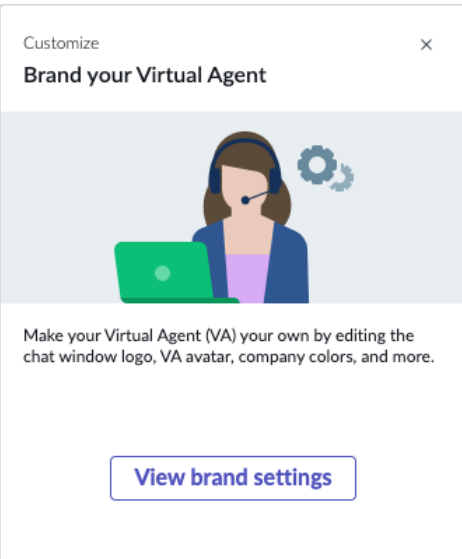
Use the cards on the Conversational Interfaces console to set up features for Virtual Agent and Agent Chat. The cards automatically sort each time you visit and unaddressed features appear first.

For more information, select the question mark at the top right. This opens a contextual help panel.

Chat configuration cards

Card	Feature	Description
Create a Virtual Agent with NLU, which contains default settings and setup topics. 	To create a virtual agent using an NLU model: 1. Select Get started to open a new window with the plugin screen where you can install the com.glide.cs.chatbot plugin. For more information, see (Legacy) Activate Virtual Agent for NLU. 2. After the plugin is installed, return to the previous window and refresh it using your browser's refresh button. 3. Select Settings to display the CI Admin Experience settings page. 4. In the left-hand panel, select Virtual Agent to configure your settings and NLU models. For	

Chat configuration cards (continued)

Card	Feature	Description
	more information, see Configuring Virtual Agent .	
Get pre-built topics for your NLU Virtual Agent Install pre-built bot topic bundles to handle the most frequently asked questions and common self-service tasks for your department or industry.  IT Service Management (ITSM) "How do I reset my password?" Get plugin  Customer Service Management (CSM) "What's the status of my order?" Get plugin  HR Service Delivery (HRSD) "My paycheck doesn't look right." Get plugin	Get pre-built topics	Teach your bot to handle additional requests using pre-built conversation topics.
 Automate Set up AI Search Define your bot's search experience so users can easily find answers to their questions in your knowledge and catalog content. Status ✓ on Set up AI Search	Set up AI Search	Give your users the power to search for answers to their questions or solutions to their requests by adding AI Search to your Virtual Agent bot.
 Customize Brand your Virtual Agent Make your Virtual Agent (VA) your own by editing the chat window logo, VA avatar, company colors, and more. View brand settings	Brand your Virtual Agent	Customize your Virtual Agent bot by selecting the colors and icons, and add a logo that reflects your company's portal.

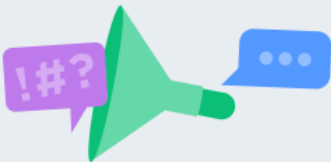
Chat configuration cards (continued)

Card	Feature	Description
Customize Create your VA's greeting  Design and deploy unique Virtual Agent (VA) greetings to meet the needs of your org's HR, CSM, and ITSM user groups. View greeting settings	Create your VA's greeting	Customize your Virtual Agent bot by choosing how it greets and interacts with your users.
Launch Add your bot to a portal  Add your bot to an employee or customer portal so your users can begin to get the chat support they need. Add to portal < ● ○ >	Add your bot to a portal	Choose where you want your Virtual Agent bot to live by adding it to a portal.
Automate Set up Topic Recommendations  Topic Recommendations intelligently identifies which pre-built bot topics will help your org's users the most. Get recommendations	Set up Topic Recommendations	Get recommended topics based on analyses of existing support requests.

Chat configuration cards (continued)

Card	Feature	Description
Measure Capture conversational metrics  Get the insights you need—total deflections, topic performance, overall usage, and more—to ensure your bot is delivering for both your users and your org. Go to VA Analytics	(Legacy) Conversational Analytics dashboard in Platform Analytics experience	Use the Conversational Analytics Dashboard to collect interaction metrics to evaluate your bot's performance.
Understand Review your NLU settings  With natural language understanding (NLU), your bot will be able to interpret what your users are saying and provide exactly the support they need. View NLU settings	(Legacy) Configure Natural Language Understanding in Virtual Agent	Help your bot better understand a user's intent. For details, see (Legacy) Advantages of natural language models over keywords.
Integrate Add your VA to other channels  Connect your Virtual Agent (VA) to other channels - Microsoft Teams, Slack, Workplace, and more-to give your users even more ways to chat. View channel settings	Integrating Virtual Agent with messaging apps	Add your Virtual Agent bot to other channels, such as a Conversational Integration with Slack or Microsoft Teams.

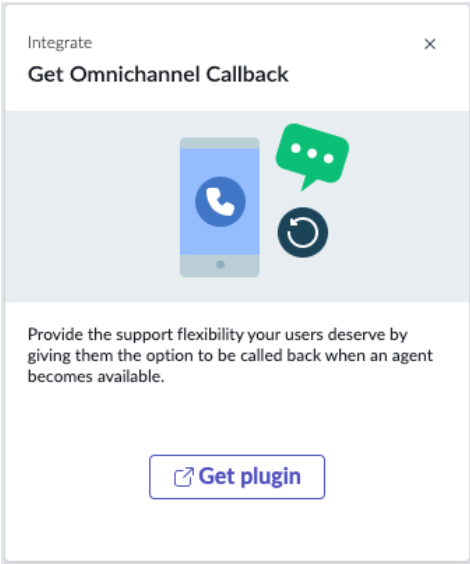
Chat configuration cards (continued)

Card	Feature	Description
Escalate Set up Agent Chat  You can configure the Agent Chat settings to connect users to live chat support in the chat client. View Agent Chat settings	Set up Agent Chat	Connect users to live chat support in the chat client they are using.
Collaborate Boost agent productivity with Sidebar  With Sidebar, your agents can collaborate in real-time to resolve user's issues faster and more thoroughly than ever before. View Sidebar Settings	Setting up Sidebar	Provide live agents with a way to collaborate with others while they work on a Workspace record.
Protect Get Profanity Filter  Keep conversations professional by preventing both users and agents from using prohibited words and phrases. Get Profanity Filter Plugin	Install and configure the Profanity Filter plugin for Agent Chat	Prevent live agents from sending messages with inappropriate or profane language to requesters.

Chat configuration cards (continued)

Card	Feature	Description
Customize Set up Virtual Agent for IVR  With the Virtual Agent for Interactive Voice Response (IVR) plugin, you can use your bot topics to provide automated support over the phone. View settings	(Legacy) Install Conversational IVR with Amazon Connect	Enable user conversations with a bot using the phone channel.
Customize SetUp Dynamic Translation for VA  Dynamic Translation boosts Virtual Agent (VA) support by translating chats using the machine translation service provider of your choice. View Settings	Language detection and dynamic machine translation in Virtual Agent in enhanced chat	Enable a combination of language detection and machine translation for Virtual Agent to improve the chat experience for diverse users.
Automate Set up Issue Auto Resolution  With Issue Auto Resolution (IAR), your bot will proactively reach out to and engage with your users to intelligently resolve their support requests. View IAR settings	Set up Issue Auto Resolution	Provide users with immediate self-service by using machine learning to intelligently deliver Virtual Agent topics, Knowledge articles, and catalog items.

Chat configuration cards (continued)

Card	Feature	Description
	Install Omnichannel Callback	Enable other ServiceNow® apps to display or announce callback options to users.

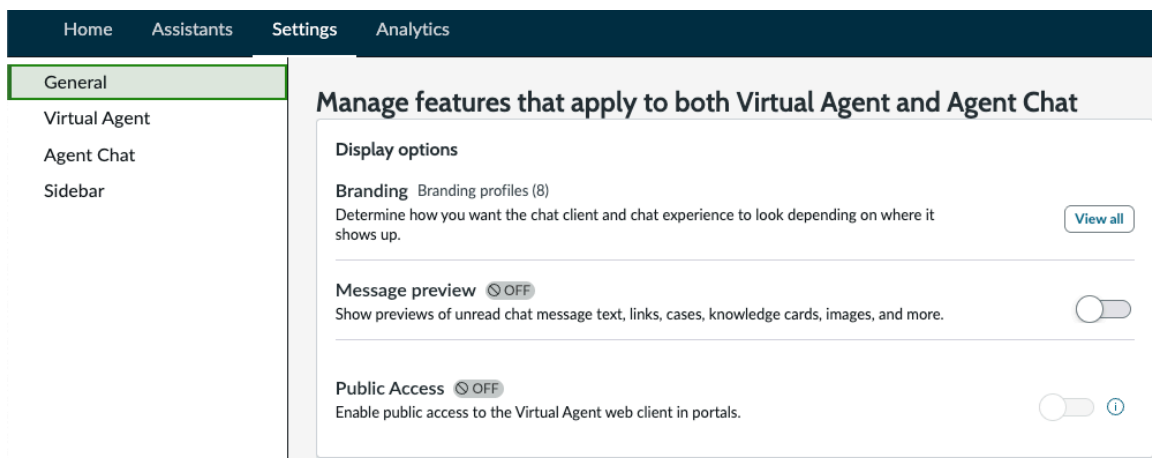
Assistants

The Assistants screen appears when you select the **Assistants** tab on the Conversational Interfaces home screen.

Chat settings

The **Chat Settings** tab opens with the **General** tab selected. This tab contains general settings that apply to all Conversational Interfaces applications. The currently installed plugins and available plugins that you can activate are listed as links. Select a link for more information or to start an activation process.

The **Virtual Agent**, **Agent Chat**, and **Sidebar** tabs in the left navigation pane open configuration settings pages for each application.



For more information about these settings, see the following topics:

- [General settings](#)
- [Virtual Agent settings](#)

- [Agent Chat settings](#)
- [Sidebar settings](#)

General chat settings

Use the Conversational Interfaces Console to set up the basic chat features shared by Virtual Agent and Agent Chat.

General chat settings

I want to...	See these topics
Display options	
Branding	(Legacy) Branding your NLU chat client
Message preview	Enable message preview on the chat widget
Public access	Enable public access to the chat widget
Channels and routing	
Channels	(Legacy) Integrating Virtual Agent for NLU with messaging apps.
Pre-chat surveys	(Legacy) Define pre-chat survey configurations
Context variables	Configure context variables for storing chat-related information
Topic context intent	(Legacy) Define topic context intent configurations
System actions	
System messages	Change Virtual Agent and Agent Chat system messages
URL navigation	(Legacy) URL navigation in NLU
Sensitive data detection	(Legacy) Configuring sensitive data handler Note: This feature is being prepared for future deprecation. It will be hidden and no longer available for installation but will continue to be supported. For details, see the Deprecation Process [KB0867184] article in the Now Support knowledge base. Install the Data Privacy application as a replacement. For more information, see Data Privacy.
Missed activity emails	Sending missed chat activity emails

(Legacy) Branding your NLU chat client

Customize your chat interface with your own brand, including company logo and bot avatar, UI color schemes, fonts, and the chat support menu displayed to your users.

Note: For new customers onboarding from Vancouver onward, the chat widget is only accessible to authenticated users by default. To allow unauthenticated users to access the chat widget, enable **Public access** in **Conversational Interfaces > Settings > General**. For more information, see [Enable public access to the chat widget](#).

Multiple branding configurations

You can create any number of branding configurations for an instance. These branding configurations apply to the web chat and mobile clients and don't apply to the Conversational Integrations for Slack, Microsoft Teams, Workplace by Facebook, and Facebook Messenger.

Note: Branding for bots in the Conversational Integration with Microsoft Teams is available through the Microsoft Teams app customization feature. For details, see [MS Teams branding for the conversational integration](#) in Now Community. For information about branding bots in Slack, see [Configure branding for your Virtual Agent bot in Slack](#).

The default branding configuration includes the Virtual Agent bot, which has a ServiceNow avatar. If you want additional branded bots, create a user profile for each bot in the User [sys_user] table. Give your bot a unique user ID, name (for example, Acme), upload the photo (image) for your bot avatar, and make your bot active. For details on adding users to your instance, see [Create a user](#).

Once created, you then select the bot to be used in a configuration. A branded bot can be used in a single configuration or in multiple branding configurations.

Supported branding items

Conversational Interfaces provides a default branding configuration that you can customize. To change the default configuration, create other branding configurations, or modify the chat (support) menu, gather and prepare the following files and information:

Organization images

Images of company logos to be used in your chat windows. If you're using Virtual Agent, the images of avatars to be used for branded bots.

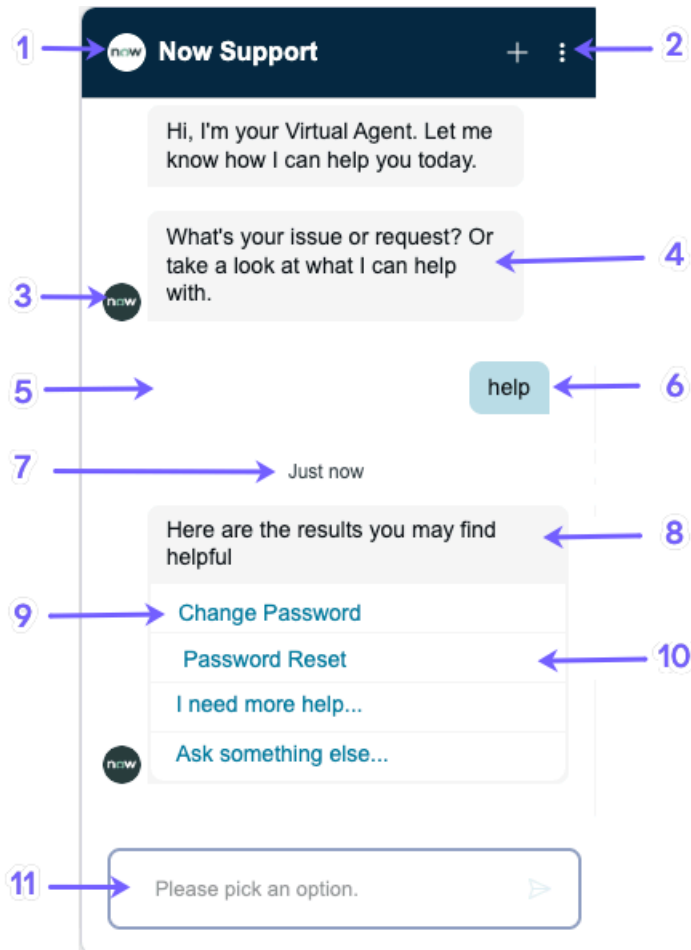
Images must be in .jpg, .png, .bmp, .gif, .jpeg, .ico, or .svg file format. The images can be high resolution, but the image display is scaled based on the aspect ratio. Keep in mind that if chat is run in its own browser window, a thumbnail of the branding logo displays automatically in the browser tab.

Colors and fonts

Colors and fonts used for the various user interface items, such as chat bubbles, buttons, and notifications displayed.

If you want to change the color of interface items, determine the Hex number or RGBA color for those items. When you specify the Hex or RGBA colors during configuration, you can immediately see your changes in the example chat window. To learn more about Hex numbers and RGB color specifications, see [HTML Color Names \(W3CSchools\)](#).

UI items in the chat window

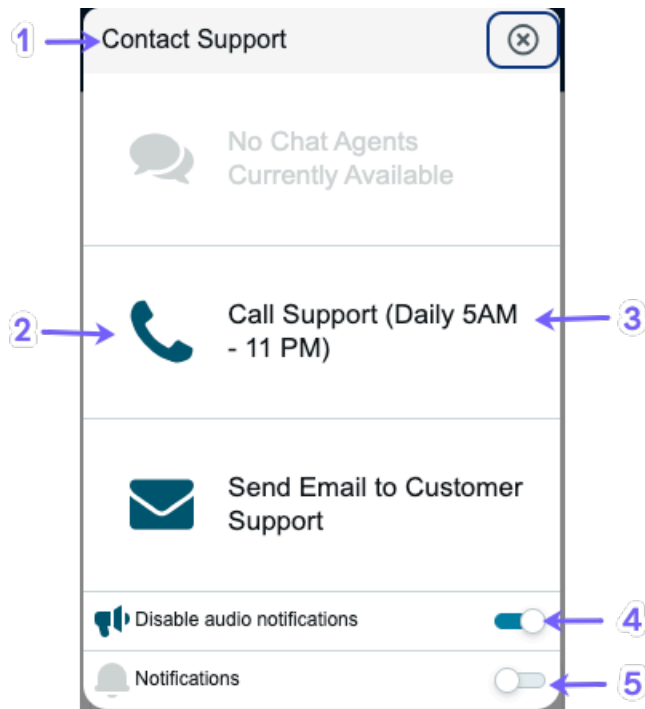


1. Logo and chat header
2. Menu icon
3. Avatar
4. Bot bubble
5. Timestamp
6. Chat background
7. User bubble
8. Category background
9. Link text
10. Button background
11. Input background

Chat menu items

Contact information for your support organization, such as support call hours, call center support phone number, and support email address. You can customize information in the support menu by adding or changing menu items, including the text and icons displayed. You can also control the visibility of the menu items (show or hide menu options).

You can also change the default menu icons or add icons for new menu items. The icons must be in .svg file format. For better resolution, use a single-color icon.

Chat menu

1. Menu title
2. Menu icon
3. Menu label
4. Audible alert enabled for Virtual Agent chats
5. (not shown) Wait time display if a live agent is available

(Legacy) Create a new user for an NLU branded bot

The default branding configuration includes the Virtual Agent bot, which has a ServiceNow avatar. To create a new bot with your own branding, create an active user profile for the bot and link it to a Live Profile.

Before you begin

Role required: admin

About this task

If you want to create a new branded bot, create an active user profile for each bot in the User [sys_user] table. Then create a bot profile record by adding this user to the Live Profile [live_profile] table.

Procedure

1. [Create a user](#)  for the bot.
Include an image (avatar) for your bot when you create the user. Also ensure that the user is active.
2. Navigate to **All**, and then enter `live_profile.list` in the filter.
3. Select **New**.
4. On the form, fill in the fields.

Field	Description
Name	Unique name for the bot profile.
Type	Type of live profile. Select User .
Document	Table associated with the profile. a. Select the Search icon  . b. In the Select the document dialog box, specify the following information: ▪ Table name: Select User [sys_user]. ▪ Document: Select the name of the user you created for the bot. c. Select OK .
Photo	Image (avatar) for the bot profile.
Description	Text that describes the live profile.

5. Select **Submit**.

Result

You can associate the bot profile with a new branding configuration. For details, see [\(Legacy\) Set up your Virtual Agent NLU bot's branding](#).

(Legacy) Set up your Virtual Agent NLU bot's branding

Create different Virtual Agent branding configurations for the various organizations that use your instance. These configurations apply to the web-based chat and mobile clients only.

Before you begin

If you're using ServiceNow® mobile, make sure you set up Virtual Agent for mobile chat. For details, see [\(Legacy\) Configure Virtual Agent for a ServiceNow mobile application](#).

Check for updates and improvements to the Omni-Experience Standard Feature Set application on the ServiceNow Store.

i Note: Branding for bots in the Conversational Integration with Microsoft Teams is available through the Microsoft Teams app customization feature. For details, see [MS Teams branding for the conversational integration](#)  in Now Community. Branding for bots in Slack is available as well. For details, see [Configure branding for your Virtual Agent bot in Slack](#).

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Under the **Display Options** section, select **View All** next to **Branding**.
3. Select **New** to create a branding configuration or select the branding configuration record to be updated.
4. On the form, fill in the fields.

Label	Description
Branding name	Name of the branding configuration. Create a new branding configuration or select one of the available choices. For the Brazil release, the choices include: ○ Coral Light ○ Polaris-Dark ○ Polaris-Light
Chat Header	Text string that identifies your company or organization in the chat window header. For example: Acme Support.
Minimum delay between bot messages (ms)	Minimum delay, in milliseconds (ms), that occurs between bot responses. The default delay is 500 ms.
Minimum delay before displaying typing animation (ms)	Minimum delay, in milliseconds (ms), that occurs before showing the animation ellipsis indicating the bot is processing user input.
Menu Title	Name of the support menu. The default title is Contact Support.
Branding key	Read-only sys_id of the configuration, which reflects the Branding name you entered. The key is in lower case letters with spaces replaced by underscore characters.
Button Selection Text	Font color of the New messages above or New messages below buttons.
Bot Profile	List that opens the Live Profile form to select or create a new bot user profile, which includes the bot picture (avatar). This bot picture appears in the chat messages. ○ To review and edit the Virtual Agent bot profile, select the information icon. ▪ To change the bot picture or description, select Edit record in the message at the top of the page. ▪ In the Live Profile form, modify the fields and select Update. ○ To choose or change the bot for the configuration, select the search icon and select the Bot Profile field. Choose the bot profile that you created in a previous step.
Chat Header Logo	Logo image that displays in the chat header. If live chat is run in a browser window, the logo also displays in the browser tab. The chat header logo is set to 42x42 pixels, and the chat message logo is set to 24x24 pixels. An uploaded image that is smaller than these dimensions will appear stretched. A larger image will be scaled down.

Label	Description
	- To add a logo, select Attach Image and use the file finder to choose the image. - To change the logo, select View image. From the file finder, select the new logo file and select OK. The updated logo displays below this field. - To remove the logo, select the trash icon. The file is immediately deleted.
Enable showing the 'New Messages Below' or 'New Messages Above' notification	Select this option to display notifications for new messages below or above your current view of the chat.

5. Select **Save**.

From here, you can adjust the color, icons, and font type and size of the chat client to match your brand. For example, you can:

- Change the color of items
- Customize the icons
- Customize the fonts used in the chat

6. To change the color of items in the chat window, select the **Colors** tab.

Colors
Icons
Fonts

Item	Color (hex)
Chat Window	
Chat Header Background	#032D42
Chat Background	#FFFFFF
Menu Icon	#FFFFFF
Chat Header Font	#FFFFFF
Input Background	#FFFFFF
Chat messages	
User Bubble Background	#BDDEE7
Agent Bubble Background	#F5F6F7
Bot Bubble Background	#F5F6F7
Link	#113A82
Button Background	#FFFFFF
Notification Background	#E5F2F6

Select an item and specify the Hex or red blue green alpha (RGBA) colors you want to use for that item. When you do so, the example chat window shows a preview of your changes.

Customize color for each item

Label	Description
Chat window	
Chat Header Background	Background color of the chat header.
Chat Background	Background color of the chat window.
Menu Icon	Color of the menu icon, which provides user options to end a conversation or contact customer support.
Chat Header Font	Font color of text in the chat header.
Input Background	Background color of the user input bar.
Chat messages	
User Bubble Background	Background color of the user chat bubble.
Agent Bubble Background	Background color of the live agent chat bubble.
Bot Bubble Background	Background color of the bot chat bubble.
Link	Color of links presented in the conversation.
Button Background	Background color of buttons used in the conversation.
Notification Background	Background color of Virtual Agent notifications delivered in the web chat client.
User Bubble Font	Font color of text in the user chat bubble.
Agent Bubble Font	Font color of text in the live agent chat bubble.
Bot Bubble Font	Font color of text in the bot chat bubble.
Link disabled	Color of links turned off in the conversation.
Notification Text	Font color of Virtual Agent notifications delivered in the web chat client.
Others	
System message	Color of general system messages displayed in the conversation.
Category background	Background color of the heading above a list of topics.
Separator	Color of the dashed line that separates each conversation in the Preview window.
Time Stamp	Color of the timestamp displayed when significant activity occurs during a conversation, such as a record being created.
Category font	Font color of text in the category heading.
Loading Animation	Color of the animated dots that indicate the system is processing information.

7. To customize the chat icons in the chat window, select the **Icons** tab.

Colors	Icons	Fonts
Item	Default	Custom
Main chat window		
Start conversation		— Add
End conversation		— Add
Support options		— Add
Emoji icon		— Add
Send icon		— Add
Attachment Icon		— Add
Masked Input Icon		— Add
Unmasked Input Icon		— Add
All topics window		
Back arrow icon		— Add
Search icon		— Add
Support menu		

You can customize the icons on four different chat screens: the main chat screen, the all topics screen, the support menu, and the end conversation screen. Use this tab to do the following:

- Add a custom icon: Select **Add** for the icon, and then select **Attach image**. After choosing the image file, select **Apply**.
- Replace a custom icon: Select **Replace** for the icon. Select the trash can icon to delete the current image, and then upload a new one.
- Revert to the system default icon: Select **Remove** for the icon.

Note: You can't remove system default icons.

When you specify the icons during configuration, the example chat window shows a preview of your changes.

Note: Unlike other settings on the branding page, icon changes take effect on the chat widget as soon as you select **Apply**. Other changes don't take effect until you select **Save** at the top of the page.

Valid file formats are .jpg, .png, .bmp, .gif, .jpeg, .ico, and .svg.

8. Optional: Customize the font type and font size.

(Optional) The available branding configurations (for example, Coral Light) are located [here](#).

Note: This feature is only available after you've installed and updated the Omni-Experience Standard Feature Set to the latest version through the ServiceNow® Store.

To customize the fonts shown in the chat, select the **Fonts** tab.

To change the font type, choose one of the following methods:

- a. Select the fonts you want to use.

From the **chat header text** drop-down list, select the font you want to use for the header.

Do the same for the **chat body text**.

You will see an example of the new font.

- b. Download the fonts from a URL.

From the **Add custom font** drop-down list, select **From URL**, specify the URL, and apply the changes.

- c. Upload the fonts you want to add from an attached file.

From the **Add custom font** drop-down list, select **Upload font**, specify the path to the file you want to attach, and apply the changes.

(Optional) To change the font size for the chat header and the chat body, do the following:

- a. From the **Font body size** dropdown, choose the Regular, Large, or Extra Large font size.

- b. From the **Font header size** dropdown, choose the Regular, Large, or Extra Large font size.

Note: These changes do not apply to custom controls you have added to the chat widget. Custom controls must be updated separately.

- c. Preview the changes in your chat window on your portal or website.

9. To update the Contact support menu, scroll down to the **Menu Items** section.

Menu Items New			
Icon	Label	Type	Value
	Contact Live Agent	Chat	
	Send Email to Customer Support	Email	support@example.com
	Call Support (Daily 5AM - 11 PM)	Phone	1-800-555-5555

You can change the icons, labels, visibility, and display order of the Email, Chat, and Phone menu items. You can also add custom options to the menu.

- a. In the **Menu Items** section, do any of the following:

- To edit a menu item, select the record icon.
- To add a new menu item, select **New**.
- To delete a menu item, select the record icon. In the record, select the More Actions icon , and then select **Delete**.

For each menu entry, fill in the fields.

Field	Description
Label	Text string that describes the menu type. The labels for the default menu types in the Global application scope are:

Field	Description
	- Email - Option that opens the default email. Default label: Send Email to Customer Support - Chat – Option for chatting with a live agent. Default label: Contact Live Agent for Chat type - Phone - Option that indicates when phone support is available. Default label: Call Support—(Daily 5AM - 11PM) The label text can be up to 75 characters in length.
Type	Type of menu item. For example, if you're adding a menu item that is a link to specific information such as a help page, select the Link Type. The menu item types are: - Email: Option for contacting support through email. - Link: Option for a link to a web page - Chat: Option for contacting a live agent through chat. - Text: Option for setting a text string - Phone: Option for contacting support by phone
Value	The menu type value. For example, the Value for Email is the email address of the support group. The values for the default menu types are: - Email: Email address of the support group. For example: support@example.com. - Phone: Phone number of your call support organization. - Email: Email address of your support organization. Note: The chat menu type doesn't have a value.
Visible	Option that makes the item visible in the Contact support menu. Clear this option to hide the menu item.
Display default icon	Option that indicates the default icon for the item is visible in the menu. Clear this option to add, change, or delete a menu icon. - To add an icon for a new menu item, select View image. From the file finder, choose your icon file and select OK. The uploaded icon displays below the Icon field. - To change an icon, in the Icon field select Update. From the file finder, select the new logo file and select OK. The updated Icon displays below this field. - To remove the icon, select trash icon. The file is immediately deleted.

Field	Description
Order	Number that identifies the sequence in which the item appears in the Contact support menu. The number 1 indicates that the item is the first option listed in the menu.
Application	Global.

b. When you complete the **Menu Item** section for a menu type, select **Save**.

10. Optional: Navigate to the Branding table [sys_cs_branding_setup.list], and select the Branding Name you created.

Note: This step is only applicable if you're configuring an assistant using Now Assist in Virtual Agent enhanced chat or enhanced chat's full-page experience.

a. Select **Configure > Form Layout** from the Additional Actions icon (☰).

b. Move the following Available fields to the Selected fields, and then **Save**:

- Search Toggle Button Label
- Enable Unread Conversation Count Display
- Left Panel Header Label

c. Configure the newly added fields.

Field	Description
Search Toggle Button Label	Option to relabel enhanced chat's full-page experience from the defaulted Search tab label to this label.
Enable Unread Conversation Count Display	Option to show the unread number of conversations on the Chats icon.
Left Panel Header Label	Option to relabel enhanced chat and enhanced chat's full-page experience from the defaulted Chats header to this label.

11. Do one of the following to apply the branding configuration:

- Apply the branding configuration to a Service Portal Agent Chat Configuration. In the server script that passes page and widget data to an Agent Chat (Virtual Agent or Live Agent) conversation, specify the branding key to be used. Items passed in this script are available to all pages in the portal. For details on setting up Service Portal Agent Chat, see [Add your bot to a portal](#).

For example, the following Service Portal Agent Chat Configuration for the Knowledge Portal uses the chat branding key `custom_1`.

Note: There are other Service Portal Agent Chat features that you can configure, such as [customizing the Agent Chat button](#) in your portal. For more information on customizing the Agent Chat widget in Service Portal, see [Configure Agent Chat in Service Portal](#).

- Apply the branding configuration to a destination page. Enter the system parameter `sysparm_branding_key` with the branding key in the chat widget URL. For example:

```
https://<your-instance-name>service-now.com/$sn-va-web-client-app.do?sysparm_branding_key=acme
```

In this example, `acme` is the key of the branding configuration to be used.

- Apply the branding configuration to an embedded chat widget. Enter the system parameter `sysparm_branding_key` with the branding key in the URL for the embedded chat widget. For example:

```
https://<your-instance-name>service-now.com/$sn-va-web-client-app_embed.do?sysparm_branding_key=acme
```

In this example, `acme` is the key of the branding configuration to be used.

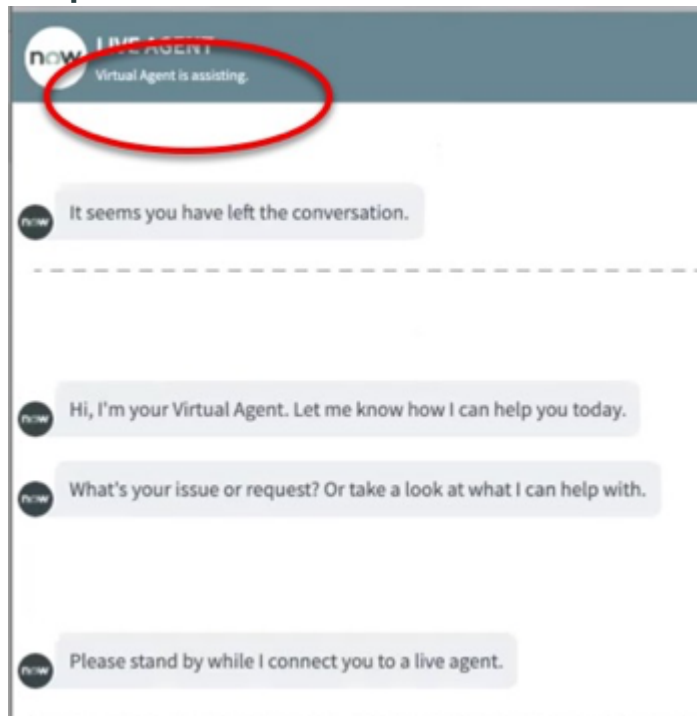
- Optional:** If you're using [Conversation Autopilot](#) with your branded bot, specify the branded bot name displayed in the chat window during Autopilot sessions by changing system properties as follows.

a. Navigate to **All > Conversational Interfaces > Settings**.

b. Under the **System actions** section, select **View All** next to **System messages**.

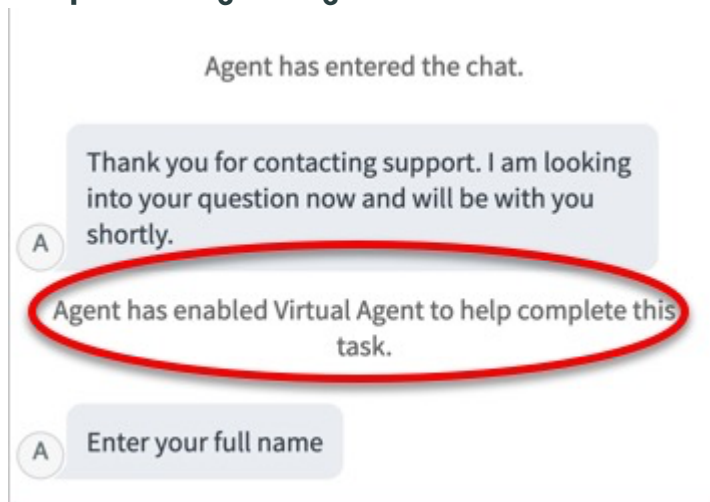
c. Change the **Value** field of the `com.glide.cs.autopilot.client_initiated_header` system property to specify the branded bot name instead of the Virtual Agent bot name displayed in the header of the chat window.

Autopilot header in chat window



- d. Update the `com.glide.cs.autopilot.client_initiated_message` system property to specify the branded bot name displayed to the requester during the conversation.

Autopilot message during the conversation



(Legacy) Create chat surveys

Use Survey Designer to build conversational questionnaires for gathering pre-chat information and post-chat feedback from end users. These questionnaires run in the chat client for Virtual Agent and Agent Chat.

Before you begin

Identify the information that you want from your requesters, such as their name or email address. If you're collecting pre-chat information, determine whether certain survey responses should be stored as chat context variables so that you can use that information for topic discovery or routing chats to certain work item queues. Before you build your survey, [configure the context](#)

variables for storing responses to certain survey questions. You will map these chat context variables to the appropriate questions in your survey.

Note: When enhanced chat is turned on, post-chat surveys only appear after a live agent conversation has ended.

Role required: survey_admin or admin

About this task

You define, configure, and publish conversational questionnaires (surveys) using [Survey Designer](#). You can use various survey controls to define the content of your questionnaires. For details on the survey controls available, see [Survey designer elements](#) to see how the controls are rendered in the survey. For example, the Choice control provides a multiple choice selection to your users.

The survey controls map to corresponding Virtual Agent Designer input controls that render the survey as a conversation in the chat client. For examples on how Virtual Agent Designer input controls are rendered in run-time conversations, see [Virtual Agent Designer user input controls](#). The following table identifies the survey controls supported in Virtual Agent Designer.

Survey controls that map to Virtual Agent Designer input controls

Survey Designer controls	Comparable Virtual Agent Designer user input controls
Attachment	Image
Boolean	Boolean
Choice	Static Choice
Date	Date Time
Date/Time	Date Time
Number	Text input
Percentage	Text input
Scale	Static Choice
Numeric scale	Static Choice
String	Text
Image scale	Carousel
Reference	Not supported
Multiple selection	Not supported
Ranking	Not supported
Template	Not supported

Procedure

1. Navigate to **All > Survey > Survey Designer**.
2. Select the **Configuration** tab and configure the survey.
As you configure your survey, remember the following:

- If you want an introduction note and end note to begin and end your survey, enter your content in the **Introduction** and **End note** fields.
- Select the **Chat Survey** option to enable conversational questionnaires. This option also enables the display of the **Context** option in the Properties form for each survey control.
- Select **Save**.

For details, see [Configure a survey in the survey designer](#) .

3. Select the **Design** tab and give your survey a **Name**.

As you design your survey questions, remember the following:

- To create a question, drag a data type icon from the Controls palette and drop it into the category container. Give each question a **Name** and select the gear icon to open the Properties form for the control.
- In the Properties form, complete the fields as needed to define the control.
 - If you enable the **Mandatory** option, users are required to answer the survey question. If you leave this field blank, users can skip the question in the survey.
 - If you want to store the user response to this question, enter the chat context variable in the **Context** field.
- Select **Save**.

For details, see [Create a question in the survey](#) .

4. When you are finished defining the questions in your survey, select **Preview** to review your survey.

5. When you are satisfied with the survey, select **Save and Publish**.

Your survey is listed in the Assessment Metric Types [asmt_metric_type] table.

What to do next

Define the pre-chat and post-chat survey configurations that control the surveys to be presented to your requesters.

(Legacy) Define pre-chat survey configurations

Use pre-chat surveys to capture preliminary information from a customer. You can define a configuration that determines the pre-chat survey to be presented to your customers. From the responses received, Advanced Work Assignment routes chat conversations to appropriate queues and groups.

Before you begin

[Create the chat survey](#) to be used in this pre-chat survey configuration.

Role required: admin

About this task

Apply the conditions that determine the pre-chat questionnaire to be presented to your requesters.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Under **Pre-chat surveys** on the **General** tab, select **View all**.
3. On the Chat Surveys page, select **New** to create a new chat survey configuration or select the configuration you want to update.

4. Under **Details**, enter or change the settings.

Field	Description
Name	Unique name for this pre-chat survey configuration.
Active	Option that activates this pre-chat survey configuration.
Show Summary	Option that asks requesters if they want to see a summary of the survey responses they entered.
Order	Number that indicates the order in which survey configurations run. If there are multiple pre-chat survey configurations, the system runs the first survey configuration found, from lowest to highest order.
Condition mode	Type of condition to be used to control the conversational survey presented to requesters. ○ Advanced: Specify a JavaScript scripted condition. ○ Simple: Specify a condition using the condition builder.
Condition	Condition that controls when the survey configuration is used. Select Set Condition to specify the conditions.
Survey	List of the pre-chat surveys available. Choose the survey to be presented to the requester.

5. Select **Save**.

Result

When a requester completes the pre-chat survey, the user is transferred either to a live agent if Agent Chat is set as the fulfiller interface or a virtual agent if Virtual Agent is set as the fulfiller. The user's pre-chat responses are stored as context in the chat interaction record. Before entering into a chat conversation, the assigned agent can review the context of the issue.

Using pre-chat surveys with context variables for topic discovery

Capture user input from pre-chat surveys to use as utterances or keywords for topic discovery.

If you're using a pre-chat survey, you can use information supplied by the user to direct them to the appropriate Virtual Agent topic without asking them to choose from a list of available topics.

A good example of this is the CSP Anonymous Pre-Chat Survey, which is included with the Customer Service Management (CSM) application. This survey applies to guest users on the CSP portal. In addition to asking for the user's name and email address, the last question asks the user to briefly describe the issue. The answer is mapped to the short_description field in the question settings. This is the context for the user's answer.

Question settings for the CSP Anonymous Pre-Chat Survey in Survey Designer

The screenshot shows the 'Properties' panel for a question in the Survey Designer. The 'Context' field is highlighted with an orange box and contains the value 'short_description'. Below the 'Properties' panel, the question text 'Please briefly describe your issue' is also highlighted with an orange box.

The user response can be passed to Virtual Agent for use in topic discovery. In order to do this, you must create a record for it in General Chat Settings.

Topic context intent card in General Chat Settings

The screenshot shows the 'General' settings page in the Virtual Agent console. The 'Topic context intent' card is highlighted with a blue box. The card shows the title 'Topic context intent', a count of 1, and a description: 'Use Natural Language Understanding to show topics to users based on contextual information.' A 'View all' button is visible next to the card.

The Pre-chat short description as NLU intent record allows the CSP Anonymous Pre-Chat Survey input to function a bit like an NLU intent. When the survey runs, the interaction's short_description is used as the search text for the conversation. Virtual Agent uses this input for topic discovery so that users don't have to select a topic from the Greetings screen.

The Context topic intent record that corresponds with the pre-chat survey

Context Topic
Pre-chat short description as NLU intent

You are editing a record in the Customer Service Virtual Agent Conversations application ([cancel](#))

Name: Pre-chat short description as NLU

Application: Customer Service Virtual Agent

Active: ☒

* Order: 100

Condition mode: Simple

Condition: Add Filter Condition Add "OR" Clause

Context.pre_chat_survey_name is CSP Anonymous Pre-Ch AND OR

or Context.pre_chat_survey_name is CSP Pre-Chat Survey X

* Context: short_description

Update Delete

(Legacy) Define topic context intent configurations

Use pre-chat survey information to determine the appropriate Virtual Agent conversation topic automatically displayed to end users (requesters), rather than prompting them to choose from a list of conversation topics.

Before you begin

- [Configure the chat context variables](#) for storing user answers to specific questions in your chat surveys.
- As you [create your chat survey](#), map a survey question to a new or existing chat context variable. The variable stores the user response that Virtual Agent uses to determine topic context intent and the conversation topic displayed.
- Role required: virtual_agent_admin or admin

About this task

Create a context topic intent to specify conditions that determine which Virtual Agent conversation topic is displayed after a user answers a pre-chat survey. The context topic intent uses data collected by the survey to find an appropriate topic for the user.

For example, a pre-chat survey asks the user "What problem are you having with your computer?" and maps their answer to a context variable called "problem" in the survey. The variable passes from the survey to the topic context intent. Instead of the chat going directly to topic discovery, the variable stored in the intent is used as an utterance to feed into the Virtual Agent for topic discovery.

You can define conditions in a topic context intent to limit topic discovery, such as restricting the "problem" variable in the preceding example to only feed to ITSM VA conversations. The Context Topic [sys_cs_context_topic] table is used to map your variables for intent discovery, after the pre-chat survey has been executed.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Under **Topic context intent**, select **View All**.
3. In the Context Topic page, select **New** or the configuration to be modified.

4. On the form, fill in the fields.

Field	Description
Name	Name of the configuration for topic context intent (topic discovery).
Active	Option that activates this topic intent configuration.
Order	Order in which Virtual Agent evaluates topic intent configurations to find a matching condition for displaying the topic. Virtual Agent reviews the configuration that has the lowest order value first.
Condition mode	Type of condition that determines how the topic intent configuration is to be applied. - Simple: Specify a condition using the condition builder. - Advanced: Specify a JavaScript scripted condition.
Condition	Condition for applying the specified context variable that displays the corresponding conversation topic. Select Set conditions to enter the condition filter. If no condition is specified, the specified context variable applies to all conversations.
Script [Displayed when Condition mode is set to Advanced]	JavaScript condition statement for applying the specified context variable that displays the corresponding conversation topic. The condition must evaluate to true.
Context	Chat context variable that stores the user response to a specific survey question and used to determine the topic intent.

5. Select **Save**.

Result

The context topic intent configuration is added to the Context Topic [sys_cs_context_topic] table. Virtual Agent displays the appropriate conversation topic to users based on the context intent configuration.

(Legacy) URL navigation in NLU

Use URL navigation settings to specify where and how chat links open. You can configure certain links to open in a specific portal. You can also specify the link target, such as a popup window.

Your base system instance provides default portals in which chat links to records from certain ServiceNow tables are opened automatically. For example, Service Portal is the default portal used to display knowledge records from the Knowledge [kbknowledge] table and also catalog items from the Catalog Item [sc_cat_item] table.

Use **URL navigation** in Chat Settings to change these default mappings, as well as define custom mappings that map a portal URL to a specified ServiceNow table. The portal configurations apply to the chat widget, chat channels, and messaging channels.

How URL navigation works

To determine the portals to be used for chat links, the system evaluates the following information in the order listed:

1. **sysparm portal** parameter - If you specified a `sysparm_portal` parameter in the instance URL for the chat widget, that portal is used.
2. **Topic script variable** - If you specified a portal in a topic script variable, that portal is used.
3. **Default portal for Provider Channel Identity** - If you specified a default portal in the Provider Channel Identity [`sys_cs_provider_application`] table for pre-built chat integrations or custom chat integrations, that portal is used. The default portal applies to the chat and messaging channels for the provider. For details on configuring the Provider Channel Identity, see [Create a channel identifier for your custom chat integration](#) in Custom chat integration framework.
4. **Default portal for a table** - Uses the portal value in the default portal mapping listed in **URL navigation** Chat Setting.
5. **Global default portal** - If you defined a global default portal using the `com.glide.cs.url_redirect.default.portal` system property, that global portal is used.
6. **Service Portal** - If you didn't define a global portal using the `com.glide.cs.url_redirect.default.portal` property, Service Portal is used.

Legacy URL mappings defined in previous releases (fallback method)

If you previously added the `com.glide.cs.portal_url_mapping.default.<portal_value>.<table_name>` property to create URL mappings that were used instead of the default URL mappings, those properties are retained after you upgrade to the Brazil release. However, you can now view the mappings using **URL navigation** in Chat Settings or the URL Navigation [`sys_cs_portal_url_mapping`] table. There are two types of URL mappings.

Default mappings

All system properties with the format `com.glide.cs.portal_url_mapping.portal.<table_name>` that define the default portal used for certain ServiceNow tables.

Default URL mapping properties

Property	Description
<code>com.glide.cs.portal_url_mapping.portal.kbknowledge</code>	Default portal context (URL mapping) to use for Knowledge Base articles. • Type: string • Default value: sp (Service Portal)
<code>com.glide.cs.portal_url_mapping.portal.sc_cat_item</code>	Default portal context (URL mapping) to use for Service Catalog items. • Type: string • Default value: sp (Service Portal)

Default URL mapping properties (continued)

Property	Description
com.glide.cs.portal_url_mapping.portal_sys_user	Default portal context (URL mapping) for sys_user records. - Type: string - Default value: esc (Employee Service Center)

Custom mappings

All system properties that define a portal and table combination using the format *com.glide.cs.portal_url_mapping.<portal_name>.<table_name>*. These mappings are retained as custom mappings. When the portal or table is specified with *_default*, it indicates that any portal or table is used.

The system determines the URL for custom mappings by evaluating the following values:

- Portal and table/parent table
- Portal and any table
- Any portal and table/parent table
- Any portal and any table

Custom URL mapping properties

Property	Description
com.glide.cs.portal_url_mapping._default_kb_knowledge	Default for Knowledge URL mapping. - Type: string - Value: /{{portal}}?id=kb_article&sys_id={{data.sys_id}}
com.glide.cs.portal_url_mapping._default_catalog	Default for Catalog Item URL mapping. - Type: string - Value: /{{portal}}?sys_id={{data.sys_id}}&id={{data.table_name}}&table={{data.table_name}}
com.glide.cs.portal_url_mapping._default_user	Default for User URL mapping. - Type: string - Value: /{{portal}}?id=user_profile&sys_id={{data.sys_id}}
com.glide.cs.portal_url_mapping._default_other	Default URL mapping for records other than knowledge articles, Service Catalog

Custom URL mapping properties (continued)

Property	Description
	items, People (sys_user) records, publication records, and task records. • Type: string • Value: /{{portal}}?sys_id={{data.sys_id}}&id=form&table={{data.table_name}}

Smart links

As an admin, you can specify the target for URL links based on patterns that you specify. For example, if you want all KB articles to open in a new window, you can configure the mapping in general chat settings. For more information, see [\(Legacy\) Create a smart link preference](#).

(Legacy) Configure URL navigation for chat links

Configure the portals in which links to ServiceNow records in live agent and Virtual Agent conversations are opened, including links in output cards and cards for Virtual Agent notifications and AI Search results.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Under **URL navigation**, select **View All**.
3. On the URL Navigation page, do one of the following:
 - To create a new custom mapping, select **New**.
 - To change a default or custom mapping, select the record to be updated.
 - If you have multiple mapping records to be updated, click the box to the left of the mapping record to be updated and select **Edit**. The preview pane opens and shows the URL Navigation fields that you can change in the selected records.
4. Complete or update the URL Navigation fields.

Field	Description
Description	Name of the portal for a particular table record.
Type	Type of portal mapping: ◦ Default Mapping: Default portal mapped to the following ServiceNow tables: ▪ Service Portal - Catalog Item [sc_cat_item] table ▪ Service Portal - Knowledge [kb_knowledge] table ▪ Employee Center Portal - User [sys_user] table ◦ Custom Mapping: Portal URL definition that identifies a portal and ServiceNow table combination, which is entered in the Value field.

Field	Description
Table	ServiceNow table that maps to the portal. Select a table from the list of tables.
Application	Name of the application to which this URL mapping belongs.
Portal	Portal to be used in the mapping. Select a portal from the list of portals.
Value	For new custom mappings, specify the combination of portal and table values to form the link. For example, the following value maps knowledge articles to the CSP portal: <code>/csp?id=kbarticle&sys_id={ {data.sys_id} }</code> If you're changing a custom mapping that was defined in a previous release using the <code>com.glide.cs.portal_url_mapping._default.<table></code> system property, you do not need to specify a Value.

5. Select **Save** to enter a new mapping or update an existing mapping.

(Legacy) Create a smart link preference

Create smart links to specify where a URL should open. For example, the URL could open in a new browser window, in a new browser tab, in the chat window, or in a pop-up window.

Before you begin

Role required: virtual_agent_admin or admin

About this task

If you (as an admin) have enabled [URL navigation](#) on the page, you can specify patterns for where and how the links open in the chat windows. End users see the URL links based on the patterns you've specified.

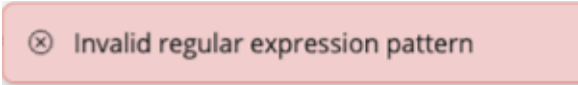
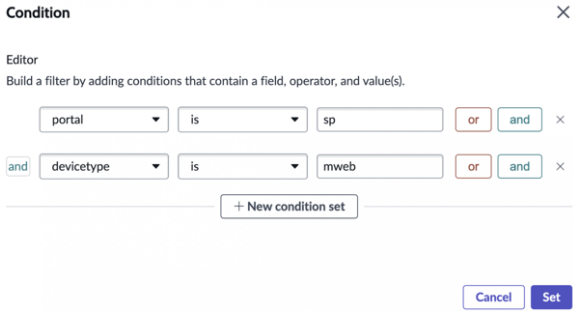
For example, you can set these URL "smart links" to open in a new browser window, in a new browser tab, in the chat window, or in a pop-up window. If you specify a pop-up window, you can set the size of the window your end users see.

Smart links can be used in chats with live agents.

Error messages display for channels that don't support smart links.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Under the **System actions** section, select **View All** next to **URL navigation**.
3. Select the **Target Location** tab.
4. Select **New**.
5. On the form, fill in the fields.

Field	Description
Description	The purpose of the smart link.
Where to open	Where to open the link. Choose one of the following options: ○ New Browser Tab: Opens the link in a new browser tab. ○ Load in Place: Opens the link in the current location. ○ Parent: Opens the link at the highest or parent level. ○ Popup: Opens the link in a pop-up window and lets you specify the pop-up window size. ○ Raise Event: In the chat widget only, prevents the default select behavior, avoiding a page navigation (the chat is kept open).
Order	Number that indicates the order in which smart link preferences run. If there are multiple preferences, the system runs the first smart link preference found, from lowest to highest order.
URL Pattern	URL pattern that uses regular expression quantifiers. If the regular expression is invalid, an error message is shown. 
Condition mode	Expression logic to specify a condition for applying the smart link preference. Select either: ○ Simple, or ○ Advanced
Set conditions	If you select the Simple condition mode, use the condition builder to add or edit the condition. Note: Applies only if you select the Simple condition mode. The condition builder specifies that the smart link is only applicable to links in the Service Portal when they're accessed on the chat widget. 

Field	Description
	◦ devicetype: Refers to the channel. In the Brazil release, only the chat widget (<i>mweb</i>) is supported. The mobile chat widget isn't supported currently. ◦ portal: Represents a specific portal. Specify the portal URL suffix in the condition. Navigate to All > Service Portal > Portals to view portals and their suffixes ◦ Select Set.
Script	If you select the Advanced condition mode, use the script editor to create or edit a JavaScript condition statement. When the end user selects the link, the component triggers a Window: message event . As a developer, if you see the Window: message event , you can decide how to handle the navigation. For example: <pre> window.addEventListener('message', e => { if (e.data.type === 'SMART_LINK_CLICKED') { console.log(e.data); /** { type: 'SMART_LINK_CLICKED', src: 'https://domain.com/link/src' } */ } }); </pre>

6. Select **Save**.

What to do next

If you would like to enable smart link preference for Microsoft Teams, you must first [Configure link authentication and opening experience in Microsoft Teams](#) and then [Configure smart links in Microsoft Teams](#)

(Legacy) Configuring sensitive data handler

Detect and mask sensitive information that is shared in Agent Chat or Virtual Agent conversations.

Before you begin

- **Note:** This feature is being prepared for future deprecation. It will be hidden and no longer available for installation but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#)  article in the Now Support knowledge base.

Activate the Sensitive Data Handler plugin (com.glide.sensitive_data_handling).

Role required: admin, virtual_agent_admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Under **Sensitive data detection**, select **View all**.
3. Slide the **Active** toggle switch to enable sensitive data detection.

4. Select the appropriate conversation flow:

- a. Requester to agent - detect and mask sensitive data entered by the requester in an Agent Chat conversation.
- b. Agent to requester - detect and mask sensitive data entered by the agent in an Agent Chat conversation.
- c. Requester to Virtual Agent - detect and mask sensitive data entered by the requester during a Virtual Agent conversation.

i Note: You must select at least one conversation flow.

5. The *Regular Expressions* tab displays the existing expressions:

Regular Expressions

Field	Description
Name	Name of the regular expression.
Regular Expression	Pattern that defines the expression.
Number of characters to mask	Number of characters in the regular expression that are masked.
Start masking from	Direction the regular expression is masked: left to right or right to left.
Status	◦ Active - this expression is masked. ◦ Inactive - this expression isn't masked.
Order	Order in which the active regular expressions are analyzed against a message to determine if there are any matches.

6. Either select an existing expression to modify or create a new regular expression by selecting **New** and filling in the fields.

Sensitive Data Regex form

Field	Description
Name	Name of the regular expression.
Number of characters to mask	Number of characters in the regular expression that are masked.
Masking symbol	Symbol used in place of the sensitive data.
Status	◦ Active - this expression is masked. ◦ Inactive - this expression isn't masked.
Domain	Name of the domain that this regular expression affects. If you select Global , then the regular expression applies to both the agent and requester domains. For the agent and requester to see each other's domain, the administrator must do one of the following:

Field	Description
	- Include the domain where the regular expression should be visible as a child domain to the corresponding parent domain. - Grant necessary access to the appropriate domain if it's a sister domain. - Set the regular expression under a global domain.
Regular Expression	Pattern that defines the expression. Check your regular expression on a regex validation site such as https://regex101.com/ 
Order	Order in which the active regular expressions are analyzed against a message to determine if there are any matches.
Start masking from	Indicates whether the regular expression is processed from left to right or right to left.

7. On the **Agent system messages** tab, enter information for the message that the agent sees if they enter sensitive data:

Agent system messages

Field	Description
Description	Description of the system message.
Value	Exact wording of the system message that displays to the agent.
Updated	Date and time the message was most recently updated.
Updated by	Name of the user who most recently updated the message.

8. On the **Requester system messages** tab, enter information for the message that the requester sees if they enter sensitive data:

Requester system messages

Field	Description
Description	Description of the system message.
Value	Exact wording of the system message that displays to the requester.
Updated	Date and time the message was most recently updated.
Updated by	Name of the user who most recently updated the message.

9. Select **Save**.

(Legacy) Customizing a Virtual Agent NLU chat experience

Create different chat experiences for your end users based on the context in which they initiate a conversation with Virtual Agent.

How chat experiences work

A chat experience defines the structure of a bot conversation (setup topics), an initial set of topics displayed to users (promoted assets), and the AI Search configurations for displaying search results in conversations. Virtual Agent provides a preconfigured, default chat experience that you (admins and topic authors) can use to control the user experience with Virtual Agent.

You can configure the default chat experience and also create custom chat experiences, tailored to the context in which different users run Virtual Agent, such as the service portal or channel that they're using. Custom chat experiences inherit the default chat experience settings, but you can override the defaults as needed for a given context.

Note: If you're using Virtual Agent Lite, you can configure certain setup topics in the default chat experience but you can't create custom chat experiences.

A chat experience consists of setup topics, promoted assets, and a search profile:

Setup topics

Virtual Agent provides common conversational elements, such as a welcome greeting to begin a conversation and a conversation closing, and automatically includes them in virtual agent conversations. These pre-built elements, called setup topics, are part of a basic conversation structure that is applied to all your conversations. They are installed with Virtual Agent and Virtual Agent Lite.

These setup topics run automatically at appropriate points in a conversation, based on the context, utterances (if NLU is enabled) or keywords that users enter during the conversation.

Virtual Agent provides the following types of pre-built setup topics:

Setup topic	Description
Greeting	Presents a welcome greeting to users, and asks users to enter a request or see what items it can assist with.
Provide Virtual Agent Feedback	Displays a survey to get user feedback on the conversational experience, before the conversation ends.
Live Agent Support	Enables users to request a live agent transfer and view items that the live agent can assist with.
Virtual Agent Capabilities	Presents a list of what the virtual agent can help with.
Error Handling Topic	Displays a standard error message when an unrecoverable system error occurs and transfers the user to a live agent.
Closing Conversation	Displays a closing message that ends the conversation.
AI Search Fallback	Generates AI Search results for a user when Virtual Agent can't find a matching intent and topic or keyword.

Setup topic	Description
Fallback Topic	Presents standard messages that ask the user to enter another request or select a different topic when the virtual agent does not understand a user entry or selection.
Anything Else Topic	After completing a task or request, virtual agent asks if the user needs further assistance with another request or task.

In NLU conversations, setup topics have corresponding intents (set in the pre-built NLU model for setup topics) and also keywords. Virtual Agent recognizes the utterances or keywords that users can enter to run certain setup topics, such as the Virtual Agent Capabilities (help) topic or the Live Agent support topic.

You can preview (test) the pre-built setup topics to see how they work. On the Virtual Agent Designer home page, use the filter icon  to sort only for Setup Topics, and then select the setup topics to test. Pre-built topics are read-only, but you can duplicate, customize (modify) if needed, and publish them.

Promoted topics

You can display a collection of up to six topics that are relevant to your users, displayed before the **Show me everything** button in the chat window. You can use these promoted assets in a chat experience to give your users quick and convenient access to the topics used for a given context.

Note: Promoted topics may not be supported on all clients.

Search profile

A search profile defines how Virtual Agent search results are generated for an AI Search application. The search application's configuration specifies a search profile to use, and also determines how the generated results are displayed to users. Virtual Agent uses a default search application configuration and search profile that controls the data sources used for searches. Its UI configuration (set in the Entity View Action Mapping application) controls the search results displayed in Genius Result answer cards and multi-link output. These configurations also apply to search results generated as a fallback when Virtual Agent can't determine the appropriate topic. For more information, see [\(Legacy\) Implementing AI Search in NLU](#).

Get started with chat experiences

Navigate to **All > Conversational Interfaces > Settings**, and then select **Virtual Agent**. Use the **Custom Greetings and Setup** tile to manage the default and custom chat experiences. You can do the following:

- Configure the default chat experience, including the setup topics, promoted assets, and search criteria used. For example, you can activate the Virtual Agent Feedback setup topic so that it is applied to all your bot conversations.
- Create different custom chat experiences based on the context in which your end users run Virtual Agent. The settings that you define in a custom chat experience override the default chat experience.

General chat settings

I want to...	See these topics
Display options	
Branding	Branding your chat client
Message preview	Enable message preview on the chat widget
Public access	Enable public access to the chat widget
Channels and routing	
Channels	Integrating Virtual Agent with messaging apps.
Pre-chat surveys	(Legacy) Define pre-chat survey configurations
Context variables	Configure context variables for storing chat-related information
Topic context intent	(Legacy) Define topic context intent configurations
System actions	
System messages	Change Virtual Agent and Agent Chat system messages
URL navigation	(Legacy) URL navigation in NLU
Sensitive data detection	Note: This feature is being prepared for future deprecation. It will be hidden and no longer available for installation but will continue to be supported. For details, see the Deprecation Process [KB0867184] article in the Now Support knowledge base. Install the Data Privacy application as a replacement. For more information, see Data Privacy.
Missed activity emails	Sending missed chat activity emails

Virtual Agent settings

I want to...	See these topics
Get recommendations for Virtual Agent topics based on my data	(Legacy) Quick start for Topic Recommendations
Configure performance tracking for Virtual Agent topics	(Legacy) Create deflection configurations and patterns
Use Natural Language Understanding (NLU) for topic discovery	(Legacy) Configure Natural Language Understanding in Virtual Agent Creating models (using NLU Workbench)

Virtual Agent settings (continued)

I want to...	See these topics
Create custom greetings and setup topics	(Legacy) Configure a Virtual Agent NLU chat experience
Determine which issues are routed to Virtual Agent first	(Legacy) Configure and run an Issue Auto Resolution simulation
Send notifications to users in Virtual Agent	Configuring Virtual Agent notifications Enable Virtual Agent notifications
Use AI Search to return fallback results for Virtual Agent	(Legacy) Implementing AI Search in NLU
Detect and dynamically translate Virtual Agent topics into a different language	Language detection and dynamic machine translation in Virtual Agent in enhanced chat

(Legacy) Configure a Virtual Agent NLU chat experience

Change the preconfigured Virtual Agent default chat experience or create a custom chat experience for your users. You can configure setup topics, specify promoted topics, and if needed, change the search profile.

Before you begin

If you want to specify custom setup topics or promoted topics that are displayed to your users in the chat window, make those topics active (published) so that they're available for configuration in the chat experience.

Role required: virtual_agent_admin or admin

About this task

The default chat experience provides the default settings for the setup topics and the Virtual Agent search configurations in your instance. A custom chat experience uses the default settings from the default chat experience, but you can override them as needed. Defining a chat experience includes the following steps:

1. Configure setup topics.

- Activate setup topics that are not initially enabled, such as the Anything else, Survey topic, and AI Search Fallback topic types.

Note: If you upgraded from the Quebec release, the AI Search Fallback topic is deactivated by default. Enable it to return AI Search results as a fallback when Virtual Agent can't determine intents, topics, or keywords.

- If you want setup topics to be included in topic discovery and listed in the All topics menu, be sure to include those setup topics in the default or a custom chat experience.
- Deactivate setup topics if you don't want them to run in your conversations.

2. Promote up to six topics that are initially displayed to your users, above the **Show me everything** button in the chat window. Promoted topics are supported only on the web and mobile clients.

3. Change the Search Application configuration in the Search Profile, if needed.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Select **Virtual Agent** and under Custom Greetings and Setup, select **View All**.
3. Define the chat experience.
Do one of the following:

- To change the setup topics, promoted topics, or AI Search setting in the default chat experience, proceed to Step 5 or 6, depending on what you want to change.

Note: The settings for the default chat experience are preconfigured (read-only).

- To define a new experience, select **New** and complete the fields in Custom Greetings and Setup. Then proceed to Step 4.
- To edit a custom experience, select the custom experience record and select **Edit** to update Custom Greetings and Setup.

Custom Greetings and Setup

Field	Description
Name	Name of the chat experience.
Description	Brief description (purpose) of the chat experience, for example ESC portal.
Active	Option that activates or deactivates the chat experience. The chat experience is active (enabled) by default. To deactivate the chat experience, clear this option.
Order	Order value that Virtual Agent uses to determine which chat experience to apply. The default chat experience has an Order value of 1000. Virtual Agent checks all the chat experiences, and if there is more than one match, the experience with the lowest order value (<1000) is applied.
Provide the context	
Condition Mode	Options for specifying the chat experience context: ○ Simple: A no-code condition builder to specify the context. This is the mode for the default chat experience. ○ Advanced: A JavaScript scripted condition that specifies the context. The condition must evaluate to true.
Condition	Condition builder for specifying the experience context. See the list of the available context variables that can be specified. For example, a Simple, no-code condition might specify the devicetype (ios or android) and the portal to which it applies. In this case, the condition applies to Condition × Editor Build a filter by adding conditions that contain a field, operator, and value(s). devicetype is ios or and × or devicetype is android or and × and portal is sp or and × + New condition set the Service Portal (sp). Cancel Set

Field	Description
Script	Script editor for specifying the condition in a script, if you selected Advanced as the Condition Mode .

4. Select **Create custom experience** if this is a new custom chat experience.

- The settings for the setup and promoted topics are empty. The setup topics and promoted topics specified for the default chat experience are used automatically, unless you override them by adding new topics or changing them in your custom experience.
- To change the setup topics, promoted topics, or AI search settings in the default experience, proceed to the next steps.

5. Select the **Setup Topics** tab.

The default experience for new instances automatically includes most of the pre-built setup topics in your conversations, except for the Anything else and Survey topics. If you upgraded from the Quebec or Rome release, the AI Search fallback topic type is also not active.

Note: the Live Agent and Virtual Agent Feedback topics are not listed in the Virtual Agent topic picker (All Topics) menu by default. You must associate a setup topic type to a setup topic as part of the default or custom chat experience.

I want to...	Procedure
Activate a setup topic, such as the Anything Else or Virtual Agent Feedback topic	a. Double-click the Setup topic field for the associated Setup topic type record. For example, double-click Anything Else topic. b. In the Setup topic field, choose the setup topic to be used. For example, Anything Else topic. c. Select Save.
Remove a setup topic from a chat experience	a. Select the Setup topic type field for the set up topic. b. In the Setup Topics form, clear the Setup topic field. c. Select Update.
Add a new setup topic	a. Select Add topic. In the Setup Topics form, select the Setup topic type and the Setup topic. b. Select Submit.

Select **Update** to apply your changes.

6. Select the **Promoted Topics** tab to configure promoted topics.

Specify up to six Virtual Agent topics to be initially displayed in the chat window.

Note: Promoted topics are supported only on the web and mobile clients.

a. For each topic to be promoted, select **Add topic**.

b. On the form, fill in the fields.

Field	Description
Topic	The topic to be promoted.
Order	A number that indicates the order in which the topic is listed in the chat window.

c. Select **Submit**.

d. If needed, select **Test** to see how the promoted topics are displayed in the chat window.

ACME IT 

Details Setup Topics **Promoted Topics (4)** Search Mapping

Promoted Topics 4     **Add topic**

Last refreshed just now.

Description	Topic	Order ^
Virtual Agent conversation flow to Change Password	Change Password	10
ITSM conversation flow to check status of incidents and requested items.	Check IT Ticket Status	20
Example conversation to provide help with meeting room issues.	Meeting Room Issues	30
Fallback topic that runs when users input is not understood, with integrated catalog and knowledge search	Search Fallback Topic.	100

7. Select the **Search Mapping** tab to change the search application for the chat experience. The default mapping consists of the Search Application Configuration and the Search UI (EVAM) Configuration for Virtual Agent.

Note: The Virtual Agent Default Search Application Configuration is tied to a search profile that does not provide Person card results.

a. Select the value in the **Active** column to open the Search Profile record.

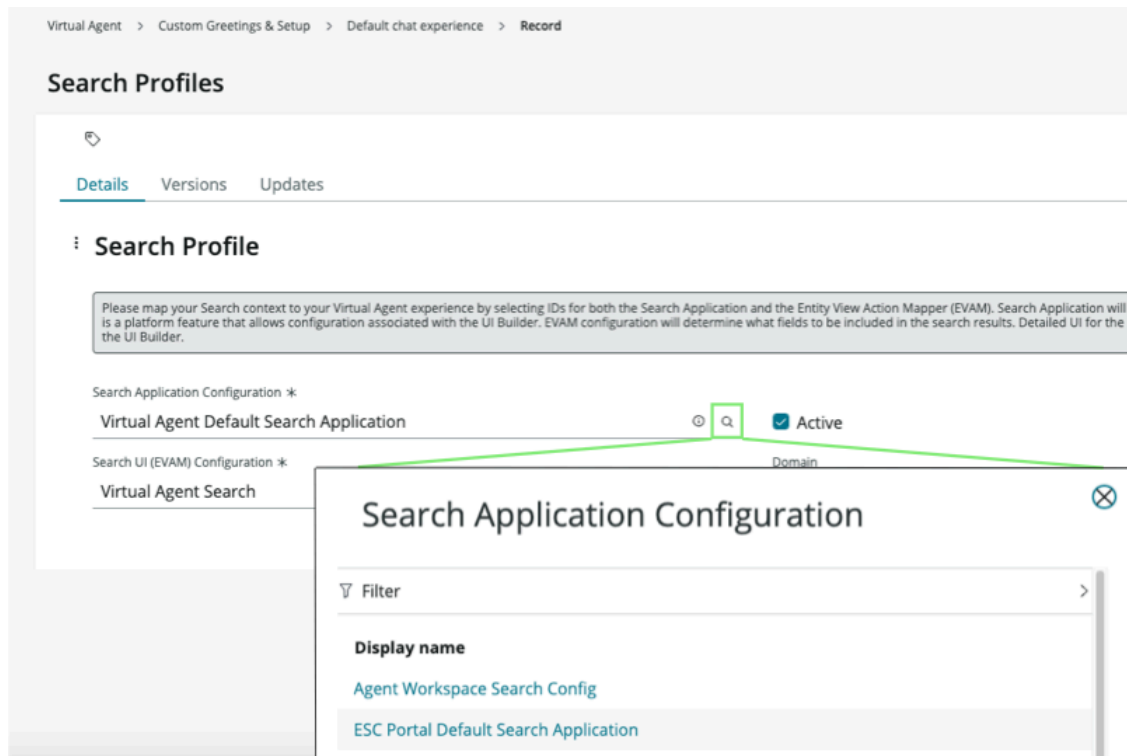
Default chat experience 

Details Setup Topics (9) Promoted Topics **Search Mapping (1)**

Search Mapping 1 Last refreshed 1m ago.

Active	Chat Experience ▾	Search Application Configuration
true	Default chat experience	Virtual Agent Default Search Application

b. To change the **Search Application Configuration**, select a configuration from the list of available Search Application Configurations.



c. Select **Update**.

Note: Although you can change the **Search UI (EVAM) Configuration**, the Virtual Agent Search (EVAM) configuration provides the appropriate card views and lists of Virtual Agent search results. If you want to create your own EVAM configuration for use, see [Create an EVAM definition](#).

(Legacy) Working with NLU setup topics

Setup topics are part of a standard conversation structure applied to all your conversations, such as the welcome greeting or fallback responses. Setup topics run at the appropriate spot in a conversation based on the context, keywords, or utterances entered by the user, and any conditions that are specified for the setup topic.

You define setup topics in a Virtual Agent Designer chat experience using the Custom Greetings and Setup option. A chat experience sets the context in which users run Virtual Agent. This context includes:

- Setup topics applied to bot conversations.
- A small list of topics, called promoted topics, initially displayed in the chat window.
- AI Search configuration used to display AI Search results for your users.

For more information on chat experiences, see [Customizing a Virtual Agent chat experience](#). For details on configuring a chat experience, see [\(Legacy\) Configure a Virtual Agent NLU chat experience](#).

Note: Setup topics in conversations are discoverable (via topic discovery) only when they're [configured in a Virtual Agent chat experience](#) using the **Custom Greetings and Setup** option. If any setup topics are not included in a chat experience, those setup topics are not listed in the chat window's All Topics menu (topic picker) and cannot be discovered by Virtual Agent.

Setup topics run during a conversation as follows.

1. Conversation beginning: Virtual Agent presents the Greeting topic and the list of available topics (Virtual Agent capabilities) that the user can select.

Note: If you want the chat window to immediately take users to a live agent, do not select the Live Agent Support topic as a greeting. Instead, use the system method to [transfer to a live agent](#).

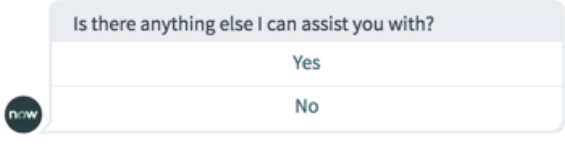
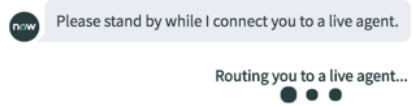
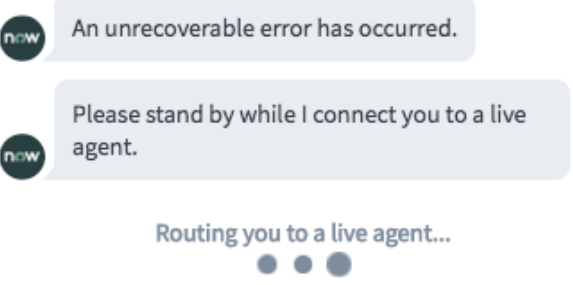
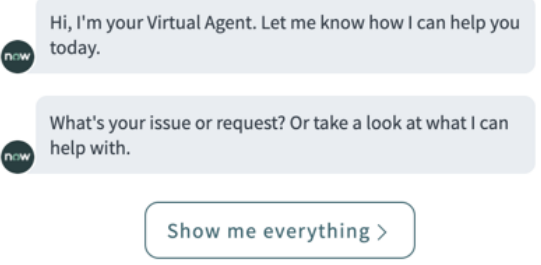
2. Conversation body: These setup topics are presented at different points in the conversation depending on the context:
 - User requests help: Virtual Agent presents the Explore help topic (Virtual Agent capabilities).
 - User enters a request or keyword that Virtual Agent doesn't understand: Virtual Agent presents the Fallback topic, unless the AI Search fallback topic is enabled.
 - If the AI Search Fallback topic is enabled and the user enters a request or keyword but Virtual Agent can't find a matching topic or keyword, or finds too many topics to determine the matching topic: Virtual Agent runs AI Search to generate relevant search results for the user. If the AI Search results do not help the user, or if the AI Search Fallback setup topic is not activated, Virtual Agent runs the Fallback topic.
 - An unrecoverable system error occurs during conversation: Virtual Agent runs the Error Handling topic, and then transfers the user to a live agent.
 - User requests a transfer to live agent: Virtual Agent runs the Live Agent topic, which transfers the user to a live agent.
 - After a task or user request is completed: Virtual Agent runs the Anything else topic to ask if the user wants to continue with another request or task.
3. Conversation ending:
 - If the user doesn't want further assistance after a task or the request is completed, Virtual Agent presents the Survey topic for feedback on the conversational experience.
 - After the survey, Virtual Agent confirms that the feedback has been received, and runs the Closing topic to end the conversation.

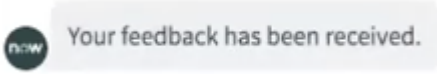
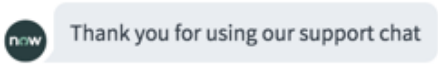
The default setup topics are read-only and have topic names with a period at the end of the setup topic name, such as **Greeting**. You can create your own custom setup topics by duplicating a setup topic and changing it as needed. You can also change prompts or add other controls to the topic, just as you might when creating other topics.

If you want a closing message to be different from the default Closing topic, create a custom setup topic that contains the revised closing text. You also need to create an intent for that custom setup topic in the NLU model for setup topics, or define topic keywords in the Topic Properties page. You can then select the custom setup topic to be used in a custom chat experience instead of using a default setup topic.

The following table provides examples of the pre-built setup topics in the default chat experience.

Setup topic type	Setup topic name and description
Anything else	Anything Else Topic. Virtual Agent asks users if they need further assistance.

Setup topic type	Setup topic name and description
	 If users select Yes, Virtual Agent returns a list of related items that it can help with.
Live agent	Live Agent Support. Tells users that a live agent transfer is in process: 
Error	Error Handling Topic. Displays a generic error message to the user when the Virtual Agent encounters a problem that it can't resolve (unrecoverable system error) and transfers the user to a live agent. 
Greeting	Greetings. Starts a conversation by greeting users and giving them the option to enter a request or see the items that the Virtual Agent can assist with.  Note: The pre-built setup topics include a personalized greeting called the Dynamic Greeting Topic, which welcomes the user by name. To change the default greetings topic, double click Setup topic name and then choose the personalized greeting from the list of available setup topics.

Setup topic type	Setup topic name and description
Survey	Virtual Agent Feedback topic. Gathers user feedback on the conversational experience with the Virtual Agent. The survey setup topic displays randomly in 33% of your Virtual Agent conversations. The survey topic includes an introductory sentence that admins can customize as needed. The survey then presents a choice list with options users can select to describe their experience. Example survey feedback choices  After the users provide their feedback, a message confirms that their feedback has been received:  Note: To change the probability (percentage) that the survey setup topic occurs in your conversations, change the value in the <code>com.glide.cs.survey.probability</code> system property. To display the survey setup topic randomly in 50% of your Virtual Agent conversations, set the Value to 0.50.
Closing	Closing Conversation. Displays a closing message to the user that ends the conversation: 
AI Search fallback	AI Search Fallback. When enabled, this setup topic uses AI Search search to generate fallback AI Search results when Virtual Agent can't find a matching intent or it finds too many intents and can't determine the appropriate topic to display to a user.
Fallback	Fallback Topic. Displays a standard message to the user when: - When virtual agent doesn't understand a user utterance or keyword and the AI Search fallback setup topic is not enabled in the chat experience. AI Search fallback topic was deactivated in the chat experience, and the virtual agent doesn't understand a user statement or keyword. - Users indicate that the AI Search results aren't helpful.

Setup topic type	Setup topic name and description
	Please try giving me your request in a different way. I'm currently better at understanding short sentences. What's your issue or request? Or take a look at what I can help with.
Explore help	Virtual Agent Capabilities. Enables users to ask for assistance during a conversation and view a list of items that the Virtual Agent can assist with (Virtual Agent capabilities). What's your issue or request? Or take a look at what I can help with. Show me everything >

(Legacy) Change text in the Show me everything button

Configure the text in the **Show me everything** button displayed in the chat window to control the display of the initial greetings and the **Show me everything** button in Virtual Agent conversations. Edit the message in the System Properties [sys_properties] table, or in a copy of the Greetings setup topic.

Before you begin

If you're updating the Greetings setup topic in Virtual Agent Designer, first [Create a copy](#) of the Greetings setup topic, since the prebuilt Greetings setup topic is read-only.

Role required: virtual_agent_admin or admin

About this task

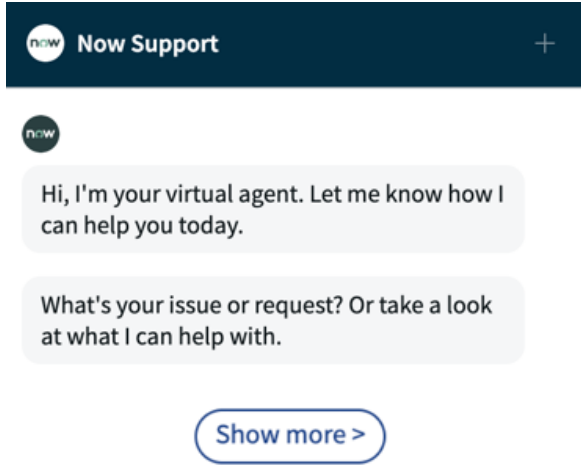
You can change the Virtual Agent greeting message by either updating the default greeting through the System Properties [sys_properties] table, or changing the message in the Greetings setup topic in Virtual Agent Designer.

If you change the message in the System Properties table, the default greetings setup topic (and any custom greetings topics that don't override the default **Show me everything**) all show the updated message. If you change the greeting message through Virtual Agent Designer, you can make more targeted changes, such as a message for an HR-based greeting topic.

The Greetings setup topic contains the Send Topic Picker script action, which controls the text in the **Show me everything** button. To change the text, edit the Send Topic Picker script action in the copy of the Greetings setup topic.

Procedure

Navigate to **All** and use one of the following methods.

Method	Description
System properties	a. Input <code>sys_properties.list</code>. b. Under <code>com.glide.cs.topic_picker_button_label</code>, set the value to a message of your choice, such as <code>Show me everything</code>. c. Select the Save icon .
Virtual Agent Designer	a. Navigate to Conversational Interfaces > Virtual Agent > Designer. b. Select the copy of the Greetings setup topic that you created. c. In the Flow tab, select the node for the Send Topic Picker script action. d. In the Script action properties sheet, select the Script icon  to open the Action expression script. e. Change the <code>greetingMessage</code> text string as needed, and select Save. For example, to change the button text to Show more, you would change the script as follows: <pre>(function execute() { var greetingMessage = vaSystem.getTopicSelectionMessage(); vaSystem.sendTopicPickerControl(greetingMessage, "Show more"); })();</pre> f. Preview the change in the chat window by selecting Test in the header bar. The button text change displays as follows: 

Method	Description
	g. Select Save in the header bar. h. When you're ready to make the topic active, select Publish.

Result

If you follow the System Properties method, your change to the greeting message is shown in all Virtual Agent conversations. If you follow the Virtual Agent Designer method, your change is shown in conversations related to the Greetings setup topic.

What to do next

If you customized your Greetings topic, add it to the default chat experience or to a new custom chat experience that you created. For details, see [\(Legacy\) Configure a Virtual Agent NLU chat experience](#).

(Legacy) Hide or reveal the Show me everything button

Set properties to hide or reveal the **Show me everything** button in Virtual Agent conversations that use NLU/Keyword (Natural Language Understanding) topic discovery.

Before you begin

Role required: virtual_agent_admin or admin

About this task

By default, the greeting portion of a Virtual Agent conversation includes a **Show me everything** button, which brings up the entire list of available Virtual Agent topics and a search filter. Use the following steps to toggle the **Show me everything** button for NLU/Keyword topic discovery.

Procedure

1. Navigate to **All** > `sys_properties.list`.
2. Under `glide.cs.disable.show_me_everything`, set the value to TRUE.

Result

The **Show me everything** button is removed from the greeting messages in your Virtual Agent conversations.

(Legacy) Change the Virtual Agent greeting messages in the Greeting setup topic for NLU

The Virtual Agent greeting setup topic provides default greeting messages for your conversations. Customize these greetings by adding system properties that change the default welcome message and the top selection message prompting users to enter an issue or request.

Before you begin

Role required: virtual_agent_admin or admin

About this task

Starting with the Orlando release, the `com.glide.cs.general.welcome_message` and `com.glide.cs.general.top_selection_message` properties are no longer automatically installed with Virtual Agent. These properties define the greeting messages used in the Greeting setup topic.

In the Orlando release, the default Greeting setup topic was updated. If you upgraded from the New York release, these properties are retained so that you can continue using the original Greeting setup topic. If you want to use the updated Greeting setup topic, delete the `com.glide.cs.general.welcome_message` and

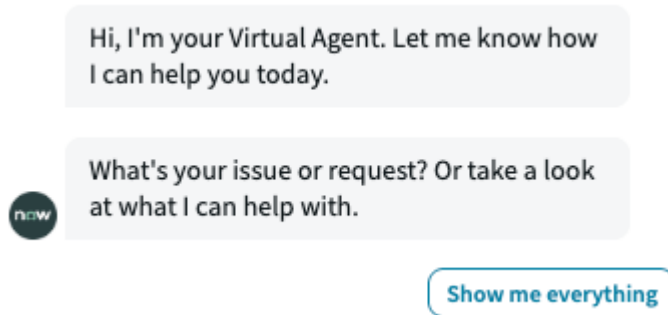
com.glide.cs.general.top_selection_message system properties that contain the original Greeting messages.

Note: These properties aren't present in the base system, but creating them enables you to override these messages.

For new customers, the updated Greeting setup topic (see the following example) is the default. If you want to change the default message text in the Greeting setup topic, add these system properties to the System Property [sys_properties] table:

- *com.glide.cs.general.welcome_message*: Change the default welcome message
- *com.glide.cs.general.top_selection_message*: Change the top selection message that displays after the welcome message

Default messages in Greeting setup topic (starting with the Orlando release)



Procedure

1. Navigate to **All**, and then enter `sys_properties.list` in the filter.
2. Select **New** to add the *com.glide.cs.general.welcome_message* property.
 - a. On the form, complete the following fields.

Field	Value
Name	Enter the system property name: <code>com.glide.cs.general.welcome_message</code>
Description	Enter an explanation for this property: <code>Welcome message</code>
Type	Select <code>string</code> .
Value	Enter the greeting text. For example: <code>How can I help you?</code>

- b. Select **Submit**.

3. In the System Properties table, select **New** to add the *com.glide.cs.general.top_selection_message* property.

- a. On the form, complete the following fields.

Field	Value
Name	Enter the system property name: <code>com.glide.cs.general.top_selection_message</code>
Description	Enter an explanation for this property: <code>Top selection message</code>
Type	Select <code>string</code> .
Value	Enter the text that specifies the next selection action that the user can make after the welcome message is presented to the user. For example: <code>You can enter your request below, or use the button to see everything that I can help with.</code>

- b. Select **Submit**.

(Legacy) Test NLU chat experiences

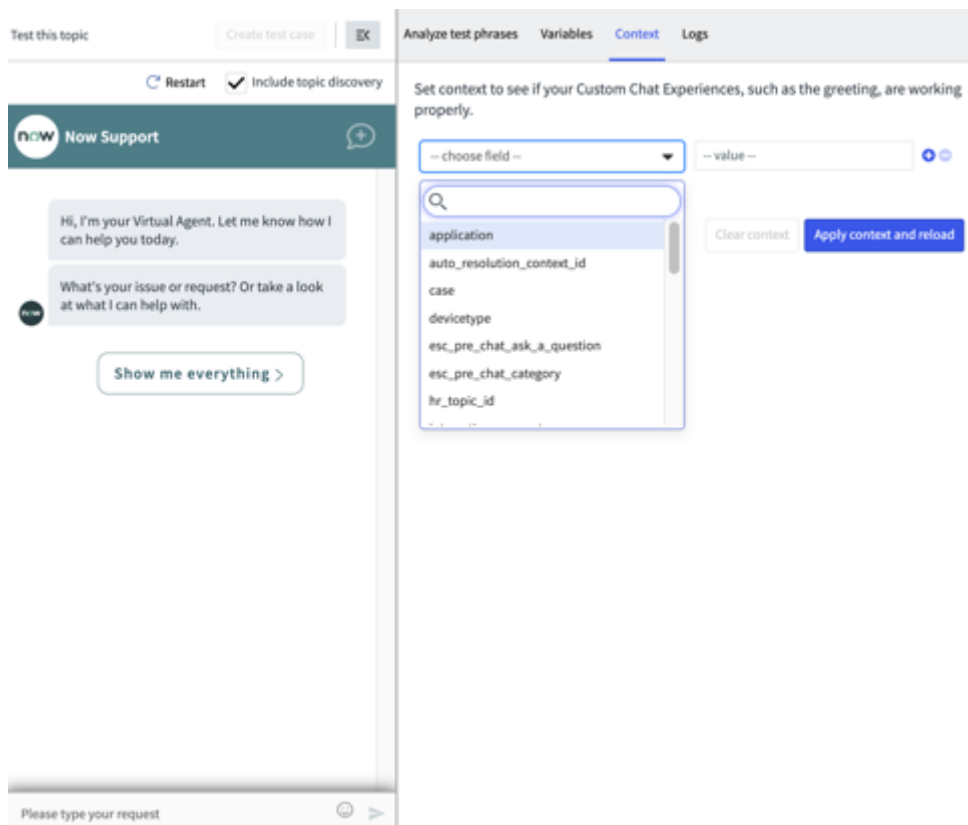
After you create or modify a Virtual Agent chat experience, you can test (simulate) it to verify that it works as expected.

Before you begin

Role required: `virtual_agent_admin` or `admin`

Procedure

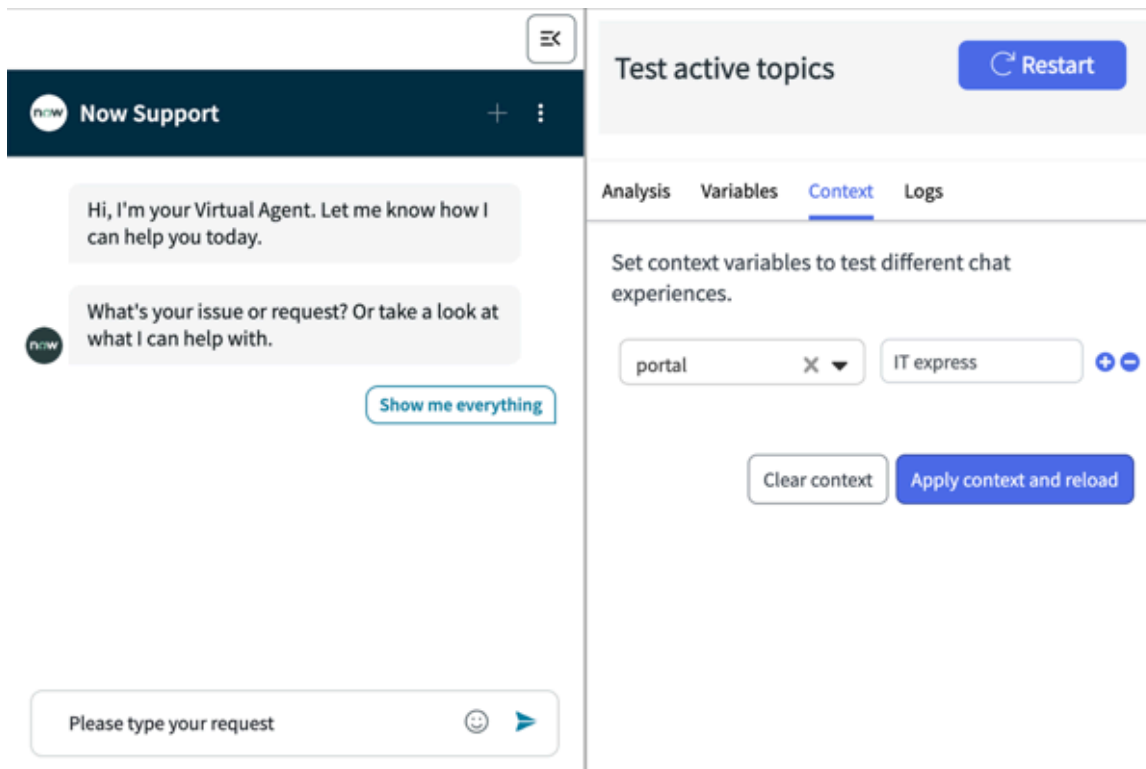
1. Navigate to **All > Conversational Interfaces > Settings**, and select the **Virtual Agent** tab.
2. Under **Custom greetings and setup**, select **View All**.
3. Select the chat experience and view the profile.
4. In the header bar, select **Test**, which automatically opens the chat test window and the associated tabs that display processing details.
The items that you defined for the chat experience, such as custom setup topics or promoted topics, run in the test window. The following example shows the custom greeting setup topic and promoted topics defined for the ESC portal.



5. To specify a different context, do the following:

- a. In the **Test this topic** window, select **Include topic discovery**.
The **Context** tab appears.
- b. In the **Context** tab, choose a context from the list of variables (these context variables are defined in Chat Settings).
For example, you could select portal from the list of variables and enter the portal name, IT Express.
- c. Select **Apply context and reload**.

The items that you defined for the chat experience, such as custom setup topics or promoted topics, run in the test window.



(Legacy) Configure Natural Language Understanding in Virtual Agent

Configure Natural Language Understanding (NLU) in Virtual Agent to identify the NLU service provider for your instance. You can also specify the languages of NLU models used during conversation design, based on the languages supported by your NLU provider and the ServiceNow AI Platform®.

Before you begin

You can select only one NLU service provider for your instance. Virtual Agent supports the following NLU services:

- **ServiceNow NLU** (default): Create your models, intents, and entities in Virtual Agent Designer and NLU Workbench.
- **IBM Watson Assistant**: [Configure the IBM Watson Assistant intent and entity integration](#) so that Virtual Agent can access IBM Watson Assistant NLU model information.
- **Google DialogFlow Essentials (ES)**: [Configure the Google DialogFlow ES intent and entity integration](#) so that Virtual Agent can access Google Dialogflow ES NLU model information.

The **Activate** toggle switch for NLU is toggled on for all new Virtual Agent activations and the **NLU Service Provider** defaults to **ServiceNow NLU**. The **Activate** toggle switch is toggled off for Virtual Agent Lite. If you upgraded from the previous release, Virtual Agent retains the NLU settings and integration information for your NLU service provider.

Role required: virtual_agent_admin or admin

About this task

The NLU-enabled topics that you preview, create, or update in Virtual Agent Designer must use NLU models created in the NLU service that you select here. For example, if you specify

ServiceNow as the service provider, you can view and access topics that use ServiceNow NLU model groups.

Similarly, to work on NLU topics in multiple languages, the languages must be enabled in your NLU service and added to your model groups. For more information, see [Multilingual model management](#).

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Click **Virtual Agent**.
3. Under Natural Language Understanding (NLU), click **View Settings**.
4. On the form, fill in the fields.

Natural Language Understanding (NLU) form

Field	Description
NLU Service Provider	Available NLU service providers for intent and entity extraction. The Supported NLU Languages list is displayed. It shows all of the language plugins that have been installed. For ServiceNow NLU, English is enabled to true by default. This field is automatically set to ServiceNow NLU.
Ask user if topic VA chose is correct	Option to prompt the user to confirm that the matched intent is correct. This option enables user confirmation only on initial intent discovery. When enabled, Virtual Agent asks the user for confirmation before continuing to the automatically selected topic content. Enabling this field triggers the Intent confirmation message field. If the user selects No for an initial intent, then Virtual Agent runs the global fallback topic. If the user selects No for an automatically selected intent in mid-topic, then Virtual Agent returns to the topic that the user was in.
Ask user if switched topic is correct	Option to prompt the user to confirm that the switched intent is correct. This option is enabled by default and prompts user confirmation only when the user triggers an intent switch in mid-topic. When enabled, Virtual Agent asks the user for confirmation before continuing to the switched topic content. Enabling this field triggers the Intent confirmation message field.

5. Edit the **Intent confirmation message** field, if needed.

Text entered in this field is shown to the user to confirm that the matched intent is correct.

6. If you plan to use language-specific NLU models, enable the languages in the Supported NLU Languages list.
A language is enabled if the Enabled column displays **true**. For more information, see [\(Legacy\) Enable NLU languages in Virtual Agent settings](#).
7. Click **Save**.

Result

When you create or update a topic in Virtual Agent Designer, you can choose NLU models available for your specified NLU provider and the specified languages, if applicable. You can also set the NLU entity properties for the input controls that you add to your topic flow.

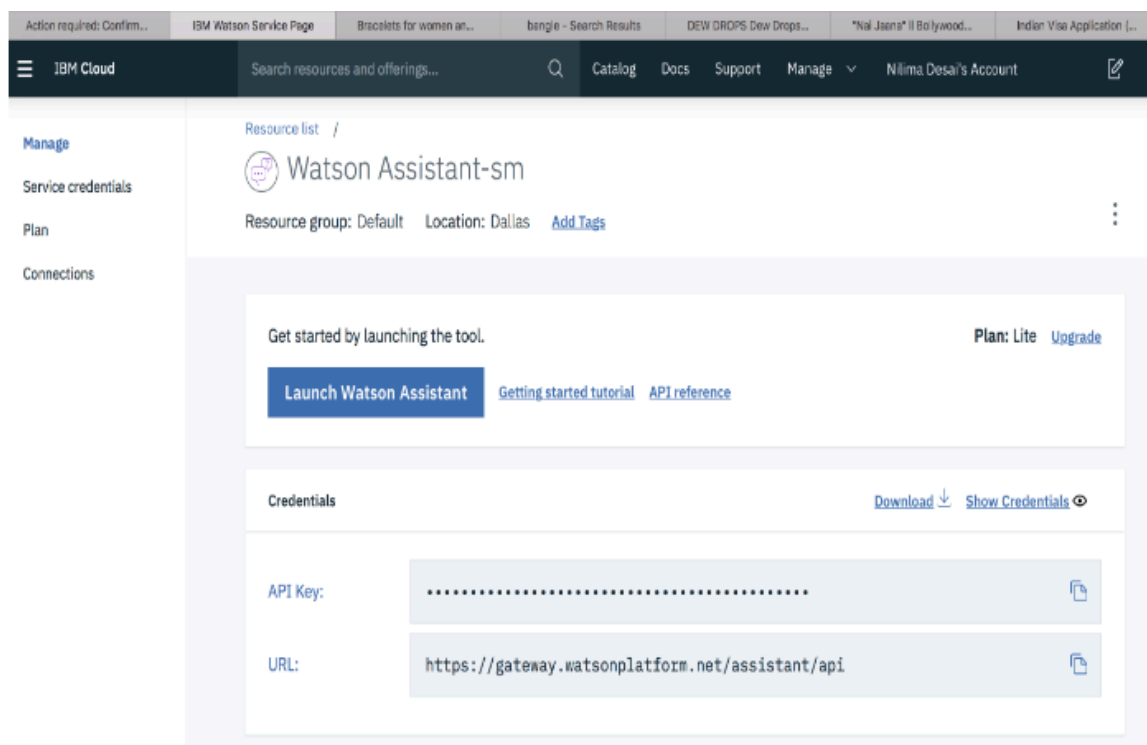
(Legacy) Configure IBM Watson Assistant as the NLU provider for Virtual Agent

Use the intents, entities, and utterances defined in IBM Watson Assistant and apply them as an NLU model for your Virtual Agent conversations.

Before you begin

In IBM Watson Assistant, do the following:

- In your IBM account, create a [Resource Link](#) in the AI (Artificial Intelligence) category. Once you have created the Resource Link, you should see the API key and URL:



- In your workspace, define the intents, entities, and utterances for your NLU model.
- Locate your workspace credentials and copy the workspace **Password**, which you must provide when setting your credentials during configuration.

In your ServiceNow instance, make sure that the Glide Virtual Agent plugin (com.glide.cs.chatbot) is activated. This plugin installs the proxy agent for the IBM Watson Natural Language Understanding server plugin (com.glide.nlu.ibmwatson.intent.discovery), which is needed for this integration.

Role required: admin

About this task

Configuring the IBM Watson Assistant integration involves providing IBM Watson Assistant credentials for authentication. You can set only one NLU service provider for your instance.

- **Note:** If you upgraded from a previous release, the upgrade process automatically retains the IBM Watson Assistant workspace **Password** that you provided.

As of the Quebec release, Virtual Agent supports legacy version 1 URLs only:

- Models: `https://<IBM HOST>/assistant/api/{{api_version}}/workspaces?version={{published_version}}`
- Intents: `https://<IBM HOST>/assistant/api/{{api_version}}/workspaces/{{model_id}}/intents?version={{published_version}}&page_limit=1000`
- Entities: `https://<IBM HOST>/assistant/api/{{api_version}}/workspaces/{{model_id}}/entities?version={{published_version}}`
- Prediction: `https://<IBM HOST>/assistant/api/{{api_version}}/workspaces/{{model_id}}/message?version={{published_version}}`

Procedure

1. Set the IBM Watson endpoint in your ServiceNow instance for each of the following HTTP(s) Connections records:

- IBM Watson NLU Models
- IBM Watson NLU Intents
- IBM Watson NLU Entities
- IBM Watson NLU Prediction

a. Navigate to **All**, and then enter `http_connection.list` in the filter.

b. In the HTTP(s) Connections page, select an IBM Watson entry in the Name column to open the record.

Name	Connection type	Active	Connection alias	Credential	Domain
IBM Watson NLU Entities	HTTP(s) Connection	true	IBMWatsonNLUEntities	IBM Watson NLU Entities	global
IBM Watson NLU Intents	HTTP(s) Connection	true	IBMWatsonNLUIntents	IBM Watson NLU Intents	global
IBM Watson NLU Models	HTTP(s) Connection	true	IBMWatsonNLUModels	IBM Watson NLU Models	global
IBM Watson NLU Prediction	HTTP(s) Connection	true	IBMWatsonNLUPrediction	IBM Watson NLU Prediction	global

c. Edit the URL in the **Host** and **Base path** fields to reflect the endpoint in your IBM Watson NLU account.

HTTP(s) Connection
IBM Watson NLU Models

* Name: IBM Watson NLU Models

Credential: IBM Watson NLU Models

Active: ☒

Domain: global

A connection alias resolves your connection and credential at runtime. Only one Connection is active per Connection Alias at a time. [More Info](#)

* Connection alias: IBMWatsonNLUModels

Manually enter your connection URL or use the URL builder to build the connection string. [More Info](#)

URL builder: ☒

Connection URL: `https://api.{{location}}.assistant.watson.cloud.ibm.com/instances/{{instance_id}}/api_version/{{api_version}}/workspaces?version={{published_version}}`

* Host: `api.{{location}}.assistant.watson.cloud.i`

Override default port:

Base path: `/instances/{{instance_id}}/api_version/{{api_version}}/workspaces?version={{published_version}}`

Mutual authentication: ☐

* Protocol: https

Use MID server: ☐

Connection timeout: 0

d. Select **Update**.

e. Repeat these steps for the remaining IBM Watson records.

2. Add the IBM Watson NLU API key in your ServiceNow instance for each of the following Basic Auth Credentials records:

- IBM Watson NLU Models
- IBM Watson NLU Intents
- IBM Watson NLU Entities
- IBM Watson NLU Prediction

a. Navigate to **All**, and then enter `basic_auth_credentials.list` in the filter.

b. In the Basic Auth Credentials page, select an IBM Watson entry in the Name column to open the record.

c. In the **Password** field, enter the IBM Watson NLU API key.

Basic Auth Credentials
IBM Watson NLU Models

Name: IBM Watson NLU Models

Order: 100

User name: apikey

Password: *****

Active: ☒

A connection alias resolves your connection and credential at runtime. More than one Credential can be active per Connection Alias at a time. If more than one credential is active, they will be used in order.

Credential alias:

Update Delete

- d. Select **Update**.
 - e. Repeat these steps for the remaining IBM Watson records.
3. Make the IBM Watson NLU service active.
 - a. Navigate to **All**, and then enter `open_nlu_driver.list` in the filter.
 - b. In the Open NLU Drivers table, locate the IBM Watson Script record and in the **Active** field, set the value to true.

Name	Active	Adapter Script	Adapter Script Name	Asynchronous Prediction Supported
Google DialogFlow ES - Script	true	GoogleDialogFlowESNLUAdapter	global.GoogleDialogFlowESNLUAdapter	true
IBM Watson - Script	true	IBM Watson NLU Adapter	global.IBMWatsonNLUAdapter	true
MS Luis - Script	true	MSLuisNLUAdapter	global.MSLuisNLUAdapter	false
ServiceNow NLU	true	ParloNLUAdapter	global.ParloNLUAdapter	true

Activating this setting adds **IBM Watson - Script active** to the list of available NLU services in Virtual Agent settings.

4. To enable NLU in your instance, navigate to **Conversational Interfaces > Settings**, and then do the following:
 - a. Click **Virtual Agent**.
 - b. Under Natural Language Understanding (NLU), click **View Settings**.
 - c. Slide the **Activate** toggle switch to enable Natural Language Understanding.
 - d. In the **NLU service provider** list, select **IBM Watson - Script**.
 - e. If you plan to use language-specific NLU models, enable the languages in the Supported NLU Languages list.
A language is enabled if the Enabled column displays **true**. For more information, see [\(Legacy\) Enable NLU languages in Virtual Agent settings](#).
 - f. Click **Save**.

IBM Watson Assistant is the NLU service provider for your instance.

(Legacy) Configure Google Dialogflow ES as the NLU provider for Virtual Agent

Use the intents, entities, and utterances defined in Google Dialogflow ES. Apply them as an NLU model for your Virtual Agent conversations.

Configuring the Google Dialogflow ES integration involves providing Google Dialogflow credentials for authentication. You can set only one NLU service provider for your instance.

Requirements

This NLU configuration requires the following:

- A Brazil ServiceNow instance
- A Google Dialogflow ES agent with defined intents, entities, and utterances

For more information, see the [Google Dialogflow ES documentation](#).

Note: A Google Dialogflow agent is similar to a ServiceNow model. Currently, Virtual Agent only supports one Google Dialogflow ES agent per instance.

- Access to the Google Cloud platform
- The Glide Virtual Agent [com.glide.cs.chatbot] plugin must be installed on your ServiceNow instance.

The following plugins are installed with Glide Virtual Agent by default:

- com.snc.integration.sso.multi.installer: Integration - Multiple Provider Single Sign-On Installer
- com.glide.nlu.googledialogflow.es.intent.discovery: Proxy agent to the Google Dialogflow ES Natural Language Understanding server

(Legacy) Create a service account and private key in Google Dialogflow ES

To use Google Dialogflow as your NLU provider for Virtual Agent, create a service account and private key for your agent in Google Dialogflow.

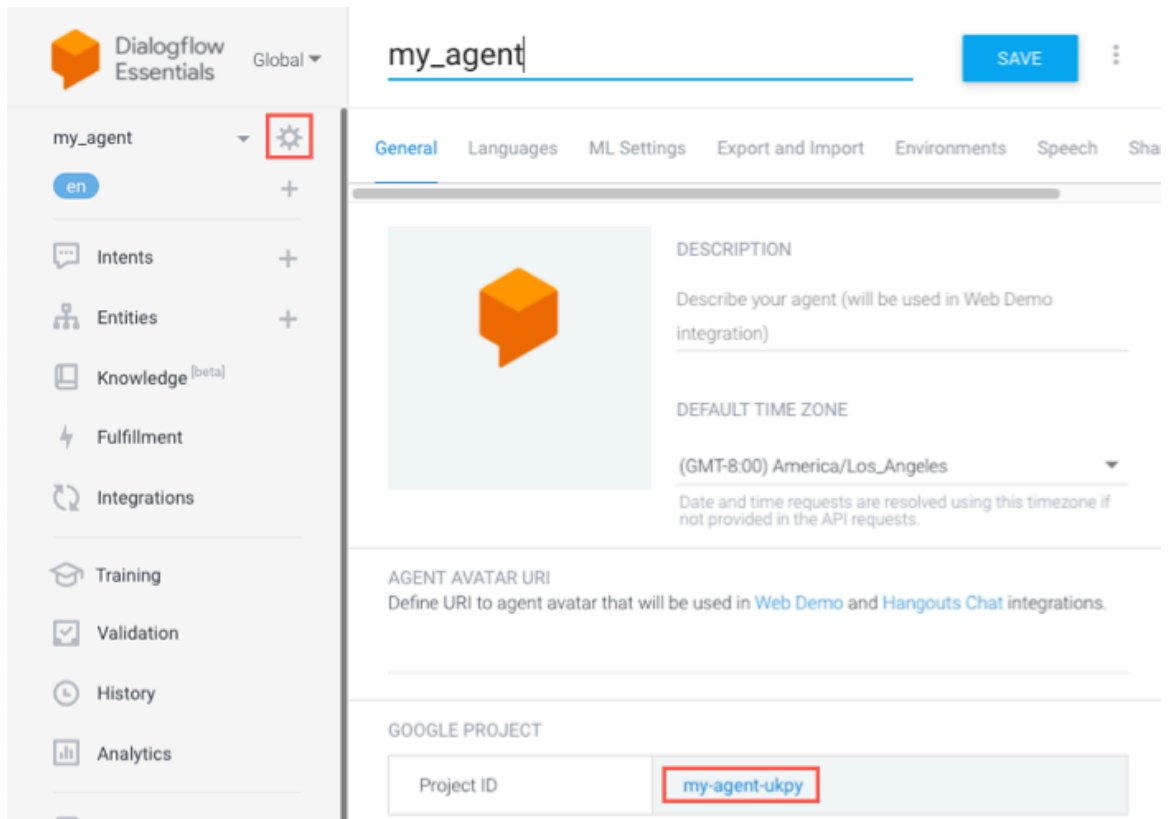
Before you begin

[Create an agent in Google Dialogflow.](#)

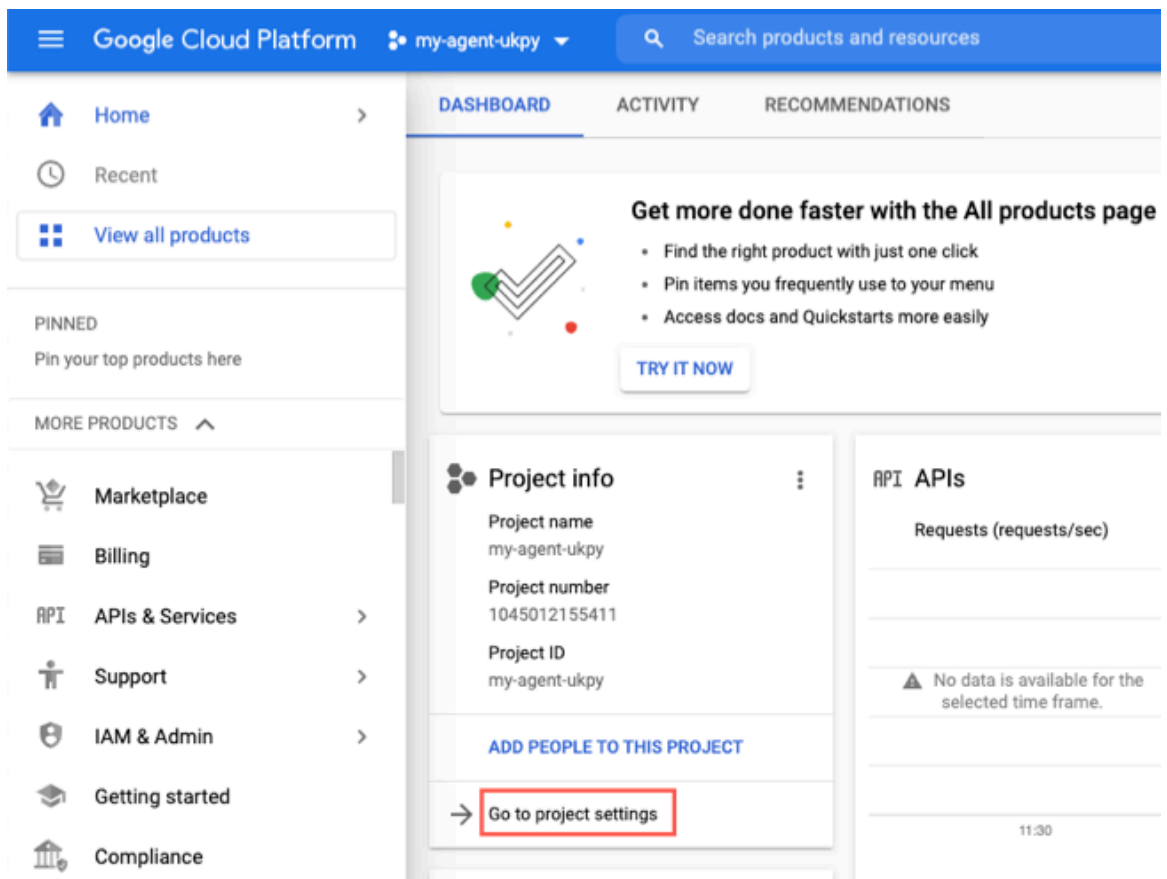
Role required: admin

Procedure

1. Log in to your Google Dialogflow account.
2. Select the agent settings icon, and then select the project ID on the **General** tab.

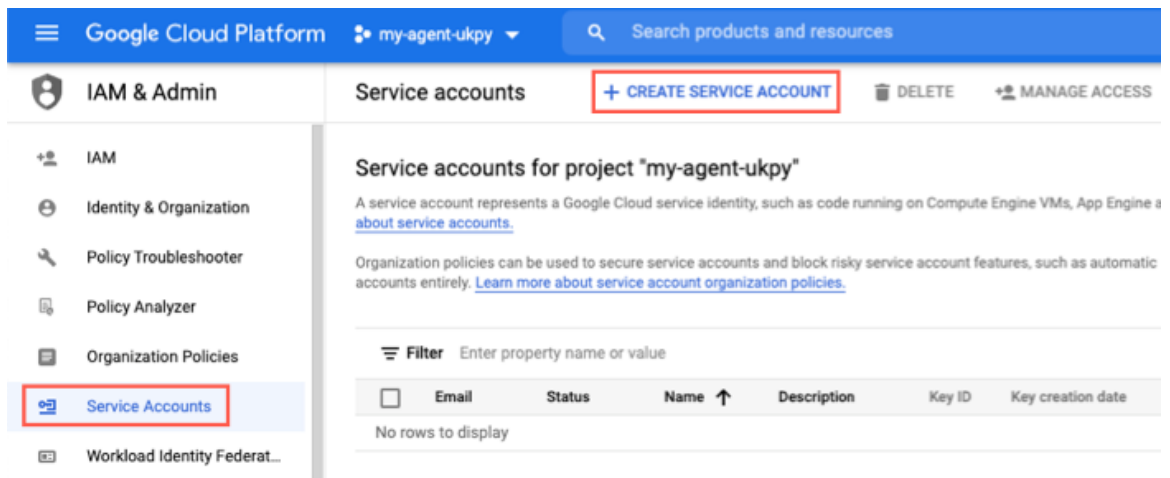


3. On the Google Cloud dashboard, select **Go to project settings**.



4. On the IAM & Admin page, select **Service Accounts**.

5. Select **+ Create Service Account**.



6. Provide a name, and then select **Create and Continue**.

7. Under the Grant this service account access to project section, select **Owner** as the role.

Create service account

1 Service account details

2 Grant this service account access to project (optional)

Grant this service account access to my-agent-ukpy so that it has permission to complete specific actions on the resources in your project. [Learn more](#)

Role	Condition
Owner	Add condition

Full access to most Google Cloud resources. See the list of included permissions.

[+ ADD ANOTHER ROLE](#)

[CONTINUE](#)

8. Select **Continue**.

9. Select **Done**.

10. In the **Email** column, select the link for the record.

Service accounts [+ CREATE SERVICE ACCOUNT](#) [DELETE](#) [+ MANAGE ACCESS](#)

Service accounts for project "my-agent-ukpy"

A service account represents a Google Cloud service identity, such as code running on Compute Engine VMs, App Engine apps, or systems running outside Google. [Learn more about service accounts.](#)

Organization policies can be used to secure service accounts and block risky service account features, such as automatic IAM Grants, key creation/upload, or the creation of service accounts entirely. [Learn more about service account organization policies.](#)

Filter	Email	Status	Name	Description	Key ID	Key creation date	OAuth 2 Client ID	Actions
	 my-srv-account@my-agent-ukpy.iam.gserviceaccount.com		my-srv-account		No keys		110222494929018	

The Service account details page opens.

11. Copy the Email and the Unique ID and save them for a later step.

[DETAILS](#) [PERMISSIONS](#) [KEYS](#) [METRICS](#) [LOGS](#)

Service account details

Name
my-srv-account [SAVE](#)

Description [SAVE](#)

Email
my-srv-account@my-agent-ukpy.iam.gserviceaccount.com

Unique ID
110222494929018576636

Save these for later!

12. On the Service account details page, select the **Keys** tab.

13. Select **Add Key > Create new key**.

← my-srv-account

[DETAILS](#) [PERMISSIONS](#) [KEYS](#) [METRICS](#) [LOGS](#)

Keys

 Service account keys could pose a security risk if compromised. We recommend you avoid downloading service account keys and instead use the [Workload Identity Federation](#). You can learn more about the best way to authenticate service accounts on Google Cloud [here](#).

Add a new key pair or upload a public key certificate from an existing key pair.

Block service account key creation using [organization policies](#).
[Learn more about setting organization policies for service accounts](#)

[ADD KEY](#) ▾

[Create new key](#)

[Upload existing key](#)

Key creation date	Key expiration date
-------------------	---------------------

14. When prompted for the key type, select **P12**, and then select **Create**.

The P12 file is downloaded to your computer.

15. Make note of the private key password (`notasecret`).

You will need this password in a [later step](#).

Private key password example

Private key saved to your computer

 `my-agent-ukpy-1924e87a9c85.p12` allows access to your cloud resources, so store it securely. [Learn more best practices](#)

This is the private key's password. It will not be shown again. You must present this password to use the private key. [Learn more about service accounts](#)

Private key password

notasecret

🔒

CLOSE

(Legacy) Generate a Java Keystore (JKS) file and configure security on your ServiceNow instance

To use Google Dialogflow as your NLU provider for Virtual Agent, use the private key you downloaded to generate a JKS file and set up authentication in your ServiceNow instance.

Before you begin

Make sure the Java Development Kit (JDK) is installed on the system.

Role required: admin

About this task

 **Note:** Google Dialogflow uses OAuth2.0 for authentication.

Procedure

1. Open a command shell window.
2. To create a JKS file from the P12 file, do the following:
 - a. Run the following command:

```
keytool -importkeystore
-srckeystore /local_dir/myprivatekey.p12 -srcstoretype
pkcs12 -destkeystore /local_dir/myprivatekey.jks
-deststoretype JKS
```

In this example, `/local_dir/myprivatekey.p12` points to the private key that you downloaded in the previous step.

- b. When prompted, enter `notasecret` for the destination keystore password and the source keystore password.
`notasecret` is the private key password you noted from the previous step. You will enter this password three times.

A JKS file is created in the same directory.

3. In your ServiceNow instance, add the JKS file to the Google Dialogflow X.509 certificate record:

- a. Navigate to **All**, and then enter `sys_certificate.list` in the filter.
- b. Select Google Dialogflow X.509 Certificate to open the record.
- c. On the form, fill in the fields as follows.

Field	Value
Type	Select Java Key Store .
Key store password	Enter the private key password that you specified when creating the JKS file (<code>notasecret</code>).
Active	Select this option to activate the certificate.

- d. Select the attachment icon and upload the JKS file to the record.
- e. Under Related Links, select **Validate Stores/Certificates**.
You should see a `Valid key_store` message.
- f. Select **Update**.

4. In your ServiceNow instance, update the Google Dialogflow JWT (JSON Web Token) Keystore alias record.

- a. Navigate to **All**, and then enter `jwt_keystore_aliases.list` in the filter.
- b. Select Google Dialogflow JWT Keystore to open the record.
- c. On the form, fill in the fields as follows.

Field	Value
Signing Keystore	Select Google DialogFlow X.509 Certificate .
Signing Algorithm	Select RSA 256 .
Signing Key	Enter the private key password that you specified when creating the JKS file (<code>notasecret</code>).
Key Id	Leave this field empty.

- d. Select **Update**.

5. In your ServiceNow instance, update the Google Dialogflow JWT provider record.

- a. Navigate to **All**, and then enter `jwt_provider.list` in the filter.
- b. Select Google Dialogflow JWT Provider to open the record.
- c. In the **Signing Configuration** field, select **Google DialogFlow JWT Keystore**.
- d. In the Standard Claims related list, enter the email address for your Google Dialogflow agent service account as the **Claim Value** for the **iss** entry.

JWT Provider details.

- Name: A Unique Name of the JWT Provider.
- Expiry Interval (sec): Lifespan of the tokens generated by this provider. Used to calculate the "exp" claim.
- Signing Configuration: Reference to the JWT Signing Configuration (JWT Key) to apply.

* Name Google DialogFlow JWT Provider

* Expiry Interval (sec) 60

* Signing Configuration Google DialogFlow JWT Keys

Update Delete

Standard Claims (3) Custom Claims

Claim Name	Claim Value Type	Claim Value
aud	string	https://oauth2.googleapis.com/token
iss	string	customer-gdf-account@customer-gdf-account...
scope	string	https://www.googleapis.com/auth/dialogflow

For more information, refer to [\(Legacy\) Create a service account and private key in Google Dialogflow ES](#).

- e. Select **Update**.
6. In your ServiceNow instance, update the Google Dialogflow NLU OAuth Provider record:
- a. Navigate to **All**, and then enter `oauth_entity.list` in the filter.
 - b. Select Google Dialogflow NLU to open the record.
 - c. On the form, fill in the fields as follows.

Field	Value
Client ID	Enter the unique ID for your Google Dialogflow agent service account that you saved from a previous step.
Client Secret	Enter the private key password that you specified when creating the JKS file (not a secret).
Default Grant Type	Select JWT Bearer .

- d. Select **Update**.
7. In your ServiceNow instance, update the **GoogleDialogFlowESNLUPrediction** system alias.

- Navigate to **All**, and then enter `sys_alias.list` in the filter.
- Select **GoogleDialogFlowESNLUPrediction** to open the record.
- Select the **Connection Attributes** tab and find the **EnvID** record.
- In the **Default value** column, update the value with the name of the Google Dialogflow environment where the agent was published.
The default value is *prod*.

Connections (1) Connection Attributes (4) Child Aliases							
Model = GoogleDialogFlowESNLUPrediction							
☐	Label	Column name	Mandatory	Read only	Type	Reference	Default value
☐	Credential Type	credential_type	true	false	String (Full UTF-8)	(empty)	credential_record
☐	REST Message Fn	rest_message_fn	true	false	Reference	HTTP Method	1866fab2ebb23010d9b201c7c1522811
☐	Env ID	env_id	true	false	String (Full UTF-8)	(empty)	prod
☐	Credential Record	credential_record	true	false	Reference	OAuth 2.0 Credentials	7eb97537eb323010d9b201c7c1522813

- Select **Update**.

- Specify Google Dialogflow ES as your NLU provider in Virtual Agent.
For more information, see [\(Legacy\) Configure Natural Language Understanding in Virtual Agent](#).

(Legacy) Activate the Google Dialogflow ES service and enable it in your instance

When you activate the Google Dialogflow ES service in the Open NLU Drivers [open_nlu_driver] table, the service becomes available as an option in Virtual Agent NLU settings.

Before you begin

Role required: admin

Procedure

- Navigate to **All**, and then enter `open_nlu_driver.list` in the filter.
- In the Open NLU Drivers table, locate the Google Dialogflow ES Script record.
- In the Active column, set the value to **true**.

Open NLU Drivers					
Name					
☐	Name	Active	Adapter Script	Adapter Script Name	Asynchronous Pr
☐	Google Dialogflow ES - Script	☒	DialogFlowESNLUAdapter	global.GoogleDialogFlowESNLUAdapter	true
☐	IBM Watson - Script	☐	IBMWatsonNLUAdapter	global.IBMWatsonNLUAdapter	true
☐	MS Luis - Script	☐	MSLuisNLUAdapter	global.MSLuisNLUAdapter	false
☐	ServiceNow NLU	☒	ParloNLUAdapter	global.ParloNLUAdapter	true

- To enable NLU in your instance, navigate to **Conversational Interfaces > Settings**, and then do the following:

- a. Click **Virtual Agent**.
- b. Under Natural Language Understanding (NLU), click **View Settings**.
- c. Slide the **Activate** toggle switch to enable Natural Language Understanding.
- d. In the NLU service provider list, select **Google Dialogflow ES - Script**.
- e. If you plan to use language-specific NLU models, enable the languages in the Supported NLU Languages list.
A language is enabled if the Enabled column displays **true**. For more information, see [\(Legacy\) Enable NLU languages in Virtual Agent settings](#).
- f. Click **Save**.

Result

Google Dialogflow ES is the NLU service provider for your instance.

(Legacy) Test Virtual Agent with Google Dialogflow ES NLU in Virtual Agent Designer

Test topic discovery with Google Dialogflow and Virtual Agent in the Virtual Agent Designer interface.

Before you begin

Check the following:

- Ensure that your Google Dialogflow agent (model) is published as a version with the most recent changes.

For more information, see [Versions and environments](#)  in the Google Dialogflow documentation.

- Ensure that at least one topic is mapped to an existing Google Dialogflow agent (model) and intent.

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**.
2. In the Topics page, click **Test Active Topics**.
3. Type an utterance that should trigger the Google Dialogflow intent that is mapped to the topic.
4. To test entity slot-filling, do the following:
 - a. On the **Flow** tab, add a Text user input node.
 - b. Select an entity for the **NLU entity** field.

Ensure that the entity you select is configured in your Google Dialogflow ES agent. When a matching utterance is entered in the Test this topic window, the topic should be triggered, and the entity should slot-fill automatically.

The screenshot displays the ServiceNow Virtual Agent interface. On the left, a chat window titled "Now Support" shows a conversation where the user says "I like red" in response to a question about a favorite color. The system responds with a confirmation question. On the right, the "Now Assist in Virtual ..." panel shows the analysis of the test phrase "I like red". It indicates a 100% confidence score, identifies the intent as "fav color", the model as "TB-Test-Agent-Model", the topic as "Test GDF 1", and the entity "@color" with the value "red".

(Legacy) Enhanced natural language handling of user inputs in NLU topic discovery

Give Virtual Agent the capability of recognizing natural variations on yes and no from the user, such as sure or nope. By defining a range of boolean responses as affirmative or negative, Virtual Agent doesn't have to prompt the user to restate their preference.

When Virtual Agent doesn't understand unexpected user input, it prompts the user again for information that it can understand. Starting with the Tokyo release, Virtual Agent can understand natural variations in boolean "yes/no" responses, such as yep or nah.

Natural language handling in ServiceNow NLU

The VA NLU Dispatches [sys_cs_nlu_dispatch] table stores the names of the model and intents that handle utterance variations.

For ServiceNow[®] NLU, the Setup Topics Model is already configured to handle boolean user inputs in English. There are two records in the table, **BOOLEAN_NO** and **BOOLEAN_YES**, which are mapped to the **Negative** and **Affirmative** intents in the Setup Topics Model.

VA NLU Dispatches

View: null

Name

Search

Actions on selected rows...

New

All

	Name	Active	Language	NLU Intent ID	NLU Model ID	Domain
	BOOLEAN_NO	true	English	Negative	Setup_Topics_Model	global
	BOOLEAN_YES	true	English	Affirmative	Setup_Topics_Model	global

The Setup Topics Model and intents are read only, so if you need to modify the intents or add additional intents in other languages, create a new model with new intents. You can update the existing entries and add new ones to the table.

Setting up natural language handling for third-party NLU providers

If you are using IBM Watson or Google Dialogflow for NLU topic discovery, add entries for the corresponding model and intents in the VA NLU Dispatches table, as described in [\(Legacy\) Configure enhanced natural language user input handling](#).

Changing the confidence threshold

The confidence threshold for boolean inputs is defined in the `com.glide.cs.dialog.boolean_threshold` system property. The default value is `0.9`. For more information, see [Add a system property](#).

(Legacy) Configure enhanced natural language user input handling

Add enhanced natural language handling for boolean user responses to your Virtual Agent environment. If you're using additional languages or third-party NLU providers, specify the model and intents that define variations in yes/no utterances for your bot.

Before you begin

In your NLU provider, create a model with two intents, or add two intents to an existing model. One intent should contain affirmative or "yes" utterances. The other intent should contain negative or "no" utterances.

If your environment supports multiple languages, create models and intents for each language.

Role required: virtual_agent_admin or admin

About this task

The default entries in this table apply to ServiceNow NLU for English only. If you want to implement natural language handling in other languages, add new entries to the table for each language.

Procedure

1. Navigate to **All**, and then enter `sys_cs_nlu_dispatch.list` in the filter.
2. Select **New** or an existing entry that you want to modify.
Alternatively, select **New** to add an entry for another language or third-party NLU provider.
3. On the form, fill in the fields.

Field	Description
NLU Model ID	Name of the model that contains the defining intents for the boolean responses.
Name	Value name that represents the type of user input being configured. The following values are valid: ○ BOOLEAN_NO: Maps to utterances that express a "no" response to a yes/no question. ○ BOOLEAN_YES: Maps to utterances that express a "yes" response to a yes/no question.
Active	Option that enables enhanced natural language user responses on your instance.

Field	Description
NLU Intent ID	Name of the corresponding intent for the boolean option. By default, the intent for BOOLEAN_NO is Negative. The intent for BOOLEAN_YES is Affirmative. If you need to make changes, create a new model with these intents, and then specify the new intent in this field.
Language	Language of the intent. English for ServiceNow NLU is configured by default. If you need to support other languages, you can add a row in the table for each supported language.

4. Select **Submit** or **Update**.

Result

Depending on your environment, your configuration may contain entries for other languages (such as French or German in the example below) or for other NLU providers, such as IBM Watson.

VA NLU Dispatches						
Name		Search		Actions on selected rows...		
All						
☐	Name	Active	Language	NLU Intent ID	NLU Model ID	Domain
☐	BOOLEAN_NO	true	English	Watson Boolean No	IBM Watson Setup Topics	global
☐	BOOLEAN_NO	true	French	Boolean No	DAL - Setup Topics	global
☐	BOOLEAN_NO	true	English	Negative	Setup_Topics_Model	global
☐	BOOLEAN_NO	true	German	Boolean No	DAL - Setup Topics	global
☐	BOOLEAN_YES	true	English	Watson Boolean Yes	IBM Watson Setup Topics	global
☐	BOOLEAN_YES	true	French	Boolean Yes	DAL - Setup Topics	global
☐	BOOLEAN_YES	true	English	Affirmative	Setup_Topics_Model	global
☐	BOOLEAN_YES	true	German	Boolean Yes	DAL - Setup Topics	global

(Legacy) Configure Virtual Agent for a ServiceNow mobile application

Virtual Agent provides optimized templates for the mobile experience. Configure a service portal to run Virtual Agent on a ServiceNow mobile application.

Before you begin

Install the required plugins:

- Virtual Agent (com.glide.cs.chatbot)
- Conversational Messaging (com.glide.messaging.awa)
- Core ServiceNow[®] mobile plugins

For more information, see [Mobile plugins](#).

Role required: admin

Procedure

1. Install the corresponding mobile plugins for each application that you want to use in Virtual Agent.
For example, if you're using Virtual Agent ITSM conversations, install the ITSM Mobile Agent (sn_itsm_mobile_agt) plugin as well. For more information, see [Mobile plugins for ServiceNow Agent](#).
2. Navigate to **All > Now Mobile App > Applet Launchers**.
3. Select the **Homepage** record.

If prompted, select the link at the top of the page to edit the record.
4. Select the **Body** tab.

Launcher screen Homepage record

Launcher screen Homepage

You are editing a record in the **Now Mobile** application ([cancel](#))

Name:

Application:

Required Roles:

Active: ☒

Available offline: ☐

Launcher Header Titles:

Header **Body**

Launcher section mappings

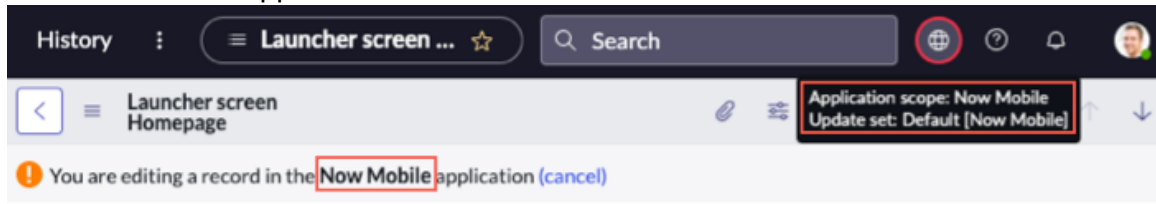
Order	UI section
1	Static Media Content
3	My Items

Quick actions menus

Quick Action Button	Order
Chat	10

5. Select **Chat** under **Quick Action Button** to open the record.
If you don't see a Chat entry, add it as follows:

- a. In the Unified Navigation bar, select the scope icon and change the application scope so that it matches the application that contains the record.



- b. Select the back button to return to the previous page.
 - c. Select the **Homepage** record.
 - d. Select the **Body** tab.
 - e. Under **Quick Action Button**, double-select **Insert a new row**.
 - f. Type **Chat**, and then press Enter or select the save icon.
 - g. Select **Update**.
6. Fill in the Chat form as follows.
 - Note:** If prompted, select the link at the top of the page to edit the record.
 - a. In the **Function** field, select **Agent Chat**.
 - b. Select the info icon ⓘ on the **Function** field and verify that **Chat Launcher** is set in the **Type** field (this is the default setting).

c. Select the **Active** check box.

d. Select **Update**.

Chat form configuration

Function instance Chat

! You are editing a record in the **Now Mobile** application (cancel)

* Name: Chat

Description: Allows an employee to communicate with a live or virtual agent

* Parent: Launcher screen: Homepage

Application: Now Mobile

* Parent table: Launcher screen [sys_sg_applet_launcher]

* Function: Agent Chat

* Label: Chat with Virtual Agent

Location: Quick Action

Button: -- None --

Emphasis: -- None --

Icon: Comments Solid

Order:

Active ☒

Function

* Name: Agent Chat

Description: Allows an employee to communicate with a live or virtual agent

Type: Chat Launcher

Context: Global

Take source:

Application: Now Mobile

Result

Depending on the device and the patch version of the server instance, end users can access the Virtual Agent chat icon in the bottom-right or top-right corner of the app. Tap the plus icon or the chat icon to start a conversation.

The topics you create in Assistant Designer asset library can be used in both the web and mobile clients, as well as any other channels you may configure. Virtual Agent output components are already optimized for Android and iOS, including [image and video cards](#), [link unfurling](#), [AI Search results](#), and [Virtual Agent notifications](#).

What to do next

To enable ServiceNow Otto for Virtual Agent, see [Assistants overview](#).

(Legacy) Now Mobile notification of unread chat and Virtual Agent messages

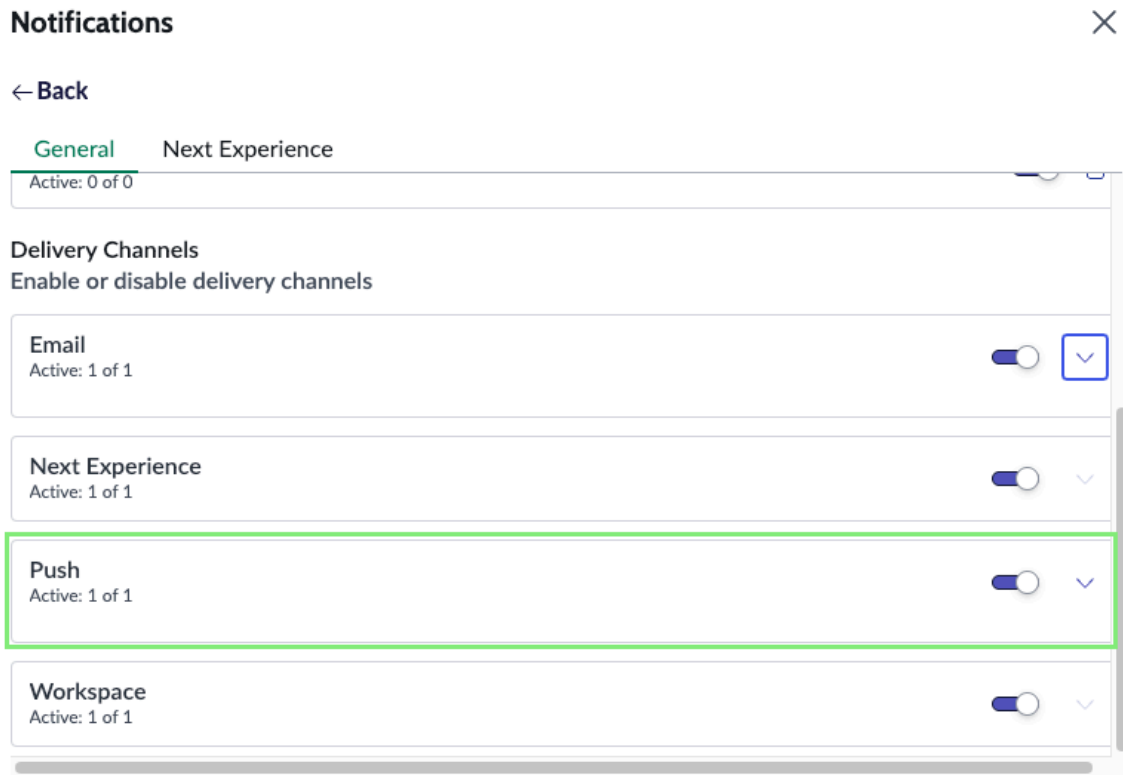
When Now[®] Mobile app users navigate away from the app after starting an active conversation, they can automatically receive Virtual Agent mobile push notifications informing them of new, unread chat messages and Virtual Agent notifications that have arrived.

Now Mobile users might need to leave an active conversation for various reasons. They could be waiting for an available agent and decide to handle other tasks instead. Or, they could be engaged in a long-running (asynchronous) conversation and do not need to be online concurrently with an agent. Now Mobile users can check Virtual Agent push notifications to get timely information about their current conversations when they're away from the app. These push notifications enable them to stay engaged with live and virtual agents and avoid unnecessary conversation closures (timeouts).

Enabling Virtual Agent message push notifications

To receive Virtual Agent mobile push notifications, your users must enable push notifications for the Now Mobile app on their iOS or Android devices.

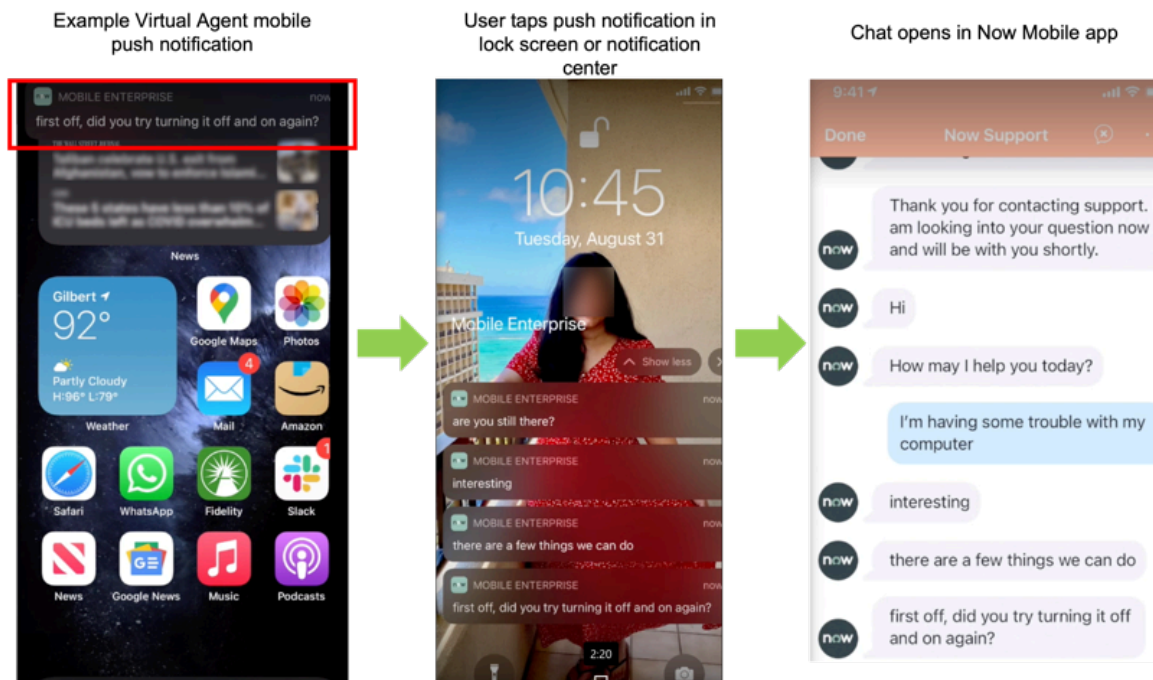
In base system instances, the Virtual Agent Message Push notification is automatically enabled for all Now Mobile users. Users can modify their [notification preferences](#) by navigating to **All > Self-Service > My Notification Preferences**.



How Virtual Agent mobile push notifications work

Virtual Agent push notifications display information about incoming, unread chat messages from agents and any Virtual Agent messages. The push notifications are listed in the notification center (lock screen) of mobile devices. Users tap a push notification in the list to open the Now Mobile app and continue the corresponding conversation.

Example Virtual Agent push notifications in the Now Mobile app



Note: Virtual Agent push notifications are not displayed under the **notifications** tab in the Now Mobile app. These push notifications also do not generate associated badge numbers on the Now Mobile app icon. However, badge numbers are displayed on the Virtual Agent quick launch icon within the app.

To process unread chat or Virtual Agent messages and deliver them to Now Mobile users, the system does the following:

- Checks which user accounts are registered to receive push notifications.
- Determines the mobile clients (devices) that are not in use.
- Runs the *Generate Virtual Agent Push Notification* scheduled job every 60 seconds to:
 - Identify and batch new unread messages.
 - Add unread messages records to the Push Notifications [sys_cs_message_notification] table, which generates the Virtual Agent push notifications.
 - Delivers Virtual Agent push notifications to Now Mobile users away from the app.

Depending on when the *Generate Virtual Agent Push Notification* scheduled job processes new unread messages, push notifications might not arrive in the order that they were generated, and it might take slightly longer than one minute for push notifications to arrive.

Virtual Agent push notification message content

The content of Virtual Agent push notification messages sent to Now Mobile users reflects the actual text from the live or virtual agent. If a text representation of the message, such as a rich control, cannot be generated, the text **New Message** is displayed instead.

Note: System action messages that are displayed to users during live chat or virtual agent conversations are not included in Virtual Agent push notifications or in the count of unread messages. The exception is the system message for the live agent timeout: The conversation is timing out, are you still there? This message is sent as a push notification since it is time-sensitive and informs users that the conversation might be closed if they do not respond.

(Legacy) View and modify Virtual Agent style templates

Virtual Agent provides optimized templates for the mobile experience. You can view and modify the style sheets in the Adapter Cards [sys_cs_adapter_card] table.

Before you begin

Role required: virtual_agent_admin or admin

Procedure

1. Click **All**, and then enter `sys_cs_adapter_card.list` in the navigation filter. The Adapter Cards page opens.
2. Click an entry in the **Card Name** column.
3. Click the name of the channel you want to view in the embedded list. For example, click **iOS** or **Android Device** to view the corresponding style sheet.
4. Make any changes in the **Template Definition** field.
5. Click **Update**.

(Legacy) Configuring Virtual Agent notifications

Send ServiceNow notifications directly to users via the Virtual Agent chatbot on supported messaging channels. Notifications can be simple informational messages for review, or actionable messages with buttons that users can select to perform certain actions.

Notifications are sent to recipients via the Virtual Agent bot in the chat widget, pre-built messaging integrations (for example, SMS Twilio, Slack, Microsoft Teams), and custom chat integrations.

Notification functionality is included with the Glide Virtual Agent (com.glide.cs.chatbot) plugin and also with Virtual Agent Lite, which is included with the ServiceNow AI Platform. However, Virtual Agent Lite users can receive only simple notifications, while Virtual Agent users can receive both actionable notifications and simple notifications. Users with no associated ServiceNow profiles in the [sys_user] table can receive non-actionable Virtual Agent notifications.

How Virtual Agent notifications work

As an admin, you can define different types of notifications that have specific layouts and content. You can also customize certain aspects of notification content, such as the message heading and message content.

Simple notifications

The content can be a standard informational message, record card, or an image card. Simple notifications are delivered to users immediately, even when they're engaged in a conversation with a virtual or live agent.

Actionable notifications

These notifications have buttons that enable the recipient to perform certain actions, such as adding a comment or requesting a live agent. When you create an actionable notification, you associate an action with a published Virtual Agent

topic, a scriptable action, or a flow action that handles the action to be performed. To encourage users to act on a notification, admin users can choose to remove the **Skip** option. If the user still doesn't act, the conversation will be completed as inactive.

Note: The notifications are actionable only when there is an associated link action to its content.

Actionable notifications are delivered to users when they're not in an active conversation with a virtual or live agent. A queue stores actionable notifications that are waiting to be delivered, for up to eight hours by default.

Actionable notifications are best suited for conversational purposes, such as:

- Password reset
- Incident update
- Approval request
- Course survey
- Service follow-ups and surveys
- Employee onboarding follow-ups

When a topic conversation completes, Virtual Agent automatically prompts the user to view pending notifications (if any). Admins can suppress this prompt by setting the `com.glide.cs.show_pending_notifications_prompt` property on the System Properties table to false.

Notifications with dynamic content

You can personalize Virtual Agent notifications by adding dynamic content to message headers and messages. For record- and event-based notifications, you use parameter substitution to specify the variables that identify the record values (from the notification table) to be included in the content.

Advanced notifications with dynamic content

You can create Virtual Agent notifications that use a script to add dynamic content in message headers and messages. The content can come from multiple data sources and include third-party services, such as URL shortening.

Variables in notifications

You can pass information to a completed survey when the notification is triggered. Context is defined by the script found in the notification topic. This script cannot be modified.

```
vaVars.global_notification_context =
  JSON.stringify({
    'tableName': table_name,
    'tableSysId': sys_id,
    'actionId': actionId,
    'eventParm1': eventParm1,
    'eventParm2': eventParm2});
```

Notifications are triggered by records updates or by creating a platform event in the event queue. `actionId` is the ID number for the action. The platform event takes in the `eventParm1` and `eventParm2` parameters. If a notification is triggered, the parameters are passed to the topic. To capture the notification incident number in your topic, use the following script.

```
var notificationContext =
  JSON.parse(vaVars.global_notification_context);
vaVars.sysId = notificationContext.tableSysId;
vaVars.tableName = notificationContext.tableName;
```

Notification processing

Virtual Agent notifications have certain processing controls and limitations, such as the maximum number of recipients allowed per notification and the number of notifications that can be sent per day. The following table identifies these processing controls and the system properties that can be used to change their default values.

Virtual Agent notification processing controls and limitations

Notification processing control or limitation	Default value	Associated system property
Maximum number of recipients per notification per channel	100,000 recipients	<code>com.glide.cs.per_notification_us</code> Max limit: None Note: - If there are more recipients than the configured number, warning messages are displayed to reduce the recipient list while you're configuring the notification and when the notification is delivered. The warnings are displayed only when there is Virtual Agent content associated with the notification. - Recipient limits may apply to third-party delivery channels based on the level of service or subscription.
Maximum number of notifications per day, per channel	100,000 notifications	<code>com.glide.cs.daily_notification_</code> Max limit: None Note: Rate limits may apply to third-party delivery channels based on the level of service or subscription.
Lifespan of actionable notifications (a queue stores	8 hours	<code>com.glide.cs.idle_actionable_not</code>

Virtual Agent notification processing controls and limitations (continued)

Notification processing control or limitation	Default value	Associated system property
actionable notifications that are waiting to be delivered)		i Note: You can specify a maximum value of 72 hours.
Allow access to notification card content and parameter substitutions in notification headings and messages	False (not enabled)	<i>com.glide.cs.notification_record</i> i Note: This property does not apply to advanced notifications.

Notification experience for end users

The notification experience for end users depends on the type of notification that they're receiving. End users can also manage how their notifications are delivered by subscribing to or unsubscribing from notifications.

- Simple message notifications - These notifications are delivered immediately to the end user, even when the user is chatting with a bot or live agent. The user sees the incoming message but can continue with the current conversation.
- Actionable notifications - These notifications are delivered only when the user is not in an active conversation with a virtual or live agent. When users complete their conversation with a bot or live agent, they can use the **Show notification** command to view a list of pending notifications, which displays the heading of each notification. Users can select a pending notification to review, then perform the appropriate action for the notification, or skip the action.

User subscriptions for notifications

End users can subscribe or unsubscribe to notifications on the channel that they're using. For example, the chat menu provides a toggle switch that users can use to subscribe or unsubscribe to notifications on the web channel.

In the conversational integrations for Slack and Microsoft Teams, end users manage their notification subscriptions by using the **Subscribe** and **Unsubscribe** commands.

(Legacy) Create Virtual Agent NLU notifications

Create a notification that is sent directly to users via the Virtual Agent chatbot. The notification specifies when users receive the notification (triggers for the notification) and who receives it (recipients with and without accounts in the User [sys_user] table).

Before you begin

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > System Notification > Provider > Notifications** and select **New**.
2. On the form, fill in the fields.

Notifications form

Field	Description
Name	Name of the notification.
Table	Table to receive notifications about.
Application	Application scope of the notification.
Type	Type of the notification.
Category	Category of the notification. For Virtual Agent, it's chat.
Active	Option to activate the notification. The notification is active by default.
Trigger	
Triggered By	System action that triggers the notification. You can choose to send the notification after a record is changed or after an event is triggered.
Inserted	Option to send the notification after a record is inserted. This field appears when you select Record Change in the Triggered By field.
Updated	Option to send the notification after a record is updated. This field appears when you select Record Change in the Triggered By field.
Event	Event that triggers the notification. For example, to send a notification after an incident is closed or resolved, you would select the <i>incident.inactive</i> event. By default, this event is logged in the system each time a user resolves or closes an incident. This field appears when you select Event in the Triggered By field.
Conditions	Filter to specify the table records that users receive notifications about. For example, to send notifications about top-priority incidents, you would select Incident [incident] in the Table field and set the conditions to [Priority] [is] [1 - Critical] .
Recipients	
Users	Users who receive the notification. Add users from the static User ([sys_user] table or its extension tables) to define recipients for the notification. i Note: You can define the recipients for notifications only for chat channels using this field.
Recipients in fields	Record fields that include recipients who receive the notification. For example, to send the notification to the record assignee, select Assigned to .

Field	Description
	Add recipients from the User [sys_user] table or its extension tables to trigger the notification. <i>Note:</i> You can define the recipients for notifications for both chat channels and messaging channels using this field.
Is originating user included?	Option to include the user who changed the record or triggered the event.

3. Select **Submit**.

Note: Use the **Submit** button for Virtual Agent notifications. The **Submit and Add Common Content** button is for other use cases.

What to do next

- (Legacy) [Create additional recipients for Virtual Agent NLU notifications.](#)
- (Legacy) [Define Virtual Agent NLU notification contents.](#)

(Legacy) Create additional recipients for Virtual Agent NLU notifications

Create and define additional recipients for a Virtual Agent notification to be delivered on chat channels or messaging channels.

Before you begin

Role required: admin

About this task

- The admin can define recipients under the Additional Recipients related list for messaging channels.

Note: Selecting the channel (chat channel or messaging channel) is a prerequisite to defining the content for the notification.

- The admin can define recipients under the Additional Recipients related list for chat and messaging channels using a dynamic condition.

Procedure

1. Navigate to **All > System Notification > Provider > Notifications** and select the notification that you want to create additional recipients for.
2. In the Additional Recipients related list, select **New**.
3. On the form, fill in the fields.

Additional Notification Recipients form

Field	Description
Notification	Identifier of the notification. The notification name is auto-populated.

Field	Description
Recipient Table	The scope of the recipient record for the notification. The Recipient Table field is auto-populated with the user [sys_user] as the default value.
Application	The scope of the recipient record.
Active	Option to activate the notification for the defined additional recipients.
Static Recipients	Names of the recipients from the scope of the selected recipient table.
Dynamic Recipients	
Dynamic Conditions	Dynamic filter conditions for the defined recipients. The dynamic condition is applicable for both messaging and chat channels. This dynamic condition enables you to define the recipients list for a group of users to send a notification. Click the refresh icon  next to the records match condition link to update the exact number of records matching the latest filter condition. By default, it shows the total number of records in the current table. Note: Only one active record can be added for a particular recipient table. If you want to add another record for the recipient table, you must deactivate the current record.

4. Select **Submit**.

(Legacy) Define Virtual Agent NLU notification contents

Create the content for a Virtual Agent notification delivered in a chat or messaging channel.

Before you begin

- Images for image cards must be 400 pixels wide or larger and must be in .jpg, .png, .bmp, .gif, .ico, or .svg format.
- If you're upgrading from an earlier release and want ACLs observed for data displayed in record cards and parameter substitutions in chat notifications, set the `com.glide.cs.notification_record_access_check` system property to true. The default value for this system property is false, which means that data is delivered regardless of the user's access level.

Note: This property does not apply to advanced notifications.

- Role required: virtual_agent_admin or admin

About this task

You can personalize Virtual Agent notifications by using parameter substitution to add dynamic content to the message header and message. When adding dynamic content to your notifications, you specify the variables that identify the record values to be included in the content. You can add dynamic content to the following types of notifications:

- **Record-based notifications** - Use the `${<variable_name>}` format in your content to specify a variable that represents a record value from the table used for the notification. For example, if you want to customize the message heading for a notification that uses the Incident table and you want to include the incident **Priority** in the message, use the **Select variable** column to select the variable for incident priority.
- **Event-based notifications** - Use the `${event.parm1}` and `${event.parm2}` format to specify event-specific parameters that pass record information in the notification content. To learn more about event parameters and how they work, see [Events](#).
- **Advanced notifications** - Modify a script provided for advanced notifications to specify dynamic content from different data sources and identify third-party services, such as URL shortening for streamlining links in the content.

Procedure

1. Navigate to **All > System Notification > Provider > Notifications** and select the notification for which you're defining or updating content.
2. Do one of the following:
 - If you're defining new content, navigate to the **Notification Contents** related list, select **New Provider Content**, and go to step 3.
 - If you're updating content, navigate to the **Notification Contents** related list, select the content to be updated, and go to step 4.
3. Select the Virtual Agent content type:
 - **Virtual Agent Content - Chat**: The notification is for chat channels.
 - **Virtual Agent Content - Messaging**: The notification is for a messaging channel, such as SMS.

Notification content

< Notification Content

What type of Notification Content would you like to create?

- Virtual Agent Content - Chat
- Virtual Agent Content - Messaging
- Workspace

4. Provide or update the notification content:

- a. On the form, fill in the fields for the chat or messaging notification:

Notification Content - Virtual Agent Chat or Virtual Agent Messaging

Field	Description
Name	Name of the notification content.

Field	Description
Notification	Notification that is associated with the content. This field is populated automatically with the notification that you created.
Type	Notification layout: ▪ Simple: A message-only notification, that contains information for review. ▪ Record card: A notification that contains information about a particular record in a table. ▪ Image card: A notification that contains images.
Table	(For Record Cards) Table to receive notifications about. This field is populated automatically with the table defined in the notification.
Fields	(For Record Cards) Fields to be displayed in the notification. For example, if you select Comments and Work notes , the notification includes the comments and work notes that users have added to the record.
Application	Application scope of the notification content.
Active	Option to activate the notification content.
Enable link	(For Record Cards) Option to add a link to the record.
Advanced	Option that opens the script editor for entering a script that returns dynamic content for notification heading and message content pulled from multiple data sources.
Script	(For advanced notification content) Script that you can edit to specify dynamic content from various data sources, including third-party services (such as URL shortening), to be used in the message heading and message content.
Message heading	Text that appears at the top of the message. The default message heading is: <code>A notification has arrived. You can continue the conversation after viewing the notification.</code> If you want to create a custom heading with dynamic content, enter the heading text and specify the variables used in the text: ▪ For record-based notifications: Expand the Select variables column and choose the variables for the record values to be included in the heading. The variables map to records in the table used for the notification. For example: <code>An incident has been assigned to you with Priority: \${priority}</code> ▪ For event-based notifications: Specify the <code>\${event.parm1}</code> and <code>\${event.parm2}</code> variables to identify event-specific parameters that pass record information in the notification content.
Message	Content of the message with rich text format. If you want to create a custom message with dynamic content, enter the message text and specify the variables used in the text:

Field	Description
	- For record-based notifications: Expand the Select variables column and choose the variables for the record values to be included in the message. The variables map to records in the table used for the notification. For example: Here's a brief description of your assigned incident: <code>\${short_description}</code> - For event-based notifications: Specify the <code>\${event.parm1}</code> and <code>\${event.parm2}</code> variables to identify event-specific parameters that pass record information in the notification content. A notification message defined with rich text format is displayed in bold, italics, link (url), and unordered list.  When users click the URL in the message, they are redirected to the destination as per the portal configuration.
Image Source	(For Image Cards) Option for selecting the image to be displayed in the notification: Upload image: Add the image by uploading. URL: Specify the URL for the image.
Image	(For Image Cards) Image displayed in the card. - To add the image, select Click to add. From the file finder, choose your image file and select OK. - To change the image, select Update. From the file finder, select the new image file and select OK. - To remove the image, select Delete. The file is immediately deleted.
Image alt text	(For Image Cards) Alternative text for the image to be displayed in the card.

Note: To create or update the messaging notification details, navigate to the **Delivery Channel** related list and complete the form. For more information, see [\(Legacy\) Configure a delivery channel for Virtual Agent NLU notifications](#).

b. Select **Submit or **Update**.**

What to do next

- To configure a delivery channel, see [\(Legacy\) Configure a delivery channel for Virtual Agent NLU notifications](#).
- If you're creating an actionable notification, see [\(Legacy\) Define Virtual Agent NLU notification actions](#).

(Legacy) Configure a delivery channel for Virtual Agent NLU notifications

Configure a delivery channel for Virtual Agent notifications by specifying the messaging channel information to send notifications to users.

Before you begin

Ensure that a messaging channel is configured in your instance. Virtual Agent admins can only select one or more chat channels for the notification from the list of chat channels associated with the instance.

Role required: virtual_agent_admin

About this task

Use the delivery channel to support multiple channels for the same notification content. The procedure to configure delivery channels depends on the channel type. There are two notification channel types: messaging channels and chat channels. For more information about channels, see [\(Legacy\) NLU channels in Conversational Interfaces](#).

Delivery channels are also part of multiple active conversations in Virtual Agent. See [\(Legacy\) Route Virtual Agent NLU notifications through multiple portals](#) for more information.

Procedure

1. Navigate to **All > System Notification > Provider > Notifications**.
2. Select the notification for which you want to define or update content.
3. In the notification Contents related list, open the notification content.
4. Follow the procedure according to the channel type for the notification that you're configuring.
 - To update delivery channels for messaging content, select **New** in the Delivery Channels related list.
 - To update delivery channels for chat content, select the **Add/Remove multiple** option in the Delivery Channels related list.

Delivery channels related list

The screenshot shows the 'Delivery channels related list' interface. It features a tabbed interface with 'Format', 'Message', and 'Channels' tabs. The 'Channels' tab is selected, showing a list of delivery channels: Alexa, Slack, Bot to Bot, Google Assistant, Teams, Workplace, and mweb. To the right of the list are three icons: a close button (X), an information button (i), and a plus button (+). A red arrow points to the plus button. Below the list is a search bar labeled 'Select target record' with a magnifying glass icon. At the bottom are 'Update' and 'Delete' buttons.

Use the arrows to add or remove specific delivery channels from your Selected Delivery Channels list. When you've defined all applicable delivery channels, select **Save**.

Note: The mweb channel is for the web client. If no specific chat channel is defined, notifications are triggered to all available chat channels by default. Virtual Agent admins can modify the chat channels associated with a notification at any time.

5. On the form, fill in the fields.

Delivery channel form

Field	Description
Notification Content	Reference of the notification content pre-populates for the delivery channel.
Active	Option to activate the delivery channel.
Connection	Connection record for the messaging channel configured in the instance.
Send From	Provider application for the selected messaging channel.
Send To (Table)	Name of the table that you want to send the notifications to.
Send To (Field)	Name of the field that you want to send the notifications to. This field is optional.

6. Select **Submit** (new notification records) or **Update** (existing notification records).

(Legacy) Define Virtual Agent NLU notification actions

Create the actions for a Virtual Agent chat or messaging channel to send actionable notifications.

Before you begin

- An action requires an associated, published (active) Virtual Agent topic, a Scriptable action, or a Flow action which can perform the action represented by a button in the notification, such as talk to an agent (live agent support) or bot feedback (Virtual Agent feedback). Consider working with your topic authors to determine the appropriate topics and corresponding actions. For more information about designing the Virtual Agent topics, see [\(Legacy\) Designing a Virtual Agent NLU topic](#).

Note: Scriptable actions and Flow actions are asynchronous and are executed when you select the action without a Virtual Agent topic. You can select either an existing flow that is defined or coordinate with the flow authors to send actionable notifications.

- Role required: virtual_agent_admin or admin

Procedure

- Navigate to **All > System Notification > Provider > Notifications** and select the notification for which you're defining actions.
- Navigate to the **Notification Actions** related list and select **New Provider Action**.
- Select a notification action.

4. On the form, fill in the fields to define the notification actions.

Notification Content - Actions

Field	Description
Name	Name of the notification action. For example, Talk to an agent.
Notification	Notification that is associated with the action. This field is populated automatically with the notification that you created.
Async	Option to enable the action execution without blocking the current request. Both Script and Flow actions in Virtual Agent are asynchronous.
Model Type	Type of actions that are configured. For example, NLU/Keyword topic. If NLU is selected, that action will only be for an NLU enabled Virtual Agent.
Topic	Virtual Agent topic that handles this notification action. Note: Virtual Agent Pro is required to send a topic with actionable notification.
Script	Script to execute the notification action. The script filed is available only when you select Scriptable notification action. Note: The Scriptable Action is available only for Virtual Agent Pro users.
Application	Application scope of the notification content.
Active	Option to activate the notification content.
Choose Flow or Action	
Flow	Flow to trigger the sequence of the notification action. Note: - You cannot choose the flow if you provided the action. - The Flow field appears only when you select Flow notification action. - The Flow Action is available only for Virtual Agent Pro users.
Action	Action to use the correct table and field configuration for the notification action. Note: - You cannot choose the action if you provided the Flow. - The Action field appears only when you select the Flow notification action.

Field	Description
Inputs	
Script	Script to pass inputs to a flow action. This Script field appears when you select the Flow notification action.

5. Select **Submit**.

6. To define another action for the notification, repeat steps 3 through 5.

What to do next

(Legacy) [Define the Virtual Agent NLU link actions to notification content.](#)

(Legacy) Define the Virtual Agent NLU link actions to notification content

Create the link actions for Virtual Agent notification content to be delivered in a chat or messaging channel as actionable notifications.

Before you begin

- Ensure that you have activated the Glide Virtual Agent plugin (com.glide.cs.chatbot).

Note: Only Virtual Agent Pro customers can associate actions with notification contents and receive actionable notifications.

- Role required: virtual_agent_admin or admin

About this task

Notification content, with no associated link actions, is delivered as a non-actionable notification.

Procedure

1. Navigate to **All > System Notification > Provider > Notifications** and select the notification for which you're defining the link actions.
2. In the Link Actions related list, select **New**.
3. On the form, fill in the fields.

Actionable Content form

Field	Description
Name	Name of the link action.
Actions	Notification action that the link action is created to. You can select one or more notification actions for a notification and also put them in the order that you want them to be shown on the notification.
Actions listed in event parm1	Actions listed in an event parameter. Users and actions cannot both be passed into the parameter. For example, if you input

Field	Description
	a sys_id of a user in event param1, the user is considered in the output.
Application	Application scope of the notification content.
Notification	Notification that is associated with the content. This field is populated automatically with the notification that you created.
Content	Notification content for the link action created.
Active	Option to activate the notification content.
Actions listed in event parm2	Actions listed in an event parameter. Users and actions cannot both be passed into the parameter. For example, if you input a sys_id of a user in event param2, the user is considered in the output.

4. Select **Submit**.

5. To define another link action for the notification content, repeat steps 3 and 4.

Note: Only a single notification with active content is supported for a provider. However, if the content for the notification is not active, you can define the secondary content for the notification and make that content active.

6. **Optional:** To remove the **Skip** action from an actionable notification, do the following steps:

- Select the notification and open the Link Actions to Content related list.
- Select the Actionable Content and select the **Disable skip** option.

Note: This option only displays when the Content Type is Virtual Agent.

What to do next

Enable Virtual Agent notifications. For more information, see [\(Legacy\) Enable Virtual Agent NLU notifications](#).

(Legacy) Enable Virtual Agent NLU notifications

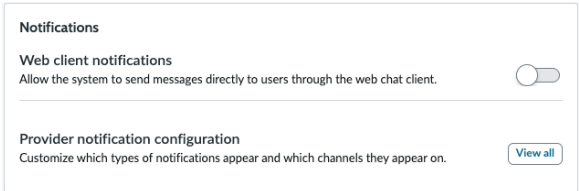
Enable Virtual Agent notifications so that your end users can receive notifications in supported Virtual Agent channels.

Before you begin

Role required: virtual_agent_admin or admin

Procedure

Enable notifications for your users in the appropriate channel:

Channel	Description
Chat widget (mweb)	a. Navigate to All > Conversational Interfaces > Settings. b. Select Virtual Agent. c. Under Notifications, slide the Use notifications toggle switch to enable notifications.  i Note: You can also change the notification text color and background in chat branding configurations. For details, see Set up your Virtual Agent bot's branding.
Custom chat integration	a. Navigate to All and in the filter navigator, enter <code>sys_cs_channel.list</code>. b. In Messaging Channels, select the custom integration record to update. c. Select Enable Notifications to activate notifications. d. Select Update. For more information on configuring custom chat integrations, see Creating conversational custom chat integrations in Virtual Agent.

Notifications are sent to recipients via the Virtual Agent bot in the channels that you enabled.

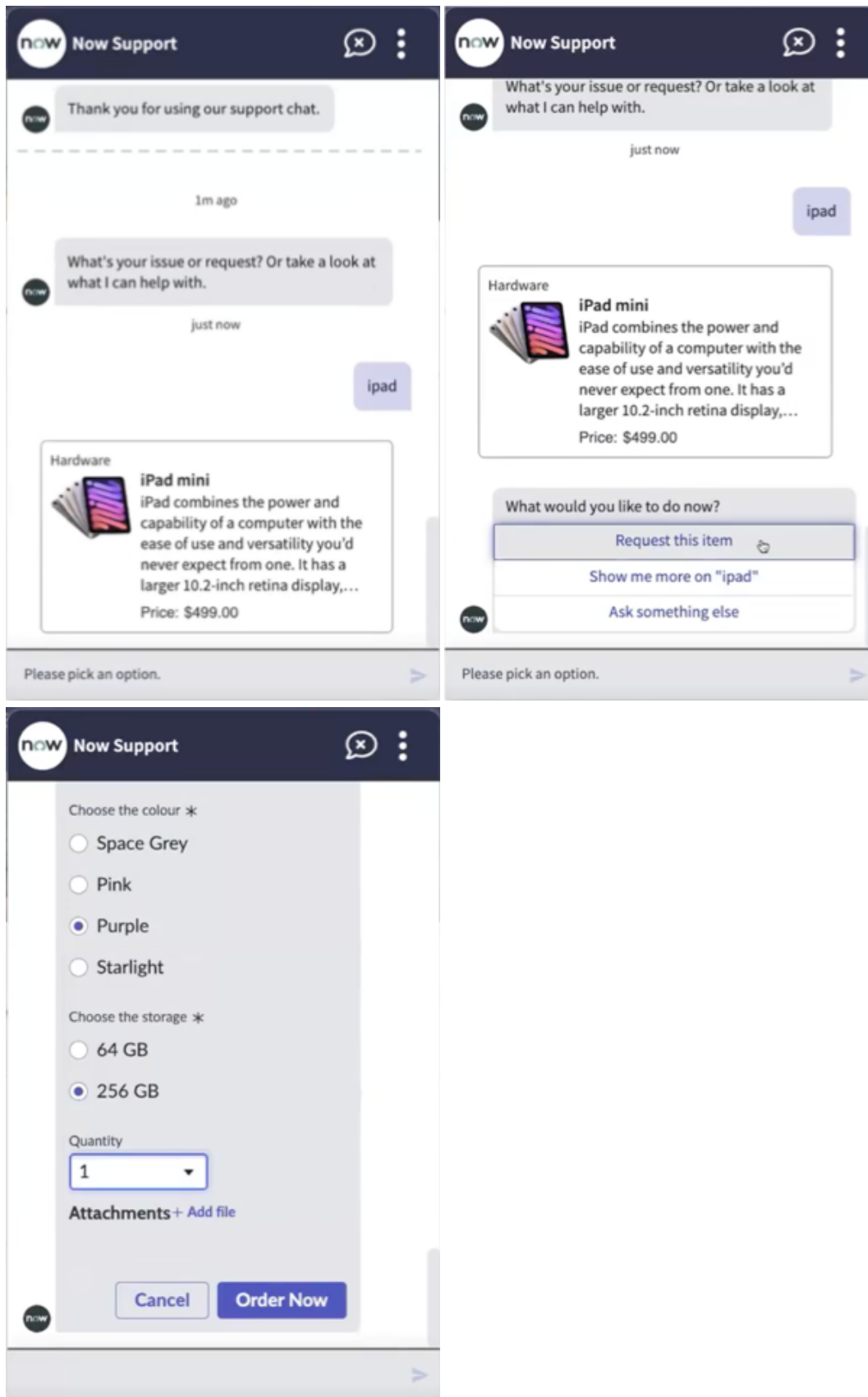
(Legacy) Using catalogs and autopilot in Virtual Agent for NLU

Use catalogs to search for and request services and products in chat widget conversations.

i Note: Catalogs for Virtual Agent are separate from Now Assist and Multi-turn catalog ordering. For more information on how catalog search results work based on AI Search, see [Genius Results](#) . For information on Multi-turn catalog ordering instead, see [Using ServiceNow Otto for Virtual Agent](#).

The catalog feature lets you use natural language to search for and request service items in a Virtual Agent conversation. The Virtual Agent recognizes your request and presents you with the best answer. You complete the entire order in the chat, without going to a new page.

For example, if you enter `iPad`, the Virtual Agent shows you the service catalog info for an iPad. You can request the item, ask for more information on the item before deciding, or ask for something else.



If you choose to order the item, you select any available options. When you complete the order, the catalog card closes, and Virtual Agent replaces it with a Requested Item record and a link. Selecting the link takes you to the record.

now Now Support

Catalog item form closed

Submitted: iPad mini

Your request has been submitted. Here are the details:

Requested Item	
Short description	Request for iPad mini
State	Open

Thank you for using our support chat.

Click here to start a new conversation

Request for iPad mini

Requested Item

Number: RITM0010013

Item: iPad mini

Request: REQ0010013

Requested for: Abel Tuter

Due date: 2024-06-19 15:28:43

Watch list

Opened: 2024-06-17 15:28:43

Opened by: Abel Tuter

Stage: Fulfillment

State: Open

Quantity: 1

Estimated delivery

☐ Backordered

Order Guide

Variables

*Choose the colour

☐ Space Grey

If you cancel the order instead, you receive a message confirming the cancellation. For example, if you enter iPhone and request the item, then cancel the order, the request closes and the Virtual Agent doesn't create a record.

now Now Support

What's your issue or request? Or take a look at what I can help with.

iphone

Mobiles

Apple iPhone 13
All-new dual-camera system with ultra wide and night mode. All-day battery. Six new colours. And the A13 Bionic, our fastest chip ever. Key features: Storage capacity: 12...
Price: \$799.00

What would you like to do now?

Request this item

Show me more on "iphone"

Ask something else

Please pick an option.

now Now Support

Green

Pink

Blue

Midnight

Starlight

Red

Choose the storage *

128 GB 256 GB 512 GB

Quantity: 1

Attachments + Add file

Cancel Order Now

now Now Support

ultra wide and night mode. All-day battery. Six new colours. And the A13 Bionic, our fastest chip ever. Key features: Storage capacity: 12...
Price: \$799.00

What would you like to do now?

Canceled: A

Thank you for using our support chat.

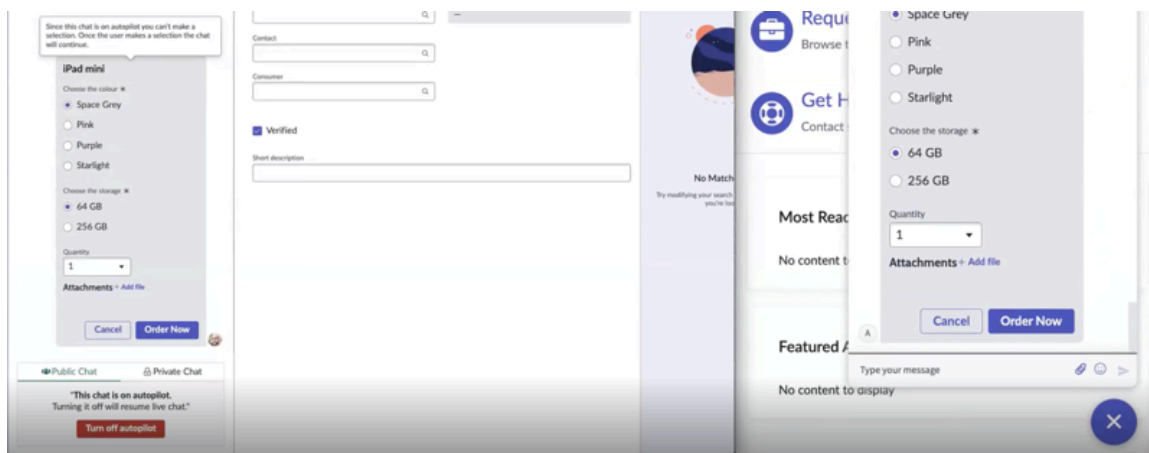
Click here to start a new conversation

Note: Catalogs for Virtual Agent are separate from Now Assist and Multi-turn catalog ordering. For more information on how catalog search results work based on AI Search, see [Genius Results](#). For information on Multi-turn catalog ordering instead, see [Using ServiceNow Otto for Virtual Agent](#).

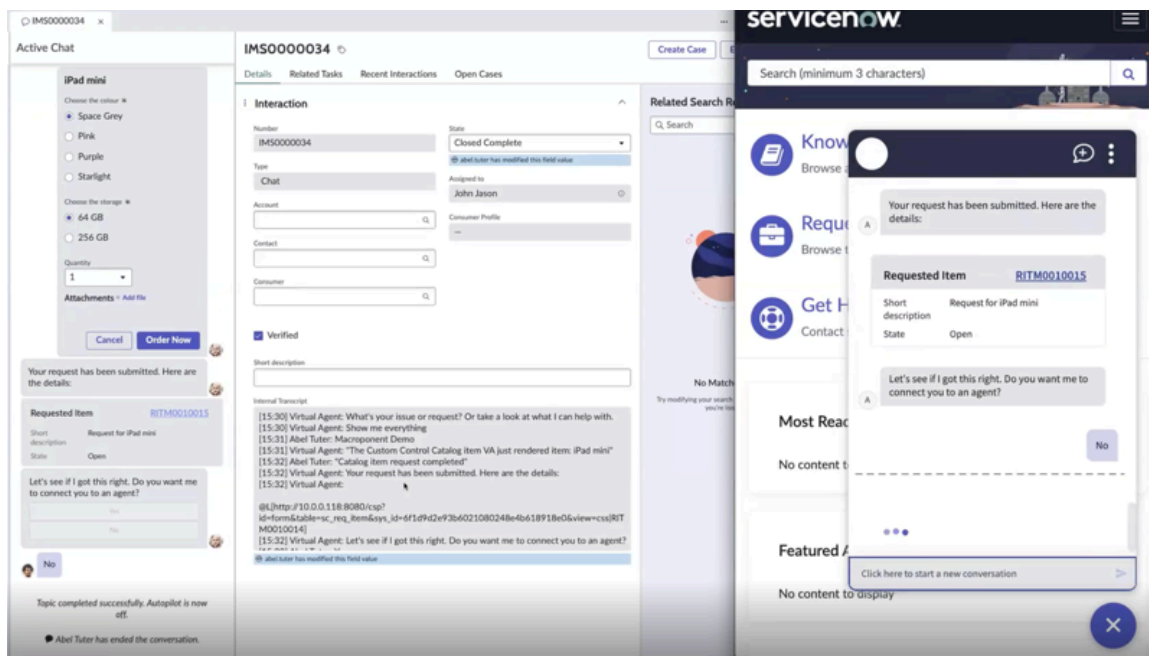
Catalog live agent autopilot experience

Autopilot is available for live agents in the CSM Workspace, and allows the live agent to assist a customer with a catalog order as well as view all information on the customer's transaction.

To use the feature, the live agent enters `/autopilot "[topic]"`, substituting `[topic]` for the catalog item topic name. The catalog item appears in the customer's chat window, and they choose any preferences for the order as usual. The live agent can see the full catalog order in the chat panel, but cannot change any details of the order themselves.



Once the customer completes the order, the chat panel displays the Requested Item record as usual. The live agent sees the full transcript of the customer's transaction, including the full catalog card and Requested Item record.



(Legacy) Set up catalog branding for NLU Virtual Agent

Customize the appearance of catalogs in Virtual Agent to match your business' branding.

Before you begin

Role required: admin, virtual_agent_admin

Download Theme Builder from the ServiceNow Store and activate the plugin (sn_theme_builder). For more information, see [Activate a plugin](#).

About this task

Virtual Agent uses the Branding Setup [sys_cs_branding_setup] table to define branding colors, but catalogs don't inherit branding colors. Instead, catalogs use cascading style sheets (CSS) variables defined in the UX Themes [sys_ux_theme] record on the instance.

Procedure

1. Navigate to **All > Themes > Theme Builder**.
2. Create a new theme by providing primary and secondary colors.

Note: You can match your colors to the Chat Header Background and Chat Background colors in the branding record of your choice. For more information creating themes, see [Create a theme with Theme Builder](#).

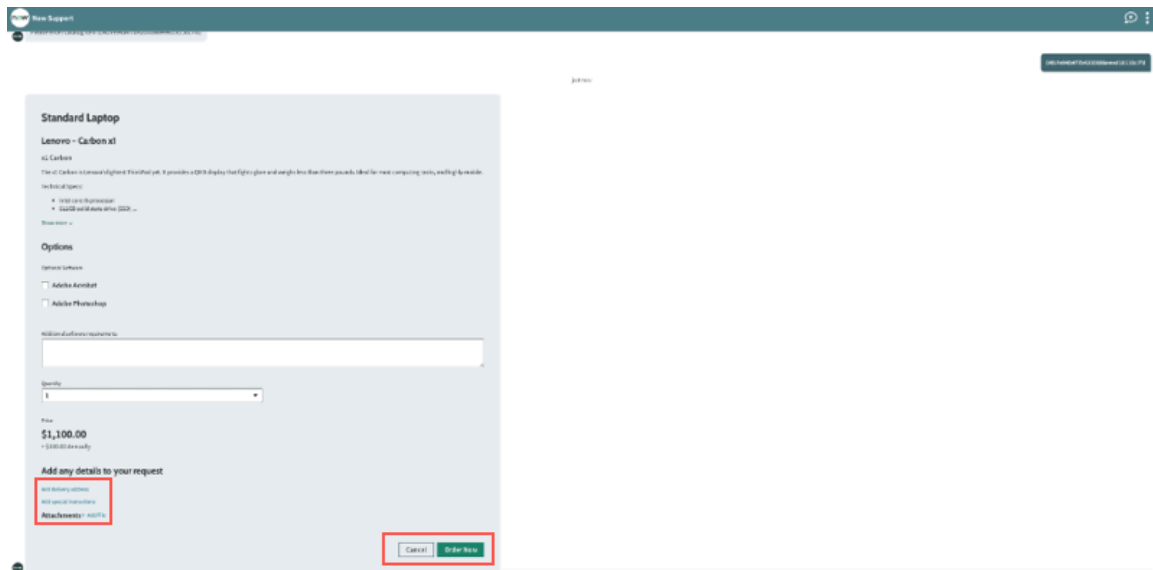
3. Save your theme.
 4. Add your theme to the portal configuration.
 - a. Navigate to **All > Now Experience Framework > Themes**.
 - b. Select the record for the theme you want to import.
 - c. Under the Additional Actions icon , select **Copy sys_id**.
 - d. Navigate to **All > Service Portal > Agent Chat**.
 - e. Select the portal configuration where you want to add your branding theme, and add the following line to the server script, including the sys_id from Step 4c.
- For example, if your sys_id is 0be48eb1eba0011090fa99602a522843, you add:

```
macroponent_theme: '0be48eb1eba0011090fa99602a522843'
```

5. Add a variant theme to the portal configuration if desired.
 - a. Repeat Steps 4a and 4b.
 - b. Under the **Compositional: App theme** tab, open your desired *Style* whose *Type* is *Variant*.
 - c. Repeat Steps 4c and 4d.
 - d. Select the portal configuration where you added your branding theme, and add the following line to the server script, including the sys_id from Step 5c.
- For example, if your variant theme's sys_id is 1df59fc2fcb1122101gb00713b633954, you add:

```
macroponent_theme_variant: '1df59fc2fcb1122101gb00713b633954'
```

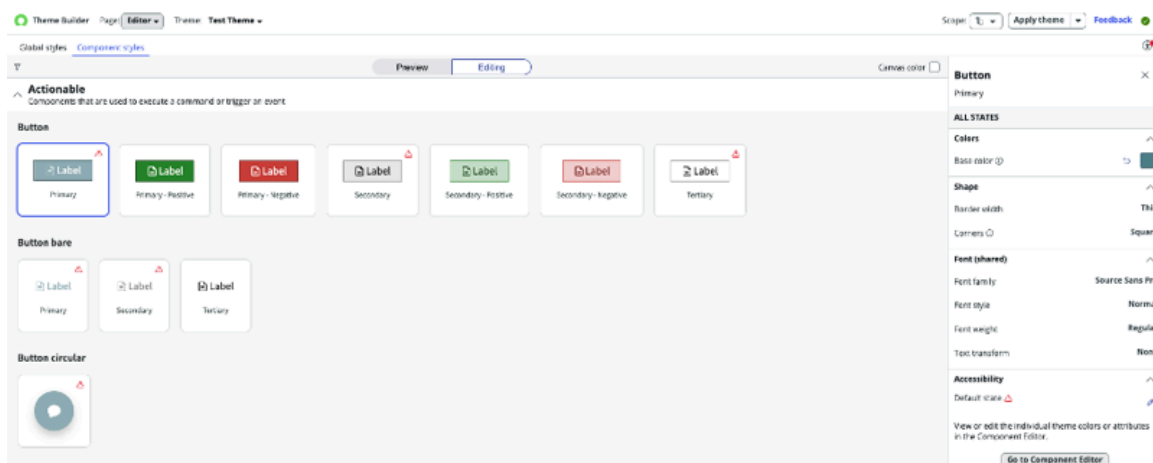
6. Select **Update** to save the configuration.
7. Navigate to the portal where the configuration is used.
For example, if you updated the *ESC Chat* portal configuration, navigate to Employee Service Center.
8. Run the catalog topic in the portal chat to load its configuration and reveal any elements that need branding.



9. Navigate to **All > Now Experience framework > Themes > Theme Builder**.

10. From the drop-down menu, select **Manager**, then select your created theme.

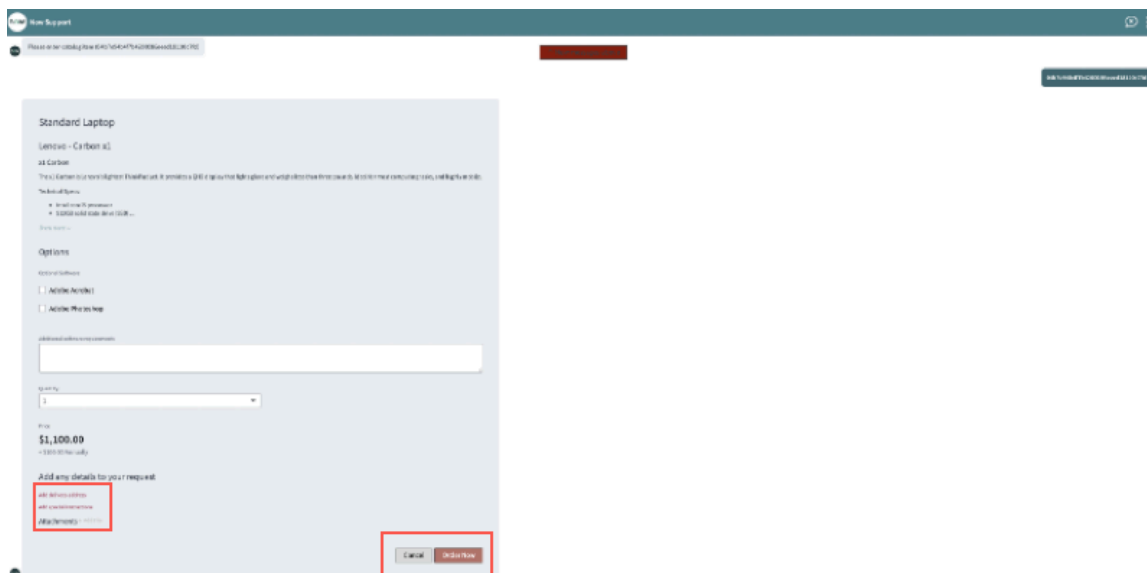
11. Under the **Component styles** tab, select **Edit**.



12. Select one of the elements needing branding found in Step 8.

13. In the palette sidebar, set the element's hex code color to match the color from your branding record.

14. Repeat Steps 12 and 13 until you update all elements.



Result

Catalog color themes now match your branding.

(Legacy) Using multiple active conversations in Virtual Agent

Virtual Agent for NLU features the ability to have multiple conversations at the same time, separated and directed by chosen context.

Overview of Multiple active conversations for Virtual Agent

Virtual Agent messages commonly follow one conversation with a shared history that persists on all VA clients, and thus all portals. For example, if you're conversing with Virtual Agent in a Service Portal (SP) portal context, the same conversation is shown in an Employee Service Center (ESC) portal. The multiple active conversations feature expands the reach of Virtual Agent by eliminating the one-conversation limit. By configuring their Virtual Agent conversations based on context, customers can choose to share or restrict any or all content between concurrent conversations on differing portals.

Each Virtual Agent conversation is fully independent, with no overlap between chats. For example, a conversation in SP will be entirely different from ESC. Each conversation also has its own transcript. You must set up context values for Natural Language Understanding (NLU) chats, while large language model (LLM) chats are automatically configured for multiple active conversations based on each portal. An administrator can activate an LLM assistant for each portal by using guided setup configurations.

Benefits of multiple active conversations

Previously, if a user was engaged in a conversation with a virtual agent, the chat would take place in a single context. Switching contexts involved a risk of exposing sensitive information by carrying over the entire chat history to the other portal. For example, if you have an HR conversation in the HR portal, then brought up an IT request, the chat continues in the IT portal. However, this request also brings the HR conversation history into the IT portal with it. Alternatively, admins can activate the `skip_load_history` system parameter to avoid exposure risk, but the initial conversation closes when the chat continues on the IT portal.

To exclude conversation history between portals, use the following procedure:

1. Navigate to **All > Service Portal > Agent Chat**.
2. Select the Agent Chat Configuration for which you want to set the context value.
3. In the Server Script window, add the line `skip_load_history: true` to load conversations without the conversation history.

Note: The script syntax may differ depending on the configuration.

The multiple active conversations feature bypasses the `skip_load_history` method, and enables continuous engagement with Virtual Agent chat, by routing selected notifications and topics to their configured contexts only. Users don't need scripting or extensive customization, and they can conduct conversations without interruption or information exposure in the wrong context. With portals and notification contexts aligned, users receive information appropriate to their context, including incident updates and other relevant data.

Considerations for using multiple active conversations

Implementing multiple active conversations should happen in the following order: Admins should define portal consumer context values, set or update a default context, activate the multiple active conversations system, and finally, configure notifications sent to portals. However, if the delivered Service Portal context is sufficient, admins can skip configuring and setting values.

Topics can be created within a portal context. If the portal context maps to consumer account context, then topics map to consumer account contexts.

(Legacy) Set NLU portal consumer context values for multiple active conversations

Use context values to determine which portals receive certain messages and notifications for users in that portal.

Before you begin

Activate Virtual Agent. For more information, see [\(Legacy\) Activate Virtual Agent for NLU](#).

Configure your Agent Chat system for your portal or portals. See [Configure Agent Chat in a portal](#) for more information.

Role required: `virtual_agent_admin` or `admin`

About this task

With consumer context added to a portal configuration, that portal acts as context for multiple active conversations with Virtual Agent.

Note: These instructions are for configuring Natural Language Understanding (NLU) conversations. Large language model (LLM) conversations are configured for multiple active conversations based on portals, with no configuration necessary.

Procedure

1. Navigate to **All > Service Portal > Agent Chat**.
2. Select the Agent Chat Configuration for which you want to set the context value.
3. In the Server Script window, add the line `consumer_account_context: 'VALUE'`, replacing `VALUE` with your desired consumer account context.

Server script example

The screenshot shows the 'Service Portal Agent Chat Configuration' interface. At the top, there's a title bar with 'Service Portal Agent Chat Configuration' and an 'Update' button. Below the title bar, there are several fields: 'Active' (checked), 'Name' (Service Portal Agent Chat Config), 'Portal(s)' (Service Portal), 'Application' (Global), 'Public' (unchecked), 'Roles' (edit icon), and 'Order' (10). The 'Server script' section is expanded, showing a code editor with the following script:

```

1 {function ($sp) {
2   return {
3     chat_queue: $sp.getValue('chat_queue'),
4     consumer_account_context: 'sp'
5   };
6 }}($sp);

```

Note:

The syntax of the account context line depends on how the configuration is set up. For example, some configurations use an equal sign versus a colon. In the case of the `esc` context, there are also two relevant chat configurations.

Values that are defined or created in a script aren't displayed to an admin as a selection for use elsewhere in the system.

4. Select **Update**.

What to do next

Set a default context for your conversations. See [\(Legacy\) Set a default NLU context value for multiple active conversations](#) for more information.

(Legacy) Set a default NLU context value for multiple active conversations

Use consumer account context values to define where Virtual Agent messages are directed by default when using the multiple active conversations feature.

Before you begin

Define values for portal consumer contexts. For more information, see [\(Legacy\) Set NLU portal consumer context values for multiple active conversations](#).

Configure context values that align Virtual Agent and your portals. See [Configure Agent Chat in a portal](#) for more information.

Role required: `virtual_agent_admin` or `admin`.

About this task

You can create as many context values as you need. One consumer account context must always be set to Yes to provide a default content area. The default acts as a fallback for the chat widget when the portal setup doesn't include context. The default is also used as the context for mobile conversations, which only support one conversation at a time. Context values are stored in the Conversation Consumer Account Context [sys_cs_consumer_account_context] table. (The CS Consumer Account [sys_cs_consumer_account] table [\(Legacy\) Plugins installed with Virtual Agent for NLU](#) shows whether third-party users in your instance have a context assigned to them.)

Note: These instructions are for configuring Natural Language Understanding (NLU) conversations. Large language model (LLM) conversations are configured for multiple active conversations based on portals, with no configuration necessary.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings > Virtual Agent**.
2. Under **multiple active conversations**, select **View settings**.

Note: The delivered default value for consumer account contexts is `sp`.

3. Select **New**.
4. On the form, fill in the fields.

Consumer Account Contexts form

Field	Description
Name	Name of the context value (also used as reference in the backend).
Short Description	Description for the context (displayed on the Conversational Interfaces card when the default value is shown).
Is Default Consumer Account Context	Option to make this context value the default for your Virtual Agent conversations. Note: Only one consumer account context can be set as the default. Setting a new one as a default automatically resets the last context to <code>False</code> .

5. Select **Save**.

What to do next

Activate the multiple active conversations system. For more information, see [\(Legacy\) Activate multiple active conversations in Virtual Agent](#).

(Legacy) Activate multiple active conversations in Virtual Agent

Use the multiple active conversations system, in combination with defined context values and a default portal, to handle concurrent conversations with Virtual Agent.

Before you begin

A default context is necessary to start out with the multiple active conversations system. See [\(Legacy\) Set a default NLU context value for multiple active conversations](#) for more information.

Role required: `virtual_agent_admin` or `admin`

About this task

Virtual Agent includes settings that let multiple conversations be carried out with the same user across multiple portals. Users can also receive updates and notifications sent to any number of portals (determined by an administrator) anywhere in their instance on ServiceNow AI Platform.

The multiple active conversations feature is inactive by default in Virtual Agent until toggled on. As of the Vancouver release, multiple active conversations are available through the chat widget; other channels may be incorporated in future.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings > Virtual Agent**.
2. Under **multiple active conversations**, select **Manage settings**.
3. Select **Activate**.
4. Select **Save**.

What to do next

With multiple active conversations activated, you can also send notifications from Virtual Agent to portals using the feature. See [\(Legacy\) Route Virtual Agent NLU notifications through multiple portals](#) for more information.

(Legacy) Route Virtual Agent NLU notifications through multiple portals

Send notifications and other Virtual Agent messages through as many portals as desired.

Before you begin

The multiple active conversations feature includes the ability to send notifications on incidents. You can configure your notifications to go to only one conversation on a specific portal, or to any number of concurrent conversations.

[\(Legacy\) Activate multiple active conversations in Virtual Agent](#)

[Configure a delivery channel for Virtual Agent notification](#)

Role required: virtual_agent_admin or admin

- Note:** These instructions are for configuring Natural Language Understanding (NLU) conversations. Large language model (LLM) conversations are configured for multiple active conversations based on portals, with no configuration necessary.

Procedure

1. Navigate to **All > sys_notification_va_content.list**.
A list of Virtual Agent Notification Contents appears.
2. Select the Notification Content that you want to send through multiple portals.
For example, to receive comments on Incidents, select the Incident commented Notification Content.
3. Under the **Channels** tab, confirm that the Consumer account contexts pane is available after activating multiple active conversations for the chat widget.
The Default Consumer Account Context will be visible in the pane.

- Note:** This string should also match the portal where the conversation will be directed.
For example, the SP portal will also be the name of the Consumer account context.

4. To add a context, on the **Select target record** line, input the string matching the desired Consumer account context.

- Note:** This string should also match the portal where the conversation will be directed.
For example, the SP portal will also be the name of the Consumer account context.

5. To remove a context, select it in the Consumer account contexts pane, then select the **X**.
6. Select **Update**.

Result

Messages with multiple contexts will now be sent through Virtual Agent to users at their matching portals.

Embed the Virtual Agent chat widget in an external web page (legacy method for standard chat)

Load the Virtual Agent chat widget interface in an external web page by using an inline frame element (iframe). You can also optionally enable the single sign-on (SSO) authentication process to run automatically for guest users who are using the chat widget and are not logged in.

Before you begin

i Important: This content describes the legacy procedural steps for embedding the standard chat widget. Consider adding the Portable Virtual Agent web client to your web page instead. It reduces code complexity and is easier to implement. It also includes standard chat features, such as click actions for launching or closing the chat. For details, see [Add the portable Virtual Agent chat widget to a third-party website](#).

- In the iframe, you specify the URL of the instance to be embedded. If you're embedding the chat widget on any page that is not on your ServiceNow instance, the URL must be a custom instance URL. Due to increased browser security, the chat widget may fail to load if you don't use a custom URL. To learn more about using custom URLs, see [Associating custom URLs to your instance](#).

To use a custom URL, do the following:

- [Activate the custom url plugin \(com.snc.customurl\) in your instance.](#)
- [Add the custom URL \(that you previously purchased and registered\) to your instance.](#)

i Note: The Virtual Agent chat widget does not work from an iframe in Safari by default. Apple blocks cross-origin iframes (when the domain of the URL used in the iframe does not match the domain of the website itself).

- After you embed the Virtual Agent client, you can optionally trigger SSO authentication from the chat widget, but only when your instance is set up to use an external SSO provider. Your hosting site must also use the same SSO provider as your instance. For details on setting SSO providers, see [External single sign-on \(SSO\)](#).

To trigger SSO authentication, you create a JavaScript script that defines conditions for running authentication and redirects users to a chat widget page that you specify (see Step 2 below). You also specify the allowed URLs that can be passed in this script, by identifying them in the `com.glide.cs.web_client_login_redirect_urls` system property. Specify the full redirect URLs or the host part of the URL, such as `https://example.com`.

Role required: admin

About this task

This procedure requires that you set values for the following two system properties:

- `com.glide.cs.embed.csp_frame_ancestors`
- `com.glide.cs.embed.xframe_options`

These properties determine the security policy for the embedded chat widget, namely how browsers render and secure HTML content for Virtual Agent and Live Agent chat, in an iframe, before you embed the web chat client.

To generate SSO authentication for your guest users, you can create a script that uses the `window.postMessage()` method (Web API) to trigger authentication and specify the URL where users are redirected after authentication. For more information on this method and Window objects, see [Window.postMessage\(\)](#).

Note: If you're using the Content Management System (CMS) application to create custom interfaces for the ServiceNow AI Platform and ServiceNow® applications, be aware that it does not support Virtual Agent.

Procedure

1. Set both the `com.glide.cs.embed.csp_frame_ancestors` and `com.glide.cs.embed.xframe_options` system properties to specify the HTTP header directives for securing the iframe contents.

The HTTP header directives tell the browser whether a page can be embedded on certain domains to mitigate clickjacking attempts. Setting both properties ensures that there are security directives for major browsers and also older browsers, such as Internet Explorer.

- a. In the navigation filter, enter `sys_properties.list`.
- b. In the System Property [sys_properties] table, search for the `com.glide.cs.embed.csp_frame_ancestors` property by name.

Note: This property sets the source value of the HTTP header directive: `Content-Security-Policy: frame-ancestors<source>`. Use the `host-source` value to specify the domains in which the external web page can be embedded. This property applies to most major browsers, except for Internet Explorer.

- c. Click the property name to open the form and specify the directive values.

System Property: com.glide.cs.embed.csp_frame_ancestors

Field	Description
Type	string This is the default value.
Value	Specify one or more sources, including: ▪ 'self': Indicates that the origin is the same as the page being served. For example, if the value is <code>'self' http://mywebsite.com</code>, then the iframe is embedded within the parent domain as well as mywebsite.com. This is the default value. ▪ host-source: The domains in which the external web page can be embedded. Specify the Internet host site by name, IP address, or optional URL and/or port number. Site address can start with a wildcard (asterisk) character. Example value: http://*.example.com

Field	Description
	▪ scheme-source: A schema. For example: http: or https: ▪ none: No matching URLs.

For more information about source values that you can specify, see [CSP:frame-ancestors](#) and [Virtual agent embedded client content security policy \(instance security hardening\)](#) in [Hardening settings](#).

- d. Return to the System Property [sys_properties] table to search for the *com.glide.cs.embed.xframe_options* property by name.

Note: This property sets the value of the of the X-Frame-Options header directive, to indicate whether the browser can render an external web page in a frame. Use the default `sameorigin` value to specify the domains in which the external web page can be embedded. This property applies to older browsers, such as Internet Explorer 11.

- e. Click the property name to open the form and specify the directive values.

System Property: com.glide.cs.embed.xframe_options

Field	Description
Type	string. Default value.
Value	Specify a value, including: ▪ <code>sameorigin</code>. Default value. Displays the page in a frame that has the same origin as the page itself. Example value: <code>allow from https://example.com</code>. ▪ <code>deny</code>. Does not display the page in a frame. ▪ <code>allow-from uri</code>. Displays the page only in a frame on the specified origin. Note: This value no longer works in modern browsers.

For more information about source values that you can specify, see [X-Frame-Options](#) and [Set Xframe options to prevent embedding third-party websites](#) in [Hardening settings](#).

2. After associating your ServiceNow instance to a custom URL, create the `iframe` element and specify the custom URL in the inline element (`iframe`) used to embed the Virtual Agent client in an external web page: `"https://<your-domain>.com/sn_va_web_client_app_embed.do"`

Note: Your instance may have multiple custom URLs, but only one instance URL. You must use your custom instance URL only.

For example:

```
<iframe id="sn_va_web_client"
  title="ServiceNow Virtual Agent Client"
  width="600"
```

```
height="900"

src="https://<your-domain>.com/sn_va_web_client_app_embed.do">
https://<your-domain>.com/"https://<your-domain>.com/</iframe>
```

Note: Use the `?sysparm_skip_load_history=true` parameter at the end of the URL to load the interface without the conversation history.

3. Optional: Create a JavaScript script that uses the `window.postMessage()` method (Web API) to define event conditions that trigger SSO authentication in a user interface page and returns users to a chat widget page that you specify.

To redirect users to a chat widget page, use this string: `"https://<your-instance>.service-now.com/sn_va_web_client_login.do?sysparm_redirect_uri=' + encodeURIComponent(<your-page>)"`

Note: Before you run the script, use the `com.glide.cs.web_client_login_redirect_urls` system property to specify the URLs that can be passed in the script. The redirection works only when you specify one or more allowed URLs in the property value. Specify the full redirect URLs or the host part of the URL, such as `https://example.com`.

Example script:

```
<script>
    window.addEventListener("message", function(e) {
        // redirect to SSO login if the chat widget logs in but
        // is logged in as a guest user(unauthenticated)
        if(e.data.type==="SESSION_CREATED" &&
        e.data.authenticated === false)
            window.location.href =
            "https://<your-instance>.service-now.com/sn_va_web_client_login.do?sysparm_redirect_uri="+ encodeURIComponent(location.href);

        // redirect to SSO login if the ServiceNow platform logs
        // out from underneath the chat widget
        if(e.data.type==="SESSION_LOGGED_OUT")
            window.location.href =
            "https://<your-instance>.service-now.com/sn_va_web_client_login.do?sysparm_redirect_uri="+ encodeURIComponent(location.href);
    });
</script>
```

In this example, authentication is triggered in the specified instance when the `SESSION_CREATED` or `SESSION_LOGGED_OUT` events occur. After authentication (when the SSO credentials for users are accepted), users are redirected to the embedded chat widget page that you specified in `sn_va-web_client_login.do?sysparm_redirect_uri=' + encodeURIComponent(<your-page>)`, as long as you also specified the page URL in the `com.glide.cs.web_client_login_redirect_urls` property.

(Legacy) Conversational Interfaces Guided Setup

Use the Conversational Interfaces Guided Setup to create a personalized setup process for just the conversational interface features you need. The Conversational Interfaces Guided Setup starts with a survey and creates a personalized task list based on your survey responses.

Before you begin

The system admin role is required to activate the plugins and store applications. However, AWA admins and Virtual Agent admins can complete additional setup tasks for their respective solutions.

Role required: admin

Procedure

1. Navigate to All > Conversational Interfaces > Conversational Interfaces Guided Setup.

The Conversational Interfaces Guided Setup page appears.

2. Review the sections Getting started and Things to consider for setup, which provide information on the setup process and highlight various items to think about before implementing Virtual Agent, Agent Chat, or both.

Also consider whether you want to run Quick setup to get your agents running in as little as 30 minutes, in a minimal number of steps. Manual setup involves a comprehensive series of steps to set up your agents and may take a couple of hours or several days to complete, based on your configuration.

3. Select Get Started.

4. In Customize your setup, select Get Started and then Configure to start your personalized setup.

5. Select the type of agents that you're using and the type of setup (Quick or Manual).

now All Favorites History : CI Guided ...

< Customize Conversational Interfaces Experience

Let's get your agents set up to start chatting.

Choose the Agent experiences you'd like and whether you want to do a quick or manual setup. Then we'll go over the steps. [Learn more.](#)

If you set up [Agent Chat](#) your customers can get support from live agents. This is available for all subscriptions.

With [Virtual Agent](#) your customers experience can quickly get help through automated conversations.

First, select which agents in your current instance that you'd like to set up. 0 Selected

- ☐ Workspace Agent Chat
- ☐ Virtual Agent for Customer Service Management (CSM)
- ☐ Virtual Agent for Field Service Management (FSM)
- ☐ Virtual Agent for IT Business Management (ITBM)
- ☐ Virtual Agent for IT Service Management (ITSM)

▼ See additional licenses to explore for upgrade (optional)

Then, decide how you want to set up the licenses. Quick Setup

☒ Quick setup

This lets you preview the basic Agent experience(s) in the minimum number of required steps. It will take approximately less than 30 minutes to complete.

☐ Manual setup

This is a comprehensive list of steps to fully set up your Agent(s). Some steps are optional, depending on your configurations & preferences. It will take approximately a couple of hours to days.

Continue

6. Select **Continue** and complete the subsequent setup tasks.

What to do next

After you've completed the setup tasks, you and your topic authors can explore the functionality provided with Virtual Agent, such as reviewing pre-built conversations and creating or updating conversation topics for your end users.

Related topics

[Guided Setup](#)

(Legacy) Building and deploying Virtual Agent for NLU

Convert the time your agents and technicians spend handling low-impact user requests into an intelligently managed interaction. Enable Virtual Agent with NLU to understand the intent of what people are looking for and provide them with more relevant answers.

Starting with the Brazil release, Virtual Agent for NLU and Virtual Agent Lite are being prepared for future deprecation. It will be hidden and no longer activated on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support Knowledge Base.

You can quickly deploy AI-powered chatbot conversations using customizable templates for the most common enterprise IT, HR, and customer service scenarios. You can design, build, and test conversations with Virtual Agent Designer.

(Legacy) Getting started with Virtual Agent Designer for NLU

The Virtual Agent Designer is a diagram tool for creating and managing assets, which are blueprints for conversations between a Virtual Agent and a user. You can design topics that help your users resolve common work issues or guide them through self-service tasks.

Virtual Agent conversations are built using topics. When building an asset, there are various components (controls) that you can use to build the logic of a conversation, as well as the responses that the user sees.

Virtual Agent can use Natural Language Understanding (NLU) to match the user's request with the appropriate conversation or topic.

With NLU/keyword topic discovery, the topic author associates the topic with an intent within an NLU model. An intent describes what the user wants to achieve. User utterances are matched with intents to determine the most appropriate topic for the user. Associating a topic with a model and intent is called mapping.

If you're using ServiceNow NLU/keyword topic discovery, then Virtual Agent Designer integrates with NLU Workbench so that you can map topics to new or existing models and intents without leaving the interface. In addition, you can also modify utterances, test, train, and publish your models from within Virtual Agent Designer.

Topic properties

Use the topic **Properties** tab to identify a Virtual Agent asset and how it's used. The properties you can specify depend on the method of topic discovery used in your instance: NLU or keyword. If you have activated NLU, you can select **NLU/keyword** from the Type drop-down menu when you create a topic. The **Properties** tab includes fields for identifying the NLU model and intent for the topic.

Use the **Properties** tab to do the following:

- Specify the name and type of asset, such as [topic](#), [topic block](#), [custom control](#), and so on.
- Control who uses the topic and [what channels it can run in](#).
- Associate [live agent variables](#) with a topic.
- Add keywords to the topic or map the topic to a ServiceNow NLU model and intent.

For more information, see [\(Legacy\) Topic Properties tab for NLU](#).

Topic flow

When you create or update a topic, topic block, or custom control, you build the conversation flow on the **Flow** tab. In the default view, the flow looks like a diagram. Use the controls for user inputs, bot responses, and utilities to define the flow. The status of the topic and NLU/Keyword model (if used) appears in the upper-right corner of the window.

The **Table View** option in Virtual Agent Designer displays the nodes in your conversation flow as a table, rather than as a diagram. Each node is identified in a corresponding row in the table. You can add, change, or delete nodes using these table rows.

For example, instead of dragging controls and dropping them onto the canvas, you can select **Add new node** to insert a node into the appropriate row in the table. When you focus on a particular row (node), the corresponding property sheet for the node is displayed.

As you create or update your design, you might find it helpful to switch between the diagram view and the Table View using the **Table View** option. If your conversation contains many nodes, the

Table View lets you review all the nodes in your conversation quickly. You can use the **Search table** option to quickly find a particular node or control.

Use the **Flow** tab to do the following:

- Design your topic flow. For more information, see [\(Legacy\) Designing a Virtual Agent NLU topic](#).
- Add script variables. For more information, see [Define script variables for a topic](#).
- Add entities to your topic. For more information, see [Use system-derived entities in your topic](#).
- Add nodeless entities, if you're creating a topic for [Add nodeless NLU entities to your topic flow](#).

For more information, see [Topic Flow tab](#).

NLU model and intent mappings

If you activated NLU on your instance, the **NLU Intent** tab is available for your topics in Virtual Agent Designer. Once you have bound the topic to a model and intent on the **Properties** tab, you can use the **NLU Intent** tab to do the following:

- Review utterances used in your topic. For more information, see [Review and edit utterances and associated entities](#).
- Train your NLU models. For more information, see [Train, test, and publish your NLU model](#).

Test the topic model with user utterances to see if it triggers the appropriate intent and topic. You can also test entity recognition.

Note: The virtual_agent_admin role includes the nlu_admin role, which enables topic authors to work on ServiceNow models.

For more information about this tab, see [\(Legacy\) Topic NLU Intent tab](#).

Topic languages

The **Languages** tab displays the topic's translation status for languages that have been activated on the instance for both LLM and NLU conversations. If you're using NLU/keyword, you can also review the language mappings for that topic.

Use the **Languages** tab to do the following:

- View translation status for activated language plugins.
- Test your topic with a given language. For more information, see [View and test the topic in a specific language](#).
- Edit translations. For more information, see [Edit the topic translations](#).
- Request translations. For more information, see [Request topic translations in additional languages](#).
- View and update NLU language and entity mapping. For more information, see [View or modify NLU language mappings and entity mapping](#).

For more information, see [\(Legacy\) NLU model mapping in Virtual Agent Designer](#).

For more information about this tab, see [\(Legacy\) NLU Topic Languages tab](#).

(Legacy) Designing a Virtual Agent NLU topic

Walk through the design of an example Virtual Agent topic that enables users to view incidents they submitted. The example highlights various design controls that can be used to build the conversation flow.

Using Virtual Agent tools and features, you can develop conversations that address many issues that can be resolved without human intervention. Once you become familiar with the product and its capabilities, your creativity is one of the most important tools for developing conversations.

To get started more quickly, the following resources are available for Virtual Agent for NLU:

Pre-built Virtual Agent topics, topic blocks, and ServiceNow NLU models

These pre-defined conversations help users with common self-service tasks in each business area, such as creating or updating cases or providing answers to frequently asked questions. [Duplicate the pre-built topics](#) you want to use, and then customize them for your organization.

Virtual Agent Topic Recommendations

Use the Topic Recommendations app to identify pre-built Virtual Agent topics that can be quickly implemented in your organization. Topic Recommendations uses Intent Discovery to analyze data from your organization and to find relevant pre-built topics that your organization can benefit from, and new topics that would be useful to create.

Getting started with conversation design

Use Virtual Agent Designer controls and reusable conversational elements to create the dialogue for your conversations between Virtual Agent and the end user. Before you begin, make sure you do the following:

Identify the use case for a conversation.

Determine who will use a conversation topic and the goal, such as solving a user problem or assisting with a self-service task. Besides gathering key requirements for your topic, identify the information that you need from the user to complete the goal.

For example, you can review your support requests over time and other available metrics to determine common issues, use cases, and customer requests or goals. From there, you can predict recurring requests or issues that a virtual agent could help with.

Determine the structure of a conversation.

As you think about your conversation flow, identify the direct path to resolution. Then consider alternate paths where the conversation might branch, depending on the information supplied by the user. Consider how to handle each branch and whether users might loop back to an earlier point in the conversation.

Conversations have a beginning (the greeting), a middle, and an end, which may include a survey or an incident number to follow up on. In the middle, consider how the user might need to switch topics, depending on the issue.

Consider scenarios where a user might want to switch topics during a conversation session. For example, a user might want to change topics entirely. Or a user might get sidetracked and ask a question that seems out of context, maybe to engage in "small talk" with the virtual agent. Determine whether you want to let the user resume the original conversation after switching topics during the conversation.

Consider creating small talk topics for NLU/keyword conversations. For more information, [\(Legacy\) Create a small talk topic for NLU](#).

You can also review the pre-built setup topics, conversation topics, and topic blocks (reusable subflows that perform certain design steps and logic). Determine whether you can use these pre-built items and consider customizing them as needed.

Understand the design process in Virtual Agent Designer

When you create a topic in Virtual Agent Designer, the design process involves these basic steps:

1. Decide what use case the topic will address.
2. Create the topic and set properties that define the scope, what portal it will be published in (what assistant will be used), and a thorough topic description that will be used for discovery.
3. Build the conversation flow in Virtual Agent Designer.
4. Test and fine-tune the conversation flow.
5. Publish your topic.

For details on the properties that you define for various assets, see [\(Legacy\) Creating a Virtual Agent NLU topic](#), [Create a reusable topic block](#), and [Create a custom control](#).

Have knowledge in the following areas (what to know before you begin)

- General knowledge of the ServiceNow platform and application table structures.
- An understanding of how intents, entities, and utterances are used in your NLU models.
- If you're using scripts in conversation design, an understanding of HTML, JavaScript, and REST integrations.

Plan the structure and purpose of a conversation

The first step in implementing a Virtual Agent topic is to decide what the topic covers. Consider the intended audience and what you want the audience to accomplish when using the conversation. For this example, the goal of this example topic is to create a flow that enables end users to see the status of incidents they submitted. The topic includes an option for the user to add a comment to the incident.

With this goal in mind, the topic needs the following elements:

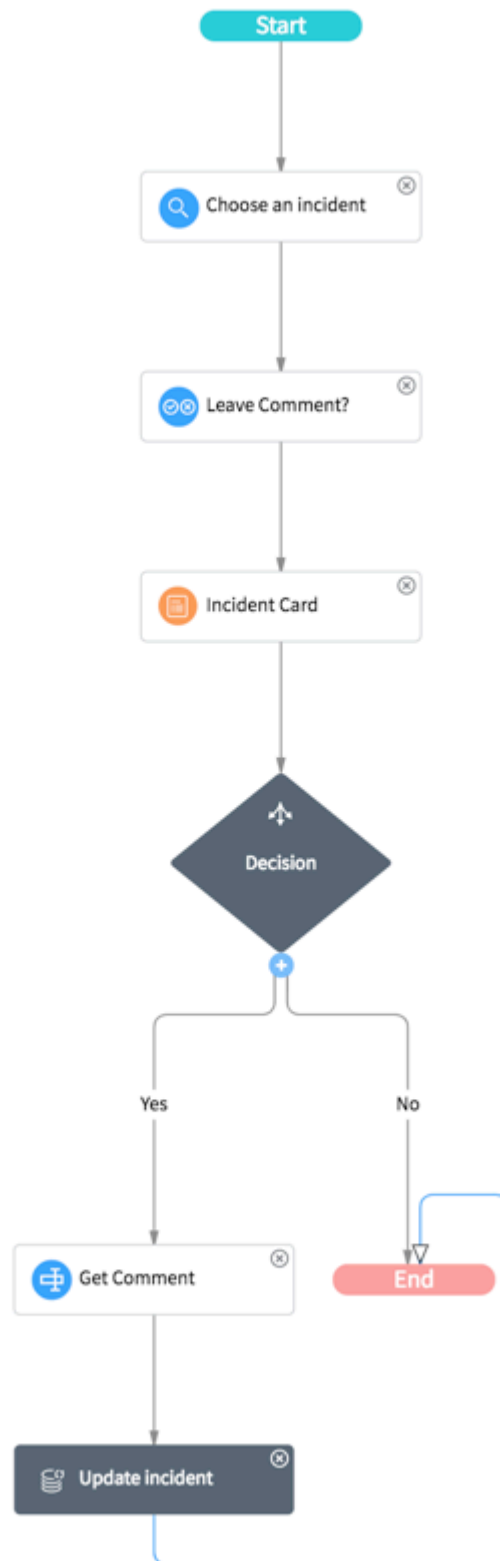
- A prompt for the user to select an incident
- An output showing the status of the incident
- A prompt to ask if the user wants to leave a comment
- A utility control to branch the conversation on that answer
- A prompt for the user to enter a comment
- A utility control to add the user input as a comment in the incident

Build the conversation flow with Virtual Agent controls

The conversation will look similar to the following dialogue flow.

Important: This flow is intended to give you a general idea of how a completed flow looks. Keep in mind that you will be building your topic incrementally and testing your topic frequently, so it's not necessary to build the entire layout first. Make sure to consider both functionality and user experience in your testing.

A completed conversation flow



Configure controls within the conversation

This example begins with defining the conversation flow in Virtual Agent Designer, after the topic properties have been set. The conversation begins with a Start node and finishes with an End node.

1. In your Virtual Agent Designer topic, add a **Dynamic Choice** control node to the conversation flow. This control is used to select the incident.
 - a. Enter `Choose an incident` for the **Node name** property. The variable name `choose_an_incident` is automatically generated for the control.
 - b. In the **Prompt** property, enter the text the user sees before selecting an incident. For example, `Please choose an incident record.`
 - c. In the **Populate choices by** property, select *Record*.
 - d. In the **Table** property, select *Incident [incident]*.
 - e. In the **Filter choices** property, select the **Condition** option, and create a condition:
 - Active is true AND Assignment group is Hardware AND Category is Database
 - AND
 - State is New OR State is In Progress

An example condition builder

Assign Condition



All of these conditions must be met

AND	Active	is	☒			or	and
	Assignment group	is	Hardware			or	and
	Category	is	Database			or	and
and							
OR	State	is	New			or	and
	State	is	In Progress			or	and
or							
New Criteria							

Cancel

Save

2. Add a *Card* control to the flow. This control shows information from the record selected by the **Dynamic Choice** in the previous step.
 - a. Enter `Status Card` for the **Node name** property.
 - b. In the **Card type** property, select *Record*.
 - c. In the **Record** property, select *Choose an Incident*. This choice refers to the Dynamic Choice control created in the previous step, so the data displayed comes from the record chosen there.
 - d. In the **fields** control, select a field. The choices available are the available fields on the chosen record. In this case, you can see the fields on the incident table.
 - e. After a field has been selected, select the *Add Field* option to add additional fields to the card. To delete fields from the card, select the delete icon to the right of the field.

3. Add a *Boolean* control to the flow. This control is used to prompt the customer with a yes/no question. In this case, the control checks whether the user wants to leave a comment on the selected incident record.
 - a. Enter `Leave Comment?` for the **Node name** property. The variable name `leave_comment_` is automatically generated for the control.
 - b. In the **Prompt** property, enter the text the user sees before the prompt. For example, `Do you want to leave a comment for this incident?`
4. Add a *Decision* control to the flow. This control branches the conversation into two possible paths. The path the conversation follows depends on the choice the user made in the previous step.
 - a. There are no properties on the decision control; however, there are properties on the branches below the decision. By default, there is a single branch labeled *Always*. Select the blue plus icon at the bottom of the decision control. A second branch appears that is also labeled *Always*.
 - b. Select one of the branches to access the properties for this branch.
 - c. Change the name to `Leave Comment`.
 - d. In the condition property, select the **Condition** option and select the **Add Condition** button. Use the condition builder to create a condition as shown in the following screen shot.

If the value of the **Leave Comment?** is *true*, this condition is met. This variable is the variable from the Boolean control in the previous step. If the user chose *Yes* at that prompt, the conversation follows this branch.

- e. Select the other branch of the decision to access the properties for this branch.
- f. Change the name to `No Comment`.
- g. In the condition property, select the **Condition** option and select the **Add Condition** button. Use the condition builder to create a condition as shown in the following screen shot.

Condition

All of these conditions must be met

Leave Comment?

is

OR

AND

or

New Criteria

Cancel

Save

If the value of the **Leave Comment?** is *false*, this condition is met. This variable is the variable from the Boolean control in the previous step. If the user chose *No* at that prompt, the conversation follows this branch.

- h. One of the two branches you have created points to the **End** node of the conversation. The second branch should also lead to this node. Select the arrow at the bottom of that branch and drag it to the **End** node.
5. Add a **Text Input** control to the *Leave Comment* branch of the conversation. This control is used to request text input from the user.
 - a. Enter `Get Comment` for the **Node name** property. The variable name `get_comment` is automatically generated for the control.
 - b. In the **Prompt** property, enter the text the user sees before the prompt. For example, `Please enter your comment.`
 - c. Optionally, you can enter a value in the **Advanced > Confirmation messages > Input completion confirmation** property. This value appears after the user enters a comment.
 6. Add a **Record Action** control to the conversation below the *Get Comment* control. This control is used to add the text entered into the previous control as a comment on the selected incident.
 - a. Enter `Update Incident` for the **Node name** property.
 - b. In the **Action Type** property, select *Update a Record*.
 - c. In the **Record** property, select *Choose an Incident*. This choice refers to the *Dynamic Choice* control created in the previous step, so the record chosen there is the one that this Record Action control updates.
 - d. In the **Field** property, select *Add Field*. You can select and give values to fields from this record in the pop-up window that appears.

Field Values

Additional comments

Input Variables>Get Comment

+ Add Field Value

Cancel

Save

- e. Select the *Additional Comments* field from the list.

- f. Select the data pill picker icon , and then select the *Get Comment* input variable from the list. This option refers to the value entered by the user in the **Text Input** control in the previous step.
- g. Select **Save**.

Test the conversation

Use the **Test** button to test the flow of the conversation. Preview topics often throughout the design process to find errors or unexpected behavior quickly. For further information on identifying and resolving issues with topics, see [\(Legacy\) Debug a Virtual Agent NLU topic](#).

(Legacy) Creating a Virtual Agent NLU topic

Use Virtual Agent Designer to create and modify Virtual Agent topics (conversations). Build your topic to meet a specific objective or goal, such as fulfilling a user's request or helping a user complete a task.

Before you begin

Do the following:

- Review [\(Legacy\) Getting started with Virtual Agent Designer for NLU](#).
- Configure Virtual Agent NLU settings. For more information, see [\(Legacy\) Configure Natural Language Understanding in Virtual Agent](#).
- Plan your conversation before you begin. For more information, see [Designing a Virtual Agent topic](#).
- Verify that you're in the appropriate application scope before you create or update a topic. For example, if you're creating ITSM topics, verify that you're in the **ITSM Virtual Agent Conversations** scope (and not the scope for the ITSM NLU Model for Virtual Agent Conversations). For details, see [\(Legacy\) Change the application scope for Virtual Agent Designer topics](#).

Role required: virtual_agent_admin or admin

About this task

The topic is in the Inactive state until you publish it. Publishing a topic changes the topic state to Active and automatically deploys the topic to your Virtual Agent clients.

When NLU is enabled, the Set up Natural Language Understanding (NLU) section is displayed in the Topic Properties page. You can use this section to specify the associated NLU model and intent for the topic. You can also optionally specify keywords that Virtual Agent can use as a fallback if NLU doesn't return a matching intent and topic. For more information, see [\(Legacy\) Natural Language Understanding \(NLU\) topic discovery in Virtual Agent](#).

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**.
2. In the Topics page, select **Create**.
3. On the form, fill in the fields.
For a description of the field values, see [\(Legacy\) Create a topic form](#).
4. On the **Flow** tab, build the conversation flow.

Flow steps	Description
Add controls	To create the topic flow: - Select the controls for user inputs, bot responses, or utilities from the palette and drop them onto the canvas. When you add a control to the canvas, it becomes a node in the conversation flow. - For each node, complete the corresponding property sheet. In the topic header bar, select Save. The topic header bar displays a <i>Saving in progress...</i> message. The toast message <i>Successfully saved your topic</i> appears in the lower-right corner afterward for 4 seconds, and can be closed by selecting the X in the message. For details about each control and the corresponding properties that you define, see User inputs, Bot responses, and Utilities. As you add controls, watch for a yellow warning badge or a red error badge in the corner of the control. The number on the badge indicates the number of issues in that control, such as missing mandatory information in the property sheet. (Highlighting a badge or the "Incomplete" banner at the top of the property sheet details the items in need of correction.)
Move a node	Select the node, drag it to the new location in the flow, and Select Save .
Delete a node	Select the X in the upper right corner of the node. In the topic header bar, select Save. The topic header bar displays a <i>Saving in progress...</i> message. The toast message <i>Successfully saved your topic</i> appears in the lower-right corner afterward for 4 seconds, and can be closed by selecting the X in the message. Note: You can't delete a node that has a script variable used by subsequent JavaScript expressions in the flow. Also, you can delete a decision node only when it has a single branch.

5. Select **Test in the header bar to test your topic in a chat window.**

You can review test results in the adjoining tabs. For detailed information, see [\(Legacy\) Testing NLU/Keyword topics](#).

If the ServiceNow Otto panel, Microsoft Teams application, or Slack application is configured for your environment, preview options for those channels are displayed in the Test button list. Select **Preview in Otto panel** or **Preview in Microsoft Teams** in the list to test your topic in those environments. For more information, see [Integrating Virtual Agent with messaging apps](#).

6. When you're finished with the topic, select **Save in the topic header bar.**

The topic is in the Inactive state until you publish it.

The topic header bar displays a *Saving in progress...* message. The toast message *Successfully saved your topic* appears in the lower-right corner afterward for four seconds, and can be closed by selecting the **X** in the message.

What to do next

[Publish](#) the topic to deploy the topic to your Virtual Agent clients. The topic state changes to Active.

If you created a topic that might be frequently used in certain contexts (environments), consider promoting the topic as part of the [default or custom chat experience](#).

(Legacy) NLU model mapping in Virtual Agent Designer

ServiceNow model groups help you to manage the localization of both topics and Natural Language Understanding (NLU) models more easily. You can map Virtual Agent topics to a new or existing model group directly from Virtual Agent.

A topic is a Virtual Agent conversation. Users find the appropriate conversation using either keyword or NLU topic discovery. If you're using [NLU for topic discovery](#), this means that your topic is associated with an NLU intent, which contains potential user utterances and other information. When a topic is associated with an intent, it's mapped to that intent. An NLU model is a group of related intents.

When you create or edit a topic and have ServiceNow NLU turned on, then you can do the following in Virtual Agent Assistant Designer:

- Map the topic to an existing model and intent.
- Map the topic to an existing model and create an intent.

Mappings are created for all languages that have been activated in NLU Settings as well. For more information, see [\(Legacy\) Configure Natural Language Understanding in Virtual Agent](#).

- Create and map the topic to a new model and intent.

If more than one language has been activated in NLU Settings, mappings are automatically created for secondary languages in the new model group. For more information, see [\(Legacy\) Topic mapping to a multilingual NLU model group](#).

For example, when creating a topic, you can select the NLU model and its associated intent. In the following Company email issues topic, the selected model from the NLU Model drop-down list is the **ITSM NLU for Virtual Agent (11 languages)** model. After selecting the NLU model, the intent list refreshes and you can select your preferred intent. This action maps the NLU intent to this topic. You can change the NLU model and intent selections later on through the topic's **Properties** tab, if needed.

Create a topic

Enter properties. [Learn about designing topics.](#)

Basic properties

* Type

Topic

* Name ⓘ

Company email issues

Description

Use this topic for email issue paths.

Natural Language Understanding (NLU) (recommended)

Help end users discover this topic with NLU. Mapping a model and intent enables your VA to understand what your users say. You can also come back later and use keywords now. [Learn about NLU models.](#)

NLU Model

ITSM NLU for Virtual Agent (11 ... X ▼

* Associated Intent

EmailIssues X ▼

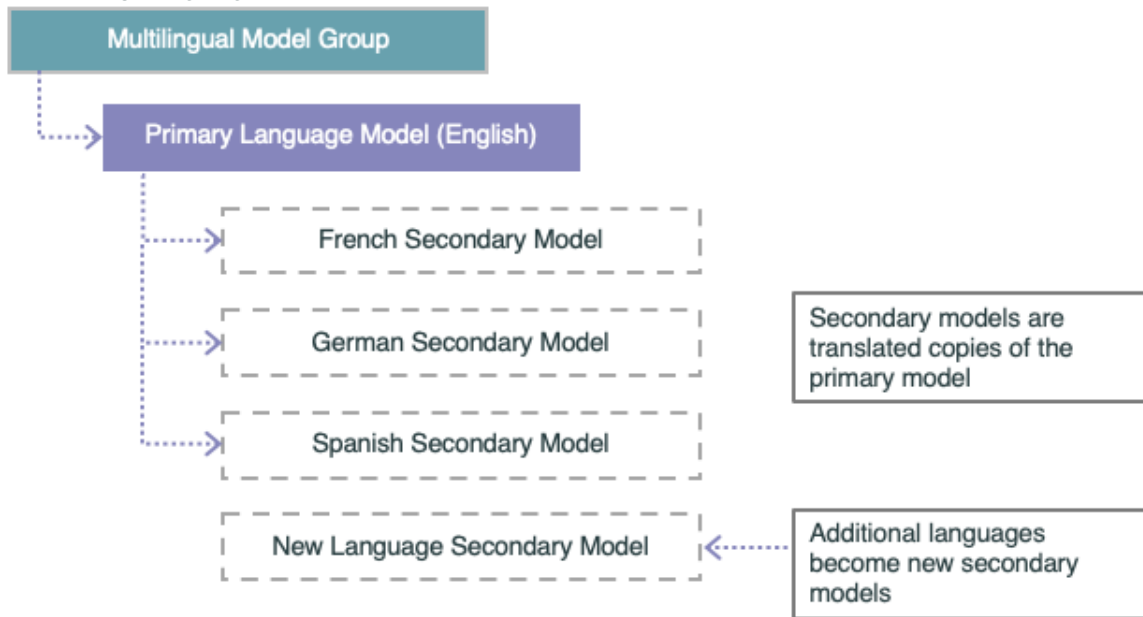
 Refresh list of intents

(Legacy) Topic mapping to a multilingual NLU model group

When you map a topic to a multilingual model group in Virtual Agent Designer, the topic mappings for enabled languages are set up automatically.

Model groups contain a primary language model, such as English, and secondary language models. Secondary models are translated copies of the primary model, where each secondary model uses a different language. Any supported language can be the primary language for a primary model or the secondary language for a secondary model. The language is reflected in the model name. For example, FR for French, DE for German, JA for Japanese, and ES for Spanish.

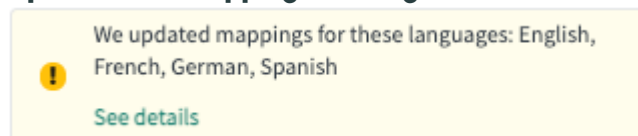
Multilingual model groups contain one primary language model and multiple secondary language models



You can view or change the model and intent mappings on the topic **Properties** tab. You can review secondary language mapping on the topic **Languages** tab.

Because secondary model content is only a translated copy of its primary model content, the secondary language mappings must always point to the same model group as the primary language. For this reason, if you map a language in a topic to a model that is part of a multilingual model group, then all of the topic mappings are updated to use the language models in that group. Virtual Agent Designer informs you of the change.

Updated NLU mappings message



Note: You can map single-language models to a topic as long as there is no conflict with the corresponding language models in the group.

If you create a model group in NLU Workbench, you can specify the primary language. If you create a model from within Virtual Agent Designer, the primary language is determined by the user session language. For example, if you create a new model in a German user session, the primary language of the model group will be German.

Model groups make it easier to maintain your topics. For more information about NLU model groups, see [Multilingual model management](#).

Note: If a model contains only a single language, that language is considered to be the primary language. The topic is mapped to the model and specified intent only. If more than one language has been activated in NLU Settings, those languages are not mapped to the model. To use the topic in other languages, map them to other models manually on the **Languages** tab. For more information, see [Legacy Map a topic to a secondary NLU model](#).

Handling disabled intents within a model

If an intent for the primary language within the model group is disabled, the primary intent displays as disabled in Virtual Agent Designer. When the primary language is disabled, the intent is still mapped to the topic, but all secondary intents are also shown as disabled. This is because the secondary languages are always dependent on the primary language within a model. If an intent for one or more secondary languages is disabled, the other languages remain active. Virtual Agent Designer displays messaging to indicate that some intents are currently disabled.

Topic with a disabled French intent on the Languages tab

Intent mapping

The topic is bound to NLU models for these languages: English, French, German.

Language to edit:

French X ▼

English	French
Test this topic	Test this topic
Model	Model
DAL Model (English, French, Ge... X ▼	DAL Model FR (English, French, ... X ▼
* Intent	* Intent
image card test X ▼	image card test (disabled) X ▼
	This intent has been disabled in NLU Workbench. Please contact your ServiceNow Administrator for assistance.

Entity mapping

Map entities across your NLU language models.

There are no prompts to bind in this topic.

To allow topic discovery for the language, enable the intent in NLU Workbench. For more information, see [Enable or disable a secondary model intent](#).

Avoiding model conflicts

In order to avoid conflicts, Virtual Agent Designer may not display all of the existing models when you create or modify topics. Virtual Agent Designer does the following:

- Only displays model groups that contain language models that reflect the user's current session.
- Shows a warning if the selected model group has language mappings that will change existing language mappings, whether in another model group or in a single-language model.
- Automatically maps intents in each language model in the group to the topic.
- Ensures that duplicate model names or intent names are not used.
- If a topic is mapped to a multilingual model group, hides single-language model groups on the **NLU Language Mapping** tab.

If languages in a topic are mapped to intents in more than one model group, conflicts may occur. An intent can only be mapped to one topic. If this situation occurs when you attempt to publish a topic, Virtual Agent Designer displays an error message.

(Legacy) Modify NLU utterances and entities for a Virtual Agent topic

View, test, and modify NLU utterances for a Virtual Agent topic on the **NLU Intent** tab in Virtual Agent Designer.

Before you begin

If the topic is not currently mapped to a model and intent, the NLU tab is not available. Specify a model and intent on the **Properties** tab in Virtual Agent Designer.

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. Set the topic discovery type toggle switch to **NLU/Keyword**.
4. Open a topic and view the **NLU Intent** tab.
5. On the **Utterances** tab, you can do the following:
 - Enter a new utterance in the box, and then select **Add**.
 - Select the pencil icon to edit an utterance.

When you are done making changes, select **Save**.

6. **Optional:** Associate entities with words in utterances.

Entities represent the context for the action. For example, common industry terms can be defined as entities to clarify the context. Universal system entities may include known elements like date and time or currency. NLU can match defined entities with user input to slot-fill the values. There are five types of entities you can define. For detailed information, see [NLU entities](#) .

7. Select **Save** in the header bar.

What to do next

After making changes, you can [train, test, and publish the model](#) from this tab.

(Legacy) Change the application scope for Virtual Agent Designer topics

Set the application scope before you create or update a topic. For example, if you're creating ITSM topics, verify that you're in the **ITSM Virtual Agent Conversations** scope (and not the scope for the ITSM NLU (Natural Language Understanding) Model for Virtual Agent Conversations).

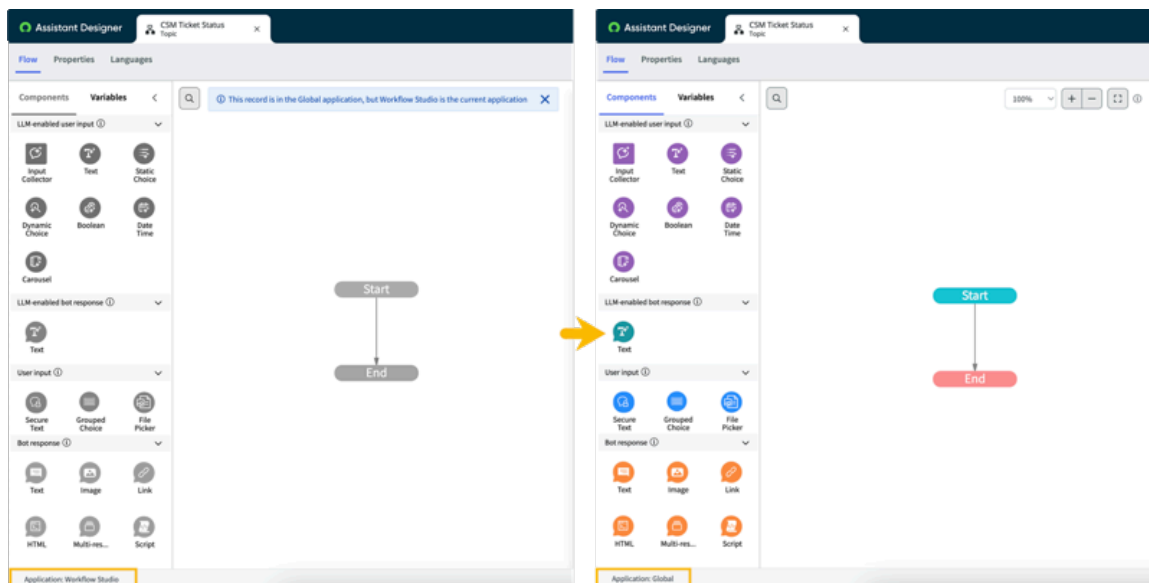
Before you begin

Role required: virtual_agent_admin or admin

About this task

When you open or create a topic, your current application scope is displayed in a status bar on the topic page. The status bar is visible in all tabs in your topic. If you open a topic not in your current scope, a warning banner appears on the canvas, and you can't edit the topic. You can still activate or deactivate, publish, or duplicate the topic. If you duplicate the topic, the duplicate sets to your current scope.

If you have multiple topics open at once, every topic shows its individual scope, and all topics not set to the current scope are locked.



Procedure

1. In the unified navigation bar, select the globe icon (🌐).
2. Select **Application Scope**, then choose the appropriate scope for your conversations.
For example, select *Workflow Studio*.

Note: If you're using domain separation, you can change the domain that you're working in. Select **Domain scope: global** to change the domain. Any topics created within a domain are restricted to users of that domain. For more information, see [Domain separation and Virtual Agent](#).

Result

The application scope updates, and the new scope is displayed in the topic page when you refresh or open the topic. When the scope isn't global, a ring appears around the globe icon (🌐).

If the new scope matches a topic that was locked before, the warning banner disappears and you can edit the topic.

What to do next

Return to creating or updating your topic. If you have multiple topics open, you can sort them by activating the **Group tabs by app scope** toggle switch in *Preferences*. For more information, see [Assistant Designer Asset library](#).

(Legacy) Create a small talk topic for NLU

Build small talk topics that let Virtual Agent engage in casual conversation with users. A small talk topic provides a response to a casual question that users might ask during a conversation, such as the time or date. A small talk topic can occur anytime within a conversation session and can be unrelated to the original conversation intent.

Before you begin

Define the corresponding intent in the appropriate NLU model.

Role required: virtual_agent_admin or admin

About this task

Small talk topics are conversations that diverge from the original bot conversation, usually to provide answers or information to casual questions that end users might ask. For example, you can create small talk topics that provide the current weather or time of day. When users engage with the bot through a small talk topic, they can return to the original conversation topic.

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**.
2. On the home page, select **Create**.
3. For the Type, select **Small Talk**.
4. Follow the steps for [creating a topic](#).

Note:

- Fill in the following fields on the Properties page.

Field	Description
NLU Model	Model that defines the intent for this small talk topic.
Associated intent	Intent defined in the NLU model for this small talk topic.

- When you complete your small talk topic, remember to publish it when you are ready to deploy it to your Virtual Agent clients.

(Legacy) Add NLU to an existing keyword topic

Create and map an NLU model group and intent for the topic from Assistant Designer.

Before you begin

[Configure NLU on the instance in Virtual Agent General Settings](#).

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**.
2. Set the discovery type toggle switch to **NLU/Keyword**.
3. Open an existing topic.
4. Select the **Properties** tab.
5. In the **NLU Model** field, do one of the following:

- Note:** If the **NLU model** field does not appear and you have Now Assist enabled, ensure that you haven't selected an LLM topic. Navigate back to the Topics page and select a topic that has the **Model Type** set to **NLU/Keywords**.

- Choose an existing model.
- Select **Create Model** to create a new model group.
 - a. In the **Model Name** field, enter a name for the new model group.
 - b. In the **Intent name** field, accept the default value or enter a name for the new intent.

- Note:** New models are created in **Draft** state.

6. In the **Associated Intent** field, do one of the following:

- Choose an existing intent.
- Select **Create intent** to create a new intent.

In the **Intent Name** field, accept the default value or enter a name for the new intent.

7. **Optional:** In the **Keywords** field, enter key phrases or terms that users enter to initiate the conversation with the Virtual Agent.

Press **Enter** after each phrase. Keywords are also used for languages that are currently not available in NLU.

8. Select the **NLU Intent** tab, and then add utterances and associate entities with them.

For more information about adding utterances, see [Create an NLU intent](#) . For more information about defining entities, see [Entities](#) .

9. Make any other changes on the **Flow** tab, such as associating entities with a node or adding entities as input variables for the topic.

10. When you're finished with the topic, select **Save** in the topic header bar.

Result

The modified topic is in the inactive state until you publish it.

(Legacy) Add nodeless NLU entities as input variables to a topic

You can add nodeless NLU entities as input variables to a topic if NLU is enabled for Virtual Agent. These variables can be slot-filled from NLU service provider predictions or provided outside of the scope of the topic.

Before you begin

Role required: virtual_agent_admin or admin

About this task

If a custom control prompts a user for a date and the user mentioned a date in their initial utterance, you can capture that without prompting the user again. To prompt the user when not slot-filled, use input controls.

For more information about NLU entities, see [Entities](#) . For more information about system entities, see [\(Legacy\) NLU system entities](#).

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**.
2. Open a topic and view the **Flow** tab.
3. In the sidebar, select the Variables tab, and select the **Input** icon .
4. On the form, fill in the fields.

Add Input Variable dialog box

Field	Description
Input Types	Data type of the input. The fields on the dialog box change according to your choice. ○ String: Alphanumeric text. Shows the Input format field. Choose plain text or a conforming rule, depending on the type of data. ○ True/False: Boolean value, either yes or no.

Field	Description
	◦ Date Time: Date, time, or both. Shows the Input format field. ◦ Static Choice: Defined user choices. Shows Display name and Value to store field pairs. ◦ Dynamic Choice: Choice of table records. Shows Populate choices by, Table, and Filter choices fields. The value can be either conditional or scripted. For details, see Input data types in Virtual Agent topics.
Name	Name of the variable for the entity. Variable names must be unique within the scope of a topic. The name appears as a variable when used in dot walking.
NLU Entity	The NLU entity associated with the node. This could be a pre-built Virtual Agent entity that you import into the model, a system entity (such as DURATION, TIME, or MONEY), or a custom entity that you created.
String data type properties	
Input format	Text format that is validated when a user enters certain text items. If the user doesn't enter the expected format, an error message indicates that the format is not valid and asks the user to reenter the text. Choose the format of the text item to be validated: ◦ Text: Any text string (no validation) ◦ Email: Format that consists of an email prefix (user name), @ symbol, and domain. ◦ IP address (IPV4, IPV6): Data communication delivery format for Internet Protocol version 4 or version 6. ◦ Phone number (E.164): Internationally recognized standard phone number format. ◦ URL: Web address format ◦ Custom: Script that provides a text validation rule for a custom text format and the related error messages displayed when the expected format is not entered. Note: For phone and IP address format examples, see E.164 phone formats and IP address field types.
Date Time data type properties	
Input format	Type of Date Time control to be displayed. Select one of the following formats: ◦ Date: Shows only the monthly calendar for the user to select the date. ◦ DateTime: Shows both a monthly calendar and time picker. ◦ Time: Shows only the time picker for the user to select the time (hours and minutes).
Static Choice data type properties	
Choices	Enter two or more choices as follows:

Field	Description
[For Static Choice data type]	○ Display name: Short phrase or text that appears to the user for that choice. ○ Value to store: The string that is stored in the variable when the corresponding choice is selected.
Dynamic Choice data type properties	
Populate choices by	Type of dynamic variable to be used. Select one of the following options: ○ Record: Returns records from the table selected. The values for these options are GlideRecord objects. ○ Script: Expression that returns an array of options.
Table [Record values only]	If you selected Record as the method to populate choices, select the table to be searched.
Filter choices [Record values only]	Select one of the following: ○ Condition Builder: Creates a filter used to select a subset of records from the table. ○ Script: Defines the enumeration list for the options (choice list) to be displayed. The name value pair is stored as a string object.

5. Select **Save**.

NLU entities appear alongside topic input variables in the Variables sidebar.



Note:

You can remove a slot-filled value to prompt the user again (unbind it from the initial input value). For more information, read about the `vaInputs.myvar.unbindEntity()` method in [Virtual Agent scripts](#).

(Legacy) Use system-derived entities in an NLU topic

Associate system-derived entities such as date, time, duration, or location with a node in a topic.

Before you begin

Create the Booking Reservations NLU model and system entities (FromLocation and ToLocation) as described in [Create a system-derived entity](#) [\[2\]](#). In this example procedure, you will create a topic that can slot fill locations that are used in an utterance.

Role required: virtual_agent_admin or admin

Procedure

1. Create a new topic called Booking Reservations.

When completing the **Properties** tab, make sure that you choose the Booking Reservations NLU model that you created in an earlier exercise.

2. Drag a Text bot response component onto the canvas, and then select it.

In the properties sheet, fill in the fields.

Response Properties sheet

Field	Description
Node name	Type Intro.
Response Message	Type Let 's get you booked on a flight.

Intro Text response properties

 Text response >

Display a bot response to the user as text. [Learn more](#)

* Node name

* Response Message ⓘ




B *I*   

+ Add alternate message

3. Drag a Text user input component onto the canvas.
In the properties sheet, fill in the fields.

User Input Properties sheet

Field	Description
Node name	Type Fromwhere.
Prompt	Type Where are you departing from?
Input format	Select Text . This doesn't restrict the input format.
NLU entity	Select FromLocation. This list only shows existing entities, such as system entities or entities that you created for the model.
Do not ask users to confirm recognized entity	Select this option to avoid having Virtual Agent ask the user to confirm the location.
Advanced (optional)	
Topic switching	
Enable NLU to switch topics	Slide this toggle switch to enable topic switching.

Fromwhere Text user input response properties


Text input
>

Collect an input from the user. [Learn more](#)

* Node name

Fromwhere

Variable name: fromwhere

* Prompt ^①

Where are you departing from?





* Input format ^①

Text ▼

NLU entity ^①

FromLocation X ▼

Do not ask users to confirm recognized entity ^①

☒

Advanced (optional)

Make this input secure ▼

Default value ▼

Confirmation messages ▼

Topic switching ▲

Enable NLU to switch topics ^①
☒

Hide or skip this node ▼

4. Drag another Text user input component onto the canvas.
In the properties sheet, fill in the fields.

Field	Description
Node name	Type Towhere.
Prompt	Type Where are you heading?
Input format	Select Text . This doesn't restrict the input format.
NLU Entity	Select ToLocation.

Field	Description
	This list only shows existing entities, such as system entities or entities that you created for the model.
Do not ask users to confirm recognized entity	Select this option to avoid having Virtual Agent ask the user to confirm the location.
Advanced (optional)	
Topic switching	
Enable NLU to switch topics	Slide this toggle switch to enable topic switching.

Towhere Text user input response properties


Text input
>

Collect an input from the user. [Learn more](#)

* Node name

Towhere

Variable name: towhere

* Prompt ⓘ

Where are you heading?




* Input format ⓘ

Text ▼

NLU entity ⓘ

ToLocation X ▼

Do not ask users to confirm recognized entity ⓘ

☒

Advanced (optional)

Make this input secure ▼

Default value ▼

Confirmation messages ▼

Topic switching ▲

Enable NLU to switch topics ⓘ
 ☒

Hide or skip this node ▼

5. Drag another Text bot response component onto the canvas, and then select it.
In the properties sheet, fill in the fields.

Field	Description
Node name	Type Confirmation.
Response Message	Type Great! I have you booked on a flight from [Fromwhere] to [Towhere]. Bon voyage! Use dot-walking to replace [Fromwhere] and [Towhere] with the input variables you created in the previous nodes.

Confirmation text response properties


Text response
>

Display a bot response to the user as text. [Learn more](#)

* Node name

Confirmation

* Response Message ①

Great! I have you booked on a flight from blank

Input Variables ➤ From... to

blank Input Variables ➤ To...

. Bon voyage!

B *I* 🔗 ☰ 😊




+ Add alternate message

6. Click **Save**.

What to do next

Use additional system-derived entities for your Booking a Reservation topic. For example, you can use system-derived entities to capture the dates that the user wants to travel. For more information about default system entities, see [\(Legacy\) NLU system entities](#).

(Legacy) Testing NLU/Keyword topics

Use the chat test window to preview, test, and debug Natural Language Understanding (NLU)/keyword topics.

As you work on a topic in Assistant Designer, you can run your conversation in a chat test window. The default test window is the web (Service Portal) chat client.

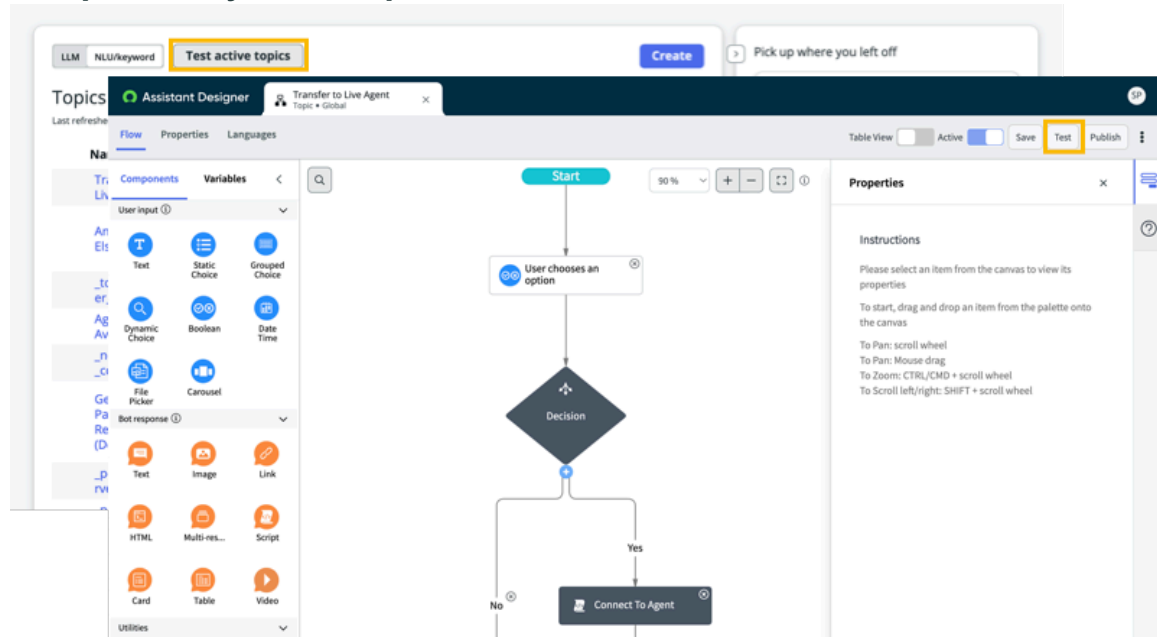
If you're using the [Virtual Agent integrations with third-party messaging apps](#), elements in your conversation might appear differently in third-party messaging applications. Test your conversations in any third-party applications where you want to deploy Virtual Agent.

If the ServiceNow Otto panel, Microsoft Teams application, or Slack application is configured for your environment, preview options for those channels are displayed in the Test button list.

Select **Preview in Otto panel** or **Preview in Microsoft Teams** in the list to test your topic in those environments.

Testing your NLU/Keyword topic in the chat test window

Example NLU/Keyword test options



To run your topic in the chat test window, select the **Test** option in the topic header bar. Alternatively, you can test active (published) topics by selecting **Test active topics** while viewing NLU topics on the home page.

Note: If your topic is missing any necessary information, an incomplete badge appears in the corner of the flow diagram pane. A yellow or red warning badge also appears next to each node. The incomplete badge lists the total number of issues, while the local warning badges show how many are found in each node. Selecting **Test** when there are issues present opens a Validation Issues tab on the sidebar, which counts up and details all the issues needing correction. These details include a full description and a hyperlink to each incomplete node.

The chat test window opens in the chat widget and displays adjoining tabs that provide details about your topic as you test it. You can use these tabs:

- **Analysis** - The results for intent matching and entity recognition appear based on what you entered in the conversation.
- **Variables** - List of all the variables used in the conversation, such as input and live agent variables.
- **Context** - Options for specifying the context (using context variables) in which a topic is run.
- **Logs** - A list of the processing performed.

Example Natural Language Understanding (NLU) chat test window and test tabs

The screenshot displays the ServiceNow NLU chat test interface. On the left, a chat window titled 'Now Support' shows a user input 'I need to order office supplies'. The virtual agent responds with 'Which supplies would you like to order?' and provides a list of items: Staples, Stapler, Paperclips, Pens, Pencils, Markers, and Notebook. The user is prompted to 'Please pick an option.'.

On the right, three panels show the test results for the phrase 'I need to order office supplies':

- Analysis:** Shows a 100% prediction score for the topic 'Order office supplies and tools'. The model used is 'Office Supplies NLU'.
- Variables:** Shows the input variable 'select_from_list'.
- Context:** Shows the language set to 'French'.
- Logs:** Shows the conversation details, including the conversation ID, user ID, and message content.

By default, the **Include Topic Discovery** option is enabled. This option automatically performs topic discovery and generates prediction results for NLU topics using test phrases that you enter in the test window. The conversation begins with the Virtual Agent greeting and the button for the menu of available topics.

If you're using the **Test Active Topics** option or sub-options from the home page, topic discovery is enabled, so it's not listed as an option. Testing active topics behaves the same as testing from a topic except that test cases can't be created.

Analyze test phrases tab

For NLU enabled topics, the **Analyze test phrases** tab provides an analysis of the possible intents that match the test phrase (utterance) that you entered in the chat test window. The tab lists the prediction results, which include matched intents and their prediction scores, along with any entity recognition and slot-filling results. The top match is listed first. The predicted intents depend on the prediction confidence threshold set in the NLU service.

Example Analyze test phrases tab for NLU/Keyword topics

The screenshot displays the ServiceNow Virtual Agent Designer interface. On the left, a chat window titled 'Now Support' shows a conversation with a virtual agent. The agent's messages are: 'Hi, I'm your Virtual Agent. Let me know how I', 'How can I help you?', and 'You can type your request below, or use the button to see everything that I can help with.' A user message says 'I want to be sure I got this right. What item best describes what you want to do?'. A button labeled 'see tickets' is visible. On the right, the 'Test active topics' panel is open, showing the analysis of the phrase 'see tickets'. The panel includes tabs for 'Analysis', 'Variables', 'Context', and 'Logs'. Under 'PREDICTED INTENTS', three results are listed:

Confidence	Intent	Model	Topic	Entity	Value
84%	CheckITTicketStatus	[Read Only] ITSM NLU for Virtual Agent	JW Test Serrvicenow NLU FR	@tasktype	incident
77%	OpenITTicket (K20)	ITSM NLU (K20)	Open IT Ticket (K20)	@tasktype	
70%	SubmitARequest				

If an utterance doesn't match a current intent, you can add or change utterances in Virtual Agent Designer. For more information, see [\(Legacy\) Modify NLU utterances and entities for a Virtual Agent topic](#).

Make changes, train the model again, and then retest until you're satisfied with the results. When the topic is ready, you can publish both the topic and the model from Virtual Agent Designer.

Variables tab

The **Variables** tab displays a list of all the variables used in the conversation and the associated values captured as the conversation progresses, so that you can follow along. A conversation can have these variable types:

- Input variables
- Script variables
- Live agent variables
- Variables passed between a calling topic and topic block
- "Nodeless" NLU entities declared as a slot-filled variable for the topic

The list is separated into sections by type of variable. The following example shows the Input variables section. Notice that for the static list control, both the display label and value are captured for the selected choice.

Example list of input variables

The screenshot shows a chatbot conversation for 'Hardware Issues'. The chatbot asks for the hardware type, and the user selects 'mobile'. The chatbot then opens an incident and asks if there is anything else to assist with. The 'Variables' panel on the right shows the following input variables:

Variable	Type
hardware_type	Input variable
mobile	Value entered
(Label: Mobile phone)	Display value (user sees)

The 'Passed variables' section shows:

Variable	Value
created_incident_sys_id	71dfe89a1b7ba0100b946466624bcb72

The 'Live Agent variables' section shows:

Variable	Value
LiveAgent_queue	-

The following example shows the Input variables section for the grouped list control. This variable information appears similar to the static list control, but the variables are separated by each group of the grouped choice.

Example list of grouped choice variables

The screenshot shows a chatbot conversation for 'Flight info'. The chatbot asks for flight information, and the user selects 'Business Class'. The chatbot then asks for the meal type, and the user selects 'Beef'. The chatbot then asks for amenities, and the user selects 'Headphones'. The 'Variables' panel on the right shows the following input variables:

Variable	Type
amenities	Group name
[Headphones]	
meal_type	
Beef	(Label: TypedValue [value=Beef, type=java.lang.String])
seat_class	
Business Class	(Label: TypedValue [value=Business Class, type=java.lang.String])

The 'Passed variables' section shows:

Variable	Value
created_incident_sys_id	71dfe89a1b7ba0100b946466624bcb72

Context tab

Use the **Context** tab to specify a different context for the chat. Choose a context variable from the list. These variables contain contextual information that can be used to determine topic intent or control how chats are routed to live agents. For example, you could select **portal** from the list of variables and enter the portal name **IT Express**. The **Context** tab is unavailable when creating test cases.

For more information about defining context variables, see [Configure context variables for storing chat-related information](#). For more information about live agent variables that are included with Virtual Agent, see [Live agent chat context variables](#).

Example Context tab

Logs tab

The **Logs** tab displays the processing and error messages that are recorded while running your conversation. If you're using scripts in Virtual Agent Designer, use `gs.log`, `gs.print`, and `gs.warn` statements in your scripts to output information in this log.

Example Logs tab

Next steps

When you're done testing your topic, close the test chat window. If needed, you can use the test information to fine-tune your conversation. For example, if the results on the **Analyze test phrases** tab return multiple possible matches for your utterance, you could update the utterances for your intent and NLU model on the **NLU Intent** tab for your topic.

(Legacy) Train and test your NLU model in Virtual Agent Designer

Use the **NLU Intent** tab to train and try a Natural Language Understanding (NLU) model that is mapped to a topic without leaving Virtual Agent Designer.

Before you begin

Role required: virtual_agent_admin or admin

About this task

As you make changes to a topic's intent, train the model so that your updates are incorporated. Then try and test the model to review prediction results based on the latest changes. Continue to test and refine your model until you're satisfied with your changes.

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**.
2. Set the discovery type toggle switch to **NLU/Keyword**.
3. Open a topic and view the **NLU Intent** tab.
4. Select **Train model**.
A message indicates that the model was successfully trained.
5. Select **Try model**.
In the Try model panel, manually enter an utterance to test. The prediction results display in the panel.

Example of testing an utterance in the NLU Try model panel

Assistant Designer | Check IT Ticket Status (Topic • Global)

Flow | **NLU Intent** | Properties | Languages

Active | Save | Test | Publish

Trained 9 minutes ago

#CheckITTicketStatus

Utterances (24) | Associated entities (2) | Conflicts (0)

Use @ to refer to values (words) in your existing vocabulary source, which you can always add to. To extract specific words from your utterances, select the word to annotate them as entities.

Add

Utterance	Source	Last modified
Can you give me the status on RITM1234567	Manual	2022-10-06 21:07:51
I want to check up on my ticket	Manual	2022-10-06 04:05:22
I need an update on my ticket	Manual	2022-10-06 04:05:16
Was the IT ticket processed	Manual	2022-10-03 11:39:45

Perform action on selected rows...

Train model | **Try model**

Enter an utterance to test

Go

"IT Ticket Status"

Trained model prediction results
Confidence Threshold 65%

Top prediction(s)

CheckITTicketStatus (92% - Intent)

Published model prediction results
Confidence Threshold 65%

Top prediction(s)

CheckITTicketStatus (92% - Intent)

If prediction confidence score results meet or surpass the confidence threshold you established for the model, the results appear under Top prediction(s). In this example, the threshold value is 65%.

The default value of the `com.glide.cs.intent_confidence_threshold` property is **0.7**.

The default value of the `com.glide.cs.entity_confidence_threshold` property is **0.5**.

Note: You can compare the draft NLU model to its most recent published version. For more information, see [Compare draft and published versions of your NLU model](#).

6. When you're satisfied with the prediction results, publish the model from NLU Workbench or select **Publish** in the topic Header bar and select **NLU Model**.

What to do next

You can publish the model at the same time as the Virtual Agent topic if the model meets publication criteria. Make sure your model has passed through all phases of development and is ready to publish. For more information, see [Model management](#).

For more information on providing feedback using thumbs icons in the results, see [\(Legacy\) Test panel feedback](#).

(Legacy) Automated testing for Virtual Agent topics that use NLU topic discovery

Automated testing for your Virtual Agent topic flows uses the ServiceNow Automated Test Framework product through Assistant Designer. You can create and run automated tests through the Automated Test Framework to confirm that your topic flow works after making a change.

Create topic test cases through a topic's **Test > Create test case** preview and view the topic's test cases through the Asset library's **Manage NLU/keyword test cases** button. Only run automated tests on a development, test, or other non-production instance to avoid data corruption and outage. For more information, see the [Automated Test Framework](#).

Working with test cases is only available if you have:

- Installed the com.glide.cs.atf plugin (installed as a part of the Virtual Agent chatbot plugin).
- Received one of the following roles: atf_test_designer, atf_ws_designer, atf_test_admin, virtual_agent_admin, or admin.
- Published topics with one of the following topic types: **Topic**, **Setup Topic**, or **Small talk**.

(Legacy) Manage and run automated test cases in Virtual Agent Designer

Run reusable test cases of your published topics using the Automated Test Framework through Virtual Agent Designer to identify performance issues and prevent regressions before production.

Before you begin

Plugin required: com.glide.cs.atf.

Role required: atf_test_designer, atf_ws_designer, atf_test_admin, virtual_agent_admin, or admin

About this task

The **Manage test cases** button opens the **Run test cases** tab. Before you can run a test case, you previously must have created a test case. The **Create test cases** tab displays published topics that don't have associated automated tests. These topics appear in order from their last published date. After you select a topic name, a new window opens and you're directed to that topic in Virtual Agent Designer. From the topic, you can select **Test** to create a test case. For more information, see [\(Legacy\) Create an automated test in Virtual Agent Designer](#).

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**.
2. Slide the discovery type toggle switch to **NLU/keyword**, then select **Manage test cases** in the Resources list on the sidebar.
You either see the **Run test cases** tab or the **Get started** button. The **Run test cases** tab displays topics that have had test cases previously created. The **Get started** button redirects you to the **Create test cases** tab to begin creating your topics' automated testing.
3. In the list view, review the columns.

Run test cases columns

Column	Description
Test case	Displays the linked test case name. Selecting the linked name opens a new window and directs you to that test within the Automated Test Framework. From the Automated Test Framework you can view test details, including test steps.
Topic	Displays the linked topic name. Selecting the linked name opens a new window and directs you to that topic in Virtual Agent Designer. Topics with multiple test cases are grouped.

Column	Description
Run status	Displays the run status of the test. Three statuses are possible: - Ready: The test case is ready to be run. - In-progress: A temporary test case status that appears while the test case is running. After the test runs, the status returns to Ready. - Run recommended: The topic's published date is more recent than the test cases latest run date so there may be published updates for the topic. A run is recommended because the latest published topic and its related test cases are potentially out of synchronization.
Last run	Displays the date and timestamp of when the test was last run. Topics are grouped and sorted by the last test run date or if the same run happened across multiple topics, the topic's last published date.
Result	Displays either Failed or Passed. Pointing to the linked result displays a brief explanation of either the passing or failing step details. Selecting the linked result opens a new window and directs you to that test's Test Results in the Automated Test Framework where you can view more specific step fail or pass details. If the test case has passed, no changes happened between the latest published topic and its saved test case. If the test case has failed, a change happened between the latest published topic and its saved test case. For more information, see View test results. Tip: You can view the test suite of all topics created and tested through Virtual Agent Designer by navigating to Automated Test Framework (ATF) > Suites, and then selecting Virtual Agent Topics. For more information, see Run an automated test suite.
Actions	Displays the Delete button that deletes the test case from this page and the Automated Test Framework.

4. Select one, multiple, or all test case check boxes, and then select **Run**.

 **Tip:** The **sn_atf.runner.enabled** property must be turned on to run test cases. After the property is turned on, you can select **Run**. Also, you can select the check box next to the Test case column header to select all test cases to be run.

An in-progress banner appears and changes to a completion banner after your test results are ready. The Last run column updates and the last run test cases are moved to the top of the table.

(Legacy) Create an automated test in Virtual Agent Designer

Create automated tests in Virtual Agent Designer and run tests regularly against ideal conversation topic flows. You can create multiple automated tests for a topic to capture different conversation flows for various situations such as ideal conversation paths or errors.

Before you begin

Plugin required: com.glide.cs.atf.

Role required: atf_test_designer, atf_ws_designer, atf_test_admin, virtual_agent_admin, or admin

About this task

As you work on a published topic, setup topic, or small talk topic, use the **Test** option in the topic header bar to run your conversation in a chat test window. The default test window is the web (Service Portal) chat client. Use the **Create test case** button to create a test case and save the test case in the Automated Test Framework.

 **Note:** You can find a list of NLU/Keyword test cases by selecting the **Manage NLU/Keyword test cases** toggle switch on the Assistant Designer Asset library page. Automated tests are also listed on the Automated Test Framework (ATF) Tests [sys_atf_test] table. For more information on managing NLU/Keyword test cases, see [\(Legacy\) Manage and run automated test cases in Virtual Agent Designer](#)

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**.
2. Set the discovery type toggle switch to **NLU/keyword**.
3. Select a published topic.
4. In the topic's header bar, select **Test**.
5. In the topic testing window, select **Create test case**.

 **Note:** The **Create test case** button is only available for published topics that are non-read only with one of the following topic types: **Topic**, **Setup Topic**, or **Small talk**.

The topic's test client restarts and the test case begins to capture your ideal conversation. While capturing your test case, the **Include Topic Discovery** and the **Context** tabs are unavailable.

6. Enter the conversational flow that you want to capture and test.

 **Tip:** Select **Restart** at any time to restart the topic conversation and test case capture.

7. Select **Stop**.

The **Test case name** field displays the topic's name along with the date and timestamp. For example: [Topic name] 3/28/2022, 3:32:19 PM.

8. Perform one of the following actions.

Option	Description
Discard the test case	a. Select the trash can icon. b. Select Discard. The test case is discarded and the testing conversation restarts.
Save the test case	a. Change the Test case name to your preferred test case name. b. Select Save. The test case is saved. To review your saved test case, select Manage on the confirmation banner to open the Manage test cases tab in a new window, or go to Manage NLU/keyword test cases on the Topics page.

(Legacy) Handle failures caused by dynamic inputs in user testing of Virtual Agent topics

Avoid failures when performing automated tests for topics in Assistant Designer by controlling which inputs that you want to run as part of a test case.

Before you begin

Set up a test case for a topic that includes dynamic inputs. See [\(Legacy\) Create an automated test in Virtual Agent Designer](#) for more information.

Role required: virtual_agent_admin or admin

About this task

When running a test in Assistant Designer, some tests may fail even when a topic has fully functional components. These failures can happen based on various cases, such as timestamps based on a function that always returns the current time. The timestamp is created correctly when the test runs, but isn't a match with the recorded timestamp in the test case. Similar examples include different users entering different names, email or physical addresses, or other information specific to each user. Any topic that returns different data based on time or other changing conditions is a potential failing point in testing. By deactivating test steps that use dynamic input, you can run tests that won't fail due to a change in the data found in those steps.

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**.
2. Set the discovery type toggle switch to **NLU/keyword**, then select **Manage test cases**.
3. Open the test case that you want to work with.
4. Under the **Test Steps** tab, select the Active column of the test step you want to exclude, and set its value to **False**.
5. Repeat Step 4 with as many test steps as you want to deactivate.
6. Run or debug your test case.

(Legacy) Debug a Virtual Agent NLU topic

Investigate and resolve unexpected behavior in your custom Virtual Agent topics, topic blocks, and controls.

For information about topic discovery issues, see [\(Legacy\) Resolve Natural Language Understanding \(NLU\) topic discovery issues](#).

Duplicate a live topic before debugging and changing it

Duplicate a topic rather than update a live topic. The unmodified original topic can serve as both a reference and a backup, and retaining the original enables you to restore the topic quickly. Remember to deactivate the original topic before publishing the duplicate.

Debug a topic while testing your conversations

As you create or update a topic in Virtual Agent Designer, use the **Test** button in the topic header bar to preview the conversation. The chat test window shows the conversation as it appears within Service Portal. Elements in your conversation might appear differently in third-party messaging applications. Test your conversations in any third-party applications where you intend to deploy Virtual Agent.

The test chat window displays four tabs that provide detailed information for debugging and refining your topic: **Analyze test phrases**, **Variables**, **Context**, and **Logs**. For details on these tabs, see [\(Legacy\) Testing NLU/Keyword topics](#). The following example shows the processing messages and errors logged during testing.

The screenshot displays the Virtual Agent Designer interface. On the left, a chat window titled "Now Support" shows a user message: "Hi. How can I help you?". Below the message is a "See tickets" button and a status indicator "Looking into your request". On the right, a "Test active topics" panel is open, showing the "Logs" tab. The logs panel contains two log entries, both timestamped "15:06:18.767". The first log entry is a long string of parameters including conversation ID, type, event, thread, user, message, node, metric_key, and metric_value. The second log entry is a JSON object with the same parameters.

```

15:06:18.767:
conversation&#61;&#34;6e55c734873c3210acd1fe66cebb3588&#34;
type&#61;&#34;PERF&#34;
event&#61;&#34;80750374873c3210acd1fe66cebb3500&#34;
thread&#61;&#34;108&#34;
user&#61;&#34;ian.cannon&#64;snc&#34;
message&#61;&#34;cmh2jlx6q000f3b7yuh80d5zj&#34;
node&#61;&#34;bdc5b660adbe532b05a7295bd77dc9e3&#34;
metric_key&#61;&#34;VA_TOTAL_PROCESSING&#34;
metric_value&#61;&#34;862&#34;

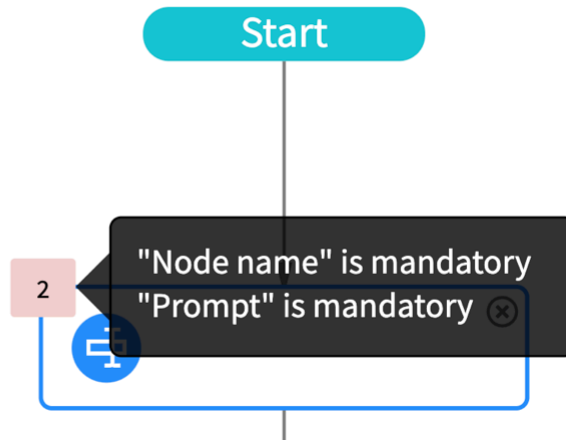
15:06:18.767
conversation="6e55c734873c3210acd1fe66cebb3588"
type="PERF" event="80750374873c3210acd1fe66cebb3500"
thread="108" user="ian.cannon@snc"
message="cmh2jlx6q000f3b7yuh80d5zj"
node="bdc5b660adbe532b05a7295bd77dc9e3"
metric_key="QUEUE_WAIT" metric_value="0"

```

Watch for warnings on controls within your topic

Warnings on a topic node in the Flow tab

2 incomplete



Controls that are missing necessary information show a red incomplete badge in the upper left corner of the control. The badge shows a number indicating the number of issues in that control. Select this badge to see a list of the issues in the control.

Another warning badge appears in the upper left corner of the canvas to indicate the number of issues within the entire topic.

Check for errors when a topic preview does not run

Topic preview errors on the canvas

 **Issues (6)** ×

This topic contains issues that must be fixed





Fix these issues to test or publish

Node: [Static Choice] 6 [View](#)

"Node name" is mandatory

"Detail description" is mandatory

"Display name" cannot be empty

"Value" cannot be empty

"Display name" cannot be empty

"Value" cannot be empty

Additional information appears in a Validation Issues tab on the sidebar of the Virtual Agent Designer canvas when an error prevents the topic from running. The total number of Issues are listed, along with details and a hyperlink for each node. Select a hyperlink to go to the node, and use the information provided to correct any errors in your conversation. You can close the tab without correcting the issues, but until the issues are corrected, the Validation Issues tab appears when you select **Publish**. The Validation Issues tab closes if you select **Publish** after correcting all issues.

Common Virtual Agent issues

Issue	Possible resolution
Cannot see module designer under conversational interfaces	• User might not have the virtual_agent_admin role. • Virtual Agent plugin might not be activated.
Cannot edit a topic	Logged-in user must be in the same application scope as the topic.
Cannot preview topic	• Make sure that all required fields are filled in on the node properties. • Ensure that your browser is configured to permit pop-ups from your instance.
chat widget stuck at Connecting...	One or more of your topics might be missing. Check the to ensure that topics are present on the instance and in the Active state.

Review topics that run in a conversation flow

Each Virtual Agent (VA) conversation in an instance automatically generates an interaction record in the Interactions [interactions] table, which logs the conversation between a requester and virtual and live agent. You can review the transcript of the conversation between the requester and virtual agent, including live agent transfers (if using Agent Chat). For details, see [Virtual Agent interaction records](#).

(Legacy) Resolve Natural Language Understanding (NLU) topic discovery issues

If an intent is not being chosen when expected, you can troubleshoot NLU prediction errors.

Quick troubleshooting tips

If a Virtual Agent is not being discovered, check the following:

Is NLU enabled for the session language?

Enable the language in Natural Language Understanding (NLU) settings for Virtual Agent. For details, see [\(Legacy\) Enable NLU languages in Virtual Agent settings](#).

Is the NLU Model trained and published for the session language?

Your topic may not be using the latest changes to your model. For ServiceNow® NLU, see [Train and try your NLU model](#) and [Publish a Virtual Agent topic](#).

Is the Virtual Agent topic published, discoverable, and bound to a published NLU Model and Intent for the session language?

The topic should be bound to a single model and intent for a given language. Ensure there are no duplicate intents bound to other topics. Make sure that the topic, model, and intent are in the same domain. For more information, see [Publish a Virtual Agent topic](#).

Are any roles or conditions specified for the Virtual Agent topic on the Properties tab in Virtual Agent Designer?

If the topic is shown only for certain roles or for certain conditions, this can impede topic discovery. For details, see [Topic Properties tab](#).

Why did Virtual Agent discover my topic in Spanish but not in French?

There are several possibilities:

- Not all languages are supported by all NLU providers. For details, see [\(Legacy\) Language support for NLU services](#).
- Not all topics are bound to a language-specific NLU model and intent.

For example, Topic A may be mapped as follows:

- Bound to Model A and Intent A for English
- Bound to Model A and Intent A for Spanish
- NOT bound to a model or intent for French

In this scenario, create a French model and intent for the topic. For more information, see [Multilingual model management](#).

Why did a topic variable NOT slot fill?

Check the following:

- The topic's user input node was not configured with an associated entity. Use the **NLU entity** property for the node in Virtual Agent Designer.

NLU entity ⓘ

DATE
X ▼

Do not ask users to confirm recognized entity ⓘ

☐

- The prediction result contained an NLU entity with a confidence score that was less than the configured confidence threshold.
- The NLU entity value for the node was invalid. For example, you can't apply the word "red" to a Date/Time entity type.

Test discovery from the topic.

Do one of the following:

- In the Asset library, slide the discovery type toggle switch to **NLU/Keyword**, then select **Test NLU/Keyword Topics**. Enter your utterance, and watch the **Analysis** tab.
- Open the topic in Virtual Agent Designer, then select **Test**. In the Test window, select the **Include topic discovery** check box. Enter your utterance, and watch the **Analysis** tab.

For details, see [\(Legacy\) Testing NLU/Keyword topics](#). For an understanding of how topic discovery works, see [\(Legacy\) Natural Language Understanding topic discovery logic in Virtual Agent](#).

Is "Setup Topic" the topic in question?

If so, it needs to be configured in Conversational Interfaces Chat Settings for it to be discovered. For details, see [\(Legacy\) Configure a Virtual Agent NLU chat experience](#).

Questions or issues with mid-topic switching.

Why did the conversation return to Topic A after Virtual Agent switched to Topic B?

The **Resume topic flow after topic switching** attribute is enabled on the topic. You can find this toggle switch on the **Properties** tab under **Advanced properties > Additional**.

Why did the conversation NOT return to Topic A after Virtual Agent switched to Topic B?

The **Resume topic flow after topic switching** attribute is disabled on the topic. You can find this toggle switch on the **Properties** tab under **Advanced properties > Additional**.

If Virtual Agent doesn't find an intent, will it use a keyword search in mid-topic?

No.

Are Topic A's variables available to Topic B after switching?

No.

Are Topic B's variables available to Topic A when Topic A resumes?

No.

For additional troubleshooting, check the information in the following tables.

Check NLU prediction information in the Open NLU tables

When reviewing or debugging topics that use Natural Language Understanding (NLU), you can use various Open NLU tables to view the NLU prediction results for your topics. For example, the Open NLU Predict Intent Feedbacks and Open NLU Predict Entity Feedbacks tables provide detailed information on the NLU processing performed by applications (such as Virtual Agent) to determine topic intent and entities (slot filling).

Open NLU Predict Intent Feedbacks table

The Open NLU Predict Intent Feedbacks [open_nlu_predict_intent_feedback] table shows the intent processing that an application (in this case Virtual Agent) performs in response to an NLU intent prediction result. The goal for Virtual Agent is to map a predicted NLU intent to a Virtual Agent topic. Whenever Virtual Agent suggests a topic, a record of the prediction result is added to this table. If Virtual Agent doesn't find a topic, no prediction occurs, and a record marked *Skipped* is added to this table.

To view the table, navigate to **All**, and then enter `open_nlu_predict_intent_feedback.list` in the navigation filter.

Key fields in the Open NLU Predict Intent Feedbacks table

Field	Description
App	Application using NLU. For example: <i>VA</i> (Virtual Agent).
App Document	<code>sys_id</code> of the application record. For example: <code>sys_cs_topic.sys_id</code> .
App document table	Table of the application record. For example: <code>sys_cs_topic</code> (Topics table).
Auto-Selected	Boolean indicating whether the system detected only one intent above the prediction threshold, and therefore the application chose to run the topic that matched the same intent: <i>true</i> or <i>false</i> .
Current Intent	NLU intent that was used by the application when the NLU prediction was submitted. This field can be empty (blank). For example, an intent used in the Virtual Agent application could be <i>Change password</i> .
Domain	The intent's domain. For example, Global or ITSM.
External Model Display Name	Name of the external NLU model. For example, the name of the IBM Watson Assistant NLU application.
Intent Switch Causer	Name of the originating topic that prompts the user for confirmation. There are two possible scenarios for values in this column: - The user is prompted for confirmation on the initial intent match for their utterance (Ask user if topic VA chose is correct toggle switch is enabled in NLU Settings). If the user is prompted for an initial utterance, this value may be the Greetings topic. If the value is <i>empty</i>, the user either was not prompted for the initial match, or the user rejected the initially matched topic intent. - The user is prompted for confirmation for an intent switch in mid-topic (Ask user if switched topic is correct toggle switch is enabled in NLU Settings). If the user is prompted for a switch in mid-topic, this value is the name of the topic they were viewing at the time of the switch. i Note: System tasks may also display here, which you can ignore. For example: <code>--silent_TerminateGoal_a3817a5f7ca7439b8</code>.
Intent Switch Causer current Task	Name of the task (node) that the user switches from. i Note: System tasks may also display here, which you can ignore. For example: <code>--silent_TerminateGoal_a3817a5f7ca7439b8</code>.

Key fields in the Open NLU Predict Intent Feedbacks table (continued)

Field	Description
Mapped	Boolean indicating whether the application (Virtual Agent) considered the prediction to be usable by matching the intent to an available topic: <i>true</i> or <i>false</i> .
Model Display Name	Name of the ServiceNow NLU model.
Model ID	ID of the NLU model that the prediction was submitted for.
Model Name	Name of the NLU model that the prediction was submitted for.
NLU Topic Discovery Outcome	Prediction result for initial utterance in a conversation as part of topic discovery: • AI Search Fallback: No prediction was made. AI Search was used as the fallback. • Correct: A single prediction was made. The user confirmed the topic was correct. • Correct Among Multiple: Multiple predictions were made. This result indicates that the user selected this prediction. Other prediction records are marked as Uncategorized. • Exited with no confirmation: The user exits with no confirmation. • Incorrect: A single prediction was made. The user confirmed the topic was incorrect. • Incorrect Among Multiple: Multiple predictions were made, but the user did not select any of the suggested topics. This result indicates that this prediction had the highest Prediction Confidence value. The other prediction records are marked as Uncategorized. • Setup Topic Prediction: Setup topic related prediction was made without using AI Search. • Skipped: No prediction was made. • Skipped with New Utterance: When the Topic menu displayed, the user typed a new utterance. • Uncategorized: None of the above conditions were met, or the user abandoned the conversation.
NLU Model Language	Language of the NLU model used for the prediction.
Prediction	Name of the predicted intent.
Prediction Audit Log	Reference to the Open NLU Predict Logs [open_nlu_predict_log] table.
Prediction Confidence	Confidence value of the prediction.

Key fields in the Open NLU Predict Intent Feedbacks table (continued)

Field	Description
Requester Session Language	Language code of the requester session language when Dynamic Translation is enabled. For example, if the user types in French, the code <i>fr</i> is stored. If language detection is enabled and the user enters text in a language that is not the default, Virtual Agent asks the user to confirm their language. If confirmed, the detected language becomes the default value for the session.
Selected	Boolean indicating whether the multiple predicted intents shown to end users as matched topics were actually selected by the end users: <i>true</i> or <i>false</i> .
Shown	Boolean indicating whether the application (Virtual Agent) displayed the predicted intent as a choice for the end user to select: <i>true</i> or <i>false</i> .
Topic Switched	Name of the topic, if the user was prompted for confirmation (regardless of their choice, yes or no).
Utterance	Phrase entered by the end user in the chat client window.

Open NLU Predict Entity Feedbacks table

The Open NLU Predict Entity Feedbacks [open_nlu_predict_entity_feedback] table shows the entity (slot-filling) processing that an application (in this case Virtual Agent) performs in response to an NLU entity prediction result. For example, the goal of Virtual Agent is to map a predicted NLU entity to a Virtual Agent topic input variable.

To view the table, enter `open_nlu_predict_entity_feedback.list` in the navigation filter.

Key fields in the Open NLU Predict Entity Feedbacks table

Field	Description
App	Application using NLU. For example, VA (Virtual Agent).
App Document	sys_id of the application record. For example: <i>sys_cs_topic.sys_id</i> .
App Document Table	Table of the application record. For example: <i>sys_cs_topic</i> .
Auto Selected	Boolean indicating whether the application automatically chose to use the entity without notifying the user: <i>true</i> or <i>false</i> .
External Model Display Name	Name of the external NLU model. For example, the name of the IBM Watson Assistant NLU application.

Key fields in the Open NLU Predict Entity Feedbacks table (continued)

Field	Description
Mapped	Boolean indicating whether the application (Virtual Agent) considered the prediction to be usable: <i>true</i> or <i>false</i> .
Mapped to	Item in the application that the entity was mapped to.
Model Display Name	Name of the ServiceNow NLU model.
Model ID	ID of the NLU model that the prediction was submitted for.
Model Name	Name of the NLU model that the prediction was submitted for.
Prediction	Name of the predicted entity.
Prediction Audit Log	Reference to the Open NLU Predict Logs [open_nlu_predict_log] table.
Prediction Confidence	Confidence value for the prediction.
Selected	Boolean indicating whether the application selected to use the entity: <i>true</i> or <i>false</i> .
Shown	Boolean indicating whether the application displayed the predicted entity to the end user as a choice to select: <i>true</i> or <i>false</i> .
Utterance	User phrase entered in the chat client window.
Value	Value of the predicted entity.

Open NLU Predict Logs

The Open NLU Predict Logs [open_nlu_predict_log] table provides a consolidated overview of the NLU prediction records for topics. Each record in the log identifies the utterance and corresponding intents (topics) and entities determined by the NLU service. Each record also includes the NLU prediction scores calculated during topic discovery (intent matching) and entity extraction.

Note: NLU prediction node logs are generated automatically. If you're using node logs for debugging but you want to suppress the automatic generation of NLU prediction node logs, add the `com.glide.opennlu.predict.node_logging_enabled` system property and set the value to false.

To view the Open NLU Predict Logs, enter `open_nlu_predict_log.list` in the navigation filter.

Key fields in the Open NLU Predict Logs table

Field	Description
Async	Indicator for asynchronous prediction processing: <i>true</i> or <i>false</i> . True indicates that the prediction was performed asynchronously, allowing Virtual Agent worker threads to continue.

Key fields in the Open NLU Predict Logs table (continued)

Field	Description
Created	Date and time the NLU prediction record was created.
Duration	Length of processing time for the prediction to return intent and entity values.
Language	The language of the NLU prediction request.
Level	Type of message: Information level.
Message	Prediction results returned: number of intents and entities.
Request	NLU prediction parameter that contains the utterance and NLU model for the recognized intent.
Response	NLU prediction results, which contain 0 (none) or more scored intents and scored entities.
Source	Process or area: <i>OpenNLU - Predict</i> .
Utterance	User statement recognized by the bot, which maps to an intent defined in an NLU model.

Note: You can view the detailed intent and entity results in the Open NLU Predict Intent Feedbacks and Open NLU Predict Entity Feedbacks tables.

Review HTTP connection information for Open NLU integrations

Use the Open NLU Driver HTTP Connection [open_nlu_driver_http_connection] table to quickly check the HTTP credentials, connection details, and methods for the intents, entities, NLU models, and predictions for your NLU service provider.

To view the table, enter `open_nlu_driver_http_connection.list` in the navigation filter.

(Legacy) Natural Language Understanding topic discovery logic in Virtual Agent

Understand how Virtual Agent returns intents and how it selects which intents to show to the user.

Prerequisites for topic discovery

Virtual Agent can discover a topic when the following conditions are met:

- The topic must be published and active.

In the Topics [sys_cs_topic] table, the **Active**, **Published**, and **Is Topic Discoverable** values are set to *true*.

Note: The **Is Topic Visible** column does not affect topic discovery.

- The topic must be discoverable.
- Topic conditions must evaluate to true at runtime.
- If any roles are configured for the topic, the requestor must have at least one of those roles.
- The topic's NLU model must have a binding for the session language.

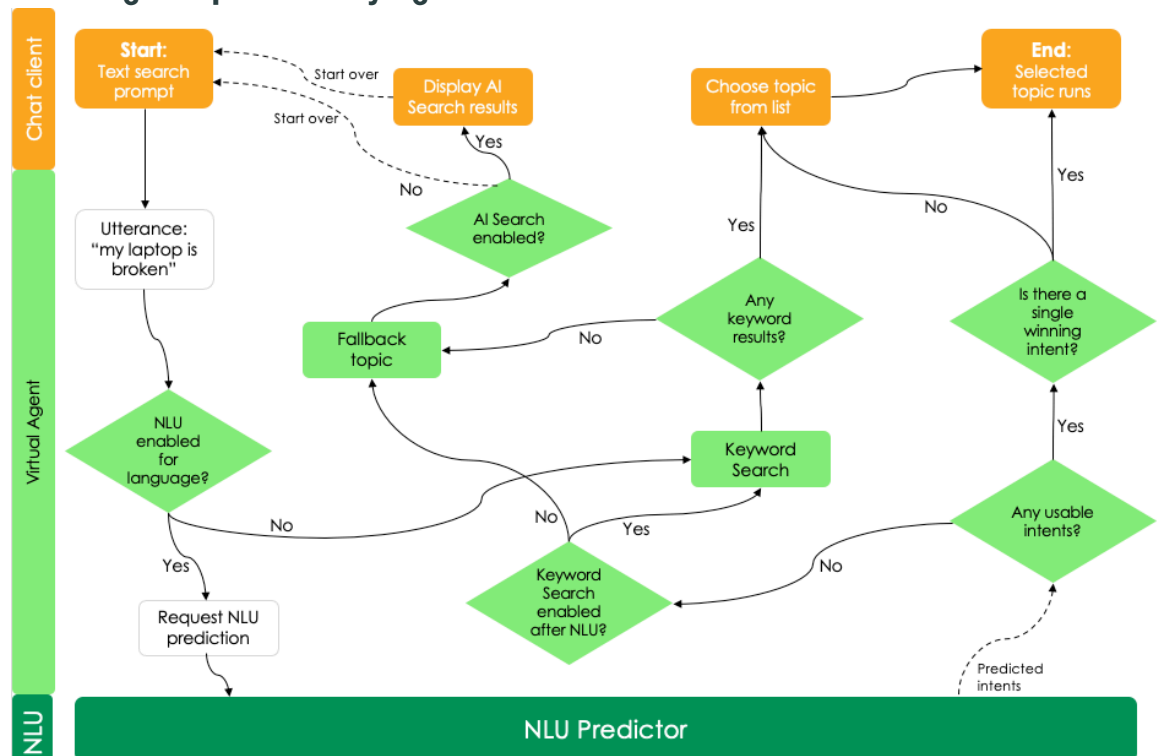
NLU topic discovery logic

Virtual Agent sends a prediction request to the NLU provider. The request contains the utterance and all registered NLU model IDs that are bound to the session language. Matches return NLU intents that correspond with a topic. Virtual Agent then responds in one of the following ways:

- Automatically selects a topic for the requester, based on the confidence score.
- Prompts the requester to pick a topic from the returned list of matches.
- Finds no matching topics.

If no matches are found but backup keywords are enabled (the `com.glide.cs.nlu.keywords.enabled` property is `true`), Virtual Agent searches for a topic based on keywords.

Virtual Agent topic discovery logic



Virtual Agent NLU confidence scores

Virtual Agent uses confidence scores to return predicted intents. To set the confidence value:

1. Navigate to **Conversational Interfaces > External NLU Integrations > Drivers**.
2. Select **ServiceNow NLU**. You can also select All and enter `open_nlu_driver.list`.
3. In the **Intent Confidence Threshold** field, enter the confidence threshold.

If an intent's confidence score is greater than or equal to the configured threshold, Virtual Agent considers it a good match.

Virtual Agent uses the following logic when selecting intents:

- Auto-selects the highest predicted intent.

This occurs when only one intent is matched, or in the event of a tie-breaker, when the next closest match is a distant second.

Note: If ServiceNow NLU is used and the **Intent Confidence Delta** field in the ServiceNow NLU driver table (`open_nlu_driver.list`) is set to `0`, there can be no tiebreaker.

- Returns a topic list for the requester to choose from.

This occurs if auto-select is not applicable. The length of the list is determined by the `com.glide.cs.max_number_display_topics` system property.

- No intents are matched.

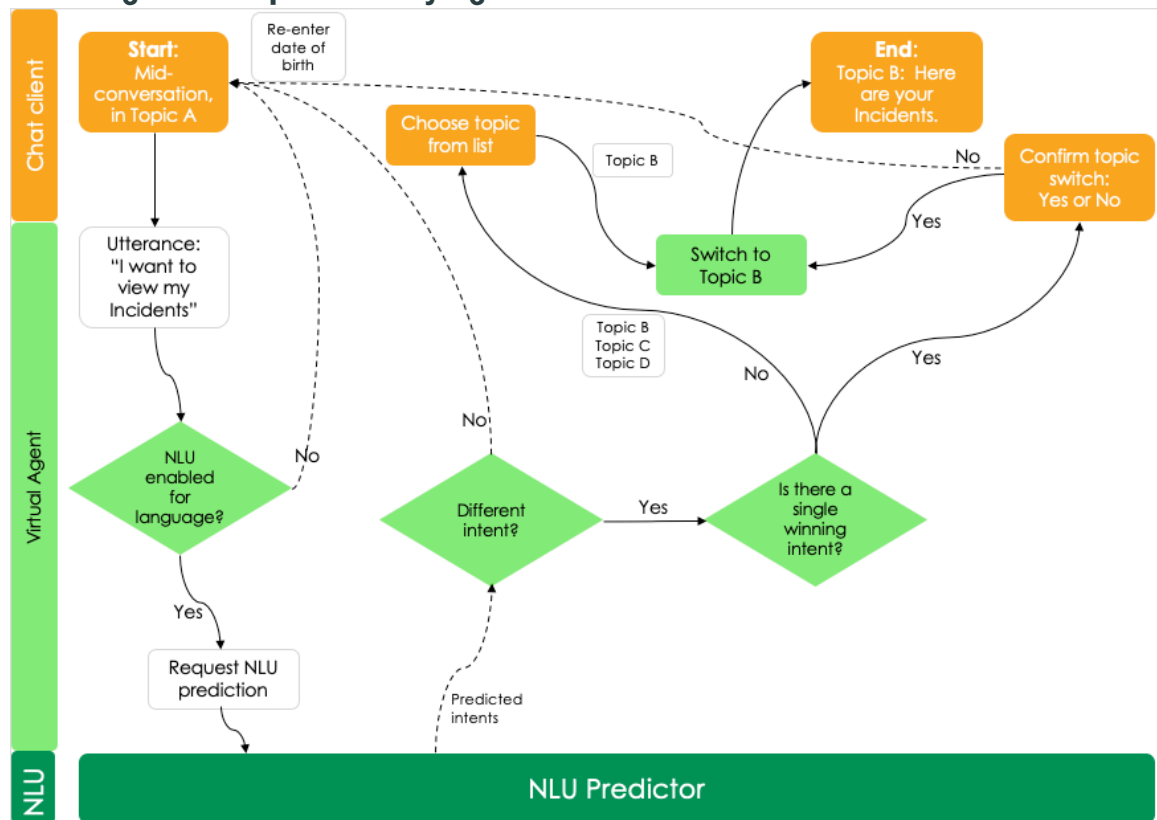
When zero NLU Intents are predicted with a confidence score greater than or equal to the configured threshold, Virtual Agent falls back to a keyword search if configured. (The `com.glide.cs.nlu.keywords.enabled` and `com.glide.cs.nlu.keywords.include_topics_bound_to_lang` system properties are `true`).

Mid-topic NLU topic discovery logic

While a topic is running, the requester can enter an utterance or phrase that results in a topic switch. For example:

1. The requester is in a Virtual Agent conversation, and Topic A is running.
2. Topic A prompts the user to enter their date of birth.
3. Instead of choosing a date, the requester types, "I want to view my Incidents."
4. Virtual Agent can't resolve this phrase to a date, so it issues an NLU prediction request.
5. The NLU predictor returns Intent B, and Virtual Agent sees that Topic B is bound to Intent B.
6. Virtual Agent switches the conversation to Topic B, which then presents information to the requester about their incidents.

Virtual Agent mid-topic discovery logic



Related topics

(Legacy) [Resolve Natural Language Understanding \(NLU\) topic discovery issues](#)

(Legacy) Using Virtual Agent Topic Recommendations

Use the Topic Recommendations app to identify pre-built Virtual Agent topics that can be quickly implemented in your organization. Topic Recommendations uses Intent Discovery to analyze data from your organization and to find relevant pre-built topics that your organization can benefit from, and new topics that would be useful to create.

Starting with the Brazil release, Virtual Agent Topic Recommendations is being prepared for future deprecation. It will be hidden and no longer installed on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support Knowledge Base.

The Topic Recommendations app lets you evaluate the common use cases that Virtual Agent can help resolve or deflect. You can use Topic Recommendations with Virtual Agent topics that use either keyword or NLU topic discovery. Use it to do the following:

1. Choose the ServiceNow data to analyze (configure analysis).
2. Analyze your existing data (run the analysis you configured).
3. Review the analysis results and use pre-built solutions:
 - Duplicate a pre-built topic suggestion, such as a topic from ITSM Virtual Agent Conversations (available from the ServiceNow Store).
 - [NLU only] Add an intent to your model and a new empty topic. You must provide the flow for the new topic in Virtual Agent Designer.

The Topic Recommendations app requires NLU Workbench and ITSM Virtual Agent Conversations from the ServiceNow Store. The Brazil release of Topic Recommendations

supports only ITSM Virtual Agent recommendations. Although Topic Recommendations uses NLU Workbench for machine learning purposes, it does not require that NLU be enabled in Virtual Agent.

For information about the apps that are automatically installed with Topic Recommendations, see [\(Legacy\) Update Topic Recommendations](#).

Required plugins

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#).
- Topic Recommendations requires the following plugins and ServiceNow Store applications. Ensure that they are activated before you install Topic Recommendations.

Required ServiceNow plugins

Glide Virtual Agent (com.glide.cs.chatbot)

Activates all the plugins needed to run Virtual Agent Pro. For details, see [\(Legacy\) Activate Virtual Agent for NLU](#).

Note: Starting with the San Diego release, the Topic Recommendations app is automatically installed when you initially activate the Glide Virtual Agent plugin (com.glide.cs.chatbot). Subsequent updates for this app must be installed from the ServiceNow Store.

NLU Workbench (NLU topic discovery only)

Activates the plugins needed to run Natural Language Understanding in your instance. For more information, see [Activate the NLU Workbench](#).

Required ServiceNow Store applications

Intent Discovery (NLU discovery only)

Identifies user intents from analyzing incident/case data. To learn more, see [Intent Discovery](#).

ITSM Virtual Agent Conversations

Provides pre-built IT service management conversations to help your organization quickly deploy automated self-service conversations. For more information, see [ITSM Virtual Agent](#).

Items installed with Topic Recommendations

The following items are installed with Topic Recommendations:

- Scheduled jobs: *Run Topic Recommendation Reports* for running Topic Recommendation reports at scheduled times.
- The following tables are installed:

Table	Description
Default settings for Topic Recommendations [sn_topic_recommend_default_setting]	The source data (table and text field), taxonomy, and filters used when running a Topic Recommendations analysis

Table	Description
Installed recommended topics [sn_topic_recommend_topic_staging]	Topics generated for recommended topics

Request apps on the Store

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

What to do

- [Get started with Topic Recommendations](#)
- [Define default recommendation settings](#)
- [\(Legacy\) Run a Topic Recommendation analysis](#)
- [\(Legacy\) Add recommended topics and intents to Virtual Agent](#)
- [Link a topic recommendation to an existing Virtual Agent topic](#)
- [Unlink a topic recommendation from an existing Virtual Agent topic](#)
- [\(Legacy\) Troubleshoot issues with Topic Recommendations](#)

(Legacy) Update Topic Recommendations

You can install updates to the Topic Recommendations application (com.snc.va_topic_recommender) if you have the admin role.

Before you begin

Starting with the Tokyo release, the Topic Recommendations store app is automatically installed with Virtual Agent. When using Topic Recommendations, the app checks the ServiceNow Store and notifies you when an update is available.

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Topic Recommendations**.

If an update is available, a notification displays on the Topic Recommendations page.

Topic Recommendations New version available [View update](#)

2. Select **View update**.

Note: Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

3. Follow the instructions on the ServiceNow Store website to request an update for Topic Recommendations on your instance.

(Legacy) Quick start for Topic Recommendations

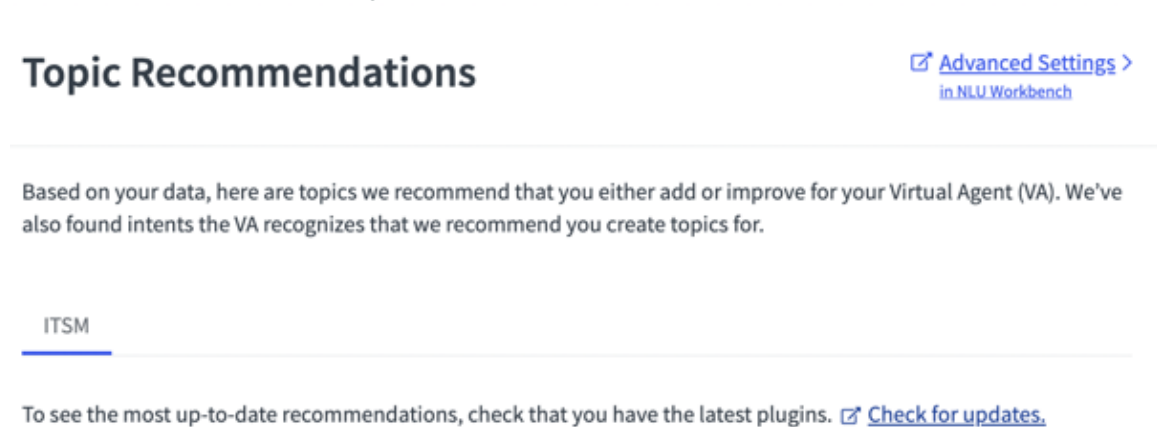
To get recommended topics based on your data, configure analysis reports, run the reports, and then review the results. You can either add new topics to Virtual Agent or link a recommendation to an existing topic.

The Topic Recommendations page appears in your instance at **All > Conversational Interfaces > Virtual Agent > Topic Recommendations**.

Step 1: Configure analysis reports based on ServiceNow data

Until you define analysis reports, the Topic Recommendations page is empty.

Topic Recommendations page with no reports defined



Each analysis report is based on the following:

- **Data source:** The ServiceNow data that you want to analyze. The options are: Incident [incident] table, Request [sc_request] table, Live Agent chat transcripts, and Virtual Agent fallback utterances.
- **The field to analyze:** A selected field (with a string data type) in the data source table to analyze. For example, the **Short description** field.
- **Taxonomy:** The business application that includes the data sets. When you install ITSM Virtual Agent Conversations, the Incident and Request data sets are installed by default. As additional data sets for applications become available, the data sets are displayed as a taxonomy on the page after they're installed on an instance.

You can also add conditions to your analysis reports and configure them to run on a schedule. When new recommendations are available, a notification appears in the Virtual Agent Designer Topics page.

Configure analysis reports for Topic Recommendations in Virtual Agent settings. For details, see [\(Legacy\) Configure analysis reports for Topic Recommendations](#).

Step 2: Run an analysis report

Run all configured analysis reports together or selectively run one at a time from the Topic Recommendations page.

During analysis, the Topic Recommendations app does the following:

- Uses Intent Discovery to review your data source, comparing your data source against the related taxonomy for your business application. Intent Discovery matches the data field specified in your data set to intents in the taxonomy.
- Maps the matched intents to pre-built topics in Virtual Agent. If intents don't have associated pre-built topics, the app recommends them as new topics that you can build because they were requested frequently enough by your users.
- Displays the analysis results as topic cards in the Topic Recommendations page.

For more information, see [\(Legacy\) Run a Topic Recommendation analysis](#).

Step 3: Review report results and add or link topics and intents

Results are sorted into the following groups:

- Topics that Virtual Agent can handle: Recommendations in this group can be addressed with a pre-built topic.

When you add this type of recommendation to Virtual Agent, the matched pre-built topic is duplicated in your instance. You can then modify, test, and publish the added topic using Virtual Agent Designer.

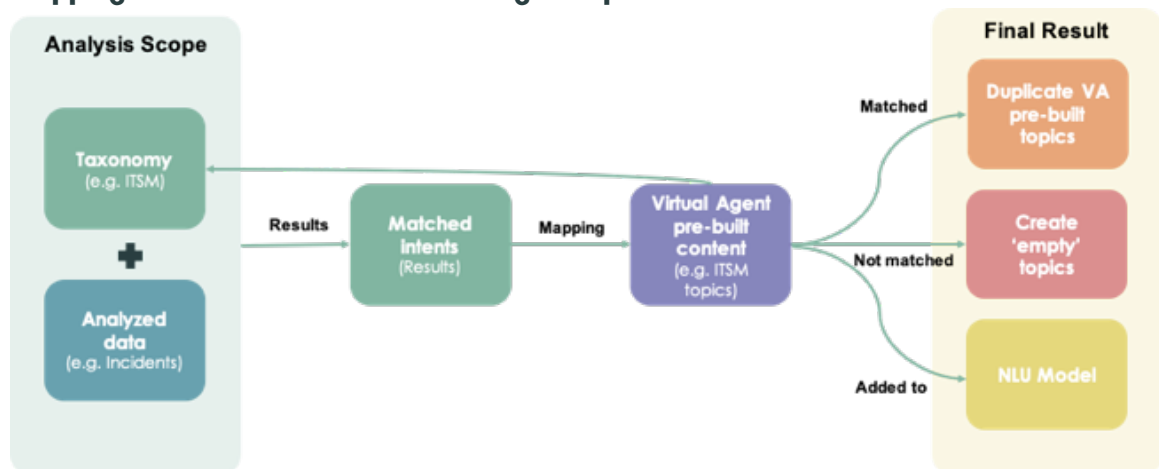
- User intents that need topic flows: Recommendations in this group match a ServiceNow NLU intent.

When you add this type of recommendation to Virtual Agent, an empty topic is created and mapped to the matched intent in the model that you specify. You can then open the topic in Virtual Agent Designer and create a flow for the new topic.

The results are displayed in descending order of matches to your data source. The top 20 intent matches are displayed. If there are more than 20 intents, you can view them in NLU Workbench.

For more information about adding a recommendation to Virtual Agent, see [\(Legacy\) Add recommended topics and intents to Virtual Agent](#). You can also [link a recommendation to an existing topic](#).

Mapping recommendations to Virtual Agent topics



(Legacy) Configure analysis reports for Topic Recommendations

To generate Topic Recommendations, specify a default data source (ServiceNow table and field) and the conditions for filtering the data records.

Before you begin

Role required: virtual_agent_admin or admin

About this task

When configuring analysis reports, consider the following:

- You can define only one setting per data table and taxonomy pair.
- Two data sets for the ITSM taxonomy (Incident and Requests) are provided by default, but you can define your own data sources.
- In the Brazil release, Topic Recommendations requires a minimum of 10,000 records in your analysis scope (data source). This minimum provides a reasonably sized data set to achieve a certain level of quality in the analyses.
- Keep your analysis scope (data source) under 300,000 records. In the Brazil release, this is the maximum number allowed. This limit maximizes the performance of the analysis report.
- You can schedule analysis reports to run automatically at specified intervals.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Select **Virtual Agent**.
3. Under Topic Recommendations, click **View all**.
4. Select **New**.
5. On the form, fill in the fields.
For details, see [\(Legacy\) Topic Recommendations settings](#).
6. Select **Save**.

Result

The data source that you defined for a given table and taxonomy displays as a section on the Topic Recommendations page. You can now [run a topic recommendation analysis](#).

(Legacy) Run a Topic Recommendation analysis

Generate a report that analyzes a given data source and identifies the appropriate Virtual Agent pre-built topics that you can implement. For intents that do not have matching pre-built topics, the report identifies the user intents (topics) that you can create.

Before you begin

Verify that the appropriate Virtual Agent conversation plugins are activated so that the Topic Recommendations app can identify the appropriate pre-built topics.

You can use the **Check for updates** link on the Topic Recommendations page to check which plugins are installed.

Make sure you [configure analysis reports](#) first.

Role required: virtual_agent_admin or admin

About this task

The analysis process takes about 15 minutes or less to return recommendation results. In the Brazil release, Topic Recommendations requires a minimum of 10,000 records in the data source and will only process a maximum of 300,000 records. Use filters in the settings page to reduce the number of records in the data source, if needed.

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Topic Recommendations**.
2. In the Topic Recommendations page, go to the data source to be analyzed and trigger the analysis.

- If the view is set to **All**, do the following:

- a. Select **Get new recommendations**.

- b. In the dialog box, select the sources you want to get reports for.

If a check box is unavailable, a report may already be running, or the amount of data to analyze might be outside of the minimum or maximum allowed.

- c. Select **Get new recommendations**.

- If the view is set to **By Source**, do the following:

- a. Select **Run analysis** or **Refresh** in the source status bar.

- b. Modify any settings in the dialog box, and then select **Get recommendations**.

A message indicates that the topic-finding process has started and the approximate time for recommendation results. The page or status bar displays **Analysis in progress**. You can review other items while the analysis runs.

Note: Changing the settings here affects only this analysis. The default settings for the recommendation are preserved. To change the default settings, see [\(Legacy\) Configure analysis reports for Topic Recommendations](#).

3. When the report completes, review the analysis results for the data set.

The results display as cards in two sections: **Topics that VA can handle** for pre-built topics and **User intents that need topic flows** for intents and corresponding topics that can be created.

Tip: To view details about a pre-built topic or user intent, select the card, and then select the Info icon ⓘ to open an overlay card. For more information, see [\(Legacy\) Topic Recommendations cards](#).

What to do next

You can [add a Topic Recommendation as a new topic](#) or [link it to an existing topic](#). You can also [hide a recommendation](#) from the list in aggregate view.

(Legacy) Add recommended topics and intents to Virtual Agent

After you run and review a Topic Recommendations report, select the pre-built topics and suggested intents to add to Virtual Agent.

Before you begin

Role required: virtual_agent_admin or admin

About this task

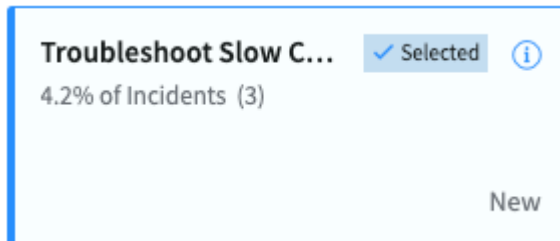
When you add a recommended topic to Virtual Agent, the Topic Recommendations app automatically does the following:

- Duplicates the pre-built topics that you selected.
- Creates empty topics for the intents you selected.
- If you're using ServiceNow NLU:
 - Creates a new NLU model if it doesn't exist.
 - Updates and trains the NLU model with the added intents.

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Topic Recommendations**.
2. Go to the analysis results for your data source.
3. Select one or more topic and intent cards to be added to Virtual Agent, and then select **Add to VA**.

Selected cards are highlighted in blue and display as **Selected**, as shown in the following example.



4. If you're using ServiceNow NLU, select one of the following options in the **Model** list:

- **Create new model**

Select this option to create a new model group. If other languages are enabled for your instance, select the languages to add as secondary models in the group. Select **make primary** for the primary language in the group.

Adding selected recommendations to a new model group

 A screenshot of a dialog box titled "Adding selections to your Virtual Agent". At the top right is a close button (X). Below the title, it says "In Virtual Agent Designer, they will have this category:" followed by a pink box labeled "Recommended". Then it asks "Which model would you like to use for this? Available in English, German". Below this is a "Model" dropdown menu currently showing "Create new model". Underneath, it says "Select which languages you want and make one a primary." There are two checkboxes: "English" (checked) and "German" (unchecked). To the right of the "English" checkbox, the text "primary language" is highlighted with a red box, and below it is a "make primary" button. At the bottom are "Cancel" and "Add to VA" buttons.

For more information about model groups, see [Multilingual model management](#).

- An existing model name

If other languages are enabled for your instance, select the languages to add as secondary models in the group.

Adding selected recommendations to an existing model group

X

Adding selections to your Virtual Agent

In Virtual Agent Designer, they will have this category:

Recommended

Which model would you like to use for this? Available in English, French, Spanish

Model DAL IT (English, French, +1 Language) X ▼

☒ English

☒ French

☒ Spanish

We will create this language model for you since it does not exist.

Additional languages are available in the model and will be included.

Cancel
Add to VA

5. Select **Add to VA**.

Result

For recommended pre-built topics, Virtual Agent duplicates the topic (but removes the *Template* portion of the file name). For recommended intents, Virtual Agent creates a new topic mapped to the intent. These topics are added to the **Recommended** category in the Virtual Agent Designer Topics page.

In the Topic recommendations page, the topic card shows the date it was added and its status (**Active** or **Inactive**). To open the new topic from the Topic Recommendations page, select the info icon to open the overlay card. Select the open link icon  to open the topic in Virtual Agent Designer.

Recommended topic cards for an added topic

Virtual Agent Designer

Localization Insights See Topic Recommendations

LLM Assistant

Select Assistant

Manage languages Manage NLU/keyword test cases Test active topics

Search by topic name Explore additional topics

Model Type Select Model Type NLU Language Select NLU Language

Topic Type Select Topic Type Channel Select Channel

ITSM - Request - Software - Update Modified 3 months ago

Recommended Topic Flow Needed

Repository Access (Recommendation) Modified 30 days ago

Recommended

Topic Recommendations

Based on your data, here are topics we recommend that you either add or improve for your Virtual Agent (VA). We've also found intents the VA recognizes that we recommend you create topics for.

ITSM

To see the most up-to-date recommendations, check that you have the latest plugins. [Check for updates.](#)

Select which prebuilt topics you want to add to your VA. View [All](#) [By Source](#)

Incidents	1 topic added	VA can handle 23%	Total Incidents 15,322	Topics added 5 of 105	Analyzed on Mar 13, 2023	Refresh	Settings	Add to VA
▼ Topics VA can handle (8)								
Email Issues (Template)	9.9% of incidents (7)	Added on Feb 24, 2021	Inactive					
Troubleshoot Slow C...	4.2% of incidents (3)	New						
Repository Access (Te...	4.2% of incidents (3)	Added on Apr 7, 2021	Inactive					

(Legacy) Link a topic recommendation to an existing Virtual Agent topic

Instead of creating a new topic from a topic recommendation, you can link it to an existing topic. This lets Virtual Agent know that you have a topic that addresses the recommendation.

Before you begin

Role required: virtual_agent_admin or admin

About this task

If you continue to get recommendations for an active topic after linking it, the topic probably needs improvement.

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Topic Recommendations**.
2. Select the info icon ⓘ to open the overlay card for a topic that has a **New** status.
3. At the bottom of the overlay card, select **Here's how to link to an existing topic**. Select the link as shown in the following example.

Key details from VPN Connectivity (Template) ✕

Example conversation to provide help on VPN connections

Per contact, VA could save
No data

How they contacted you	Who handled the ticket	Language
web 100%	dbe58711... 100%	English 100%

How to apply this recommendation

You can add this as a VA topic or link to one covering these issues that you already have.

[Here's how to link to an existing topic.](#)

4. In the dialog box, select a topic in the **Find topic to link** list.

5. Select **Link topic**.

Result

The overlay card shows that the recommendation is linked, as well as the date this occurred.

Overlay card for a linked topic

Key details from ITSM - Issue - Software - Troubleshoot
Inactive

We also identified common requests Virtual Agent already understands. These are called user intents. You can add these now and create topics from them later.

Per contact, VA could save
No data

How they contacted you	Who handled the ticket	Language
web 100%	No data	English 100%

Linked topic

ITSM - Request - Software - Install *
Linked Jun 9, 2021
Unlink

If a topic recommendation continues to appear in your analysis results after you linked it to a topic, you may want to revisit the topic to improve its effectiveness.

You can also [unlink a topic recommendation from a Virtual Agent topic](#).

(Legacy) Unlink a topic recommendation from a Virtual Agent topic

You can unlink a topic recommendation from a topic. This lets you link it to a new or alternate topic.

Before you begin

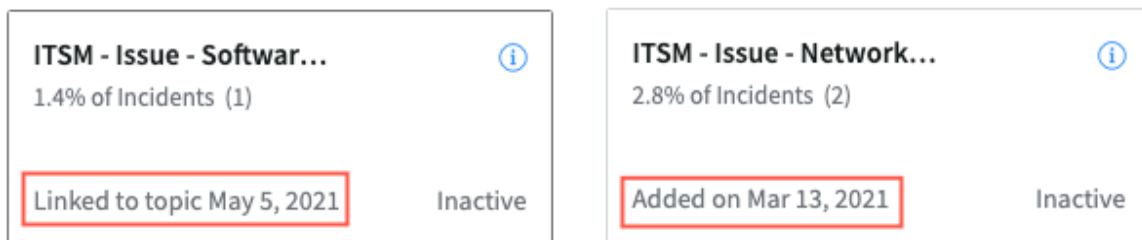
Role required: virtual_agent_admin or admin

About this task

You can either add a recommendation as a new topic or link it to an existing topic. If you link it to an existing topic, you can always unlink it later if you need to. Added topic recommendations create an empty topic that you provide with a workflow, so you can't unlink them using this method.

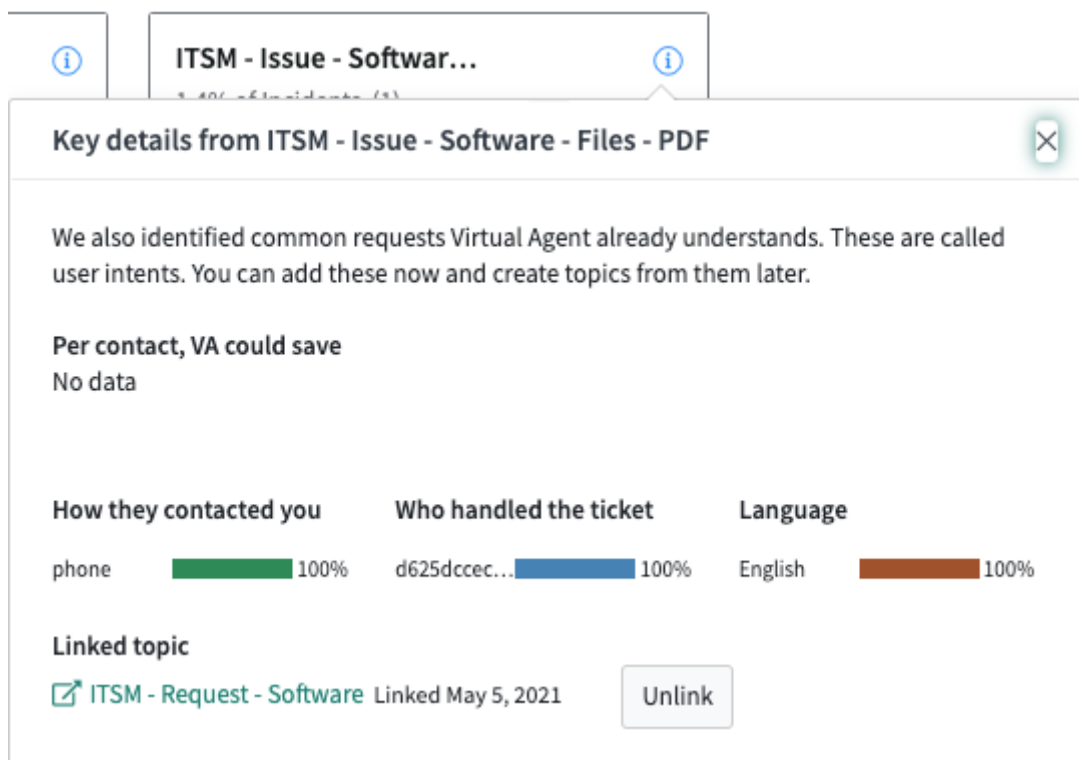
The following example shows the difference between a linked recommendation and an added recommendation.

Example of linked and added cards in the Topic Recommendations page



Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Topic Recommendations**.
2. Select the info icon ⓘ to open the overlay card for a linked topic.



3. Select **Unlink**.

Result

Unlinked recommendations are set to **New** status. You can link it to another topic, or add it to Virtual Agent as a new topic.

Note: If you added a topic to Virtual Agent for a recommendation, it is not shown as linked, so you can't unlink it. To reset an added recommendation as **New**, delete the topic that was added in Assistant Designer.

(Legacy) Hide a topic recommendation

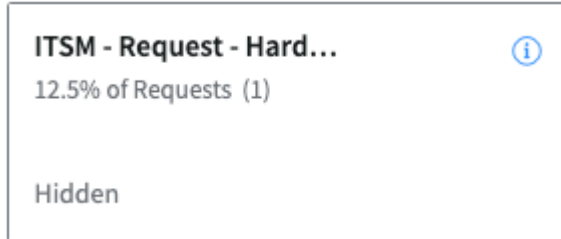
You can choose to ignore a topic recommendation by hiding it. Doing so hides it for everyone on the instance. You can still view hidden recommendations and show it again later.

Before you begin

Role required: virtual_agent_admin or admin

About this task

Topic recommendations are hidden only when **View** is set to **All** (aggregate view). Hidden recommendation cards will still display when **View** is set to **By Source**. The status on the card is **Hidden**.

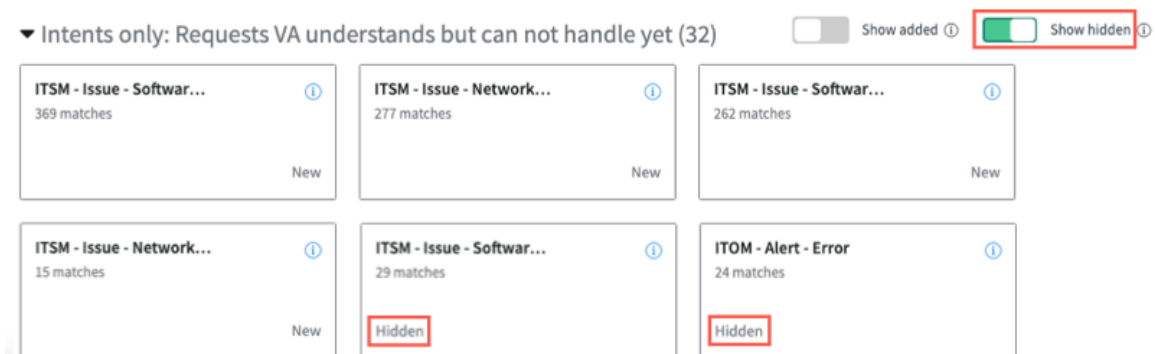


Procedure

1. Navigate to **All** > **Conversational Interfaces** > **Virtual Agent** > **Topic Recommendations**.
2. Select the info icon ⓘ to open the overlay card for a topic that has a New status.
3. Select **Hide**.

Result

The recommendation is hidden from the list. To view hidden recommendations, slide the **Show hidden** toggle switch to enable it.



To return a recommendation's status to New, select the info icon ⓘ to open the overlay card for the topic, and then select **Don't hide**.

(Legacy) Troubleshoot issues with Topic Recommendations

Investigate and resolve unexpected behavior with Topic Recommendations, or find answers to common questions.

For information about using Topic Recommendations, see [\(Legacy\) Quick start for Topic Recommendations](#).

Note: Topic Recommendations tries to train the model when you add new topics to Virtual Agent. If an error occurs during training, the topic is still added, but the model remains in a draft state.

Issue	Solution
Topic Recommendations page is blank	No analysis reports have been configured. Configure an analysis report . You can also install or activate ITSM Virtual Agent Conversations, which will add default configurations to Topic

Issue	Solution
	Recommendations. For more information, see Set up ITSM Virtual Agent .
Error when adding topics to Virtual Agent	Check the error log for details: 1. Navigate to All > System Logs > System Log > Errors. 2. Find the entry that has a value of sn_topic_recommend in the Source column. The Message field displays the error. Note: If model training fails while adding topics, Topic Recommendations will ignore those errors and continue to add your recommendations. In this case, you will be notified that the models are in draft state.
Reports have intent matches, but no pre-built topic matches	Make sure ITSM Virtual Agent Conversations is installed and activated for the instance. If the app is installed, then none of the pre-built topics address the issues found in your reports. For more information, see Set up ITSM Virtual Agent .
Analysis reports are not available in production instances	This is the expected behavior. Analysis reports and Intent Discovery are designed to live in one instance only. Added topics and NLU models are made available in a "new" instance, but the Topic Recommendations reports do not move between instances.
Analysis report is stuck and says "Analysis in progress"	Check the status in the Discovery Report Definitions table: 1. Navigate to All > sn_nlu_discovery_report_definition.list. 2. Sort the table on the Created column, and then find the name of the affected analysis definition. 3. If the Status column is empty, the analysis failed. Try running it again. You can also navigate to NLU Workbench > Intent Discovery to see if something went wrong in the intent discovery process. For more information, see Intent Discovery.
Adding new topics takes longer than expected	Try the following: • Navigate to All > sn_topic_recommend_topic_staging.list and view the Status column to see what stage topic generation is in. Training models can take some time. • Navigate to All > System Logs > Events to see which event ran last or if the event is queued. • If the reason for failure is not clear, navigate to All > sn_topic_recommend_topic_staging.list and change the value of the Status field to Error. You can then try to add the recommendation again.

Issue	Solution
Can't generate a report with less than 10,000 or more than 300,000 records	Topic Recommendations currently supports a minimum of 10,000 records and a maximum of 300,000 records. This is done for performance and to ensure a statistically significant data set.
Model is not preselected in the app	If you are upgrading from Quebec and this is your use of the Topic Recommendations app, you must select a model. Once you select a model, Topic Recommendations preserves the selection.
Unmigrated model support	While you are encouraged to migrate your models to groups, Topic Recommendations does not require models to be grouped.
Unlinked topics	You don't have to link all recommendations. Topic linking is a way to "acknowledge" a recommendation if you have an existing topic.
The Topics/Requests VA Can Handle tab is not displayed	System property <code>glide.ui.escape_all_script</code> is not set to True. Navigate to ALL > sys_properties.list (or ALL sys_properties_list.do). Search for and select <code>glide.ui.escape_all_script</code> , then set its Value to True .

(Legacy) Topic Recommendations interface reference

The Topic Recommendations app provides two main pages: a configuration page and the Topic Recommendations page, where you find any recommended topics.

For more information about the Topic Recommendations user interface, see the following topics:

- [\(Legacy\) Topic Recommendations settings](#)
- [\(Legacy\) Topic Recommendations page](#)
- [\(Legacy\) Topic Recommendations cards](#)

(Legacy) Topic Recommendations settings

Use the Topic Recommendations settings page to configure analysis reports based on your ServiceNow® data.

You can find the Topic Recommendations settings in the Conversational Interfaces Chat Settings (**All > Conversational Interfaces > Settings**) under Virtual Agent. When you first install Topic Recommendations, nothing is configured, so the settings page appears empty.

Empty Topic Recommendations settings page

Virtual Agent > Topic Recommendations

Topic Recommendations

All 0
Last refreshed just now.

Refresh Filter Edit Export New

☐ Data source	Field analyzed	Taxonomy	Filter by
 No records yet			

0 records < < > > 20 rows per page

Once configured, you can view or edit analysis reports on this page.

Configured Topic Recommendations settings

Virtual Agent > Topic Recommendations

Topic Recommendations

All 2
Last refreshed just now.

Refresh Filter Edit Export New

☐ Data source	Field analyzed	Taxonomy	Filter by
☐ sc_request	short_description	ITSM	Created > 2021-08-04 00:00:00
☐ incident	short_description	ITSM	Created > 2021-08-04 00:00:00

Showing 1-2 of 2 < < 1 > > 20 rows per page

Topic Recommendations analysis settings

When you create or edit a Topic Recommendations analysis record, specify the information in the following form.

Default settings for Topic Recommendations

Field	Description
Data source	ServiceNow table that contains the data to be analyzed.

Default settings for Topic Recommendations (continued)

Field	Description
Field analyzed	Field (string column) in the table to be analyzed. For example, the Short description in the Incident table.
Taxonomy	Comprehensive list of intents for a specific business application, such as ITSM.
Filter by	Condition builder for filtering the records to be analyzed. Click Set conditions to open the condition builder. The default filter is [Created] [after] [Last 90 days].
Frequency	The schedule for running the analysis, which is triggered through the Run Topic Recommendation Reports scheduled job: • None • Every Month • Every 3 Months • Every 6 Months • Every 12 Months Note: If you're using a non-production instance for testing, set the analysis schedule in your production instance so that it and your analysis history are retained. The intent discovery process works best in a single instance, where data is not promoted between instances.

Related topics

[Configure analysis reports for Topic Recommendations](#)

(Legacy) Topic Recommendations page

Use the Topic Recommendations page to run analysis reports, view recommendations, add topics to Virtual Agent, or link a recommendation to an existing topic.

View all recommendations (aggregate view)

Topic Recommendations shows all results in this view by default. This view allows you to run or refresh analysis reports for all configured sources at one time. The configured sources for the recommendations are listed as hyperlinks. Click the link to open the settings for the report. If a recommendation has a New status, you can select it, and then click **Add to VA**.

Default (aggregate) view

Topic Recommendations [Advanced Settings >](#)
in NLU Workbench

Based on your data, here are topics we recommend that you either add or improve for your Virtual Agent (VA). We've also found intents the VA recognizes that we recommend you create topics for.

ITSM

To see the most up-to-date recommendations, check that you have the latest plugins. [Check for updates.](#)

We reviewed these sources where requests came from:
[Incidents](#), [Live agent chat transcripts](#), [Requests](#), [VA Fallback Utterances](#).

View **All** By Source | [Get new recommendations](#) [Add to VA](#)

► **Full topics: Requests VA understands and handles (4)**
 Select which prebuilt topics you want to add to your VA. Once you add topics, you can customize and test them in VA Designer before you publish.



These topics can handle:

- 52.54% of your Incidents
- 64.71% of your Incident Metrics
- 28.4% of your Tasks

Troubleshoot Slow C... 32 matches Added on Apr 15, 2021 Inactive	Email Issues (Template) ✓ Selected 19 matches Added on Apr 15, 2021 New	Reset Password (Tem... 2 matches Added on Mar 31, 2021 Inactive
---	---	--

► **Intents only: Requests VA understands but can not handle yet (10)**

View recommendations by source

You can view topic recommendations by their data source. This lets you run a new analysis or refresh an existing analysis for a single data source, rather than running all of them at once. Click **Settings** to view the report's settings. If a recommendation has a New status, you can select it, and then click **Add to VA**.

Topic Recommendations page in source view

Topic Recommendations

[Advanced Settings >](#)
[in NLU Workbench](#)

Based on your data, here are topics we recommend that you either add or improve for your Virtual Agent (VA). We've also found intents the VA recognizes that we recommend you create topics for.

ITSM

To see the most up-to-date recommendations, check that you have the latest plugins. [Check for updates.](#)

Select which prebuilt topics you want to add to your VA.

View

All
By Source

Incidents	New	VA can handle 23%	Total Incidents 15,322	Topics added 5 of 105	Analyzed on Mar 13, 2023	Refresh	Settings	Add to VA
Topics VA can handle (18)0 topics selected Collaboration Applica... 2.4% of Incidents (369) Added on Mar 13, 2023 Inactive VPN Connectivity (Te... 1.8% of Incidents (277) Added on Mar 22, 2023 Inactive Email Issues (Template) 0.8% of Incidents (116) Added on Feb 10, 2023 Inactive User intents that need topic flows (20)0 intents selected								

Live agent chat transcripts
Run analysis



Run a new analysis

Run an analysis to get recommendations on topics within your live agent chat transcripts that the VA can already handle.

(Legacy) Topic Recommendations cards

Recommended topic and intent cards display the status of the recommendation, allowing you to track them more easily over time.

Card status

Topic and intent recommendations appear as cards. The status lets you know what action has been taken, if any, for each recommendation.

Example intent recommendation cards

ITSM - Request - Data - ...
1.4% of Incidents (1)
New

ITSM - Issue - Softwar...
4.2% of Incidents (3)
Added on Mar 9, 2021
Active

ITSM - Issue - Data - Us...
2.8% of Incidents (2)
Added on Apr 6, 2021
Inactive

Topic and intent card statuses

Status	Description
New	Topic or intent has never been added to Virtual Agent. Cards with New status have a dark gray border.
Active	Topic or intent was added to Virtual Agent or linked to an existing topic and published. Cards with Active status have a green border.

Topic and intent card statuses (continued)

Status	Description
	If you keep getting recommendations for an Active topic, it probably needs improvement.
Inactive	Topic or intent was added to Virtual Agent but never published, or it was linked to an existing, unpublished topic. Cards with Inactive status have a light gray border. If you keep getting recommendations for an Inactive topic, take steps to publish it and make it active.
Hidden	Topic or intent was not added to Virtual Agent, but it was marked as hidden from the aggregate view and has a status of Hidden .

Overlay cards

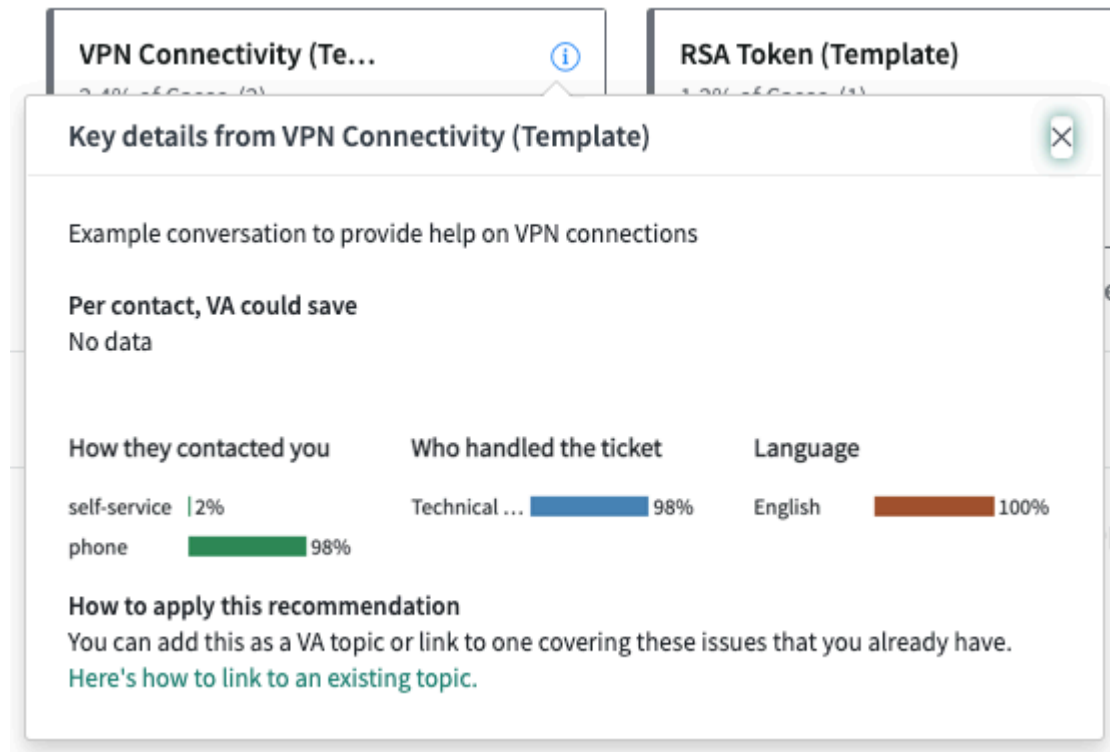
To get more details about a pre-built topic or user intent, select the recommendation card, and then click the info icon to open an overlay card.

The overlay card includes a description of the pre-built topic or user intent and the following information, which can provide insight into why the topic or intent was recommended.

Label	Description
Per contact, VA could save	How long it takes for Virtual Agent to resolve an intent (displayed in minutes).
How they contacted you	The way in which users engaged with support. For example, phone or email .
Who handled the ticket	The assignment group.
Language	The languages of users interacting with support for this issue.
Topic completion	Graph that shows a snapshot of topic completion over a window of time. This information displays for active topics only.
Status area	
This section displays one of the following statuses.	
How to apply this recommendation	Suggestions for an unused recommendation. You can do one of the following: - Select the card, and then click Add to VA to create a new topic. Link the recommendation to an existing topic.
Added topic recommendation	Displays the name of the topic that was added for the recommendation, as well as the date when it was added. Click the open link icon  to view the topic in Assistant Designer.
Linked topic	Displays the name of the topic that was linked, as well as the date when the recommendation was linked.

Label	Description
	Click the open link icon  to view the associated topic in Assistant Designer. You can also unlink the topic from the recommendation.

Example overlay card



(Legacy) Exploring other Virtual Agent for NLU features

After creating topics with the basic Virtual Agent Designer controls and scripting, you can also enhance conversation functionality and topic maintenance by using additional Virtual Agent features.

After learning the basics, here are some other Virtual Agent features that may help you improve your authoring and end-user experience.

Deploy Virtual Agent in other channels

By default, Virtual Agent runs in a chat widget, but you can also run it in other channels. While some features may not be available in certain channels (such as the carousel user input control), you can customize your conversation flow to accommodate these differences.

Use link unfurling in Virtual Agent

Virtual Agent supports link unfurling on the chat widget, mobile devices, and various channels. Link unfurling generates a content-rich preview when a supported link is shared in a conversation with a user, a virtual agent, or in a text-based bot response.

Improve the user experience with AI Search

What happens when a user utterance isn't matched to a keyword or intent? Enable AI Search as a fallback so that the user sees a list of search results as a response when no other match is found.

Maximize code reuse with topic blocks

Rather than duplicate common functionality in multiple topics, you can create reusable topic blocks that you can reference in many topics. This allows you to maintain frequently used functionality in one central location.

Customize Virtual Agent with custom controls

If a Virtual Agent Designer control doesn't quite work for what you want to achieve, create a custom control. You can create your own controls to accept input from the conversation, as well as custom response controls to handle the output. Use these controls within topics to handle specialized tasks.

Integrate Virtual Agent with Workflow Studio workflows

If your company is using Workflow Studio to create workflows, you can integrate them into Virtual Agent. You may need to do this if your conversations require you to pass secure inputs, such as a password. Workflow Studio actions and subflows support the password2 data type, which lets you pass the input securely.

Use Virtual Agent with Agent Chat

Customize Virtual Agent to hand off some conversations to a live agent when needed.

Use Virtual Agent for Incident Auto-Resolution

Initiate a Virtual Agent conversation with an end user after they submit an incident through email or the ServiceNow® Service Portal if an existing Virtual Agent topic can resolve the issue.

Localize Virtual Agent topics

Use the ServiceNow Localization Framework to translate topics and NLU models into other languages.

NLU Workbench - Advanced Features

Expand the functionality of NLU Workbench to help you manage and improve your models. NLU Workbench - Advanced Features is available from the ServiceNow Store.

Integrate Virtual Agent with other portals and apps

Integrate and extend the capabilities of Virtual Agent by connecting to your employees and customers where they already are.

Use Virtual Agent REST API in a standalone or multi-bot environment

Integrate any chat interface or bot using this REST API that is available in the ServiceNow Store.

Additional resources

Take advantage of the following ServiceNow® resources to help you customize your Virtual Agent:

- [Virtual Agent and Natural Language Understanding \(NLU\) community forum !\[\]\(dfca7b7ba04af5e0fd8f631088951778_img.jpg\)](#)
- [Virtual Agent Academy !\[\]\(bf1925d4ff0ffe3d685948333cd87bdf_img.jpg\)](#)

(Legacy) Deploying Virtual Agent NLU topics in other channels

When creating a topic or topic block, you can specify the chat channels in which the topic or topic block will run. During conversation design, Virtual Agent Designer provides built-in guardrails to help you tailor your conversations to those channels.

In Virtual Agent, a channel is a chat interface or application in which Virtual Agent interacts with end users. Default channels are the chat applications natively supported by Virtual Agent,

such as the Slack, Microsoft Teams, Workplace, and Facebook Messenger applications, and the web and mobile clients. Virtual Agent also supports custom channels created through the [conversational custom chat integrations](#) feature, which enables third-party applications (other chat providers) to work in Virtual Agent.

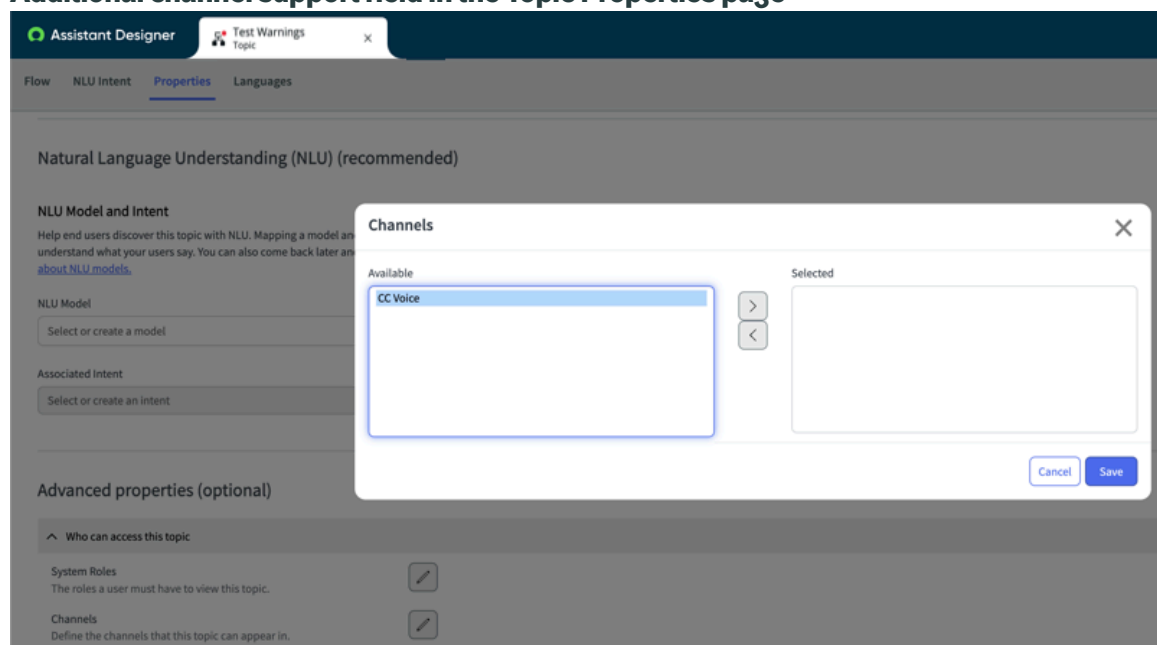
For example, admins can build a custom conversational chat integration for a specific messaging provider, such as Skype. Admins also define the controls that can be used in topics that run in these channels. For details about creating channels for chat providers and specifying the controls used in a channel, see [Creating conversational custom chat integrations in Virtual Agent](#).

Specifying channels in your topics or topic blocks

When you create or edit a topic or topic block, you can specify the applicable channels in the **Channels** field under Advanced properties in the Topic Properties page. Applicable channels are the custom channels created for your instance through the conversational custom chat integrations. Use this field to specify chat clients in which the topic or topic block will run.

Note: An updated Assistant Designer Asset library user interface is available when you install ServiceNow Otto for Virtual Agent. This content assumes that you can see the list view. If ServiceNow Otto for Virtual Agent is not installed, you see the legacy UI and topics page. For more information, see [Virtual Agent Designer legacy topics page](#).

Additional channel support field in the Topic Properties page



During conversation design, Virtual Agent checks the various controls used to build the conversation flow to confirm that the control is valid for the channels in which the topic or block will run.

Design checks for specified channels during conversation design

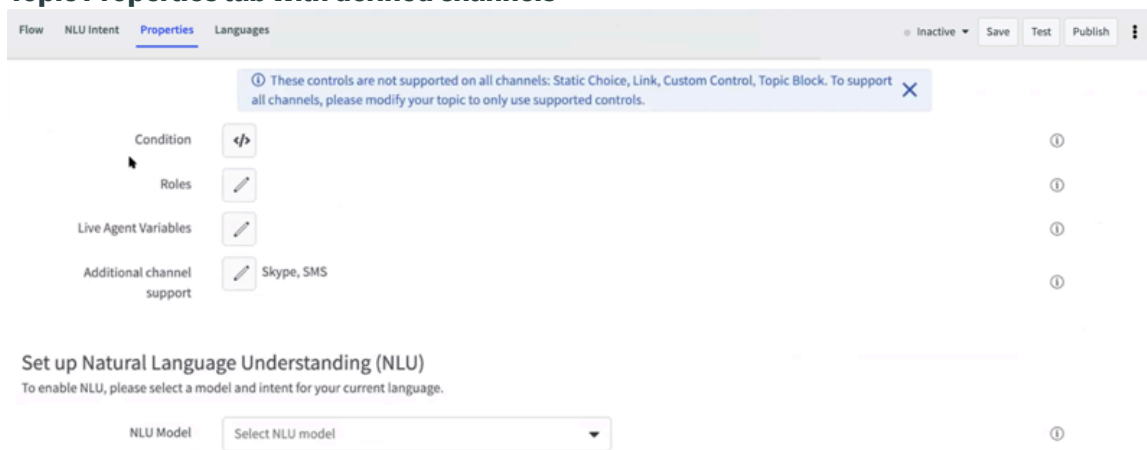
When you're designing your conversation, built-in guardrails identify the Virtual Agent Designer controls that are not suited for the custom channels that you specified in the Topic Properties page. These messages are displayed in the following views:

- **Properties** tab (Topic Properties page)

In the following example, Skype and SMS are the additional channels in which the topic will run. The banner message identifies the controls that are not supported on the channels for the

topic. As you develop the conversation flow, you can revise your conversation so that it does not use any of the specified controls for your selected channels.

Topic Properties tab with defined channels

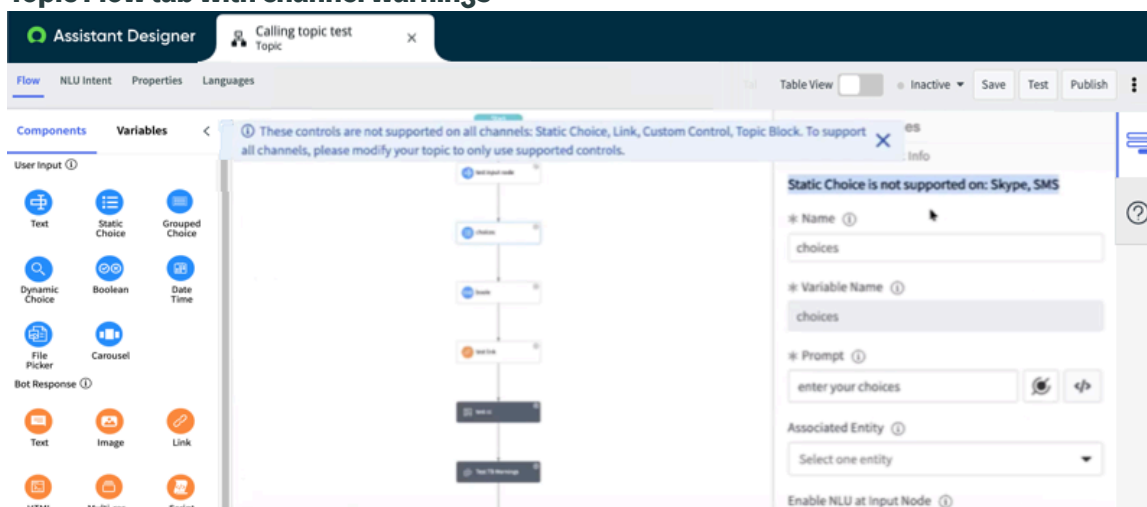


• Flow tab (Virtual Agent Designer canvas)

In the following example flow, the banner message identifies the controls that are not supported for the specified channels. The property sheet for the affected nodes also displays a message indicating that the control is not supported. For example, when you highlight a particular node (control) in the flow, the associated property sheet for the node indicates that the control is not supported in the Skype and SMS channels.

If you have controls that cannot be used, you can branch the flow so that you can continue building the flow with the controls that are supported.

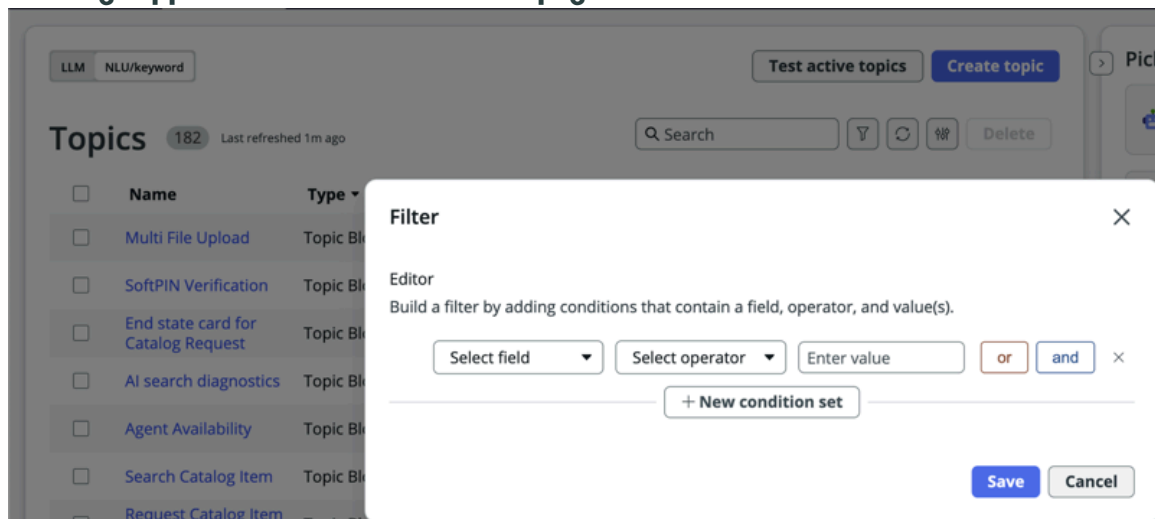
Topic Flow tab with channel warnings



Finding the channels available in your instance

To see a list of the available channels in your instance, use the filter icon () in Virtual Agent Designer (**Conversational Interfaces > Virtual Agent > Designer**). The Messaging Channels [sys_cs_channel] table also shows the available channels.

Filtering supported channels in the home page



The default channels in Virtual Agent are the web chat and mobile clients and also the Virtual Agent messaging integrations for the Slack, Microsoft Teams, Workplace, and Facebook Messenger messaging applications. In the previous example, SMS is an available chat channel that was created for your instance through a conversational chat integration. When you choose a channel, the home page lists your topics (cards) by channel type. For more information, see [Creating conversational custom chat integrations in Virtual Agent](#).

(Legacy) Case and incident deflection in Virtual Agent for NLU

Virtual Agent provides several self-service options for your user that can help deflect tickets.

Deflection occurs when a user asks a question or makes a request that doesn't result in a ticket or human assistance. There are many ways that your customers can self-serve, including using AI Search and reading Knowledge articles. Virtual Agent provides a number of ways for your users to serve themselves.

Issue Auto Resolution

When a user creates an issue, the Issue Auto Resolution application uses machine learning and NLU to identify the criticality of the issue, the intent, and an appropriate Virtual Agent topic for an automatic resolution. If a Virtual Agent topic isn't found, Issue Auto Resolution does an AI Search to return the most appropriate Knowledge articles, FAQs, or catalog content. The deflection content is then delivered to the user through the configured response channel, such as email, short messaging service (SMS), or the Virtual Agent chat widget.

Conversational subflows and conversational actions

Create conversational subflows and actions in Workflow Studio and use them in Virtual Agent conversations.

Use the deflection topic block

Use the pre-built deflection topic block in Virtual Agent to track the issues that Virtual Agent helped to resolve or actually resolved for a user.

(Legacy) Using Issue Auto Resolution

You can proactively deflect issues and expedite the resolution process for your agent and user with the Issue Auto Resolution (IAR) application. Through machine learning and Natural Language Understanding (NLU), users get immediate self-service and can access Virtual Agent topics, Knowledge articles, and catalog items.

Starting with the Brazil release, Issue Auto Resolution is being prepared for future deprecation. It will be hidden and no longer installed on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#)  article in the Now Support Knowledge Base.

How Issue Auto Resolution works

When a user creates an issue, the Issue Auto Resolution application uses machine learning and NLU to identify the criticality of the issue, the intent, and an appropriate Virtual Agent topic for an automatic resolution. If a Virtual Agent topic isn't found, Issue Auto Resolution does an AI Search to return the most appropriate Knowledge articles, FAQs, or catalog content. The deflection content is then delivered to the user through the configured response channel, such as email, short messaging service (SMS), or Virtual Agent.

Issue Auto Resolution Admin Console

As an administrator, you use the IAR Admin Console to set up the Issue Auto Resolution application, review how configurations may perform based on historical data (simulations), and track performance. You can also see the total cases processed, the solutions identified by the Issue Auto Resolution application, and the cases closed by the user.

To view the IAR Admin Console, navigate to **All> Issue Auto Resolution> Overview**. The Overview page contains an FAQ section that provides tips for how certain features work. You can also find a section where you can upgrade your IAR.

Issue Auto Resolution with custom NLU models

For information about using a custom NLU model and intents with Issue Auto Resolution, see the following post in ServiceNow Community: <https://www.servicenow.com/community/virtual-agent-nlu-articles/how-to-configure-custom-intents-for-issue-auto-resolution-iar/ta-p/2638545> .

Issue Auto Resolution agentic workflows

To learn more about the agentic workflows for Issue Auto Resolution for ITSM and HR Service Delivery, see [Issue Auto Resolution for ITSM Virtual Agent](#)  and [Issue Auto Resolution for HR Service Delivery](#) .

(Legacy) Configure and run an Issue Auto Resolution simulation

Use the incident data from your organization to run simulations from the matching intents that the Issue Auto Resolution application based its predictions on from the case descriptions.

Before you begin

Role required: virtual_agent_admin or admin

About this task

You can run multiple simulations for a Issue Auto Resolution (IAR) configuration. You can also do the following tasks:

- Cancel a simulation: Stop a simulation in progress.
- Refresh simulation status: Check the status of a simulation in progress.
- Delete a simulation: Delete a simulation configuration, but not while a simulation is running.

Procedure

1. Configure and configure an IAR simulation.

- a. Navigate to **All > Issue Auto Resolution > Simulations > ..**
- b. Select **New** or **Create new simulation** if you don't have an existing simulation.
- c. On the form, fill in the fields.

Create new simulation

Field	Description
Name	Name of the simulation configuration.
Auto Resolution configuration	Table that contains the records to be simulated. The default configuration is for incidents.
State	Simulation status: ▪ Ready: Simulation is ready to run. ▪ Running: Simulation is in progress. ▪ Canceled: Simulation stopped. ▪ Complete: Simulation finished. ▪ Error: Simulation encountered a processing error, but continues the simulation for the next set of records.
Record set	Condition that identifies the records evaluated in the simulation. For example: [Active] [is] [true] . This condition is automatically filled in with the conditions that you specify in your incident configuration, but you can modify the conditions as needed.  Note: Record sets that return a large number of records can take longer to simulate. To reduce the simulation time, consider changing the record set to return a smaller number of records. 50,000 is the maximum record limit for each simulation run.

d. Select **Save**.

2. After the new simulation is created, select **Run**.

The simulation may take a bit more time depending on the number of records that you have. After a run is completed, you see the **Latest resolution potential** and other simulation results.

3. To specify a time and schedule to run the simulation instead of manually running one, select **Enable scheduled job**.

You can run the simulation on a daily, weekly, or monthly basis at a specific time, in hours, minutes, and seconds. After you set up the schedule, select **Save**. To cancel your scheduled

job, disable **Automatically run this simulation**. For each simulation run, the following information is displayed:

Simulation results

Field	Description
Start time	Date and time that the simulation started.
Completed time	Date and time that the simulation ended.
Progress	Percentage of the simulation performed.
Latest trained version	Version number of the machine learning model used for the simulation.
State	Status of the simulation: - Complete: Simulation completed its run. - Ready: Simulation is ready to run. - Running: Simulation is in progress. - Canceled: Simulation stopped. - Complete: Simulation finished. - Error: Simulation encountered an error.
Total records	Total number of records evaluated in the simulation.
Resolution rate (%)	Percentage of cases that the simulation has predicted that match active intents with active topics.

4. View the simulation details of the individual run by selecting the link within **Runs > Start time**.

Run details

Field	Description
Resolution potential	Percentage of incidents that have active intents and are mapped to active topics.
Inactive topics	Virtual Agent topics currently mapped to intents that aren't active and not visible to users. Select an active topic by using the intent to topic map table in the IAR configuration, or go to Assistant Designer to activate the topic.
Mapped intents: Active	Intent that was successfully predicted from the case description and is active in your intent to topic map table.
Mapped intents: Inactive	Predicted intents that are available but not active in your intent to topic map table.
No intents found	Description in the records didn't match any of the intents available.

Field	Description
Unmapped intents	Intent that was successfully predicted from the case description, but the intent itself hasn't been added to the intent to topic map table in the configuration. To increase the coverage for those incidents, add those additional intents to the table.

(Legacy) Issue Auto Resolution configuration settings

Learn about the different configuration settings that you can use for the Issue Auto Resolution (IAR) application. For example, you can see the status of your Issue Auto Resolution configurations and decide to turn off or edit each configuration setting to fit your organization's needs.

The following tables show the configuration settings that are available for Issue Auto Resolution

Note:

To modify your settings, navigate to **All > Issue Auto Resolution > Settings**.

Task configuration

Specify the tables, defaults, and task templates while processing the task.

Setting	Definition
Table	Name of the table for the Issue Auto Resolution application to process.
Invocation type	Trigger for the Issue Auto Resolution application either through a business rule when the case is created or an API on demand.
Assign to	Assignee for the case that is being processed by the Issue Auto Resolution application.
Requester	User requesting assistance on the issue.
Task assignment template	Template that sets the fields and values when it's being assigned to the user.
Task resolution template	Template that sets the fields and values when the user indicates that the issue is resolved.
Task completion template	Template that sets the fields and values during the interim state while the matched topic conversation flow runs.
Unresolved task template	Template that sets the fields and values when the end user requests agent assistance.

Entry & exit criteria

Set the entry & exit criteria for issues processed through an IAR.

Setting	Definition
Entry conditions	Records that are processed for the Issue Auto Resolution application. Only the issues that match the entry condition are processed by the Issue Auto Resolution application.
Exit conditions	Condition where the Issue Auto Resolution application stops processing when the machine learning process is complete.

Machine learning model settings

*Select the machine learning models to be used by IAR. Choose a training language that you want to use and train the model for intent identification when required. The machine learning model contains English, Spanish, French, German, Japanese, Dutch, Italian, and Portuguese. To configure new languages for a user, add the language(s) in **Training details** **Training language**, then select **Train**. For more accurate intent prediction, tune and publish your model before turning on IAR. See *Issue Auto Resolution Tuning in NLU**

Setting	Definition
Training language	Language in which the training must be performed for the machine learning model.
Configuration languages	Overview of the machine learning models associated with the Issue Auto Resolution configuration.
Retrain frequency	Interval in which the machine model must be retrained with the training data.
Advanced	Advanced settings that you can enable.
Prediction fields	List of fields used as input for processing the issue.
Pre-processing extension	Server script to perform data cleanup or manipulation on the issue before it's processed by machine learning APIs. The pre-processing script is available only when you enable the Advanced setting.
Post-processing extension	Server script to perform additional actions on the results from machine learning APIs. The post-processing script is available only when you enable the Advanced setting.

AI Search settings

Setting	Definition
Apply AI Search	AI search results that are delivered if relevant Virtual Agent topics aren't found.
Search application	Detailed AI search settings, including the search source, number of search results to retrieve, and more.
Search results portal	Portal to be used in links while delivering recommendations to the users on any response channel.
AI Search display topic	Virtual Agent topic that performs AI search and presents the results.
EVAM definition	Definition of how search results from different data sources are displayed for the end users in cards and lists.

Intent to topic map settings

Enter your intent and topic map to configure your resolutions using "true" or "false". Hover over and select "true" or "false" to edit.

Setting	Definition
Intent to topic map	List of intents and their associated Virtual Agent topics. When an issue is identified, the corresponding topic is delivered to the user for automatic resolution.

AI Search settings

Setting	Definition
Apply AI Search	AI search results that are delivered if relevant Virtual Agent topics aren't found.
Search application	Detailed AI search settings, including the search source, number of search results to retrieve, and more.
Search results portal	Portal to be used in links when delivering recommendations to the users on any response channel.
AI Search display topic	Virtual Agent topic that performs AI search and presents the results.
EVAM definition	Definition of how search results from different data sources are displayed for the end users in cards and lists.

Response channels settings

Admin users and users with the `iar_admin` role can configure where to deliver the resolutions, using Virtual Agent, Email, or SMS.

When at least one intent to topic map is active, the VA response channel is mandatory. When AI Search is enabled, one of the three response channels needs to be mandatory: email, SMS, or VA.

When VA is selected as a response channel, the user will also receive an additional comment on the portal prompting them to open VA to respond to the notification. Email templates have also been updated to show a preview of AI Search topics to give end users a better idea of the content itself in the email.

These are the pre-requisites for response channels.

- **To add Virtual Agent as a response channel, install Glide Virtual Agent and enable Virtual Agent on Service Portal. Notifications must be enabled on at least one active channel. Depending on your organization's needs, admin users can also install Conversational Integration with Microsoft Teams on Slack.**
- **To add email as a response channel, ensure email sending is enabled in Notifications. To learn more about setting up email notifications, see [Outbound mail configuration](#).**
- **To add SMS as a response channel, install the Twilio Notify app and set up the Conversational SMS Integration with Twilio.**

Setting	Definition
Follow up sequence	Options on how to deliver the deflection content to your users: • All: Delivers the deflection content to the user on all available response channels. • First match: Delivers the deflection content on an active channel where the user is available, in the order defined by the response channels list.
Response channels	List of available response channels to send the user deflection content. When you set the Follow up sequence to First match, the response channel order determines the channel that is used to contact the user. You can adjust the order number to change the priority sequence. You must set up the email properties to set Email as an active channel.

Response channels settings

Admin users and users with the `iar_admin` role can configure where to deliver the resolutions, using Virtual Agent, Email, or SMS.

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- **To add SMS as a response channel, install the Twilio Notify app and set up the Conversational SMS Integration with Twilio.**

(continued)

Setting	Definition
	The Glide Virtual Agent plugin is required, and Virtual Agent notifications must be enabled to set Chatbot as an active response channel. You must configure Twilio Notify to set SMS as an active response channel.
Initial recommendation email	Email template used to deliver the deflection content to users when the AI search recommendations are found.
Catalog submitted email	Email template used to notify users when a catalog item is submitted from recommendations made by the Issue Auto Resolution application.
Notify SMS phone	Twilio Notify phone number to be used to deliver SMS to users.
Initial recommendation SMS	SMS template used to deliver the deflection content to users when AI search recommendations are found.
Catalog submitted SMS	SMS template used to notify users when a catalog item is submitted from

Response channels settings

Admin users and users with the `iar_admin` role can configure where to deliver the resolutions, using Virtual Agent, Email, or SMS.

When at least one intent to topic map is active, the VA response channel is mandatory. When AI Search is enabled, one of the three response channels needs to be mandatory: email, SMS, or VA.

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- **To add SMS as a response channel, install the Twilio Notify app and set up the Conversational SMS Integration with Twilio.**

(continued)

Setting	Definition
	recommendations made by the Issue Auto Resolution application.

SLA & reminders

You can select if you wish to use the SLA engine versus the Task SLA.

Setting	Definition
Use SLA engine	Task-based SLA engine that provides additional flexibility and functionality.
Auto resolution reminders	List of reminders and the Email and SMS templates used to deliver reminders. SLA percentage at which to send the reminder using the Email and SMS templates. To send automatic resolution reminders, you must set Use SLA engine to true. Note:

SLA & reminders

You can select if you wish to use the SLA engine versus the Task SLA.

(continued)

Setting	Definition
	The SMS Notification template is only available when the Notify app is installed.
Task SLA	Duration that an issue is assigned to the Issue Auto Resolution application before it's automatically reassigned to a live agent, if not yet resolved.

Review

Setting	Definition
Review	Opportunity to review your configuration before you select Enable IAR .

(Legacy) Issue Auto Resolution diagnostic chat

Admin users can initiate a chat conversation to troubleshoot the settings and functionality of Issue Auto Resolution if an issue arises that wasn't addressed as expected.

Enabling diagnostic chat

To enable the Issue Auto Resolution diagnostic tool, an admin user must set certain Restricted Caller access records to **Allowed** on the Restricted Caller Access Privileges table.

To identify the records to allow, follow these steps:

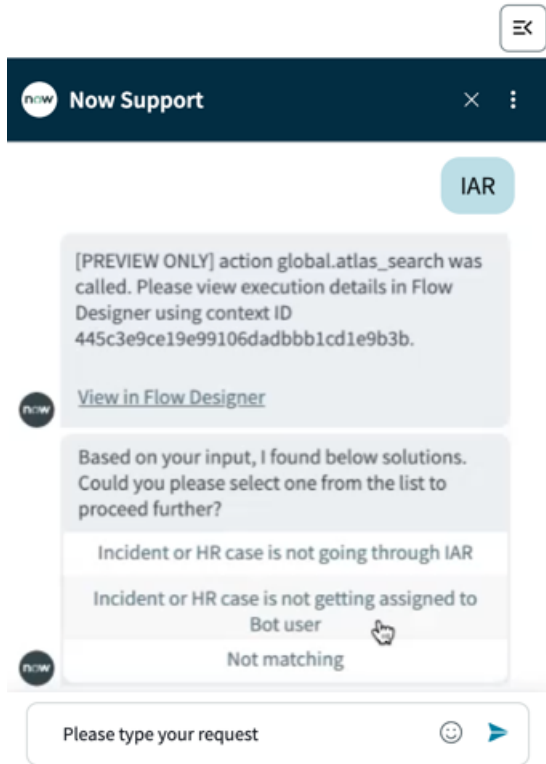
1. Navigate to **All > System Applications > Application Restricted Caller Access**.
2. Filter the records by **Source = 76fec17dc0e1d5d0f877e9d0ea777a12** (Script Include: IARIssueNotAssignedDiagnostic).
3. Navigate to each record and change the status to **Allowed**.

Restricted Caller Access Privileges						
		Source	Search		Actions on selected rows...	
All > Application is same as Target Scope > Source >= 76fec17dc0e1d5d0f877e9d0ea777a12						
Operation	Status	Application	Target Scope	Target	Source	Source Scope
Search	Search	Search	Search	Search	Search	Search
Read	Requested	(empty)	(empty)	(empty)	Script Include: IARIssueNotAssignedDiagnostic	Omni-Experience Standard Feature Set
Read	Allowed		(empty)	(empty)	Script Include: IARIssueNotAssignedDiagnostic	Omni-Experience Standard Feature Set
Read	Requested	(empty)	(empty)	(empty)	Script Include: IARIssueNotAssignedDiagnostic	Omni-Experience Standard Feature Set
Read	Requested	(empty)	(empty)	(empty)	Script Include: IARIssueNotAssignedDiagnostic	Omni-Experience Standard Feature Set

Diagnostic conversation flows

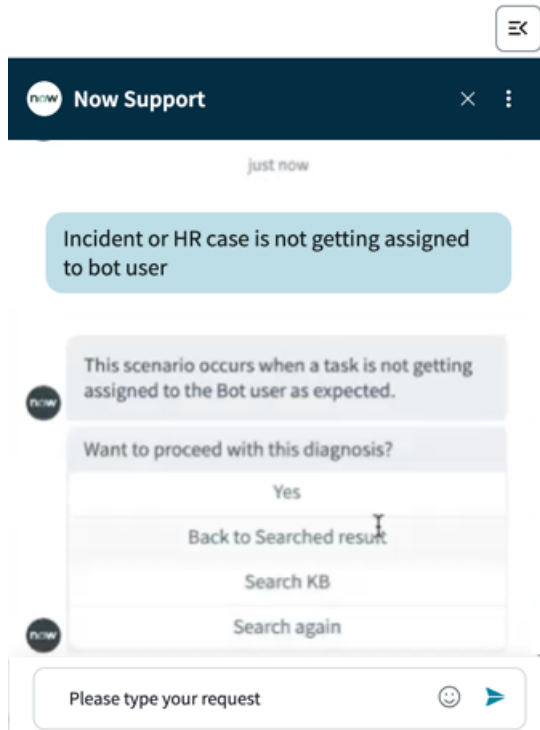
The admin user enters IAR in the chat window to initiate a conversation about Issue Auto Resolution, and then selects one of two issues:

- An Incident or case isn't getting assigned to the Bot user.
- An Incident or case isn't going through Issue Auto Resolution.

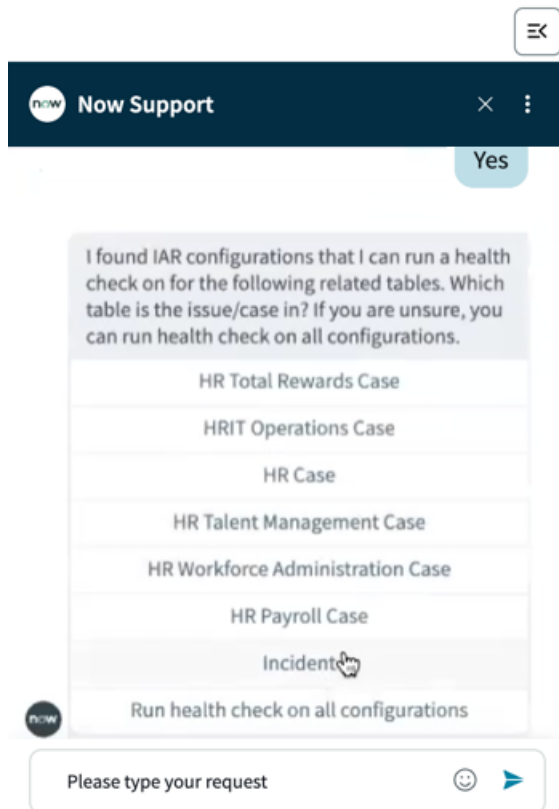


Conversation flow: Incident or HR case is not getting assigned to bot user

1. Confirm your selection, return to search, or search KB articles.



2. Select the type of case or Incident with which you need help, or choose to search all Issue Auto Resolution configurations.



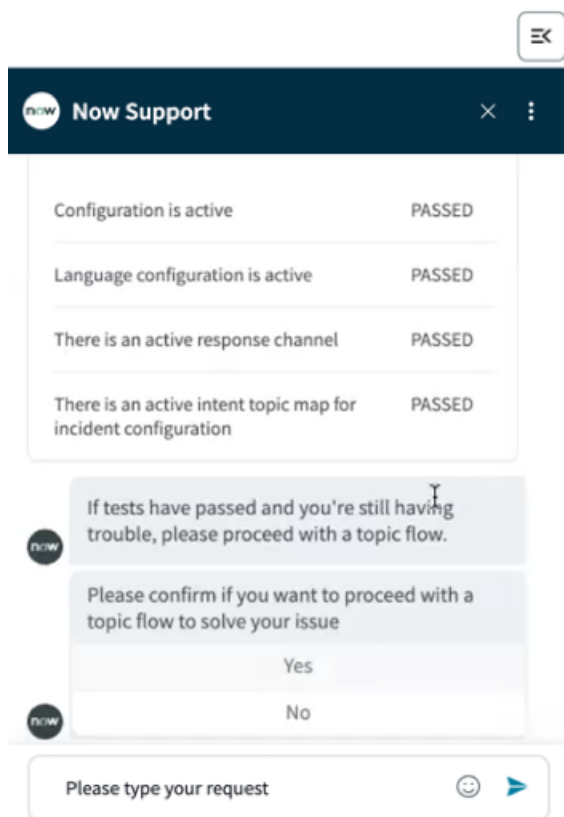
3. The diagnostic tool performs an analysis on Issue Auto Resolution configuration and settings and displays the results. The diagnostic confirms the following conditions:

- The prediction server is up.
- There are existing Issue Auto Resolution configurations.
- The configurations are active.

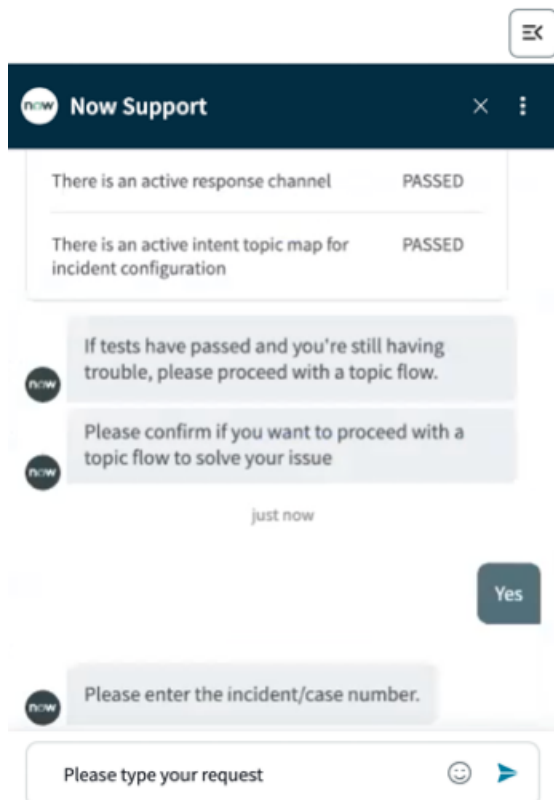
A health check for the selected configuration type also runs to determine if the Incident or case is properly configured for Issue Auto Resolution. The diagnostic for an Incident checks the following conditions:

- Issue Auto Resolution configuration is active.
- Language configuration is active.
- There is an active response channel.
- There is an active intent topic map for the Incident configuration.

The diagnostic for a case additionally checks that AI Search has been enabled and doesn't check for an intent topic map. If all the settings are correct and the issue persists, the user can choose to continue the conversation.



4. Enter the Incident or case number and confirm it's correct.



The bot asks you to confirm the number you entered.

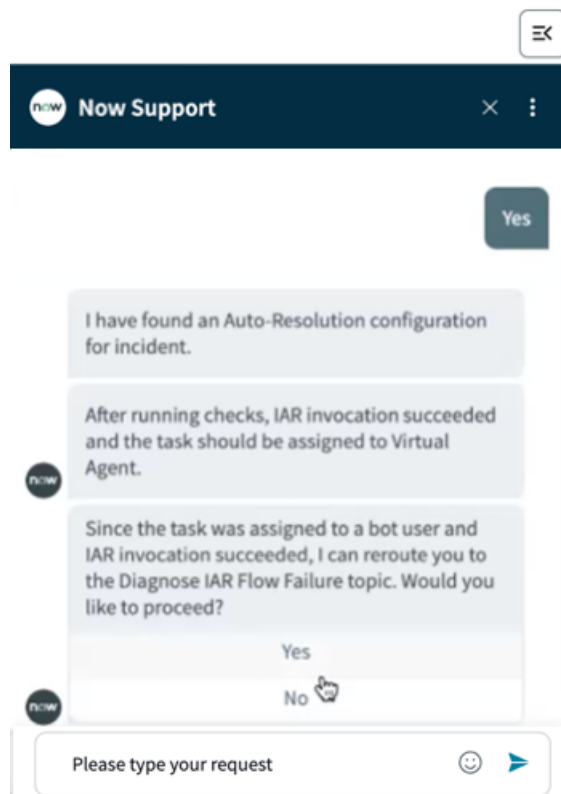
5. The diagnostic tool analyzes the issue to determine if the following conditions are met:

- The trigger condition on the configuration matches the Incident or case values.
- The business rule order is the highest.
- There's only one trigger business rule for Issue Auto Resolution on the Incident or case table and it's active.

If the suggestions don't resolve the issue, you can choose to run further analysis.

Conversation flow: An Incident or case is not going through Issue Auto Resolution

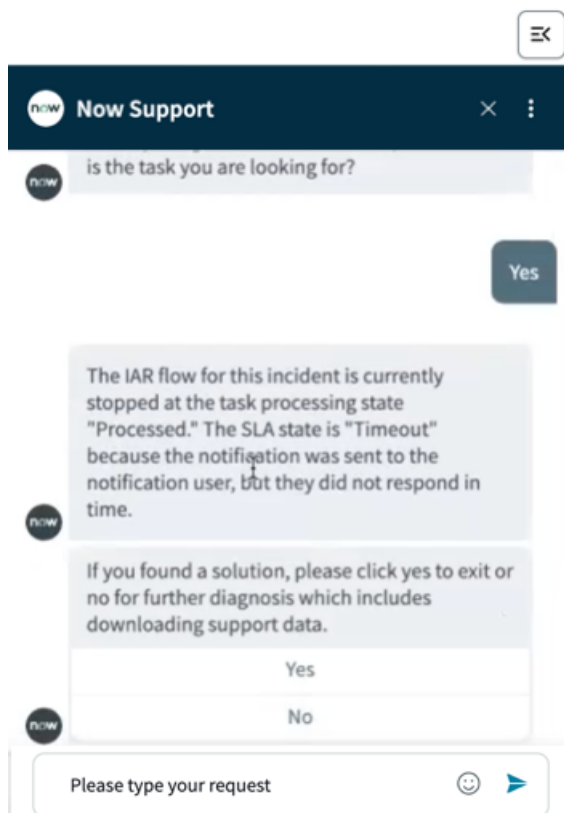
1. Confirm your choice to proceed diagnosing a functionality issue with Issue Auto Resolution.



2. The diagnostic tool checks the following conditions:

- The intent prediction was successful (Incidents only).
- The criticality is correct and AI Search is active (cases only).
- A notification was sent.
- The end user responded to the notification.

If any of these checks reveal an issue, the diagnostic tool displays a possible solution. Indicate whether these solutions resolved the issue, or choose to perform further analysis.



Related topics

[Conversational Interfaces Diagnostic Tool](#)

(Legacy) Using the deflection topic block to track deflections in Virtual Agent

Use the pre-built deflection topic block in ServiceNow® Virtual Agent to track the issues that Virtual Agent helped to resolve or actually resolved for a user. Incident deflection patterns and metrics can help you optimize and analyze the effectiveness of Virtual Agent.

A deflection occurs when Virtual Agent automatically redirect users to self-service options or knowledge base articles that can help them solve their problems without requiring the assistance of a live agent. As a result, the user might not need to create an incident. If necessary, however, Virtual Agent can ask relevant questions and then create an incident in the correct assignment group. This workflow becomes more efficient because no live agent has to get involved.

The Virtual Agent deflection tracking is enabled by default, but you must set up the deflection configuration and deflection patterns to capture certain deflection metrics. For more information, see [\(Legacy\) Create deflection configurations and patterns](#).

You use deflection configurations to group deflection patterns. A deflection configuration can consist of one or more deflection patterns. Deflection patterns categorize Virtual Agent activities in conversations for tracking deflection metrics. For example, let's say that Virtual Agent adds a user to an email list without creating a task in the Task table to complete the workflow. You can categorize this activity as a self-resolving deflection pattern.

You can view the deflection metrics for each deflection pattern. A deflection pattern can lead to these deflection outcomes in a conversation:

- **Confirmed deflection:** Virtual Agent provided a resolution to the user, which prevented the user from creating an incident or transferring to a live agent.
- **Potential deflection:** It is unclear whether Virtual Agent provided a resolution to the user. An example is when search results are displayed to a user in a conversation.
- **No deflection:** Virtual Agent did not provide a resolution, and the user created an incident or transferred to a live agent.

You can either create new deflection patterns, or use these pre-built deflection patterns in the **VA Default** deflection configuration:

Deflection pattern	Activity	Outcome
VA-Search-served	Virtual Agent showed search results to the user.	Potential deflection
VA-Triage & Created	Virtual Agent creates an incident in the correct assignment group. This action improves the assignment accuracy. For example, Virtual Agent identifies a reimbursement-related intent in a user conversation and creates a reimbursement incident instead of a general incident.	Confirmed deflection
VA-Self-Resolving	Virtual Agent completes the workflow on its own without creating an incident. For example, Virtual Agent adds a user to a distribution list.	Confirmed deflection
VA-Intercept & Resolved	Virtual Agent intercepts an incident that was created by a user and provides a resolution to close the incident. An example is when Incident Auto Resolution resolves an incident.	Confirmed deflection

The deflection configuration and deflection pattern that you create in the deflection settings are mapped to the deflection topic block. For example, the pre-built Issue Auto Resolution topic uses a deflection topic block to track deflections. For more information, see [Maximizing code reuse with topic blocks](#) and [\(Legacy\) Virtual Agent pre-built topic blocks for NLU](#).

The deflection metrics are generated and stored in the Deflection Metric [ssa_deflection_metric] table. To view the deflection metrics, navigate to the Deflection Metrics module in the Self-Service Analytics framework.

Note: The Self-Service Analytics framework requires the Self-Service Analytics Core plugin (com.snc.self_service_analytics_core). For more information, see [Activate Self-Service Analytics](#).

Deflection metrics

Deflection Metrics				
Content Table		Search	Actions on selected rows...	
All	Content Table	Content ID	Type	Deflection Configuration
	sys_cs_conversation_task	Conversation Task	No Deflection	ITSM VA Default
	sys_cs_conversation_task	Conversation Task: Open IT Ticket (DAL)	Confirmed Deflection	ITSM VA Default

You can also view the visualization for deflection metrics in the **Overview** tab of the Conversational Analytics Dashboard. For more information, see [\(Legacy\) Conversational Analytics dashboard in Platform Analytics experience](#).

(Legacy) Create deflection configurations and patterns

Set up deflection settings to create deflection configurations and deflection patterns that you can map to deflection topic blocks in Virtual Agent conversation topics. These deflections help you to track the issues that Virtual Agent helped to resolve or actually resolved for a user.

Before you begin

Review [\(Legacy\) Using the deflection topic block to track deflections in Virtual Agent](#).

Watch this video for more information about deflection tracking.  [Virtual Agent Academy: Measure success and user journey in Conversational Analytics](#) 

Note: For information about configuring components of the Virtual Agent Analytics dashboard (such as Performance Analytics widgets), see [Add and configure components](#) .

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
The **Conversational Interfaces Settings** page opens in a new tab.
2. Navigate to **Virtual Agent > Deflection metrics > View all**.
3. To enable tracking of deflection metrics, turn on the toggle under **Activate**.
4. To create new Deflection Configurations, click **New**.
5. In the Create Deflection Configuration form, enter these deflection configuration properties:

Field	Description
Name	Short and meaningful name for the deflection configuration.
Description	Short description about the deflection configuration.

6. Click **Save**.
A new Deflection Configuration is created.
7. To add new deflection patterns to a deflection configuration, select the deflection configuration in which you want to add the deflection pattern.
8. Click **New**.

In the Create Deflection Pattern form, enter these deflection pattern properties:

Field	Description
Name	Short and meaningful name for the deflection pattern.
Outcome	Result of the deflection in a Virtual Agent conversation.

Field	Description
Primary Activity Table	Table that is associated with the activity that you are categorizing in the deflection pattern. For example, if the Virtual Agent is helping to prevent the creation of a task for the activity, then you can specify the task table.

Note: If you are creating a generic pattern that is used for tracking different deflections, you can leave the **Primary Activity Table** field empty.

The primary activity table that is associated with each activity helps in calculating the deflection rate for a particular business area. For example, if Virtual Agent resolves 42 VPN issues and overall 100 VPN incidents are created, the deflection rate for VPN issues is 42/142 or 30 percent.

9. Click **Save**.

(Legacy) Implementing AI Search in NLU

Virtual Agent uses the ServiceNow AI Platform[®] AI Search application to return search results in bot conversations as a fallback when there are no relevant topics to display to end users. Virtual Agent also provides a Run AI Search topic block that topic authors can use to generate search results in a topic.

How Virtual Agent uses AI Search

The AI Search application, which is included with the ServiceNow AI Platform, provides relevant search results for queries and uses Machine Learning to continuously improve search results based on end-user selections. To learn more about AI Search, see [AI Search](#).

In addition to normal search results, AI Search can display Genius Result cards that show relevant catalog items, questions and answers (Q&A), and people (user) information. To learn more, see [Genius Results](#).

Catalog Genius Results and Q&A Genius Results are automatically activated in the base system.

Virtual Agent uses AI Search to provide the following:

- The Run AI Search topic block, which calls the AI Search application in a conversation. Topic designers can add this block as a topic node, to generate and display search results in a conversation. For details about the Run AI Search block and other topic blocks provided with Virtual Agent, see [\(Legacy\) Virtual Agent pre-built topic blocks for NLU](#).
- The AI Search Fallback setup topic that generates search results for end users when Virtual Agent can't determine an intent and topic or the keyword to display the appropriate conversation for user requests.

Virtual Agent provides base system (default) AI Search configurations that determine how search results are generated and displayed:

- Search application configuration that defines:
 - Index sources - Data sources to be used for search, such as catalog items or knowledge base (KB) articles.
 - Search profile - Index source to be used and the type of results to show in Genius Result cards.
- Entity View Action Mapping (EVAM) configuration that defines how search results and Genius Results are displayed.

The Virtual Agent search configurations are part of the default chat experience set in Assistant Designer, through the Custom Greetings and Setup feature. Use this feature to specify the context for running Virtual Agent. The chat experience defines the setup topics used in Virtual Agent conversations and the search configuration that controls the AI Search experience. The AI Search Fallback setup topic controls the AI Search experience. For details, see [Customizing a Virtual Agent chat experience](#).

Virtual Agent and Virtual Agent Lite use AI Search functionality. If you're a Virtual Agent Lite admin, you can deactivate setup topics such as the AI Search Fallback setup topic, but you can't change the Virtual Agent search configurations set in chat experiences, the Run AI Search topic block, nor the AI Search Fallback setup topic.

In order to use AI Search in Virtual Agent, you must request it for your instance. For more information, see [\(Legacy\) Activate AI Search for Virtual Agent](#).

When Virtual Agent uses AI Search fallback

Virtual Agent uses AI Search fallback in the following instances:

- Topic discovery can't find any matching topics for the user query.
- **Note:** If you're using pre-built NLU conversations, such as ITSM Virtual Agent conversations, topic discovery finds the topics that match the keywords or intents provided with those conversations, before falling back to AI Search. If your users select **Ask something else** after suggested topics are displayed, Virtual Agent takes the additional input and reruns topic discovery AI Search to return relevant search results.
- Topic discovery returns too many topics for the user query. In this case, Virtual Agent can't determine the best topic to display to the end user.
- Topic suggestions are displayed to the user, but the user selects the **Ask something else** option.
- **Note:** If you deactivate the AI Search Fallback setup topic in a chat experience, the Virtual Agent runs the Fallback setup topic when it can't find a matching topic.

What the AI Search results look like

In Virtual Agent, the default chat experience or a custom chat experience determines the search experience, namely the search profile used and the format of the AI Search results displayed:

- The search application specified in the Virtual Agent default or custom chat experience defines certain aspects of the search experience, such as the search sources (searchable content) and synonyms used to improve search recall.
- The EVAM configuration for Virtual Agent controls the Genius card content presented in search results (Q&A, Catalog, and People). For information on how EVAM works, see [Exploring Entity View Action Mapper](#) .

The default AI Search results include these items:

Genius Result cards

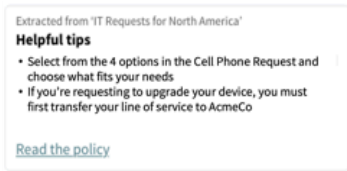
When AI Search generates a match (result) with a high confidence score, Virtual Agent displays a single Genius card with the result. The cards display information returned from AI Search:

- Q&A - Provides an answer snippet from the Knowledge Base article determined as the top search result.
- Catalog items - Returns the most relevant catalog item with the related entities (catalog item name and catalog item category).
- People - Returns the relevant person with the related entities (name, department, city).

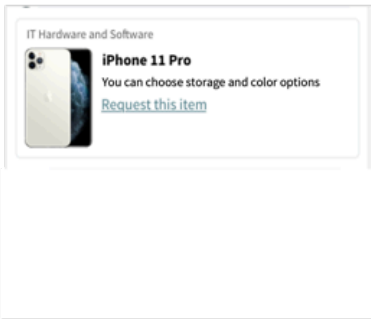
Note: The default search application for Virtual Agent is configured to include Q&A (Knowledge Base) and Catalog results, but not People card results. The People card is not available with the default Virtual Agent search application. People card results are available if you're using the Employee Service Center (ESC) app and the ESC search profile, which can be specified in a Virtual Agent chat experience for ESC.

Genius card examples

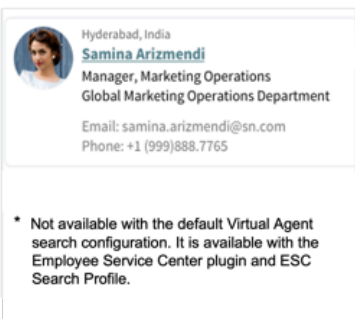
Q&A card



Catalog item card



People card*



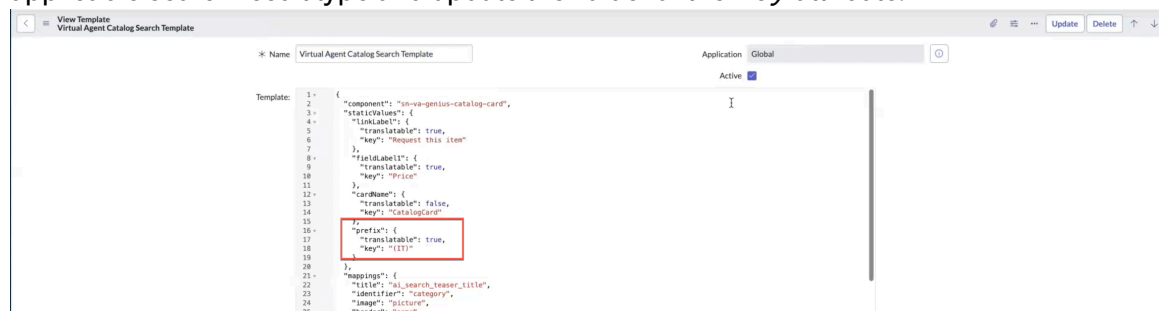
* Not available with the default Virtual Agent search configuration. It is available with the Employee Service Center plugin and ESC Search Profile.

List output

After a Genius Result is returned, users can indicate what they would like to do next. If they choose the option **Show me more on <search item>**, Virtual Agent displays search results as a list output, which includes:

- Knowledge articles
- Catalog items
- People
- Other - Generic results determined by EVAM, for example results from Microsoft SharePoint or Microsoft OneDrive connectors

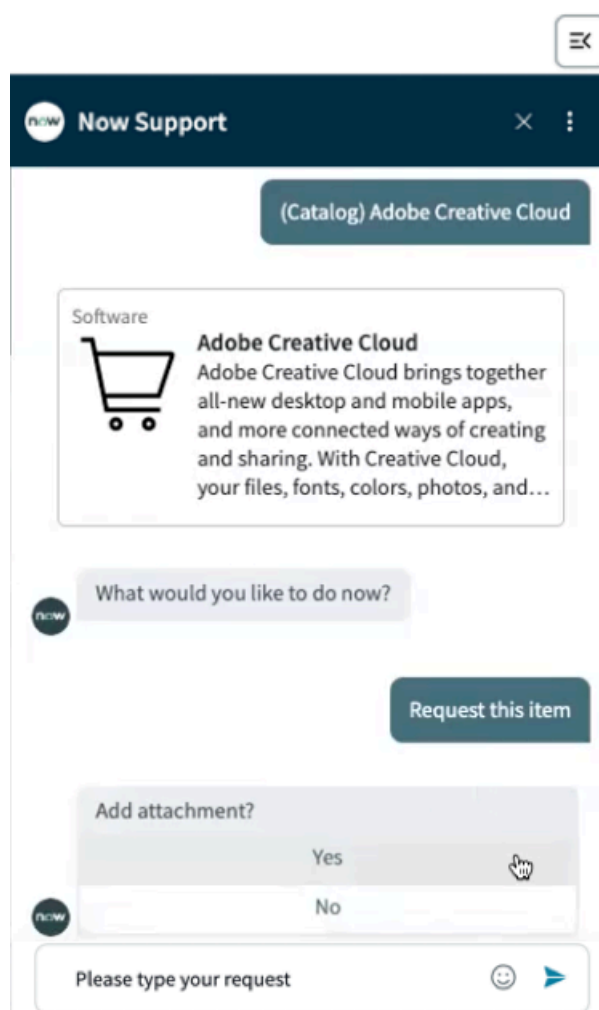
Admins can edit the prefix of these search result titles by navigating to EVAM and searching for Virtual Agent templates. Select the template for the applicable search result type and update the value for the *key* attribute.



Admins can expand the number of search results displayed up to 10, using the `com.glide.cs.ai_search.max_regular_result` property. In order for the search results to display as expected, the search result limit in the search application configuration should be greater than or equal to the `com.glide.cs.ai_search.max_regular_result` system property.

Note: When admins specify 10 for the maximum regular results, 12 choice options display (10 results plus the actions “I need more help” and “Ask something else”). However, the default total number of list options allowed on the chat widget is 10. In order for all 12 choices to display, the admin must adjust the `com.glide.cs.picker_page_limit` system property accordingly. For optimal user experience, fewer list options are recommended.

Users can select a search result from the list and continue the Virtual Agent conversation. For example, when a user selects a catalog item from the search results list, Virtual Agent provides an option to request the item directly from the chat.



Portals that display AI Search links

Links in the Genius card and multi-link output search results are opened automatically in a portal that you can set in various ways. For example, you can use default or custom URL mappings to specify the portal in which links are opened. To learn more, see [\(Legacy\) Configure URL navigation for chat links](#).

Custom search experiences

You can customize the AI Search experience in a conversation, for example to run searches that return results relevant to a particular business application. To control the AI Search results returned in a conversation, you can create a search application configuration that defines the search experience used by the AI Search topic block. For details, see [\(Legacy\) Create a custom AI Search experience for Virtual Agent conversations](#).

(Legacy) Activate AI Search for Virtual Agent

Once activated, AI Search configurations that are part of the Virtual Agent default chat experience become available. The AI Search Fallback setup topic controls the AI Search experience.

Before you begin

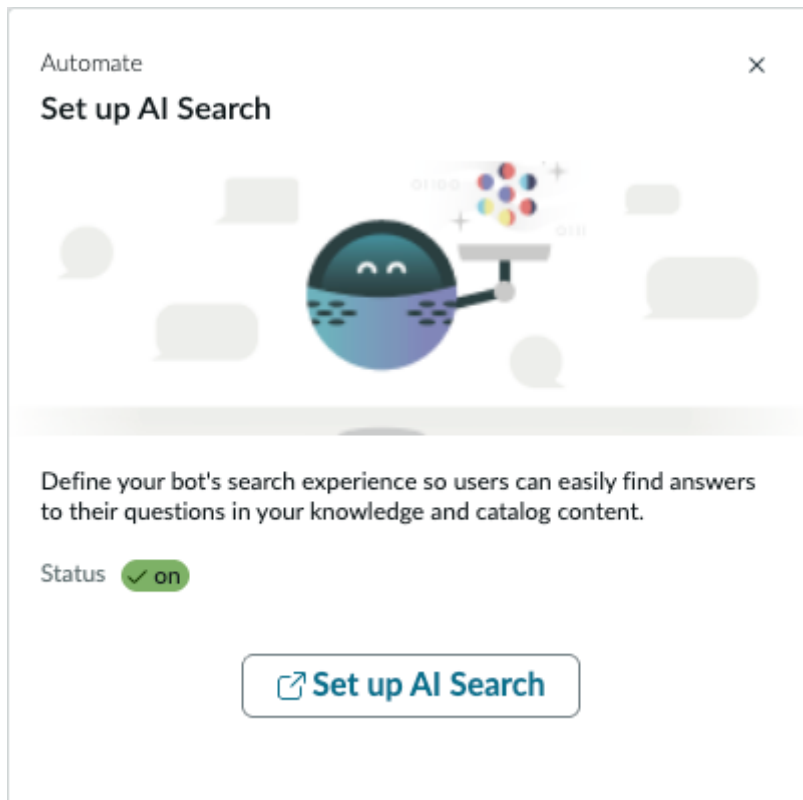
Role required: admin or virtual_agent_admin

About this task

The default chat experience is defined in the Custom Greetings and Setup settings area in the Conversational Interfaces admin console. The default experience uses the AI Search Fallback setup topic, which requires AI Search to be activated for Virtual Agent. You can request AI Search from the Conversational Interfaces admin console Home page.

Procedure

1. Navigate to **All > Conversational Interfaces > Home**.
2. On the Home page, find the Request AI Search tile, and select **Request AI Search**.



3. On the page that opens, select **Request AI Search** to request provisioning.

Result

Your request will be processed. Once activated, enable the AI Search Fallback setup topic in the default or a custom chat experience. For instructions on configuring a chat experience, see [Customizing a Virtual Agent chat experience](#).

If you want to customize the Virtual Agent AI Search results that are generated for your users, see [\(Legacy\) Create a custom AI Search experience for Virtual Agent conversations](#).

(Legacy) Create a custom AI Search experience for Virtual Agent conversations

Define a custom AI Search experience in a conversation using the AI Search topic block. You create a Search Application Configuration used by the topic block to control the AI Search results returned in the conversation. Or you can use the Search Application Configuration to control AI Search results in a custom chat experience.

Before you begin

[Create the search profile](#) [\[2\]](#) that defines the search experience to be used in the search application configuration. For details, see [Search profiles](#) [\[2\]](#) and [Search application configurations](#) [\[2\]](#).

Role required: virtual_agent_admin or admin with the search application administrator [search_application_admin] role

About this task

A search application configuration specifies the AI Search profile used by the Run AI Search topic block or in a custom chat experience to control the search experience, such as the search source used to generate search results.

Note: As of the Utah release, use the AI Search topic block when creating an AI Search application. (The Run AI Search topic block is used in releases from Rome to Tokyo.)

Procedure

1. Navigate to **All > AI Search > Search Experience > Search Applications** and select **New** to create the search application configuration.
2. On the form, fill in the fields.
For more information, see [Search Application Configuration form](#) [\[2\]](#).
3. Select **Submit**.
4. Apply the custom Search Application Configuration to the AI Search topic block used in a conversation or to a custom chat experience.

Option	Procedure
Specify the custom Search Application Configuration in the AI Search topic block used in a conversation	Add the AI Search topic block to a conversation topic. For details, see Add a reusable topic block to a calling topic or topic block. a. Navigate to Conversational Interfaces > Virtual Agent > Designer and select the topic or create a new topic. b. In the Flow tab, drag the Topic Block utility onto the canvas. c. Complete the Topic Block Properties sheet:

Option	Procedure
	▪ In the Topic Block field, select AI Search. ▪ In the Search Term (String) field, use dot-walking or a script to specify the input variable for the search. ▪ In the Search Application Configuration field, select the custom Search Application Configuration that you created in a previous step. If you leave this field empty, AI Search uses the default search application configuration for Virtual Agent. ▪ If needed, click Hide this node and specify conditions. d. Select Save. The AI Search topic block runs the selected search application configuration to generate the customized AI Search experience.
Use the custom Search Application Configuration in a custom chat experience	Create or update a custom chat experience that uses the Run AI Search topic block with the custom Search Application Configuration. For details on creating a custom experience, see (Legacy) Configure a Virtual Agent NLU chat experience.

Your custom Search Application Configuration is used in the AI Search topic block in a conversation or a custom chat experience to generate the customized AI Search experience.

(Legacy) Maximizing code reuse with NLU topic blocks

Topic blocks are reusable components that you can create to run common tasks and conversational elements in Virtual Agent conversations. Topic blocks simplify the topic authoring and maintenance process by enabling you to reuse standard procedures or actions across conversation topics.

How reusable topic blocks work

A topic block is basically a subflow that performs certain actions or conversational tasks in a topic. For example, you can build a topic block that creates or retrieves certain types of records. You create topic blocks with Virtual Agent Designer, similar to the way that you build conversation topics. With Virtual Agent Designer, you can do the following:

- Set topic block properties.
- Define the controls (nodes) used in the block.
- Test or preview the block.
- Publish the block to make it available for use in topics or other topic blocks.

Unlike topics, topic blocks are not discoverable by a large language model (LLM), Natural Language Understanding (NLU), or keywords. The topic block's functionality can only be accessed by a topic.

A conversation that uses (consumes) a topic block is referred to as the calling topic. A topic block can call another topic block, but it cannot call itself. You can "nest" topic blocks in this manner, even if the flow returns to the initial topic, as in this example:

Chain of nested topic blocks



Note: If Virtual Agent detects an infinite loop, the conversation ends.

The Virtual Agent platform and applications provide pre-built topic blocks for common tasks or subflows. You can use these pre-built topic blocks in your conversation topics "as is" in the appropriate application scope by duplicating them. You can then customize these pre-built topic blocks as needed. Some of the common topic blocks include the following.

Examples of pre-built topic blocks

Pre-built topic blocks	Application scope
• Transfer to Live Agent: Transfers a bot conversation to a live agent. • Survey: Presents a survey for collecting feedback for an agent. • Geolocation: Gathers information about the user's location. • Pause: Insert a pause (in seconds) in the conversation. • Deflection: Tracks deflection metrics for the Virtual Agent.	Global. Provided with the Glide Virtual Agent plugin (com.glide.cs.chatbot).
Contextual search: Uses a search phrase to return search results in a card format, such as knowledge articles and catalog items.	Common topic block used by the CSM, HR Service Delivery, and ITSM business applications. Provided with the Service Management Virtual Agent Topic Blocks plugin (com.glideapp.cs.sm_topic_blocks). This plugin is included with the Virtual Agent conversation plugins for these business applications.

On the home page, you can use the filter icon  to filter and view only the topic blocks.

Virtual Agent Designer

Test active topics Create topic

Topics 48 Last refreshed 7m ago

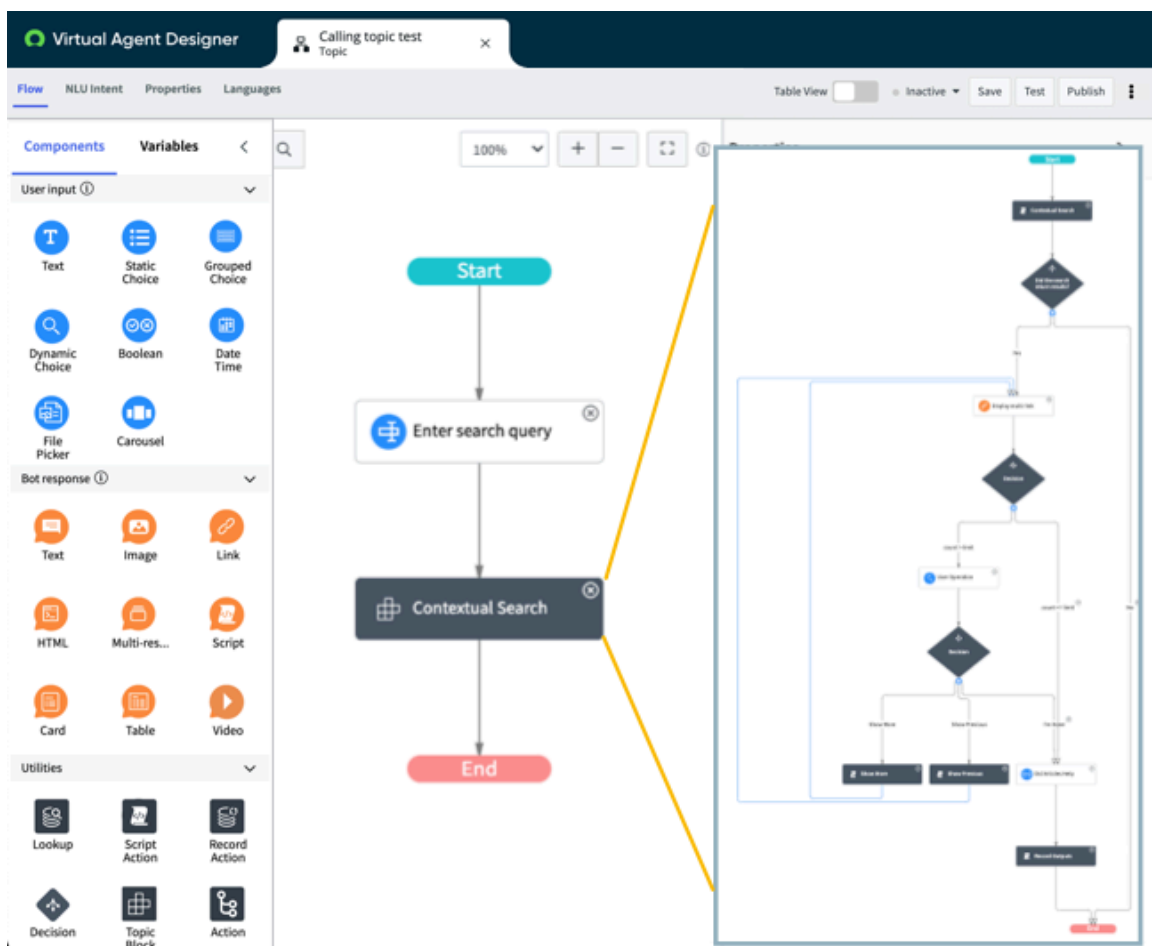
Search

	Name	Type	Status	Active	Last modified	Description
☐	AIA-NLU Input Collector	Topic Block	Published	Active	2025-06-18 12:39:39	AIA Input Collector
☐	AIA-Text Input Collector	Topic Block	Published	Active	2025-06-18 12:39:05	
☐	Generate Form Popup	Topic Block	Published	Active	2025-06-05 23:33:06	Generate Form Popup
☐	AI Search	Topic Block	Published	Active	2025-04-30 05:40:53	Perform asynchronous AI Search
☐	Doc intel User Query Input	Topic Block	Published	Active	2025-04-01 03:47:23	
☐	Trigger Par Export	Topic Block	Published	Active	2024-12-17 14:44:13	This is a reusable topic block to create par export job records and return the e...
☐	Analytics Export - Non LLM Text input	Topic Block	Published	Active	2024-12-02 19:24:09	Non LLM text input
☐	get query	Topic Block	Published	Active	2024-11-22 14:56:06	
☐	Run AI Search	Topic Block	Published	Active	2024-11-07 00:15:29	Perform asynchronous AI Search
☐	Contextual Search	Topic Block	Published	Active	2024-10-28 12:31:57	Returns results from knowledge articles, service catalog items, attachments to c...

Showing 1-10 of 48

Records per page 10

After you create and publish a topic block, the block is available for use as a Topic Block utility in Virtual Agent Designer. You can add the topic block to a calling topic or to another topic block. In the following example, the calling topic uses the Contextual Search topic block. When a topic calls the Contextual Search topic block, the conversation flow contained in the topic block executes.



What to do next

Working with topic blocks involves the following steps:

1. [Create a reusable topic block.](#)

Build a conversation component that performs a common function that can be reused in Virtual Agent conversations.

2. [Add a reusable topic block to a calling topic or topic block.](#)

To run a specific subflow, add a reusable topic block to a calling (parent) topic or topic block. Specify the inputs that are used in the topic block and review outputs that are returned from the topic block.

3. [Maintain topic blocks and associated calling topics \(as needed\).](#)

When you update a published topic block, Virtual Agent Designer performs certain checks. Displayed messages inform you of changes that you may want to make to calling topics that use the updated block.

(Legacy) Virtual Agent pre-built topic blocks for NLU

Virtual Agent provides pre-built topic blocks that topic authors or admins can use to perform specific platform-related functions or tasks in bot conversations. For example, certain topic blocks enable you to check agent availability or generate AI Search results.

Overview of pre-built topic blocks

Certain pre-built topic blocks are included automatically with the Glide Virtual Agent (com.glide.cs.chatbot) plugin and Virtual Agent Lite. If you're using Virtual Agent Lite, you have read access to the topic blocks but you can't create topic blocks or add them to calling topics.

You can duplicate pre-built topic blocks and modify the duplicates by using Virtual Agent Designer. For information about working with topic blocks and how to add them to calling topics, see [Maximizing code reuse with topic blocks](#) and [Add a reusable topic block to a calling topic or topic block](#).

The following sections describe the input and output parameters for calling different types of platform topic blocks. The topic block input parameters are passed from the calling topic, and the output parameters are returned from the topic block to the calling topic.

Note: Upgrades to the default topic blocks are not applied to the duplicated topic blocks.

Agent Availability topic block

Use this topic block to get relevant live agent information for use in agent handoff conversations. This information includes agent availability, wait time (how long before an agent is available), and queue information. You can use the information returned, such as a long wait time for an agent, to initiate a case or customer callback.

This topic block requires the Agent Chat (com.glide.interaction.awa) plugin, which includes Advanced Work Assignment.

The following table lists the output parameters for this topic block.

Agent Availability output parameters

Parameter	Description
agentAvailable	Agent availability. The value is true if an agent is available for this queue. Otherwise, the value is false.
supportQueue	sys_id of the queue that is associated with the conversation. The value is null if an agent is not available or if there is no associated queue.
waitingTime	Average numeric wait time for the queue. The value is null if an agent is not available.

Deflection topic block

Use the deflection topic block in Virtual Agent conversation topics to track the issues that Virtual Agent helped to resolve or actually resolved for a user.

For example, the pre-built Auto Resolution Virtual Agent topic uses a deflection topic block to track deflections. For more information, see [\(Legacy\) Using the deflection topic block to track deflections in Virtual Agent](#).

The following table lists the input parameters for this topic block.

Deflection input parameters

Parameter	Description
Deflection Configuration	Group of deflection patterns.
Deflection Pattern	Deflection pattern in the deflection configuration that you have chosen.
Activity Table	Table where the deflection activity occurs. This table is associated with the primary activity table. For more information, see (Legacy) Create deflection configurations and patterns .
Activity Ids	List of comma-separated activity system IDs. For example, incident ID or task ID. You can also add output from the AI Search or Contextual Search topic block to create a link between a deflection occurrence and the content that contributed to the same deflection.

FAQ Conversation Builder topic block

Use this topic block to build bot conversations that use your existing FAQ content. With this topic block, you can enable topic authors to build simple conversations by using existing [knowledge articles](#)  that are published in the FAQ template or by using Q&A data that was imported from sources such as [spreadsheets](#) .

The FAQ Conversation Builder topic block uses [contextual search](#)  to find an appropriate match in the FAQ content. FAQ content is access-controlled based on requester role, access rights, and context.

Activate the [Knowledge Management Advanced](#)  plugin to use the FAQ Knowledge template.

Note: The default length of an FAQ snippet that is returned in the conversation is 400 characters. The snippet length includes the HTML tags and links that are used in the snippet. To change the snippet length, change the value in the *com.glide.cs.faq.display_size* system property. In addition to applying the specified length, the system applies word-wrap logic to prevent words and links in the snippet from being truncated arbitrarily.

The following tables list the input and output parameters for this topic block.

FAQ Conversation Builder input parameters

Parameter	Description
query	Search term or phrase that is passed to the topic block. Select Input Variables or Script Variables .
portal	Context for the search. Select Input Variables or Script Variables .
kb_knowledge	Knowledge base for the search. Select Input Variables or Script Variables .

FAQ Conversation Builder output parameters

Parameter	Description
Results_Returned	Boolean value that indicates whether any results were returned from the query.
Results_Helpful	Boolean value that indicates whether the user found the results helpful.

Form Content Popup topic block

Use this topic block to open a form in a popup window from the chat widget. Once the user submits the required information, the record appears as a card in the Virtual Agent chat window. If a new record is created, the sys ID for that record is sent to the server so that the Virtual Agent topic has that information. For information about creating a pop-up window from a link, see [\(Legacy\) Create a smart link preference](#).

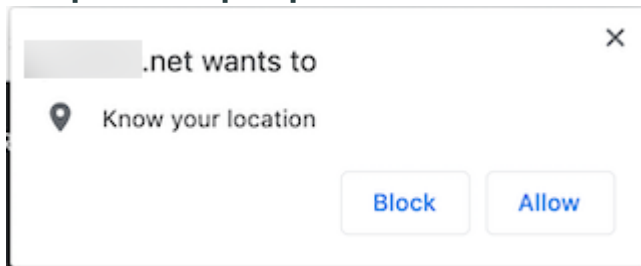
Form Content Popup topic block input parameters

Parameter	Description
sysId	Sys ID of the record you want to display from the table specified in the <i>table</i> parameter. If you don't want a specific record, enter <code>-1</code> to create a new record.
table	Name of the table you want to query or create a record in.
view	Name of a view that you created for the table. If not specified, the default view is used.

Geolocation topic block

Use this topic block to retrieve information about the location of users, if the users agree to that. Before the topic block is called in a conversation, the users are asked if they want their location to be known. For example, the users see a prompt similar to the following:

User permission prompt



Users can choose to block the request or allow their location to be known. If the users click **Allow**, they are later asked if they would like to share their location.

The following tables list the input and output parameters for this topic block.

Geolocation input parameters

Parameter	Description
permissionPrompt (String)	Text asking permission to use the user's location. This text is shown to the user.
isGeoPermissionGrantedForNextUse (Boolean)	A boolean value that determines if users have granted permission to retrieve their location coordinates if this request is asked more than once during the conversation. The variable can be set as follows: • <i>True</i>: Don't display permission prompt again because the user has granted permission on this device. • <i>False</i>: Display the permission prompt because the user has either denied permission or has allowed the coordinates to be retrieved one time only.

Geolocation output parameters

Parameter	Description
Latitude	Latitude coordinates.
Longitude	Longitude coordinates.
errorMessage	Message that is associated with the error if there are any errors.
errortype	Variable that is returned from the topic block. Types of errors include: • PERMISSION_DENIED • POSITION_UNAVAILABLE • TIMED_OUT • UNKNOWN_ERROR
status	Variable that is returned from the topic block. The status can be:

Geolocation output parameters (continued)

Parameter	Description
	• OK: Location coordinates were retrieved successfully. • ERROR: Retrieval was unsuccessful.

Pause topic block

Use this topic block to create a pause to control the pacing of a conversation. To end users, this feedback is seamless and is displayed as a typing indicator.

For example, if the chat generated a list of knowledge base links, you may want to add a delay before continuing the conversation to give your end user time to read the information.

The Pause topic block appears on the Utilities section of the palette for easier access.

The following table lists the input parameter for this topic block.

Pause input parameter

Parameter	Description
Seconds	Number of seconds to wait before continuing the chat. The maximum value allowed is 60 seconds. If the value entered is 30 seconds (the default value) or less, the block should unpause in near real time. If the value entered is greater than 30 seconds, expect the unpause to occur with a maximum latency of +30 seconds. For example, if you set the value to 31 seconds, it could take up to 61 seconds to unpause (at most).

Run AI Search topic block

Note: If you're upgrading from Rome or a prior release, you must replace the legacy AI Search topic block with the Run AI Search topic block in order for it to work.

Use this topic block to generate AI Search results in a conversation. This block doesn't require specific input parameters from a calling topic because it is controlled by the AI Search application in Virtual Agent. The default Virtual Agent Search Application and EVAM configuration set in the [chat experience](#) control how AI Search results are displayed in conversations.

For information about how Virtual Agent uses AI Search, see [\(Legacy\) Implementing AI Search in NLU](#). To learn more about Virtual Agent chat experiences and how to configure them, see [Customizing a Virtual Agent chat experience](#).

You can control certain aspects of the Run AI Search topic block:

- Optionally customize the AI Search experience - You can customize the search experience by creating a custom Search Application Configuration to be used by the topic block, rather than the default Virtual Agent Search Application Configuration. The Search Application Configuration defines the search results returned in the conversation. For details on using a custom Search Application Configuration in the topic block, see [\(Legacy\) Create a custom AI Search experience for Virtual Agent conversations](#).

To use the default Virtual Agent configuration for AI Search, leave the **Search Application Configuration** field empty in the Topic Block Properties sheet when you're adding the Run AI Search topic block to a topic.

- Specify an AI Search flow action timeout value - The AI Search flow action in the topic block automatically times out at 10 seconds. You can change the length of time before this flow action times out by [adding the system property](#) `com.glide.cs.fdi.atlassearch.timeout` and setting these fields to change the timeout value:

System property fields for `com.glide.cs.fdi.atlassearch.timeout`

Field	Value
Name	Enter the system property name: <code>com.glide.cs.fdi.atlassearch.timeout</code>
Description	Enter an explanation for this property: AI Search action timeout (in seconds)
Type	Select integer.
Value	Enter the number of seconds before the AI Search action times out. The default value is 10 seconds.

The following tables list the input and output parameters for this topic block. For the output parameters, you have the option to deactivate any of the variables returned by the topic block.

Run AI Search input parameters

Parameter	Description
search_term	Phrase entered by a user during the conversation.

Run AI Search output parameters

Parameter	Description
genius_results	Variable that identifies the Genius Results returned.
search_results	Variable that identifies the regular search results (multi-list output) returned.
search_metadata	Variable that identifies the search result metadata used for click metrics in Conversational Analytics, such as the search term used, query language, and more.

Runtime Language Detection topic block

Use this topic block to detect the user's language during a conversation and switch to that language mid-conversation if the language is supported in the ServiceNow AI Platform.

For example, in conversations where guest users are interacting with the bot in a language different from the current conversation language, you can use this topic block to change the language accordingly. This topic block enables your bot to:

- Detect the language in conversations across all supported Virtual Agent channels.
- Determine if the language is supported in the ServiceNow AI Platform, and if so, ask the user whether to switch to the detected language.
- Switch to the detected language during the conversation if the user agrees to the switch.

Activate the Virtual Agent Language Detection and Translation plugin [com.glide.cs.runtime_language_detection_translation] to use this topic block.

The following table lists the input parameters for this topic block.

Runtime Language Detection input parameters

Parameter	Description
utterance (String)	Text entered by the user.
Change language (Boolean)	Option that displays a message to the user that does the following: • Indicates the bot has detected that the user is typing in a different language. • Asks whether to continue the conversation in the supported language. If the user responds yes, the conversation changes to the supported language.

(Legacy) Using the Geolocation topic block

Topic authors can include a pre-built topic block called Geolocation in conversations with users. The Geolocation topic block retrieves the latitude and longitude coordinates of the user's location.

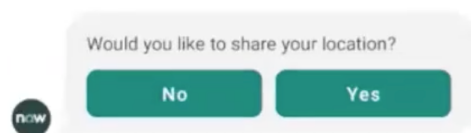
Topic authors can add this topic block to larger conversation flows. With the user's permission, the topic block retrieves the user's latitude and longitude location coordinates. Knowing these coordinates can help topic authors respond to customer requests or issues faster and more efficiently.

For example, you may need to send a technician to a customer site to resolve an incident. To quickly respond to the customer, you need to know which technicians are located nearby so you can dispatch the appropriate technician for the customer's location.

For general information about how geolocation is used on the ServiceNow platform, see [Geolocation](#).

Share location details

The first time a user, such as a field technician, uses the Geolocation topic block in a conversation, they are asked if they would like to share details about their location.



Geolocation topic block flow

User choice	Topic block response
Yes	The topic block sends the user's latitude and longitude coordinates from the server to the user's device. If users want to allow the ServiceNow instance to access their location, users may then see operating system-specific or browser-specific prompts. Examples of such prompts include the following: • Allow (always) • Allow (one time only) • Block (don't allow) Depending on the user's response, they may see this prompt one or more times, or they may never see it.
No	The topic block does not retrieve user coordinates and displays a relevant error message for the topic author to resolve. The error is logged as an output parameter. For details, see Geolocation topic block parameters.

Modify the Geolocation topic block

If you are a topic author or an admin, you can modify the Geolocation topic block flow, as applicable. Simply duplicate the topic block and rename it. You can then use it as needed in the larger conversation flow you're designing.

The Geolocation topic block properties sheet lets topic authors specify the input and output mappings. You can also customize the prompt using data pills or scripts. For example, you can include an explanation or reason for asking the question. For information about using data pills and scripts, see [Assistant Designer controls](#).

Share location prompt in the Geolocation topic block properties

Input Mapping

These variables are passed to the Topic Block.

* permissionPrompt (String)

Use the input mappings to customize how Virtual Agent asks users for permission to share their location. The response is passed to the topic block.

Use the output mappings to specify the variables that are returned from the topic block in the conversation.

Output mapping properties in the Geolocation topic block

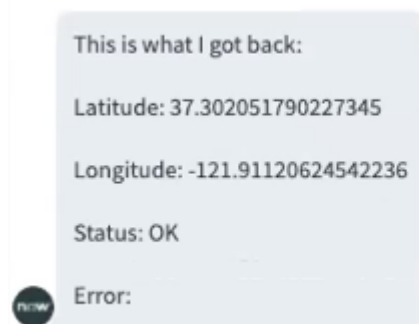
Output Mapping

These variables are returned from the Topic Block.

Enable	Name	Variable Name ^①
☒	latitude	latitude
☒	longitude	longitude
☒	errormessage	errormessage
☒	errortype	errortype
☒	status	status

All the variables are selected by default. Keep the default choices, or select the variables you want returned from the topic block. At a minimum, you should select the latitude and longitude coordinates. However, error messages, error type, and status details could be useful when resolving problems. The output mappings you select are stored as variables on the server.

Geolocation topic block results



For more information about the Geolocation topic block properties, see [Geolocation topic block parameters](#).

(Legacy) Using NLU Virtual Agent with a live agent

Sometimes a conversation requires human intervention. When this occurs, you can transfer the user to a live agent in Agent Chat.

(Legacy) Transferring NLU Virtual Agent conversations to a live agent

Manage live chat support, including the chat support interface used when a Virtual Agent conversation is transferred to a live agent.

Note: The Glide Virtual Agent plugin (com.glide.cs.chatbot) automatically activates the Glide Conversation Server plugin (com.glide.cs) for chat support.

Conversations in Virtual Agent are transferred to a live agent in several ways. This transfer happens automatically when an unrecoverable error occurs, but it can also be triggered by a script in a topic, or when a user manually selects that option.

Automatic transfer to a live agent when an error occurs

When a conversation encounters an error, the conversation automatically transfers to a live agent.

Note: If you don't plan to use Agent Chat, be sure to deactivate it in the Agent Chat settings. For more information, see [Setting up Agent Chat](#).

Automatic transfer to a live agent that is triggered by a script in a topic

In situations where you want a support agent to handle the conversation, you can create a script in your topic that uses the `vaSystem.connectToAgent()` method. This method triggers a transfer to a live agent. This option can be useful for conversations involving negative customer sentiment, high priority requests, or requests outside the scope of your topic process. For example:

```
(function execute() {
  if (vaInputs.urgency == 1 && vaInputs.impact == 3)
    if(vaSystem.isLiveAgentAvailable()) {
      vaSystem.connectToAgent()
    }
})()
```

This script action control transfers the conversation to a live agent based on the incident impact and user urgency. The script uses the `vaSystem.isLiveAgentAvailable()` method as follows:

- In Agent Workspace, the `vaSystem.isLiveAgentAvailable()` method checks the queue schedule and whether agents are online.
- In Connect Support, the `vaSystem.isLiveAgentAvailable()` method only checks the queue schedule.

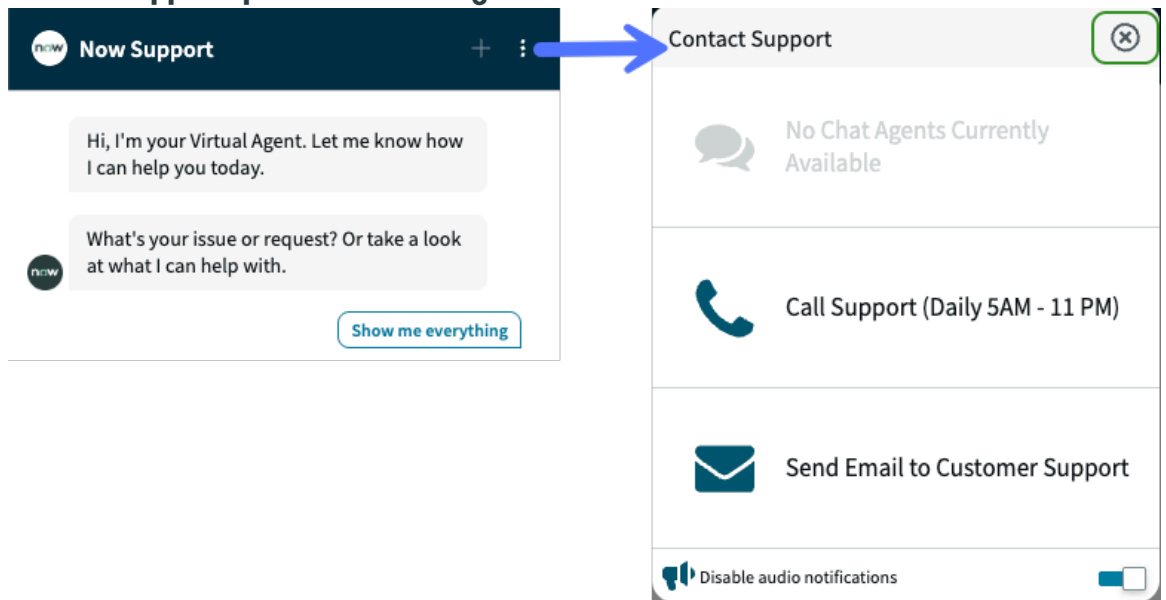
Note: The `vaSystem.isLiveAgentAvailable()` method only checks whether agents are online, regardless of their skill set.

Manual transfer to a live agent using the Contact support option

You can choose the **Contact support** option and then select **Contact Live Agent** to transfer the conversation to a live agent.

Note: Users running a Virtual Agent messaging integration must enter the command `Hi` or `agent` to access the live agent transfer option. If your environment isn't configured for live agents, the `agent` command doesn't work. For more information, see [Integrating Virtual Agent with messaging apps](#).

Contact Support options in Virtual Agent



How Virtual Agent conversation transfers work

For a user engaged in a Virtual Agent conversation, the switch to a live agent is a seamless transfer. When a transfer is triggered, either automatically or by a user manually, the conversation is automatically routed to the appropriate chat support interface, based on your [Agent Chat settings](#). In Agent Chat settings, admins also define the general messages that users see during live agent transfers.

If you're using Agent Workspace, the conversation is automatically routed and assigned to an available live agent. If you're using Connect Support, the conversation is routed to the chat support queue that you specify.

Note: At least one live agent must be available when transferring from Virtual Agent, otherwise the end user is presented with a no agents available message and their conversation isn't transferred.

Transfer to a live agent in Agent Workspace

If you're using Agent Workspace, the Virtual Agent conversation is automatically transferred to a qualified available agent, based on the Chat service channel configuration and the queues that the agent supports, as defined in Advanced Work Assignment.

For the user, the conversation with the agent continues in the Virtual Agent (client) interface. In Agent Workspace, the chat assignment appears in the agent's inbox. When an agent accepts the assignment, the agent joins the conversation and interacts with the user.

Transfer to a live agent in Connect Support (deprecated)

If you're using Connect Support, the Virtual Agent conversation is routed to the appropriate chat support queue. For the user, the conversation with the agent continues in the Virtual Agent chat interface. In Connect Support, the agent accepts the queue with the transferred user to join the conversation and interact with the user.

In earlier releases, admins used the Chat Setup form to assign the default chat queues for Customer Service Management, HR Service Delivery, and IT Service Management or a global queue to which Virtual Agent conversations were

automatically routed if default queues weren't assigned. These queues, which admins defined in Connect Support, are stored in the Chat Queues [chat_queue] table. If you're using Connect Support as the fulfiller interface and must change chat settings, see [Setting up Agent Chat](#) for details.

User sentiment

When configured, user sentiment analysis is performed on Virtual Agent and live agent conversations. The user sentiment is stored in the Interaction Insights [sys_cs_interaction_insight] table. For details, see [Interaction Insights table](#).

(Legacy) Closing NLU Virtual Agent and Agent Chat conversations

Virtual Agent and Agent Chat conversations that are abandoned by requesters remain open until they are automatically closed by the scheduled job, *Time Out Abandoned VA Conversations*. This job runs hourly each day.

The default timeout period for abandoned Virtual Agent and live agent conversations is two hours (7200 seconds). The *Time Out Abandoned VA Conversations* job runs hourly to find and close any conversations that have been open longer than the default (or configured) timeout period.

Admins can change the default timeout period for closing Virtual Agent and live agent conversations by [adding the system property](#) `com.glide.cs.conversation_idle_timeout`. The timeout value that you specify in this property applies to all conversations in supported Virtual Agent and live agent channels, including chat channels such as Microsoft Teams, Slack, and messaging channels (such as SMS).

If you're using Virtual Agent and Agent Chat on multiple chat channels, you can add a channel-level idle timeout value that overrides the timeout value set in the `com.glide.cs.conversation_idle_timeout` property for chat channels.

If needed, you can also change the time at which the Time Out Abandoned VA Conversations job runs.

Note: You can initiate the Closing Conversation topic with phrases tied to the intent (End Conversations) such as Bye or Exit. If the chat isn't closing when you enter an appropriate phrase, the NLU model for the setup topics might not be published or assigned.

Change the timeout period for Virtual Agent and live agent conversations

Add the `com.glide.cs.conversation_idle_timeout` property to the System Property [sys_properties] table to specify the length of time that an abandoned Virtual Agent or live agent conversation remains open (idle). When the *Time Out Abandoned VA Conversations* job runs hourly, it closes any Virtual Agent and live agent conversations that have been open longer than the specified time.

1. In the navigation filter, enter `sys_properties.list`.
2. Select **New**.
 - a. On the form, fill in the fields.

Field	Value
Name	Enter the system property name: <code>com.glide.cs.conversation_idle_timeout</code>

Field	Value
Description	Enter an explanation for this property: Idle timeout period (in seconds) for all conversations
Type	Select integer.
Value	Enter the number of seconds that abandoned Virtual Agent or live agent conversations remain open, after the requester's last response. This value must be less than 7200 seconds, since the <i>Time Out Abandoned VA Conversations</i> job runs every 3600 seconds (hourly) to close idle conversations. For example, a value of 1800 seconds (30 minutes) means that an abandoned conversation remains open for 1800 seconds (30 minutes). When the <i>Time Out Abandoned VA Conversations</i> job runs, it closes any conversations that have been idle longer than 1800 seconds.

b. Select **Submit**.

Override the conversation timeout period by channel

You can set the conversation timeout value for a channel by adding a channel-specific conversation timeout value that overrides the `com.glide.cs.conversation_idle_timeout` property. When the *Time Out Abandoned VA Conversations* job runs hourly, it closes any Virtual Agent or live agent conversations in the channel that have been open longer than the specified time.

1. In the navigation filter, enter `sys_cs_channel.list`.
2. In the Messaging Channels table, locate the channel record to be changed and double click the **Conversation Idle Timeout** field.
3. Enter the number of seconds that abandoned Virtual Agent or live agent conversations remain open in the channel, after the requester's last response.

For example, a value of 1800 seconds (30 minutes) means that an abandoned conversation in the channel remains open for 1800 seconds (30 minutes). When the *Time Out Abandoned VA Conversations* job runs, it closes any conversations that have been idle longer than 1800 seconds.

4. Save the value.

Change the Time Out Abandoned VA Conversations scheduled job

To change the time that this hourly scheduled job runs or to make other adjustments to the scheduled job:

1. Navigate to **All > System Definition > Scheduled Jobs**, and then open the Time Out Abandoned VA Conversations record.
2. In the Scheduled Script Execution form, change the **Time** at which the scheduled job runs. Or, depending on how you want to adjust the timing, change other fields in the form as needed.

For example, to change the interval at which the job runs, in the **Run** field, select **Periodically**. You then specify the **Repeat Interval (Days and Hours)** that the job runs and the **Starting** date for the interval. For a description of the other fields that you can change in this form, see [Automatically run a script of your choosing](#).

3. Select **Update**.

The job runs at the specified time and frequency.

(Legacy) Localization options for Virtual Agent for NLU

The ServiceNow platform provides several methods for serving your international Virtual Agent users, regardless of their language and locale. Professionally localize your conversations, use dynamic machine translation, or a combination of the two.

Direct and dynamic language support

If your chat audience is diverse, you want to support them in their own language whenever possible. One option is to localize everything professionally using linguists who can translate your topics into the desired languages. While this option produces the best user outcomes, it is often the most expensive. Another option available to you is language detection combined with dynamic machine translation. Instead of using translated topics and models, dynamic translation connects to a third-party machine translator. During the conversation, user utterances and responses are translated into the primary language on the instance, and all results are translated back into the user's language for the session. There are benefits and drawbacks for all options, as described in the following list. Before activating machine translations, you should carefully weigh the costs and benefits and set proper expectations for your deployment objectives.

Direct language support (professional localization)

A direct language strategy employs an expert linguist to configure entities, intents, strings, keywords, and vocabulary, which are then used to match user utterances with configured content. Since an expert provides translations that directly match the conversation's content, the accuracy of the translated content will be high. In addition to the translations themselves, experts can use the [NLU vocabulary feature](#) to further define words and phrases that it may encounter from your users. For example, a user may enter an acronym such as MS, which you can define as the vocabulary item `Microsoft`.

Professional translations are implemented directly in Virtual Agent Designer. For details, see [\(Legacy\) Localizing Virtual Agent NLU conversations](#).

Using translations from professional linguists and corresponding ServiceNow language plugins

Benefits	Constraints
• More accurate translations • For supported languages, NLU intents and entities are localized	• Requires more resources to build and maintain • Longer completion time • Higher implementation costs • 5 languages have NLU intent and entity support • 12 languages have NLU intent support only

Using translations from professional linguists and corresponding ServiceNow language plugins (continued)

Benefits	Constraints
	- Increased coverage is not typically scalable - Not easily extensible For more information, see (Legacy) Language support for NLU services.

Dynamic language detection and machine translation

Dynamic machine translation relies on the translation service to translate all content in real time. The accuracy of the translations is dependent on the translation service. Although translation services typically leverage algorithms to translate words based on the context of the conversation or sentence, there may be times when there is minimal context for the algorithm to leverage. Accuracy may be diminished in this situation. Check with your translation service provider about the ability to exclude words from translation or associate vocabulary with specific synonyms.

Using dynamic translation with the supported ServiceNow language plugins

Benefits	Constraints
- Lower implementation costs - Faster completion time - Less human maintenance - ServiceNow provides 22 language plugins with basic translations	- Limited scalability - Limited extensibility 5 languages have NLU intent and entity support 12 languages have NLU intent support only For more information, see (Legacy) Language support for NLU services.

Dynamic machine translation for languages that are not supported on the ServiceNow platform provides coverage, but the quality of the user experience may be lower.

Using dynamic translation with unsupported languages

Benefits	Constraints
- Lower implementation costs - Faster completion time - Less human maintenance - Support for many languages	- User experience may vary - Potential for mistranslation may reduce user outcomes

Using dynamic translation with unsupported languages (continued)

Benefits	Constraints
• Highly scalable • Highly extensible	

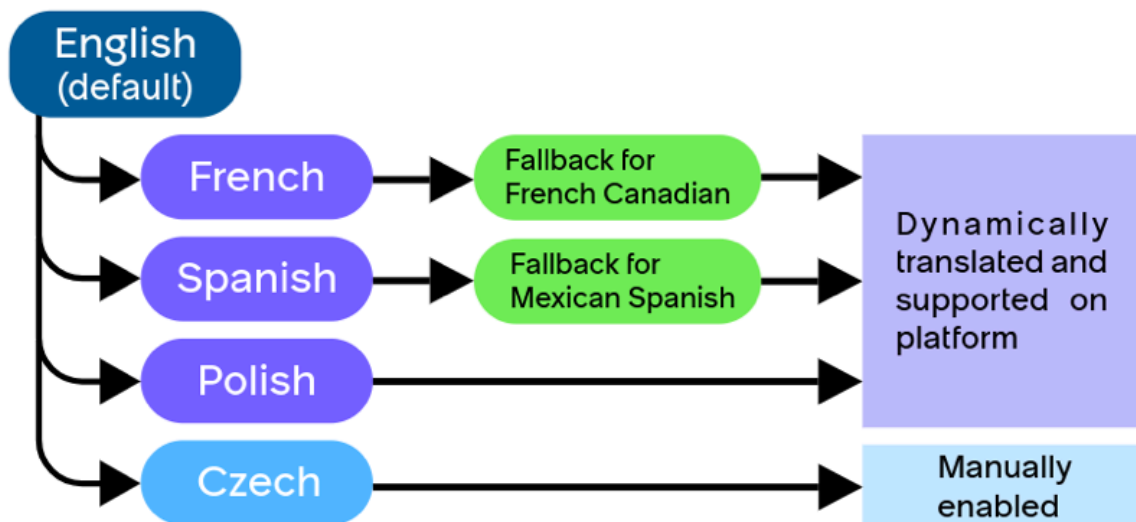
Multi-language deployment strategies

Depending on the needs of your user base, you may want a mix of solutions to maximize both user experience and access. For example, you may choose to professionally localize prioritized languages and dynamically translate others. For example, if 95% of your users speak six languages, you may decide to use a linguist to translate your topics into those six. You might then use Dynamic Translation for the remaining five percent.

You can also enable locale support by [designating translated languages as fallback languages](#). For example, you can support Mexican Spanish users by designating Spanish as the fallback language for that locale.

In the following example, French, German, and Spanish are professionally localized, including the NLU models, intents, and entities. This localized content provides the best user experience. Polish is supported as a language on the ServiceNow platform, and when the plugin is installed and activated, it includes some translated content. In this imaginary scenario, the business decision was made to dynamically translate Polish content because it accounts for a smaller percentage of users. The quality of this experience may vary since NLU models are not localized. Instead, utterances are dynamically translated to English, and NLU topic discovery is run through the English model. Since Czech is currently not a supported language on the ServiceNow platform, dynamic machine translation is the only option. Admins can add Czech as a language and enable Dynamic Translation for the language in Virtual Agent.

Example language support strategy



Localization insights

You can view dynamic translation and localization insights from the Virtual Agent Designer page. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**, and select **Localization Insights** from the list of links in the side panel.

For more information, see [Localization Insights dashboard](#) .

(Legacy) Language detection and dynamic machine translation in Virtual Agent NLU conversations

Enable a combination of language detection and machine translation for Virtual Agent to improve the chat experience for diverse users. You can designate fallback languages for locales or dynamically translate languages that are not professionally localized or are not supported in topic discovery.

Chat users are more comfortable having conversations in their preferred language. Their preferred language is set in the user's profile language preference. For example, Virtual Agent greets users in the preferred language specified in their user profile. But if a user responds in another language, Virtual Agent can detect the change. Depending on your user experience, users either receive a prompt regarding whether they'd like to switch the conversational language to the detected language or the conversational language updates automatically to the detected language. After the language is switched to the detected language, that language becomes the conversation's language for the remainder of the conversation. But in many cases users don't have control over their preferred language, particularly if they are guest users.

Guest conversations do not support language detection if resumable guest sessions are not enabled. This is why language detection and dynamic machine translation can improve the chat experience, particularly if you have conversations that have not been localized in some languages. For example, your organization may routinely localize into Spanish and French, but you may also want to support Dutch and Danish. You can enable Dynamic Translation on your ServiceNow® instance for those languages.

You can use language detection to support custom or locale-specific language codes as well. For example, NLU topic discovery doesn't support Mexican Spanish (es-mx), but it does support Spanish (es). You can designate Spanish as the fallback language for Mexican Spanish, ensuring that these users have a good customer experience.

Virtual Agent conversations can be dynamically translated. Virtual Agent uses platform translations and if no platform translations are found, then Dynamic Translation is used instead. If some conversations have been professionally translated, you should disable dynamic translation for those specific languages. Expert translations of your NLU models, keywords, and topics may be more accurate and of higher quality than machine translations. Prior to making a dynamic translation call, the Text Translations for Dynamic Translation [sys_cs_dynamic_translation_text] and Message [sys_ui_message] tables are checked to see if the text has been previously translated or already has a localization record. A dynamic translation call is only made if no translation exists in either table. After a dynamic translation call is made and that text is translated, that translated text is stored in the Text Translations for Dynamic Translation [sys_cs_dynamic_translation_text] table for future use. This table is cleared every 24 hours to ensure that the most up-to-date translations stored in the Message [sys_ui_message] table are being referenced. Storing previously translated text results in fewer dynamic translation calls to third-party translation services. For more information about localizing Virtual Agent conversations, see [\(Legacy\) Localizing Virtual Agent NLU conversations](#).

You can use Dynamic Translation during the localization process as well. If you are localizing conversations with professional linguists, you can enable Dynamic Translation while some topics and strings remain untranslated. When your deployment in that language is complete, you can disable Dynamic Translation, since professional translations are likely more accurate.



Virtual Agent Academy: [Dynamically translate languages in Virtual Agent](#) Watch this video for a demonstration of using Virtual Agent with Dynamic Translation.



Note: You can use language detection independently of Dynamic Translation.

Language detection and Dynamic Translation process in Virtual Agent NLU conversations

When you enable language detection and Dynamic Translation for Virtual Agent for other languages, a variety of diverse users gain access to your Virtual Agent chat environment.

For more information on enabling language detection, see [\(Legacy\) Enable Dynamic Translation for languages in Virtual Agent for NLU](#).

Language detection is only applicable to the first utterance entered into the conversation. Conversational language switching cannot occur mid-conversation. Language detection prompts users with a question regarding whether they'd like to switch the conversational language during Virtual Agent NLU conversations.

When language detection is turned off, no conversational language switching can occur.

The default system language sets all users' default session language. That user's default session language is what sets the conversational language. It is also the preferred language in your NLU model. When a user types an utterance that is not recognized as the system language, the results depend upon your configuration for that language.

The following examples show how a conversational language can be impacted depending upon the language detection and dynamic translation settings:

Note: If you create exclusion rules for Dynamic Translation, those excluded terms are honored during Dynamic Translation. For more information about the Exclusion Framework, see [Exclusion Framework in Dynamic Translation](#).

Language detection and Dynamic Translation configuration settings and results

Language configuration	Results in Virtual Agent NLU conversations
Language detection and Dynamic Translation are not configured.	For unlocalized conversations, the language the topics appear in is dependent on the language they were authored in. Typically, the default system language is used for topics and topic discovery.
Language detection is enabled, but not Dynamic Translation	Language responses can show up differently depending on whether localization was done or not for those topics. The conversation language may continue in the detected language based on whether localization records for those topics were previously included. If localization records are not provided, the conversation language would continue in the preferred conversational language. If the detected language is a locale or other language code that has been configured with a fallback language, Virtual Agent asks the user if they want to switch the conversation to the fallback language. For example, if the detected language is Mexican Spanish (mx-es), and Spanish (es) has been designated as the fallback language, Virtual Agent asks: I have detected you are typing in Spanish. Would you like to switch the conversation to Spanish? (Yes/No) If the user selects Yes, the fallback language is used for topic discovery and topic display. This continues until the conversation ends.

Language detection and Dynamic Translation configuration settings and results (continued)

Language configuration	Results in Virtual Agent NLU conversations
	If the user selects No , Virtual Agent will not prompt them again during the conversation.
Language detection and Dynamic Translation are enabled	If the detected language is enabled for dynamic translation in Virtual Agent Chat Settings, Virtual Agent asks the user if they want to switch the conversation to the detected language. For example, the preferred conversational language is in English but the user types an utterance in Spanish. The user receives a prompt asking whether they'd like to switch the conversation to Spanish. The prompt reads, I have detected you are typing in Spanish. Would you like to switch the conversation to Spanish? (Yes/No) If the user selects No, Virtual Agent will not prompt them again during the conversation and the conversation continues in English. If the user selects Yes, the utterance is translated to the default language. The default language for NLU conversations is within the <i>glide.sys.language</i> system property. All topic matches are translated dynamically into the user's conversation language and displayed. In this example, the conversation will now continue in Spanish, and Virtual Agent expects the user to continue chatting in Spanish. After the conversation ends and the user restarts a new conversation by reloading their browser or initially navigating to a portal with no conversation in progress, the prior conversational language (Spanish in this example) continues.

The language detection and dynamic machine translation process operates according to the following principles:

- Language detection occurs only once per conversation, at the initial utterance.

If a user tries to change the language in the middle of a conversation, Virtual Agent returns an I didn't understand message.

- When the conversation has closed and restarted, the language used in the next conversation varies depending on how the user restarted the conversation. If the user restarted the conversation by reloading their browser, the preferred language is restored in the next conversation. If the user restarted the conversation by using the chat widget's restart feature, the previous conversational language is restored in the next conversation. Regardless of how a conversation has closed and restarted, if a user did not accept to switch languages after a different language was detected in the previous conversation, the preferred language is restored in the next conversation.
- If a user's detected language is the same as the preferred language, the user is not asked to switch languages.
- If a user's detected language has no fallback language specified and dynamic translation is not enabled for it, the conversation continues in the preferred language.
- If a user's detected language is not activated on the instance, the conversation continues in the preferred language. For more information, see [Activate a language](#) .

 **Note:** AI Search results are not translated.

Dynamic Translation and Agent Chat

If Dynamic Translation is enabled on Virtual Agent but turned off for Agent Chat, the live agent will see what the user sees. If the user started the conversation in another language and the conversational language switches, then the live agent will see the conversation in the user's detected language. This may cause some confusion for both the agent and the customer. To resolve this issue, consider turning on Dynamic Translation for Agent Chat as well. For details, see [Configuring Dynamic Translation for Agent Chat](#).

Supported languages

For better results, install the ServiceNow language plugins for each language that uses dynamic translation. For a detailed list of language plugins, see [Activate a language](#).

You can enable dynamic translation for languages that are not currently supported on the ServiceNow platform. For details, see [Enable Dynamic Translation for an unsupported language](#).

Supported channels

Dynamic Translation for Virtual Agent is currently supported in the following channels:

- ServiceNow chat widget
- Microsoft Teams
- Slack

Note: The Virtual Agent topic test window may identify user utterances from Microsoft Teams or other adapters as `sysparm_search_text`. Dynamic Translation will translate this content as well.

The following channels do not support Dynamic Translation for Virtual Agent:

- ServiceNow mobile client
- WhatsApp
- LINE
- Twilio SMS
- Alexa
- Google Assistant
- Siri

(Legacy) Prerequisites for using Dynamic Translation in Virtual Agent for NLU

To enable dynamic machine translation, install ServiceNow[®] language plugins and Dynamic Translation plugins. Then configure Dynamic Translation for your instance.

Before you can [enable dynamic machine translation](#) for a language, you must install and configure Dynamic Translation on your instance.

1. As an admin, install the following plugins:

- Glide Virtual Agent (com.glide.cs.chatbot)
- Dynamic Translation for Virtual Agent (com.glide.cs.dynamic.translation.virtual_agent)

2. [Activate language plugins](#) for each language that you want to deploy with dynamic translation.

Note: Languages for Dynamic Translation are stored in the `sys_cs_dynamic_translation_virtual_agent` table.

3. (Legacy) Enable NLU languages in Virtual Agent settings.

Note: NLU detection and discovery values are stored in the `sys_cs_general_settings` table. As of Vancouver, ServiceNow NLU is the available NLU driver.

4. (Optional) Create exclusion rules for specific terms and content patterns within the [Exclusion Framework](#).

The following translation service providers are pre-configured once the plugins are installed:

- Microsoft Azure
- Microsoft Azure OEM
- Google Translate

Configuring other translation service providers

You can configure any other translation service provider in the Dynamic Translation application as follows:

1. [Integrate with a translation service provider](#).
2. [Create a translator configuration in Dynamic Translation](#).
3. (Optional) [Create a language code mapping](#) to map translator language codes to the ServiceNow® language codes.

Next step

[\(Legacy\) Configure Dynamic Translation service integration credentials](#)

(Legacy) Configure Dynamic Translation service integration credentials

Configure the credential and connection for your translation service.

Before you begin

Note: The following content is only relevant to NLU and live agent LLM conversations that use Dynamic Translation for Agent Chat.

Complete the [\(Legacy\) Prerequisites for using Dynamic Translation in Virtual Agent for NLU](#).

Role required: admin

Procedure

1. Create a credential for the translator service alias.
For detailed information, see the following topics:
 - [Create a credential for the MicrosoftTranslation alias](#)
 - [Configure the credential for the GoogleTranslation alias](#)
2. Create a connection for the translator service alias.
For detailed information, see the following topics:

- [Create a connection for the MicrosoftTranslation alias](#) 
- [Configure the connection attributes for the GoogleTranslation alias](#) 

What to do next

(Legacy) [Activate your translation service in Dynamic Translation](#)

(Legacy) Activate your translation service in Dynamic Translation

Activate your preferred Dynamic Translation provider and mark it as the default service for both translation and language detection.

Before you begin

- i Note:** The following content is only relevant to NLU conversations and live agent conversations that use Dynamic Translation for Agent Chat.

Review and configure:

- [\(Legacy\) Prerequisites for using Dynamic Translation in Virtual Agent for NLU](#)
- [\(Legacy\) Configure Dynamic Translation service integration credentials](#)

Role required: admin

Procedure

1. Navigate to **All > Dynamic Translation > Translator Configurations**.
2. Select the name of the translation service to open the record.
3. On the Translator Configuration form, select the **Active** check box.
4. On the Preferences tab, select **Mark as default for translation**.
5. On the Preferences tab, select **Mark as default for detection**.
6. Select **Update**.

What to do next

(Legacy) [Enable Dynamic Translation for languages in Virtual Agent for NLU](#)

(Legacy) Enable Dynamic Translation for languages in Virtual Agent for NLU

Enable Dynamic Translation for one or more languages in Chat Settings for Virtual Agent.

Before you begin

Install and configure the plugins for Dynamic Translation, as described in [Prerequisites for using Dynamic Translation in Virtual Agent](#). If these prerequisites aren't completed, the Multi language support card described in the following steps doesn't appear.

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Select **Virtual Agent**.
3. On the Multi language support card, do the following:
 - a. Turn on the **Language Detection** toggle switch to enable it.
 - b. Turn on the **Dynamic language translation** toggle switch to enable it.
 - c. Select **View All**.

The Multi-language support page opens. All languages that are installed on the instance are listed.

4. In the **Dynamic Translation Enabled** column, select **false** for the language you want to enable.

Virtual Agent > Multi-language support

Multi-language support

Activate languages for dynamic translations by installing the language plugin for ServiceNow supported translations or manually add an active language row in the sys_language table for other languages.

All 8
Last refreshed 2m ago.

Language	Dynamic Translation Enabled
Portuguese	false
French	false
Spanish	false
Japanese	false

- a. If prompted, select **Edit record**.

You can view this record but can't edit it here. [Edit record](#)

- b. Select **Dynamic Translation Enabled**.

- c. Select **Update**.

- d. Return to the Multi-language support page and repeat these steps for any other language you want to enable.

5. Optional: Enable language detection for guest users.

If this system property is set to **off**, Dynamic Translation will not work for guest users.

- a. Navigate to **All**, and then enter `sys_properties.list` in the filter.

- b. In the **Name** field, search for `com.glide.cs.guest_session_resumable`.

- c. In the **Value** column, change the setting to **true**.

System Properties Name Search

All > Name >= com.glide.cs.guest_session_resumable

Name	Value	Type
com.glide.cs.guest_session_resumable	true	true false
com.glide.cs.html_output_max_transcript...		integer
com.glide.cs.idle_actionable_notificatio...	8	integer

(Legacy) Specify a fallback language for locale-specific languages and NLU prediction

Provide language locale support by specifying a fallback language for Virtual Agent to use for topics, keywords, and NLU prediction. For example, the ServiceNow® platform doesn't support Mexican Spanish (mx-es), but it does support Spanish (es), which you can designate as the fallback language for a better user experience.

Before you begin

- Note:** The fallback language plugin must be installed on the instance. Once installed, the language is available in the Languages [sys_language] table. If Now Assist in Virtual Agent is on and you work with LLM-enabled conversations, you can only establish a fallback language in the Languages [sys_language] table rather than use the following steps.

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Select **Virtual Agent**.
3. On the Multi language support card, slide the **Language Detection** toggle switch to enable it.
4. Select **View All**.
5. Select the name of a language to open the record.
6. Select **Edit Record** at the top of the page.
7. In the **Fallback** field, select the Search icon (🔍) and select an available language.

The screenshot shows the 'Languages' configuration page in ServiceNow. The header indicates the current language is 'Spanish - Mexico'. Below the header, there are several fields: 'Name' (Spanish - Mexico), 'Application' (Global), 'Active' (checked), 'ID' (es-MX), 'Chart Font' (empty), and 'Text Direction' (Left-to-Right). The 'Fallback' field is highlighted with a green border and contains the value 'Spanish'. A search icon (🔍) is visible next to the 'Fallback' field. At the bottom of the form, there are 'Update' and 'Delete' buttons.

8. Select **Update**.

Result

Custom locales appear in the Languages [sys_language] table, along with their fallback language. The language code (ID) indicates a language that Virtual Agent can detect. In the following example, three French locales use French as the fallback language. Only French Canadian remains unconfigured.

Languages

Name

Search

Actions on selected rows...

New

All

☐	Name	ID	Text Direction	Active	Fallback
	American English	en-US	Left-to-Right	true	(empty)
	Brazilian Portuguese	pb	Left-to-Right	false	(empty)
	Chinese	zh	Left-to-Right	false	(empty)
	Czech	cs	Left-to-Right	false	(empty)
	Dutch	nl	Left-to-Right	false	(empty)
	English	en	Left-to-Right	true	(empty)
	Estonian	et	Left-to-Right	false	(empty)
	Finnish	fi	Left-to-Right	false	(empty)
	French	fr	Left-to-Right	true	(empty)
	French (Belgium)	fr-BE	Left-to-Right	true	French
	French (Luxembourg)	fr-LU	Left-to-Right	true	French
	French (Switzerland)	fr-CH	Left-to-Right	true	French
	French - Canada	fq	Left-to-Right	false	(empty)
	German	de	Left-to-Right	true	(empty)
	Hebrew	he	Right-to-Left	false	(empty)

(Legacy) Enable Dynamic Translation for an unsupported language in NLU

The ServiceNow® platform supports several languages, but you can enable dynamic machine translation for additional languages in Virtual Agent.

Before you begin

Install and configure the plugins for Dynamic Translation, as described in [\(Legacy\) Prerequisites for using Dynamic Translation in Virtual Agent for NLU](#).

Role required: virtual_agent_admin or admin

About this task

You can configure Dynamic Translation for any installed language plugin on the ServiceNow® platform. Once installed, the language is available for configuration in the Multi language support card in Virtual Agent Chat Settings. But if you want to support a language that doesn't have a plugin, you can add it to the Languages [sys_language] table. Once added, you can enable machine translation for that language.

For more information about multi-language support options and their tradeoffs, see [\(Legacy\) Localization options for Virtual Agent for NLU](#). For more information about custom localizations, see [Custom translations](#).

Procedure

1. Navigate to **All**, and then enter `sys_language . list` in the filter.
2. On the Languages page, select **New**.
3. On the form, fill in the fields.

Field	Description
Name	Name and locale of the language, if applicable. For example, Spanish (Mexican) .

Field	Description
Active	Check box indicating that the language is enabled on the instance.
ID	The BCP 47 code for the language. For example, es-MX .
Text Direction	Direction of text for the language. Options are Left-to-Right or Right-to-Left .
Fallback	Language to be used if a translation is not available. The language plugin must be installed on the instance and activated for NLU, if you are using NLU topic discovery. For example, if the language is Mexican Spanish, you can specify Spanish as the fallback language.

4. Select **Submit**.

5. **Optional:** For a better user experience, translate some of the Virtual Agent system messages into the new language.

a. Navigate to **All**, and then enter `sys_ui_message.list` in the filter.

b. Translate the following Keys:

- Are you sure you want to end the current conversation?
- Click here to start a new conversation
- Close contact options
- [language name] (for example, **English** or **German**)
- Disable audio notifications
- End conversation
- I have detected you are typing in {0}. Would you like to continue the conversation in {0}?
- Just now
- No
- No Chat Agents Currently Available
- Please pick an option.
- Please type your request
- Please type your response here
- Send
- Start a new conversation
- Start typing to filter the list of topics below...
- Support options
- Yes

Note: If you specify a supported fallback language for the language you're adding, you do not need to translate Keys in the Messages table. For example, if you add Mexican Spanish as a language, you can specify Spanish as the fallback language. The Spanish language plugin already contains translations of these messages. For more information, see [\(Legacy\) Specify a fallback language for locale-specific languages and NLU prediction](#).

6. When the languages have been added, enable Dynamic Translation.

For more information on enabling Dynamic Translation, see [\(Legacy\) Enable Dynamic Translation for languages in Virtual Agent for NLU](#).

(Legacy) Localizing Virtual Agent NLU conversations

The ServiceNow platform provides several methods for localizing Virtual Agent conversations, depending on your needs. Use the Localization Framework to manage all aspects of the translation process, whether you are using machine translation, a third-party provider, or both.

Use the ServiceNow Localization Framework to standardize and track the translation process for Virtual Agent topics. The framework enables you to define the business process for translating your conversations. Use it to configure the following:

- How localization requests are fulfilled.

Options include machine translation, a translation management system (TMS), and exporting and importing files.

- Who is responsible for each step in the process.

Virtual Agent uses the following roles:

- Localization requestor
- Localization fulfiller
- Localization editor
- Business rules for the process:
 - Auto translation and publication
 - Approval required for translation and publication

To learn more, see [Localization Framework](#) . To learn more about localization roles, see [\(Legacy\) Localization roles for Virtual Agent](#).

Localizing topics

The localization process flow depends on the method of topic discovery that you are using for your topics. The following types of topic discovery are supported using the Localization Framework.

- Keyword topic discovery

When you use the Localization Framework, the chat conversation and the keywords associated with the topic are translated.

- Natural Language Understanding (NLU) topic discovery

If your topics use NLU, both the topic and the model group must be localized. When you request a translation from Virtual Agent Designer, the topic and any optional keywords are translated. You must request translation for model groups from NLU Workbench. For more information about that process, see [Translate a multilingual model](#) .

Once the topic and secondary models are localized, you may need to [map the models to the topic](#) before publishing them.

Prerequisites

i Important: Currently, translatable strings such as topic text and bot responses cannot contain embedded quotes. Strings that contain embedded quotes cannot be localized.

Do the following before you begin managing translations:

- Activate the ServiceNow plugin for each language you want to support.

The Localization Framework is also installed by default. For more information, see [Activate a language](#).

- Configure the translation mode that you want to use in the Localization Framework.

You can configure machine translation, a translation management system (TMS), or send via email. For more information, see [Translation modes](#).

- If you are using Natural Language Understanding (NLU), enable languages in Virtual Agent settings.

For more information, see [\(Legacy\) Enable NLU languages in Virtual Agent settings](#).

- If necessary, add secondary languages to your NLU model group. For more information, see [Multilingual model management](#).

- Assign localization roles to team member groups.

Users are assigned different roles based on their responsibilities for the translation process. For more information, see [\(Legacy\) Localization roles for Virtual Agent](#).

Manage languages by model

If NLU is enabled for your instance, you can view and manage translations by model and language. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**, and then click **Manage languages**. Choose a model and a language, and then you can do the following:

- View translation status
- Request translations
- View or edit translations
- Test translations

Click **Manage NLU translations** for easy access to the model management page in NLU Workbench.

For more information, see [\(Legacy\) Localize Virtual Agent topics that use NLU topic discovery](#).

(Legacy) Enable NLU languages in Virtual Agent settings

If you plan to use language-specific NLU models, you must enable the installed languages in the Supported NLU Languages list. A language is enabled if the **Enabled** column displays true. English language is enabled by default.

Before you begin

Activate the ServiceNow plugin for each language you want to support. For more information, see [Activate a language](#).

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Click **Virtual Agent**.
3. Under Natural Language Understanding (NLU), click **View settings**.
4. Find the languages in the Supported NLU Languages list.
5. If the Enabled column displays **false** for a language, select the link to open the language NLU properties.
For example, in the following image, German, Portuguese, and Japanese are not enabled.

Language	Enabled
English	true
German	false
Spanish	true
Italian	true
Portuguese	false
French	true
Japanese	false

Showing 1-7 of 7 1 10 rows per page

6. Select the **Enabled** check box.
7. Click **Save**.

(Legacy) Localize Virtual Agent topics that use keyword topic discovery

Use the ServiceNow Localization Framework to manage the process of localizing Virtual Agent conversations and keywords.

Before you begin

Check the prerequisites for translating Virtual Agent components. For more information, see [\(Legacy\) Localizing Virtual Agent NLU conversations](#).

Make sure that your Virtual Agent topics are published and performing the way you want them to. Make any adjustments before you send them to localization.

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. Select the **NLU/Keyword** toggle, and open the topic that you want to translate.

4. Select the **Languages** tab.

Only languages that are installed and activated are displayed. To learn how to activate localization plugins, see [Activate a language](#).

Note: The ServiceNow AI Platform provides translations for interface features and pre-built topics. So in some topics, languages may display as partially translated.

The screenshot shows the 'Languages' tab in the ServiceNow AI Platform. It includes a 'Translations' section with a table of language mappings. The table has the following columns: Language, Topic translation status, Topic translations, Localization request, and Test. The data rows are as follows:

Language	Topic translation status	Topic translations	Localization request	Test
English	Complete			Test
Português (Brasil)	Not started	Edit	Request translation	Test
中文	Not started	Edit	Request translation	Test

At the bottom of the table is a button labeled 'Request translations'.

5. Do one of the following:

- Request translation:

a. Select the applicable check boxes, and then click **Request translations**.

b. When prompted, confirm your choice.

A translation record is created, and the translation status changes to **In progress**. The translation task is assigned to a user with the localization fulfiller role. For information about the fulfillment process in the Localization Framework, see [Fulfill a localization task](#).

- [Edit translations directly in Virtual Agent Designer.](#)

Result

When translations are complete, Virtual Agent admins can view, unlock, or edit them from the topic Languages tab or the Manage languages page.

Once translations are published, they are made available to Virtual Agent topics that use keywords dynamically.

(Legacy) Localize Virtual Agent topics that use NLU topic discovery

Use the ServiceNow Localization Framework to manage the process of localizing Virtual Agent conversations that use Natural Language Understanding (NLU).

Before you begin

Check the prerequisites for translating Virtual Agent components. For more information, see [\(Legacy\) Localizing Virtual Agent NLU conversations](#).

Make sure that your Virtual Agent topics are published and performing the way you want them to. Make any adjustments before you send them to localization.

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**.
2. Slide the discovery type toggle switch to **NLU/Keyword**, then select **Manage Languages**
3. In the **Select NLU Model** list, select the model group you want to manage. Intents that are mapped to a topic display on the page.
4. In the **View language** list, select a language.
The translation status of each topic in the chosen language displays on the page. Select a topic name to open the topic in Virtual Agent Designer, view or edit translations, or test translated content. The **Topic translation status** column shows the current status of the topic in the localization process.

Manage languages page

Manage languages for topics and their associated NLU Model

* Select NLU Model
[Read Only] Password Reset NLU Model (6 languages) X

View language
English

Request, edit, and test translations for topic and available NLU Languages.

Topic	Topic translation status	Topic translations	Test	NLU Intent
☐ Change Password (Template)	Complete		Test	ChangePassword
☐ Reset Password (Template)	Complete		Test	ResetPassword
☐ Unlock Account (Template)	Complete		Test	UnlockAccount

☐ Request topic translations ☒ Manage NLU translations NLU published a year ago [Refresh status](#)

If the **Topic translation status** column shows **Needs publishing**, you must publish the topic before you can submit it for translation.

Note: The ServiceNow AI Platform provides translations for interface features and pre-built topics. So in some topics, languages may display as partially translated.

5. Do one of the following:

- Select the check boxes for the topics you want to translate, and then click **Request topic translations**. When prompted, confirm your choice.

A translation record is created, and the translation status changes to **In progress**. The translation task is assigned to a user with the localization fulfiller role. For information about the fulfillment process in the Localization Framework, see [Fulfill a localization task](#).

Note: If a topic is already in localization, the corresponding check box is not available.

- [Edit translations directly](#).

6. Click **Manage NLU translations**.

The model opens in NLU Workbench. Request translations for your model group. For more information, see [Translate a multilingual model](#).

Result

When translations are complete, Virtual Agent admins can view, unlock, or edit them from the topic Languages tab or the Manage languages page.

Once translations are published, they are made available to Virtual Agent topics that use keywords dynamically. However, language-specific intent matching is not available until model groups are also translated and published.

What to do next

You may need to [map a topic to secondary models or a language-specific model](#).

When translations are done, you can [test localized NLU models](#).

(Legacy) Map a topic to a secondary NLU model

Map a Virtual Agent topic to a secondary model in the model group or to a standalone, single-language NLU model for each supported language.

Before you begin

i Note: An updated Assistant Designer Asset library user interface is available when you install ServiceNow Otto for Virtual Agent. This content assumes that you can see the list view. If ServiceNow Otto for Virtual Agent is not installed, you see the legacy UI and topics page. For more information, see [Virtual Agent Designer legacy topics page](#).

If you're using ServiceNow NLU, review [\(Legacy\) NLU model mapping in Virtual Agent Designer](#) for an understanding of NLU model groups.

If necessary, add secondary languages to the model group in NLU Workbench to create language-specific versions of the model. For more information, see [Multilingual model management](#) .

Role required: virtual_agent_admin or admin

About this task

If you select a secondary model for a language that is part of a different model group, the mapping changes for the entire topic. Secondary models must be part of the same model group as the primary language. You can select a different model and intent for a secondary language when it is the only language in the model (and therefore the primary language).

Updated model group mappings message



We updated mappings for these languages: English, French, German, Spanish

[See details](#)

Topic mapped to a model group with primary and secondary languages

Intent mapping

The topic is bound to NLU models for these languages: English, fr, German.

Language to edit:

German X ▼

English	German
Test this topic	Test this topic
Primary language → Model DAL Model (4 languages) X ▼	Secondary language Model DAL Model DE (4 languages) X ▼
* Intent	* Intent
Book a room X ▼	Book a room X ▼

For more information, see [\(Legacy\) NLU model mapping in Virtual Agent Designer](#).

Procedure

1. Navigate to **All > Conversational Interfaces > Virtual Agent > Designer**.
2. Slide the discovery type toggle switch to **NLU/keyword** toggle, and open a topic.
3. Open the **Languages** tab, and then select the **NLU language mapping** tab.
The first column is the NLU mapping that is based on your current session language. For example, if you're using English, the first column is **English**.
4. In the **Language to edit** list, select the language to map.
The languages listed are based on the NLU languages that you enabled in Virtual Agent settings. After you select a language, a column displays in the Intent mapping section and, if applicable, in the Entity mapping section. For example, if you select **Français**, a French language column displays.

Flow
NLU Intent
Properties
Languages
Active
Save
Test

Translations
NLU language mapping

NLU Language Mapping

The topic can be mapped to an intent in each of the supported languages. Select a trained model and one of its intents so that your users can discover this topic.

Intent mapping

The topic is bound to NLU models for these languages: Deutsch, English, Français.

Language to edit: Français

English	Français
Test this topic	Test this topic
Model	Model
Internal IT (3 languages)	Internal IT FR (3 langua...
* Intent	* Intent
Hardware Issues	Hardware Issues

Entity mapping

Map entities across your NLU language models.

Node Name	Prompt	English	Français
Hardware Type	What are you having a problem with?	-- Select --	-- Select --

5. Update the Intent mapping section.

- In the Model row, select an NLU model for the language that you selected.
- In the Intent row, select an NLU intent for the language that you selected.

6. If applicable, update the Entity mapping section.

For each language, map an entity from the model to an input node in the topic. In a conversation, these nodes are populated automatically with the entity value.

7. Click **Save**.

What to do next

(Legacy) [Test topic and NLU model translations](#)

(Legacy) Test topic and NLU model translations

Test a translated Virtual Agent topic and the localized NLU model to ensure that it works as expected in a conversation.

Before you begin

- Note:** An updated Assistant Designer Asset library user interface is available when you install ServiceNow Otto for Virtual Agent. This content assumes that you can see the list view. If ServiceNow Otto for Virtual Agent is not installed, you see the legacy UI and topics page. For more information, see [Virtual Agent Designer legacy topics page](#).

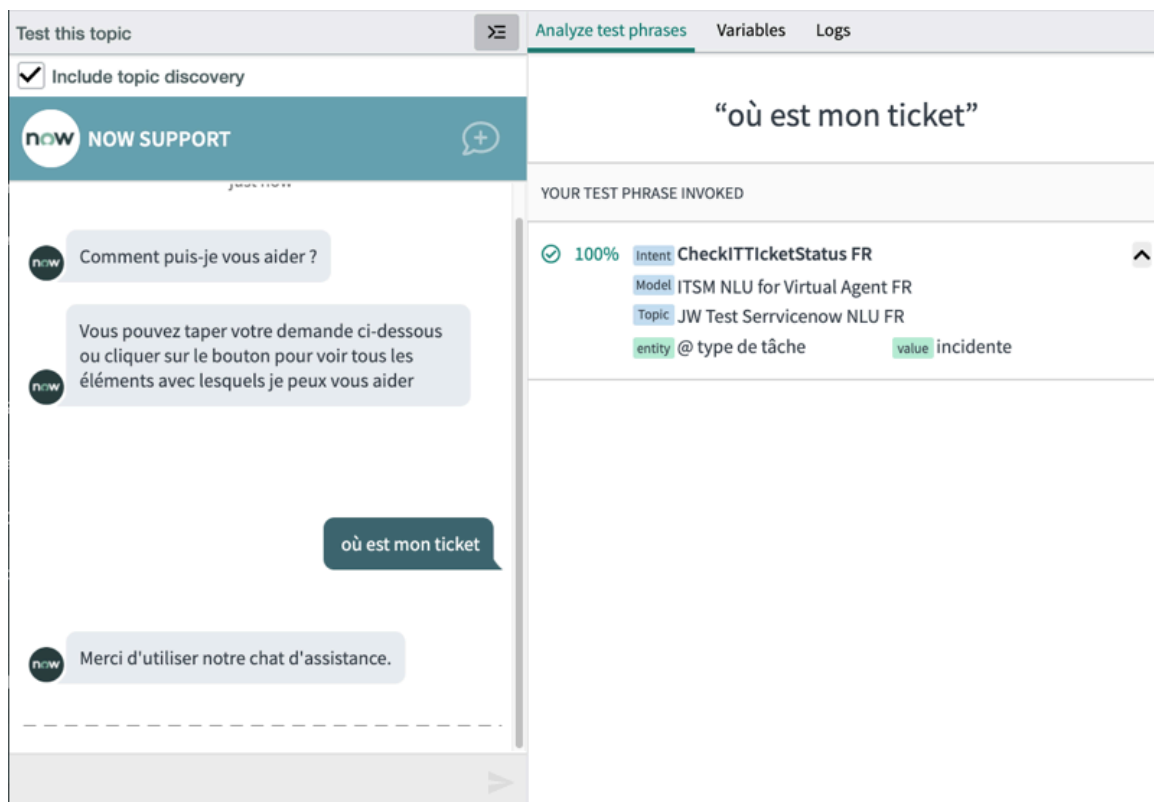
Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**.
2. Select the **Asset library** tab.
3. Set the discovery type toggle switch to **NLU/keyword**, followed by the NLU topic you want to test.
4. Under the Languages tab, select **Manage languages**.
5. In the **Select NLU Model** list, select the model group to test.
6. In the **View language** list, select a language.
7. In the **Test** column for an intent, select **Test**.
8. On the test window, run the conversation and review the results in the test tabs.
For more information about using the chat test window, see [\(Legacy\) Testing NLU/Keyword topics](#).

Example

The following image illustrates how you can test a French translation.



9. End the test by closing the window.

What to do next

Use the test results to modify the topic as needed. Continue testing as you adjust your topic and the NLU language mappings.

When the topic is ready, publish the topic to make it available to users. You can publish all or some of the NLU mappings. For more information about publishing a topic, see [Publish a Virtual Agent topic](#).

Tip: You can view localization insights from the **Manage languages** page and the Virtual Agent Designer home page. Navigate to **All > Conversational Interfaces > Virtual Agent Designer**, and then select **Localization Insights** from the Resources.

(Legacy) Edit translations for Virtual Agent topics

A Virtual Agent admin user can edit and publish translations directly in Virtual Agent Designer.

Before you begin

Note: An updated Assistant Designer Asset library user interface is available when you install ServiceNow Otto for Virtual Agent. This content assumes that you can see the list view. If ServiceNow Otto for Virtual Agent is not installed, you see the legacy UI and topics page. For more information, see [Virtual Agent Designer legacy topics page](#).

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > Conversational Interfaces > Assistant Designer**, select the **Asset library** tab, and do one of the following:
 - (LLM) Open a published topic, and then select the **Languages** tab.
 - (NLU/Keyword) Slide the discovery type toggle switch to **NLU/keyword**. Select **Manage languages** from Resources, and then choose a model, language, and topic.
2. In the **Topic translations** column, select **Edit**.

Example

The Edit Translations form opens.

The screenshot shows the 'Assistant Designer' interface for editing translations. At the top, there's a header with 'Assistant Designer' and a topic 'Hardware Issues'. Below the header, there's a navigation bar with tabs: 'Flow', 'NLU Intent', 'Properties', and 'Languages'. The 'Languages' tab is selected. Below the navigation bar, there's a section for 'Translations' and 'NLU language mapping'. A red arrow points to the 'Machine Translate' button, which is labeled 'Visible when configured'. To the right of the 'Machine Translate' button are 'Export Source File' and 'Publish Translations' buttons. Below these buttons, there's a section for 'Basic Info' with fields for 'Key phrases', 'Title', and 'Description'. Each field has a corresponding translation input box and a lock/unlock icon. A red arrow points to the lock/unlock icons, which are labeled 'Lock / unlock fields'.

3. On the Edit Translations form, you can do any of the following:
 - Unlock fields and enter translations directly on the form.
 - If it is configured in the Localization Framework, use machine translation to fill in the fields.

To set up machine translation, see [Create a translator configuration](#) .

- Export files to send to a third party for translation.

Select **Export Source File**, and then choose the file type. Select **Export File** to begin the download.

- Import translated files received from a translation service.

From the Export Source file list, select **Import Translated File**.

4. When translations are ready to publish, select **Publish Translations**.

Result

Once translations are published, they are made available to Virtual Agent topics that use keywords dynamically.

If your topic uses Natural Language Understanding (NLU), train your localized models. You may also need to map them to the topic. Then test and publish your localized models to ensure that native speakers can access localized intents. For more information, see [\(Legacy\) Map a topic to a secondary NLU model](#) and [\(Legacy\) Test topic and NLU model translations](#).

(Legacy) Request bulk translations for multiple topics

If you need to translate many Virtual Agent topics across multiple models at one time, you can use the [sys_cs_topic] table list view to request translations.

Before you begin

Role required: virtual_agent_admin or admin

Procedure

1. Navigate to **All > sys_cs_topic.list**.
2. Select the topic records you want to translate.
3. From the **Actions on selected rows** list at the bottom of the page, select **Request Translations**.
4. In the Request Translations dialog box, select the languages.

Only languages that are installed and activated in the Localization Framework are displayed. To learn how to activate localization plugins, see [Activate a language](#) .

5. Click **Submit**.

(Legacy) Authoring Virtual Agent conversations for localization

Use localization methods in your Virtual Agent scripts to ensure that the content can be translated. Localization methods are designed to show the original text when no translation is found. These methods can be applied to your code before you have created translations.

Localization method for message content

The `gs.getMessageLang` method checks the Message table [sys_ui_message] for a translated version of the text in the language selected for the current user. If a translated version isn't found, the default language (English) is returned.

This code provides a greeting that dynamically adds the value of the `first_name` variable.

Note: This content focuses specifically on NLU language support. For more information on LLM language support for Now Assist in Virtual Agent, see [Multilingual service for Now Assist](#).

Supported NLU languages

Service	Supported languages
ServiceNow NLU	For intent matching and entity recognition: - English - French - German - Japanese - Spanish For intent matching only: - English - Chinese (Simplified) - Danish - Dutch - Finnish - French - French (Canadian) - German - Italian - Japanese - Korean - Norwegian - Polish - Portuguese (Brazilian) - Spanish - Swedish
IBM Watson Assistant	- English - Chinese (Simplified) - Dutch - French - German - Italian - Japanese - Korean

Supported NLU languages (continued)

Service	Supported languages
	• Portuguese • Spanish
Google Dialogflow ES	• English • Chinese (Simplified) • Chinese (Traditional) • Dutch • Finnish • French • French (Canadian) • German • Italian • Japanese • Korean • Norwegian • Polish • Portuguese • Portuguese (Brazilian) • Russian • Spanish • Swedish • Thai • Turkish

(Legacy) Localization roles for Virtual Agent

Assign localization roles according to a user's scope in the localization process. Users may request translations, fulfill translation requests, and edit translations, based on their role.

The localization process follows this basic flow:

1. Topics are developed and released in the source language (for example, English).
2. Topics are translated, either by request or by editing them directly in Virtual Agent Designer.

If you are using NLU models, the models must be translated as well. For more information about that process, see [Multilingual model management](#) .

3. Translations are tested and published.

Virtual Agent role privileges vary with the user's function in this process. These roles are also defined in the Localization Framework. For more information, see [Localization Framework roles](#) .

To learn more about managing subscriptions, see [Managing per-user subscriptions in Subscription Management](#) and contact your account representative.

Virtual Agent admin permissions

The Virtual Agent admin role contains the localization requestor and localization editor roles by default. Users can do the following:

- Request translations
- View existing translated content
- Unlock and edit translated content (unless translation is in process)

The localization task is not available to this user.

Manage languages page with the Virtual Agent admin role

Manage languages for topics and their associated NLU Model

* Select NLU Model

Internal IT (3 languages) X

View language

Deutsch

Request, edit, and test translations for topic and available NLU Languages.

Topic	Topic translation status	Topic translations	Test	NLU Intent
☒ Hardware Issues	Partial	Edit	Test	Hardware Issues
☐ Open IT Ticket - Internal	In progress...	View	Test	Open IT Ticket - Internal
☐ Printer Problem	In progress...	View	Test	Printer Problem
☐ Software Issues	Needs publishing View topic	Edit	Test	Software Issues
☐ VPN Connectivity Problem	Not started	Edit	Test	VPN Connectivity Problem

☐ Request topic translations ☒ Manage NLU translations NLU draft saved 21 hours ago [Refresh status](#)

Localization fulfiller permissions

The localization fulfiller role may not have Virtual Agent privileges. In that case, the user would only have access to assigned Localization Framework tasks.

If a Virtual Agent admin has the localization fulfiller role, the **Manage languages** page lets the user view the localization task that was created.

Manage languages page with Virtual Agent admin and localization fulfiller roles

Manage languages for topics and their associated NLU Model

* Select NLU Model

Internal IT (3 languages) X

View language

Deutsch

Request, edit, and test translations for topic and available NLU Languages.

Topic	Topic translation status	Topic translations	Test	NLU Intent
☐ Hardware Issues	Partial	Edit	Test	Hardware Issues
☐ Open IT Ticket - Internal	In progress...	View View requested item	Test	Open IT Ticket - Internal
☐ Printer Problem	In progress...	View View requested item	Test	Printer Problem
☐ Software Issues	Needs publishing View topic	Edit	Test	Software Issues
☐ VPN Connectivity Problem	Not started	Edit	Test	VPN Connectivity Problem

☐ Request topic translations ☒ Manage NLU translations NLU draft saved 21 hours ago [Refresh status](#)

Click **View requested item** to open the localization fulfillment task in a new window.

Localization request task number

Localization Requested Items Number - Search Actions on selected rows...						
All > Number = LRITM0001001						
☐	Number	Document	Source language	Target language	State	Requested by
	LRITM0001001	Topic: Open IT Ticket - Internal	English	German	Open	System Administrator

(Legacy) Localization requestor [localization_requestor]

Requests translations for all the Virtual Agent components into one or more languages. Can also view localization insights. The Virtual Agent admin [virtual_agent_admin] role contains this role by default.

Contains Roles

List of roles contained within the role.

None.

Groups

List of groups this role is assigned to by default.

None.

Special considerations

None.

(Legacy) Localization fulfiller [localization_fulfiller]

Provides translations for the requested Virtual Agent topics. Depending on the flow, duties may include editing the translations in the Localization Framework task, interacting with third parties, and loading, verifying, and publishing translations.

Contains Roles

List of roles contained within the role.

None.

Groups

List of groups this role is assigned to by default.

None.

Special considerations

None.

(Legacy) Localization editor [localization_editor]

Edits the translations directly in Virtual Agent Designer. The NLU admin [nlu_admin] and Virtual Agent admin [virtual_agent_admin] roles contain this role by default.

Contains Roles

List of roles contained within the role.

None.

Groups

List of groups this role is assigned to by default.

None.

Special considerations

None.

(Legacy) Virtual Agent admin [virtual_agent_admin]

Contains the localization requestor and localization editor roles by default.

Contains Roles

List of roles contained within the role.

None.

Groups

List of groups this role is assigned to by default.

None.

Special considerations

Note: Avoid granting an admin role when more specialized roles are available.

(Legacy) Virtual Agent translation tables

Virtual Agent uses the [sys_translated_text] and [sys_ui_message] tables to store translated text.

Translation tables used by Virtual Agent

Table	Description
Translated Text [sys_translated_text]	Stores translations for fields with the field type translated_text or translated_html (see the dictionary entry). The [sys_cs_topic] table contains the English keywords and topic titles. It pulls translations from the [sys_translated_text] table. For details about translating text content into different languages, see Translated text table and Translating text fields.
Message [sys_ui_message]	Stores expert translations for messages in Virtual Agent topics.

Translation tables used by Virtual Agent (continued)

Table	Description
	Pre-built topics have already been translated, but you must provide translations for any content you create for your instance. For more information about the Message table, see Message table  .
Text Translations for Dynamic Translation [sys_cs_dynamic_translation_text]	Stores copies of the translations found in the Message [sys_ui_message] table and previously dynamically translated messages. This view-only table is only available when the Dynamic Translation for Virtual Agent plugin is installed and the Dynamic Translation in Virtual Agent feature is enabled. This table is cleared every 24 hours to ensure that the most up-to-date translations stored in the Message [sys_ui_message] table are being referenced. For more information about how the Text Translations for Dynamic Translation [sys_cs_dyamic_translation_text] table works with Dynamic Translation in Virtual Agent, see Language detection and dynamic machine translation in Virtual Agent in enhanced chat.

(Legacy) Integrating Virtual Agent with other channels

Integrate and extend the capabilities of Virtual Agent by connecting to your employees and customers where they already are. They are engaged in web portals, Now[®] Mobile apps, and messaging applications.

Starting with the Brazil release, Virtual Agent for NLU and Virtual Agent Lite are being prepared for future deprecation. It will be hidden and no longer activated on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#)  article in the Now Support Knowledge Base.

(Legacy) Integrating Virtual Agent for NLU with messaging apps

Enable users to run Virtual Agent bot conversations in supported third-party messaging apps. Use the Conversational Integration apps for Slack, Microsoft Teams, and Workplace that are available from the ServiceNow Store to configure these messaging apps on your ServiceNow instance.

i Note: Conversational Integration apps for Slack, Microsoft Teams, and Workplace, other consumer apps and voice apps are not supported for on-prem instances.

Admin setup

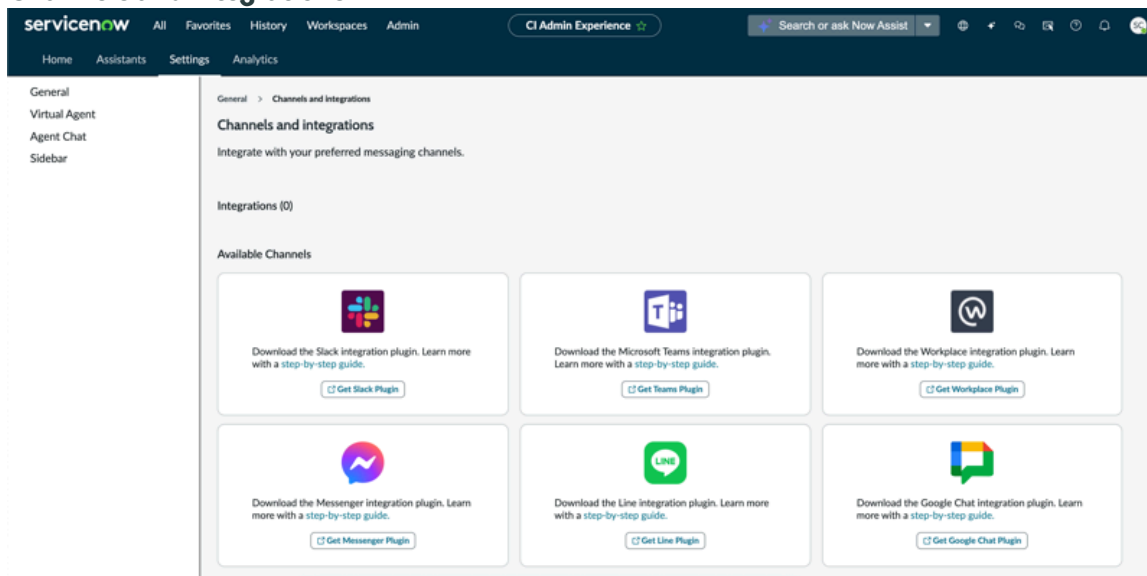
Use the Virtual Agent Conversational Integration apps to configure the messaging applications for your instance. Perform these basic installation steps to set up the Virtual Agent bot.

1. Install the Conversational Integration messaging apps, that are pre-built with ServiceNow Virtual Agent from the ServiceNow Store and then associate the app with your own ServiceNow instance.

For details, see [Integrating Virtual Agent with messaging apps](#).

2. Install the Conversational Integration apps for Slack, Microsoft Teams, and Workplace, LINE, Twilio, WhatsApp, Facebook Messenger, Alexa, Google Assistant, Amazon Connect, on your ServiceNow instance once they become available for installation after installing from the ServiceNow Store.

Channels and integrations



3. If needed, configure the system messages that users see in Virtual Agent conversations. You can also customize the common commands used in these messaging integrations.

Conversational interface in messaging integrations

The Virtual Agent interface for the Conversational Integration apps (Slack, Microsoft Teams, and Workplace) is similar to the web-based interface. However, there are some differences, such as commands used and how certain interface controls are displayed in these third-party messaging apps.

Common commands in messaging integrations

Command	Description
Hi	Begin a new conversation or end a conversation.
agent	Begin a new conversation or request a transfer to a live agent.
bye	Leave a live chat conversation at any time, for example before engaging with a live agent, during a live chat, or when live chat is about to end.
help	Displays a short list of useful commands.
logout	Unlink your ServiceNow account from a messaging integration.
notification or notifications	Subscribe to or unsubscribe from notifications.

Command	Description
restart	End the current conversation and begin a new one.

After you install the integration, you can customize these commands by using the **Configure** button for the installed teams/communities in the channel specific pages.

1. Navigate to **All > Conversational Interfaces > Settings**.
2. In **General Settings** under **Channels and integrations**, click **View All**.
3. On the Channels and integrations page, you can see the number of integrated channels and available channels for installation on your instance.
4. Click the **Manage** button in the specific channel and navigate to the Settings tab.
5. Click the **view settings** button against Contextual Actions.
6. Select the command record to be changed and update as needed.

Configuring Virtual Agent system messaging in the Conversational Integration apps

You can modify the default messages displayed to your users in Virtual Agent and Agent Chat conversations. For details on customizing them, see [Change Virtual Agent and Agent Chat system messages](#).

Rendering of input controls and bot responses in conversations

Input controls in Virtual Agent Designer, such as the Carousel render differently in bot conversations in messaging apps than in the web-based interface. For example, the Date Time picker control in Workplace presents buttons for users to select a date and time. Similarly, certain bot response controls, such as the Image response and Multi-response controls, also render differently in third-party messaging apps. For details on these differences, see the descriptions of the Virtual Agent Designer [input controls](#), [bot responses](#), and [utilities](#).

Attachments

In live agent conversations, users and agents can upload and exchange any type of attachment file when prompted.

Now Assist support

Existing channel integrations	Supports Now Assist	Supports synthesized response
Microsoft Teams/Copilot	Yes	Yes
Slack	Yes	Yes
WhatsApp	Yes	No
SMS/Twilio	Yes	No
IVR with Amazon Connect	Yes	No
AWS end user messaging	Yes	No
Workplace by Facebook	No	No
Facebook Messenger	No	No
Apple Business Chat	No	No
LINE	No	No

Existing channel integrations	Supports Now Assist	Supports synthesized response
IBM Watson Assistant	No	No
Alexa	No	No

(Legacy) Integrating IBM Watson Assistant conversations

Use the IBM Watson Assistant topic to enable Virtual Agent to exchange information with conversations that were created in IBM Watson Assistant.

(Legacy) Integrating Virtual Agent with IBM Watson Assistant

Set up the IBM Watson Assistant topic to run dialog skills (conversations created in IBM Watson Assistant) in the web-based chat client. This topic returns information exchanged during the Virtual Agent conversation to IBM Watson Assistant.

Before you begin

Note: An updated Assistant Designer Asset library user interface is available when you install ServiceNow Otto for Virtual Agent. This content assumes that you can see the list view. If ServiceNow Otto for Virtual Agent is not installed, you see the legacy UI and topics page. For more information, see [Virtual Agent Designer legacy topics page](#).

- In IBM Watson Assistant:
 - Create the dialog skill (conversation) in your IBM Watson Assistant workspace. The skill includes the dialog and any intents and entities that you define.
 - Navigate to your skill tile and in the tile menu, select **View API Details**. View the Skill Details and Service Credentials. Copy the following items: **Skill ID**, **Workspace ID**, **Username**, and **Password**. You need these items when setting up this integration.
- Activate the IBM Watson Assistant Integration plugin (com.glide.cs.ibm.watson.assistant).

Role required: virtual_agent_admin or admin

About this task

This topic runs an IBM Watson Assistant dialog in Virtual Agent. It doesn't require enabling Natural Language Understanding (NLU) or setting IBM Watson Assistant NLU as the NLU service provider for Virtual Agent.

Procedure

1. In your ServiceNow instance, update the watson_assistant.workspaceID system property.
 - a. In the navigation filter, enter `sys_properties.list`.
 - b. In the System Properties [sys_properties] table, locate the watson_assistant.workspaceID property.
 - c. Replace the existing **Value** with the **Workspace ID** for your skill, and select **Update**.
2. Verify that the REST message for IBM Watson Assistant provides the correct authentication endpoint for your IBM skill:
 - a. Navigate to **System Web Services > Outbound > REST Message**.
 - b. Select the IBM Watson Assistant record to open the REST Message IBM Watson Assistance form.

- c. Confirm that the **Endpoint** field and the **Endpoint** column displayed on the **Authentication** tab have the correct endpoint URL for your IBM Watson account.

REST Message: IBM Watson: Assistant

Name: IBM Watson: Assistant Application: Global Accessible from: All application scopes

Description: IBM Watson Assistant Service API's

* Endpoint: https://gateway.watsonplatform.net/assistant/api

Authentication | HTTP Request

REST Messages support the following Authentication types:

- Basic authentication
- Mutual (two-way authentication)
- OAuth 2.0

Authentication configured on the REST Message will automatically apply to child HTTP Methods. Authentication configured on child HTTP Methods will override the parent configuration.

[More info](#)

Authentication type: Basic Use mutual authentication: ☐

Basic auth profile: Assistant Profile

Update Delete

HTTP Methods for text Search Actions on selected rows... New

Name	HTTP method	Endpoint
Message	POST	https://gateway.watsonplatform.net/assis...

3. In the **Basic auth profile** field on the **Authentication** tab, open the Assistant Profile record.

4. In the Basic Auth Configuration form, enter the **Username** and **Password** values from your IBM Watson Assistant Service Credentials, then select **Update**.

Basic Auth Configuration: Assistant Profile

Name: Assistant Profile Application: Global

* Username: username

* Password:

Update Delete

5. Publish the IBM Skill topic:

- a. Navigate to **Conversational Interfaces > Virtual Agent > Designer**, and then slide the discovery type toggle switch to **NLU/keyword**.

- b. On the Virtual Agent Designer home page, select the IBM Watson Assistant topic to open the Topic Properties page.

Notice that the **Keyword** for this topic is IBM Watson Assistant and the **Category** is IBM.

- c. In the Topic Properties page, select **Publish** to deploy the topic to your Virtual Agent chat widget.

6. Configure the default topic for the Virtual Agent chat widget in one of the following ways:

- Provide the URL that specifies the IBM Watson Assistant topic as the default topic that opens in the Service Portal client:

For example: `https://<Your instance URL>$sn-va-web-client-app.do?sysparm_skip_load_history=true&sysparm_topic=<sys_id>` where `<sys_id>` is the `sys_id` of the published IBM Watson Assistant topic. The `sysparm_skip_load_history` parameter doesn't load the conversation history in the chat widget.

- Configure the Service Portal widget by selecting the edit (pencil) icon in the upper right corner of the Virtual Agent widget.

To set the default topic using the widget instance parameters, enter `sysparm_topic=sys_id` (where `<sys_id>` is the `sys_id` of the published IBM Watson Assistant topic) in the **Virtual Agent Client URL Parameters** field, and select **Save**.

Note: You can find the `sys_id` of a topic in the Topics [`sys_cs_topic`] table.

Important:

Use the `sysparm_topic` parameter only to load the given topic in the Service Portal chat client or when using the IBM Watson Assistant chat integrations (`com.glide.cs.ibm.watson.assistant.topic` and `com.glide.cs.ibm.watson.assistant.topicV2` plugins). This parameter doesn't allow users to start a new conversation or transfer to a live agent. It also disables the context menu and doesn't support other third-party chat clients.

(Legacy) Integrating Virtual Agent with IBM Watson Assistant for Assistant V2 API

Configure the IBM Watson Assistant Chat Integration to run a dialog skill (conversation) created in IBM Watson Assistant with the Assistant V2 API. The V2 API enables the Virtual Agent chat widget to run a topic that uses Watson Assistant's intent disambiguation feature to improve topic discovery.

Before you begin

- Note:** An updated Assistant Designer Asset library user interface is available when you install ServiceNow Otto for Virtual Agent. This content assumes that you can see the list view. If ServiceNow Otto for Virtual Agent is not installed, you see the legacy UI and topics page. For more information, see [Virtual Agent Designer legacy topics page](#).

With the IBM Watson Assistant v2 API chat integration, the chat widget communicates with an assistant instead of with a workspace. Workspaces are referred to as dialog skills. For information on IBM Watson Assistant, see [Migrating to the v2 API](#) in the IBM Watson Assistant documentation.

Role required: `virtual_agent_admin` or `admin`

About this task

This integration runs an IBM Watson Assistant dialog as a Virtual Agent topic in the chat widget. It doesn't require enabling Natural Language Understanding (NLU) or setting IBM Watson Assistant NLU as the NLU service provider for Virtual Agent.

The IBM Watson Assistant V2 API enables the chat widget to use the Watson Assistant intent disambiguation feature, which can potentially reduce false-positive intent predictions. If a user's utterance is ambiguous, IBM Watson Assistant suggests additional intents that might better match the user's true intention. For example, if the user utterance is `restaurant`, IBM Watson Assistant can suggest other possible intents, such as `book a restaurant` or `restaurant reviews`.

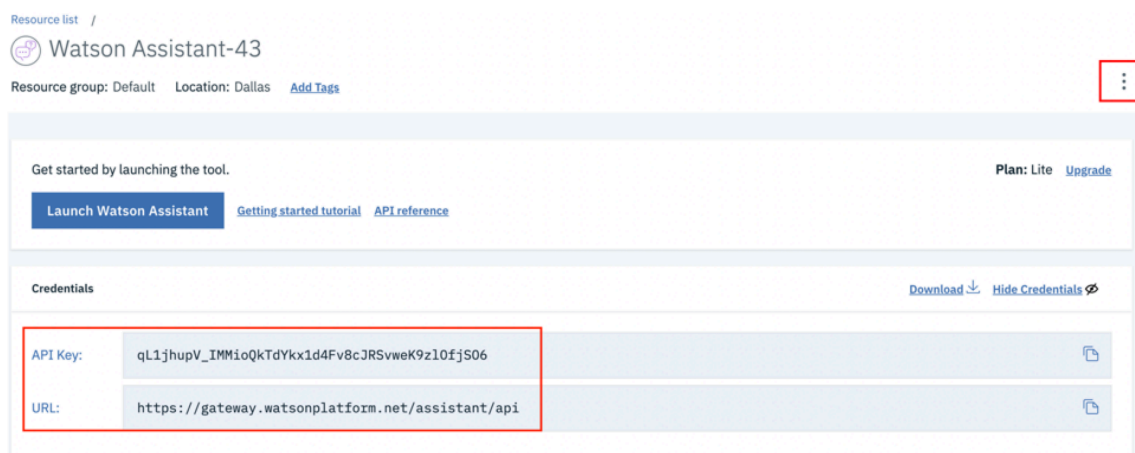
Procedure

1. Configure IBM Watson Assistant.

- a. Create your assistant, then add a dialog skill.

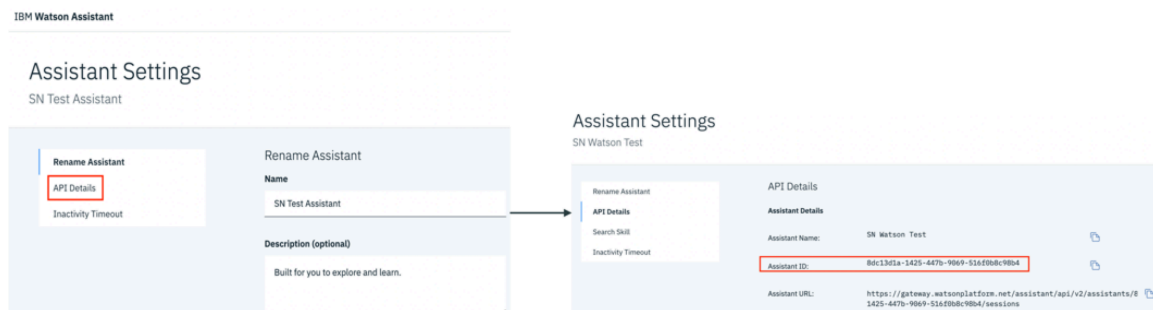
For details, see [Creating an assistant](#) in the IBM Watson Assistant documentation.

- b. On the Resource list page, locate and record your API key and URL, which you need to set up the chat integration:



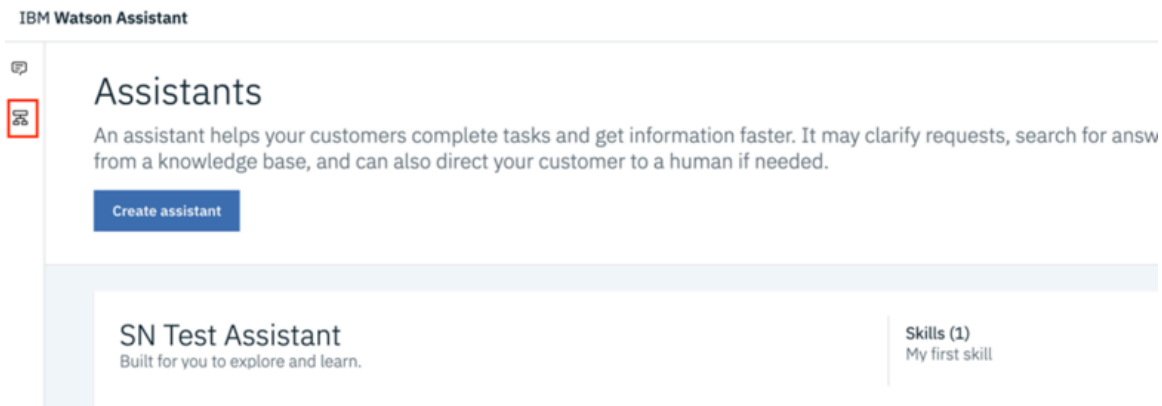
- c. Select the three vertical dots icon  and select **Settings**.

- Select the **API Details** tab.
- On the Assistant Settings page, find the **Assistant ID** key.



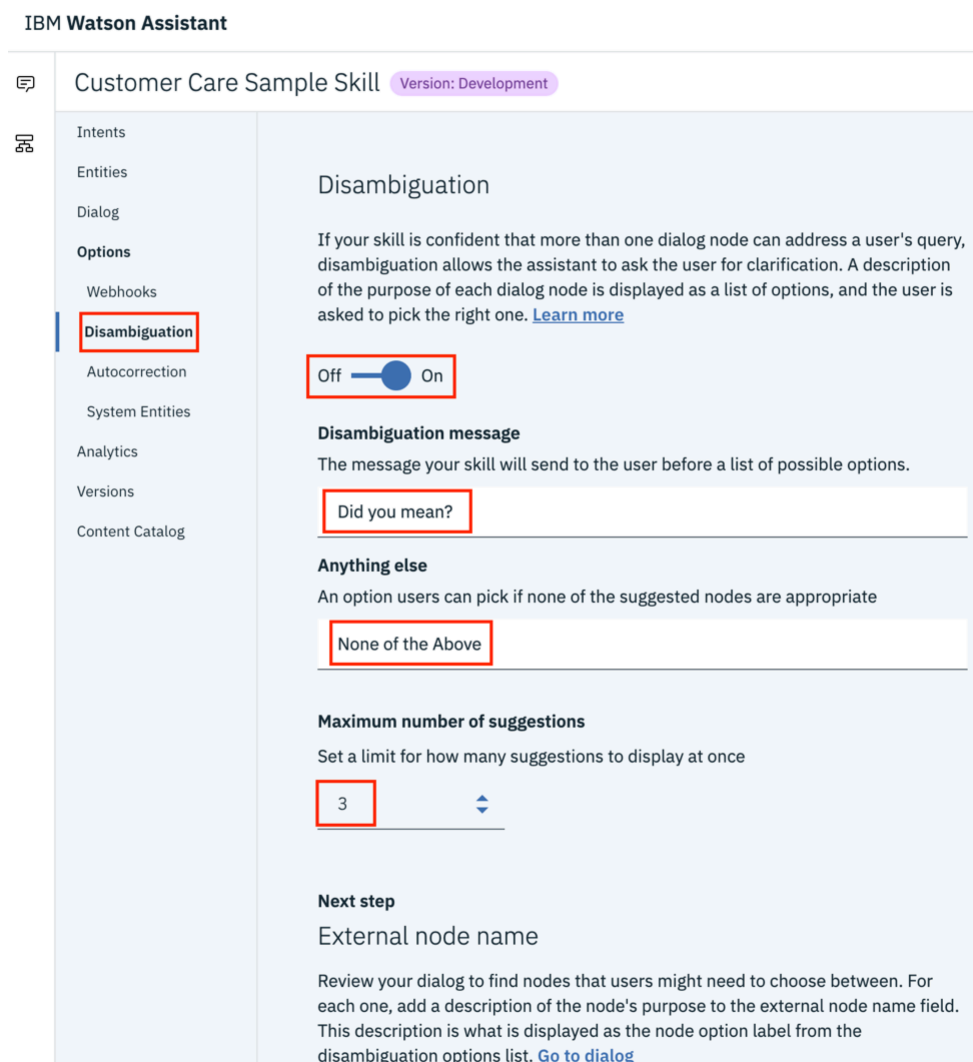
2. Enable the disambiguation feature in IBM Watson Assistant (for premium and plus users only). You can enable (or disable) disambiguation for each skill, and also specify a disambiguation message and the number of suggestions to be displayed to the end user.

- a. Access your skill by selecting the skill tree icon  in the panel.

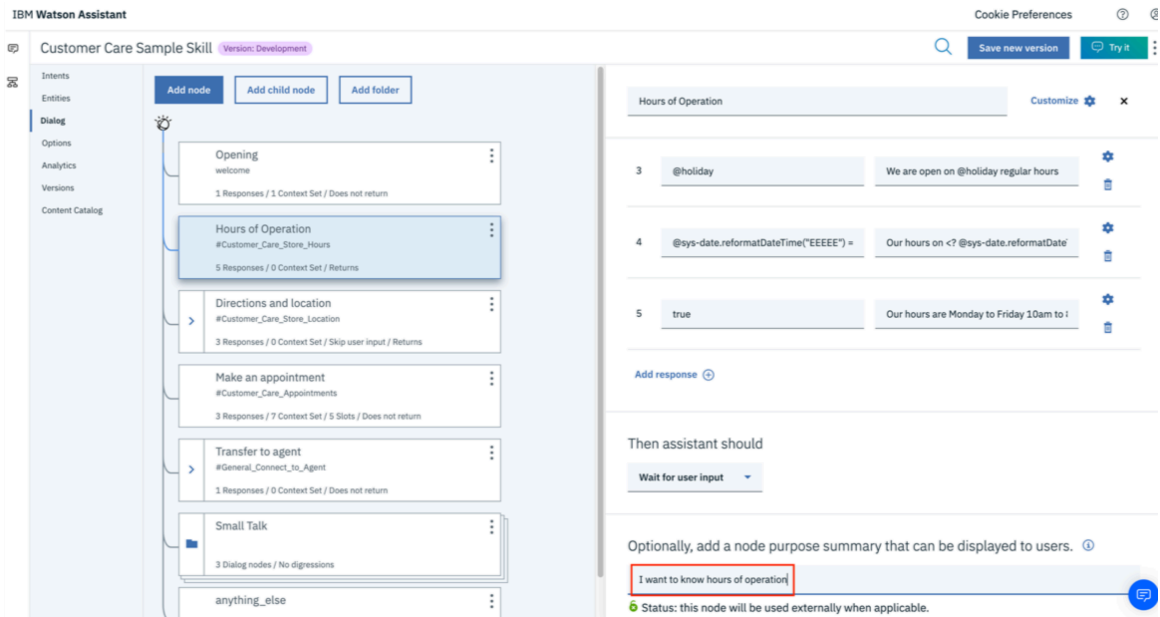


- b. Navigate to **Options > Disambiguation** to enable disambiguation and set the disambiguation features.

The following example shows the disambiguation features that can be set, such as the disambiguation message and the number of suggested intents to be displayed to the end user.



3. Navigate to **Dialog**, select a node to which the disambiguation feature will apply, and provide a summary of the node that will be displayed to users if it's one of the intent suggestions.



4. In your ServiceNow instance, activate these plugins:
 - Glide Virtual Agent (com.glide.cs.chatbot), if not already activated (requires a subscription)
 - IBM Watson Assistant Integration V2 plugin (com.glide.cs.ibm.watson.assistant.topicV2)

5. In Virtual Agent Designer, publish the IBM Watson Assistant V2 topic:

- a. Navigate to **Conversational Interfaces > Assistant Designer**.

- b. Select the **Asset library** tab.

- c. Set the topic discovery type toggle switch to **NLU/Keyword**.

- d. In the Virtual Agent Designer home page, select the IBM Watson Assistant V2 topic to open the Topic Properties page.
Notice that the **Keyword** for this topic is IBM Watson Assistant V2.

- e. In the Topic Properties page, select **Publish** to deploy the topic to your Virtual Agent chat widget.

6. Navigate to **All**, and then enter `sys_properties.list` in the filter.

7. Update the following properties.

- *watson_assistant.v2.assistantID* – In the **Value** field, enter the Watson Assistant ID for your assistant and select **Update**.

The screenshot shows the ServiceNow System Property form for `watson_assistant.v2.assistantID`. The form includes the following fields and options:

- Name:** `watson_assistant.v2.assistantID`
- Application:** Global
- Description:** This property holds the value of Assistant ID from watson assistant API Details.
- Choices:** (Empty list)
- Type:** string
- Value:** a1911261-6e7a-42b1-8bb9-ec8f7d27db56 (This field is highlighted with a green border in the image)
- Ignore cache:** ☐
- Private:** ☐
- Read roles:** (Edit icon)
- Write roles:** (Edit icon)
- Buttons:** Update (highlighted with a green border), Delete

- *watson_assistant.v2.service_endpoint* – In the **Value** field, replace the existing value with your Watson Assistant URL and select **Update**.

The screenshot shows the 'System Property' configuration form for the property 'watson_assistant.v2.service_endpoint'. The form includes fields for Name, Description, Choices, Type, and Value. The 'Value' field is highlighted with a green border and contains the text 'gateway-lon.watsonplatform.net'. Below the 'Value' field are checkboxes for 'Ignore cache', 'Private', and 'Read roles', and a 'Write roles' button. At the bottom of the form are 'Update' and 'Delete' buttons, with the 'Update' button highlighted by a green border.

Note: You can specify just the location portion of the service instance URL in the **Value** field. For example, if the base URL for the IBM Watson service endpoint is `https://gateway.watsonplatform.net/assistant/api`, you can enter just the location of the service instance, `gateway.watsonplatform.net` in the **Value** field.

If your Watson Assistant is hosted in a data center other than Dallas, such as Washington DC, your base URL is `https://gateway-wdc.watsonplatform.net/assistant/api`. You would enter `gateway-wdc.watsonplatform.net` in the **Value** field.

8. Set the Watson Assistant API key as the password in the IBM Watson Assistant Profile.

- a.** Navigate to **All**, and then enter `sys_auth_profile_basic.list` in the filter.
- b.** Open the IBM Watson Assistant Profile record.
- c.** In the Basic Auth Configuration form, enter the Watson Assistant API key in the **Password** field and select **Update**.

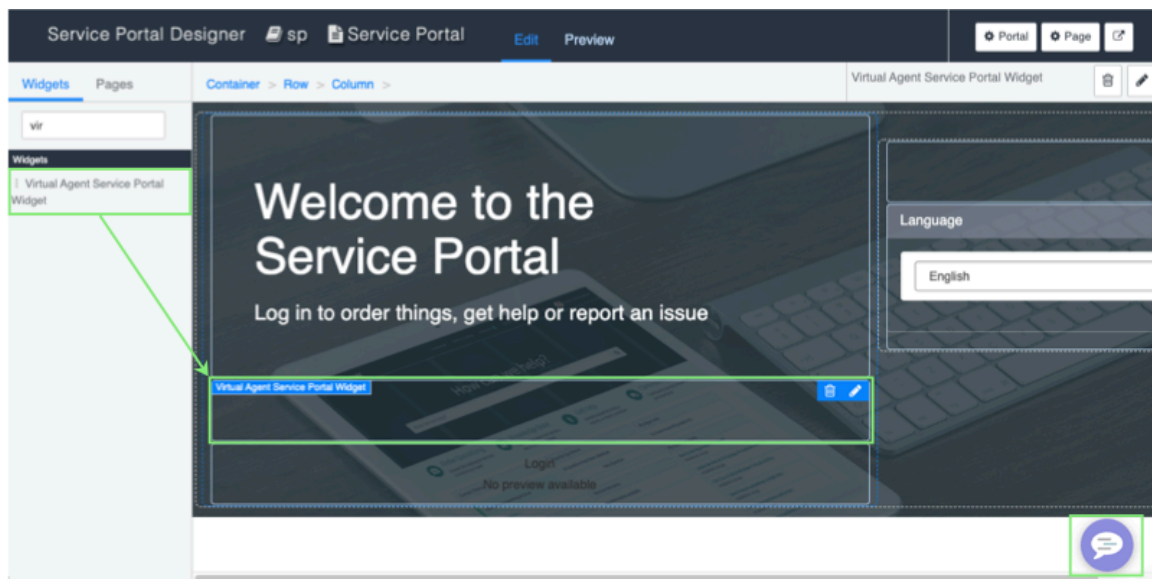
The screenshot shows the 'Basic Auth Configuration' form for the 'IBM Watson Assistant Profile'. The form includes fields for Name, Username, and Password. The 'Password' field is highlighted with a green border and contains a series of dots. Below the 'Password' field are 'Update' and 'Delete' buttons, with the 'Update' button highlighted by a green border.

9. Add the Virtual Agent (web chat) client to the Service Portal.

a. Navigate to **Service Portal** > **Service Portal Configuration**.

b. Select **Designer**, and then select the **Service Portal** landing page.

c. Search for the Virtual Agent widget and drag the widget into the outlined area.
The purple chat icon appears in the bottom right corner.



10. Configure the Virtual Agent widget by selecting the edit icon  in the upper right corner to set the URL parameters passed to the chat client and change the color of the floating chat button.

a. In the **Virtual Agent Client URL Parameters** field, enter the `sysparm_skip_load_history=true` parameter so that the topic history doesn't display in the chat client and the `sysparm_topic` parameter with the `sys_id` of the published IBM Watson Assistant V2 topic to be run.
You can find the `sys_id` of a topic in the Topics [sys_cs_topic] table.

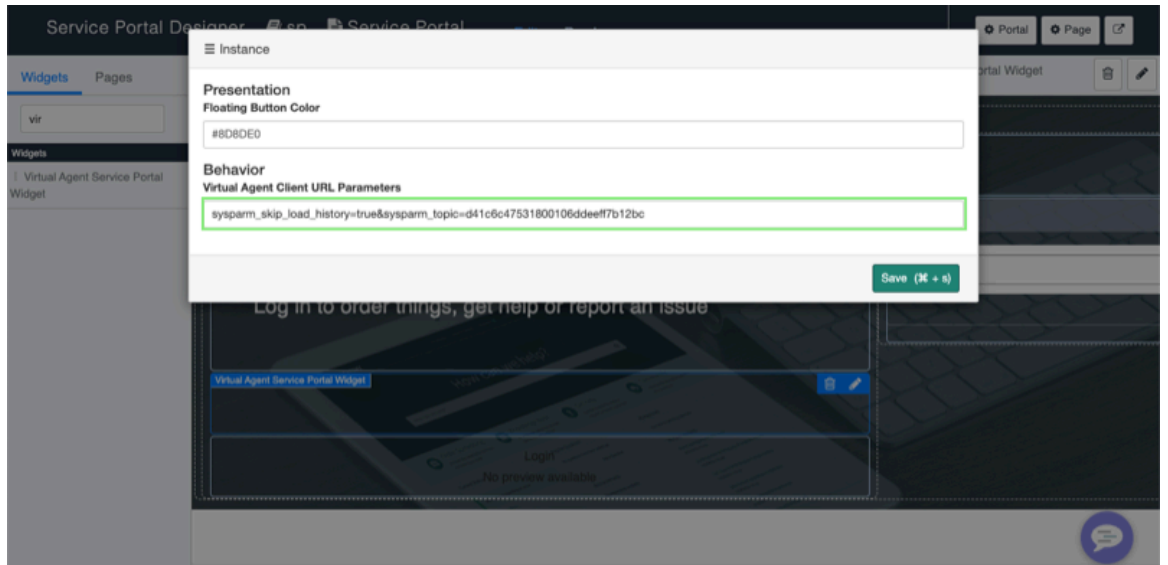
If you don't configure the instance behavior in Service Portal, you can specify your instance URL with the `sysparm_topic` and `sysparm_skip_load_history` parameters when you open the chat chat widget. For example: `https://<Your instance URL>$sn-va-web-client-app.do?sysparm_skip_load_history=true&sysparm_topic=<sys_id>` where `<sys_id>` is the `sys_id` of the published IBM Watson Assistant V2 topic to be run.

Important:

Use the `sysparm_topic` parameter only to load the given topic in the Service Portal chat client or when using the IBM Watson Assistant chat integrations (com.glide.cs.ibm.watson.assistant.topic and com.glide.cs.ibm.watson.assistant.topicV2 plugins). This parameter doesn't allow users to start a new conversation or transfer to a live agent. It also disables the context menu and doesn't support other third-party chat clients.

b. To change the floating button color, enter the new color (RGB hex format) in the **Floating Button Color** field.

c. Select **Save**.



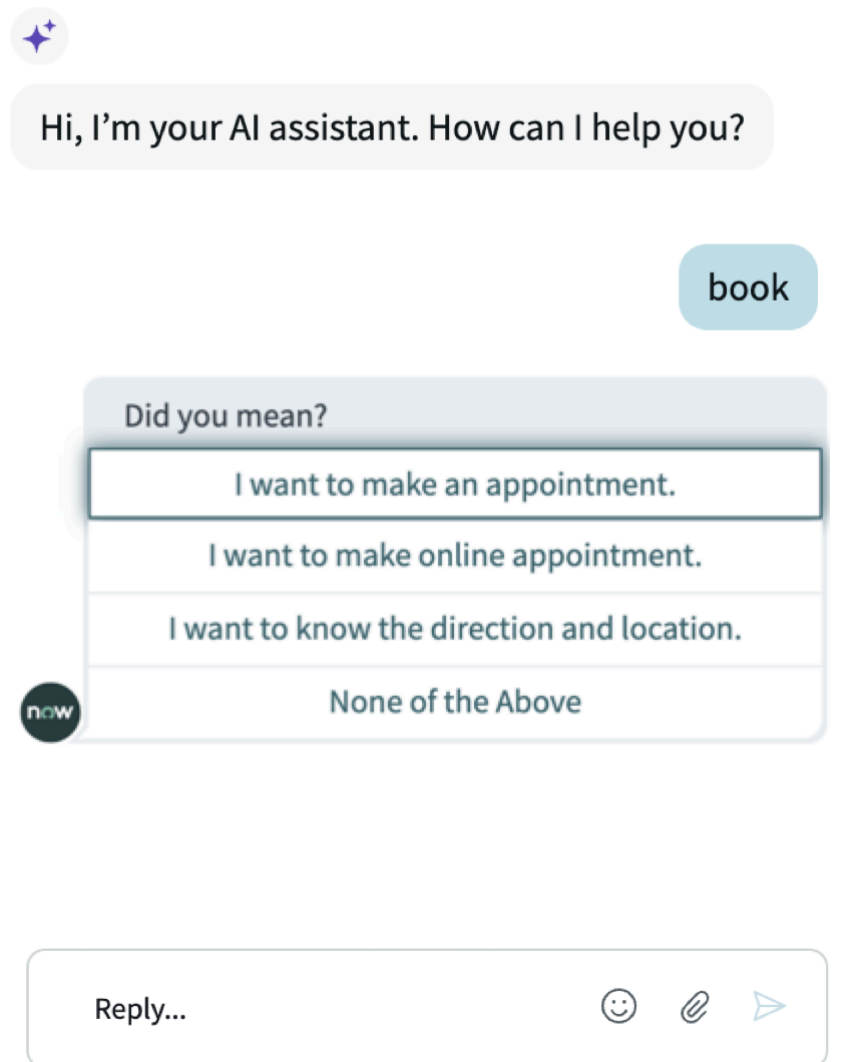
11. Test that the disambiguation feature is working for your topic.

Be sure that disambiguation is enabled for your Watson Assistant skill and at least two dialog nodes. In the following example, the virtual agent provides four additional intents that the user can select.

Example topic with disambiguation



Answers generated by AI. Review for accuracy.



(Legacy) Integrating Virtual Agent for NLU with voice channels

Enable users to run voice-based Virtual Agent bot conversations by integrating with supported third-party Contact Center applications and voice-assistant-based applications. Use the Conversational Integration apps that are available from the ServiceNow® Store to configure these voice-based apps for your ServiceNow instance.

Conversational IVR (Interactive Voice Response) integrates third-party Contact Center applications with your ServiceNow instance. This enables users to have voice-based conversations with your Virtual Agent.

The Virtual Agent integration with voice assistant applications enables interactions with touch or speak commands.

(Legacy) Conversational IVR with Amazon Connect

Use Conversational IVR with Amazon Connect to enable Conversational Interactive Voice Response (IVR) on your instance. Users will be able to conduct conversations with a bot via the phone channel, powered by ServiceNow Virtual Agent.

Starting with the Brazil release, Conversational IVR with Amazon Connect is being prepared for future deprecation. It will be hidden and no longer installed on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support Knowledge Base.

Get started with Conversational IVR with Amazon Connect

Conversational IVR with Amazon Connect is available with the installation of Conversational IVR with Amazon Connect (com.sn.va.amz.connect) plugin.

Select a tile to get started.

Explore  Learn more about Conversational IVR with Amazon Connect.	Install  Install Conversational IVR with Amazon Connect.	Configure  Configure your Conversational IVR with Amazon Connect implementation.
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Request apps on the Store

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

(Legacy) Exploring Conversational IVR with Amazon Connect

Use this application to build an integration with Amazon Connect. This allows your users to initiate an IVR (Interactive Voice Response) conversation with Virtual Agent. This integration also allows the user to connect with an agent using Advanced Work Assignment (AWA) over SoftPhone.

Conversational IVR with Amazon Connect overview

- Use Virtual Agent topics as a Conversational IVR to enable deflection in Phone channels, providing consistent end-user experience.
- Enable true-omnichannel flow including routing Phone to the Conversational VA-IVR.
- In case of escalations, route calls smoothly to live agents using AWA via conversational infrastructure.

To get started, see [\(Legacy\) Install Conversational IVR with Amazon Connect](#).

Unsupported Virtual Agent Designer controls

Within the Virtual Agent topic flow, there are a few controls that are not supported for Conversational IVR.

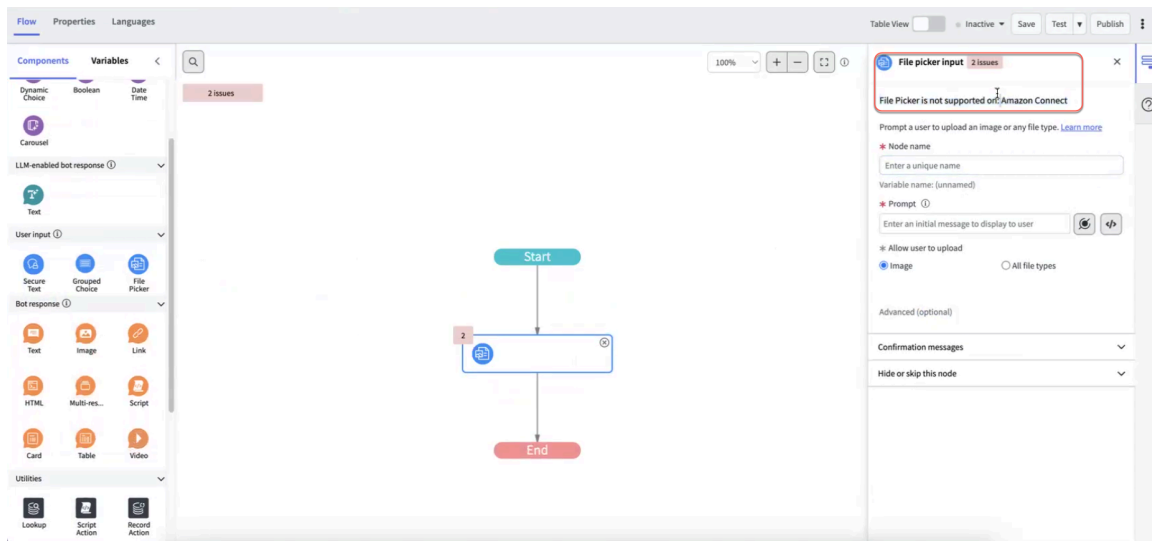
- User input controls:
 - Grouped Choice
 - File Picker
- Bot response controls:
 - Image
 - Link
 - HTML
 - Multi-response
 - Script
 - Card

Note: The Card control is supported but Conversational IVR will not read all the parts or elements of the card, if the card's subtitle contains incident numbers, request numbers, and so on, such as INC0001, RITM0001, HRC0001. IVR is configured to read only the number in such cases.

- Table
- Video

Conversational IVR is designed to silently skip the execution of unsupported controls within the topic flow and to move to the next supported control for execution.

The system is designed to provide warnings when you pick an unsupported control for your topic flow while creating the topic. For example, you can trigger a warning message by adding File picker to your topic flow for a topic that has IVR enabled.



For information about supported controls, see [Input Collector user input control](#).

(Legacy) Install Conversational IVR with Amazon Connect

Install Conversational IVR with Amazon Connect application, to use interactive voice response (IVR) with Virtual Agent.

Before you begin

Role required: admin

Note: Before installing Conversational IVR with Amazon Connect, ensure that you have installed the Glide Virtual Agent (com.glide.cs.custom.adapter) plugin in your ServiceNow instance.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Select **Virtual Agent** on the left pane and navigate to **Add virtual agent to your contact center**.
3. Click **Install**.
You are directed to the ServiceNow Store where you can search and get the Conversational IVR with Amazon Connect application to use IVR.

What to do next

To learn how to configure your AWS account for enabling Conversational IVR, see [\(Legacy\) Configuring your AWS account for use with Conversational IVR](#).

(Legacy) Components installed with Conversational IVR with Amazon Connect

After installing the Conversational IVR with Amazon Connect application from the ServiceNow Store, the additional dependant plugins and spokes get auto-installed to enable other features for interactive voice response.

Plugin	Description
OpenFrame - (com.sn_openframe)	An interface to integrate external communication systems with a ServiceNow instance. This plugin brings a UI frame that is accessible and available anywhere within a ServiceNow screens.

Plugin	Description
Virtual Agent API - (sn_va_as_service)	Connects a user with a Virtual Agent using the company's Amazon Connect account.
Advanced Work Assignment - (com.glide.awa)	Automatically assigns work items to agents based on their availability, capacity, and skills.
Amazon Connect Spoke - (sn_amzn_connect_spk)(ih-amazon-connect-actions)	Simplifies how you integrate with Amazon Connect.
Amazon S3 Spoke - (ih-amazon-s3-action-pack)(ih-s3-actions)	Simplifies how you integrate with Amazon S3.
Omnichannel Callback - (sn_omni_callback)(com.sn.omnichannel.callback)	Provides a consistent omnichannel experience for requesters whether they are coming from the digital channel or from the phone.

(Legacy) Configuring Conversational IVR with Amazon Connect

Install and configure the Conversational Integration with Amazon Connect application to enable users to have a conversational voice response with Virtual Agent.

Configuration overview

1. (Legacy) Install Conversational IVR with Amazon Connect

Install the pre-built adapter for Conversational Integration with Amazon Connect.

2. (Legacy) Configuring your AWS account for use with Conversational IVR

Set up your Amazon Connect account.

3. (Legacy) Configure Conversational IVR with Amazon Connect

Configure Conversational Integration with Amazon Connect.

4. (Legacy) Sync agents to set up live agent transfer

Set up live agent transfer for Conversational Integration with Amazon Connect.

5. (Legacy) Configure user authentication for Conversational IVR

Configure user authentication.

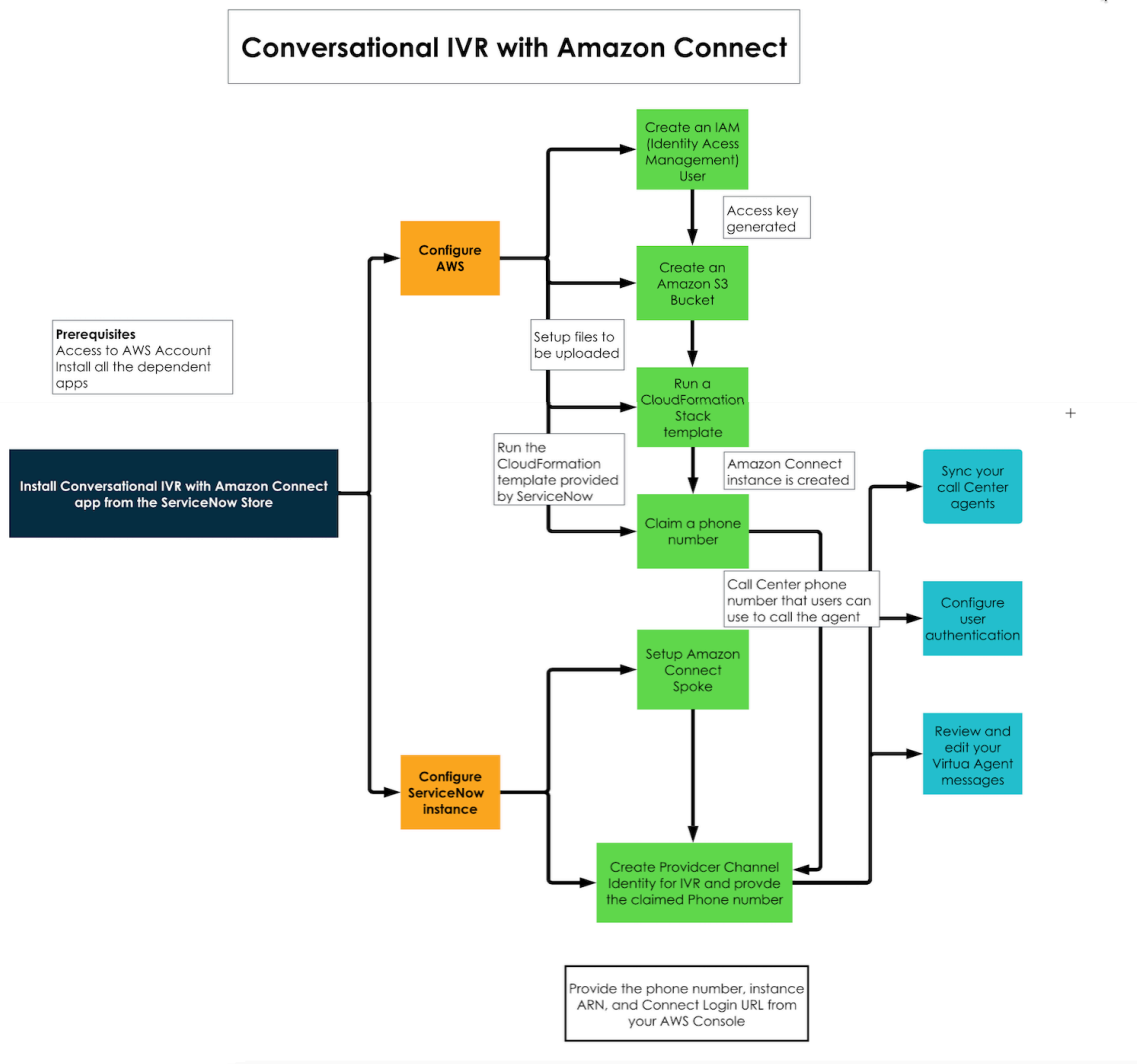
6. (Legacy) Manage bot messages for Conversational IVR

Modify the Conversational Integration with Amazon Connect settings for the best interactive voice response.

7. Configure callback behavior for a channel

Configure callback functionality.

Workflow of Conversational IVR with Amazon Connect



(Legacy) Configuring your AWS account for use with Conversational IVR

To enable the Conversational IVR functionality within your ServiceNow instance, you must utilize a third-party Contact Center application. One such option is Amazon Connect, which is part of the Amazon Web Services (AWS) platform. You must configure your organization's AWS account prior to making it available for use in the Conversational IVR feature.

Configure your AWS account

1. To grant a ServiceNow user the required permissions to complete the Conversational Integration with Amazon Connect on the AWS Console, see [\(Legacy\) Grant access to an IAM \(Identity and Access Management\) role](#).
2. To create an Amazon S3 bucket and to store objects within your AWS account, see [\(Legacy\) Create an Amazon S3 bucket](#).

This will host the files required to complete the configuration.

3. To create an AWS CloudFormation Stack and to provide a common language to describe and provision all the infrastructure resources required to enable the Conversational IVR feature in your environment in a safe and repeatable way, see [\(Legacy\) Create an Amazon CloudFormation stack](#).

You will be populating a template provided by ServiceNow that will then generate the required configuration.

4. To claim a phone number for setting up Conversational IVR, see [\(Legacy\) Claim a phone number](#).
5. To configure Conversational IVR with Amazon Connect application in your ServiceNow instance to store the conversation between the agent and the user over Softphone as a transcript, see [\(Legacy\) Set up transcription for Amazon Connect](#).

(Legacy) Grant access to an IAM (Identity and Access Management) role

Grant a ServiceNow user the required permissions to complete the Conversational Integration with Amazon Connect on the AWS Console.

Before you begin

Role required: admin

Procedure

1. Log in to your AWS (Amazon Web Services) account and search for **IAM**.
2. Navigate to **Users**.
3. Click **Add users**, provide the **User name**, and click **Next**.
4. On the Set permissions page, under Permissions options, select **Attach policies directly** and select the following permissions:
 - AWSLambdaExecute
 - AmazonConnect_FullAccess
 - AmazonS3FullAccess

Note: You can search and select the attachments at the **Permissions policies** search

The screenshot shows the 'Set permissions' page in the AWS IAM console. The 'Attach policies directly' option is selected. A search bar for 'Permissions policies' shows 'AmazonConnect_FullAccess' selected. Below the search bar, a table lists the policy with details like 'Policy name', 'Type', and 'Attached entities'.

Policy name	Type	Attached entities
AmazonConnect_FullAccess	AWS managed	19

5. After selecting the required roles, click **Next**.
6. Click **Create user**.

(Legacy) Create an Amazon S3 bucket

Create an Amazon S3 bucket to store the files required for configuring Conversational IVR within your AWS account.

Before you begin

Role required: admin

- Note:** Before creating the Amazon S3 Bucket, ensure that you have downloaded the Lambda function, Lex Bot, and HelperLambda files from this [Knowledge Base article](#).

For additional information about Amazon S3 Buckets, refer to the [Amazon S3 documentation](#).

Procedure

1. Log in to the AWS Admin Console.
2. Navigate to **Amazon S3** and click **Create bucket**.
3. Provide a **Bucket name** (for example: sn-ci-cc-amazon-connect-setup) and note it down.
This Bucket name will be used during the creation of a CloudFormation Stack at a later stage.
4. Select the **AWS Region** from the drop-down and ensure that this region remains consistent throughout the setup process.
5. Click **Create bucket**.
You will be redirected to the list of Amazon S3 buckets that you have on your instance.
6. Search for the bucket that you created and click the bucket name to open it.
Clicking the bucket name takes you to the **Objects** tab of the bucket.
7. On the Objects tab, click **Upload**.
8. Click **Add Files** and browse for the following downloaded files:
 - Lambda function
 - Lex Bot
 - HelperLambda
 - Prompt

Note:

- The Prompt file is not provided by ServiceNow. You must create your own Prompt file, note its name, and provide the name while creating the CloudFormation Stack. For more information about creating a Prompt, see <https://docs.aws.amazon.com/connect/latest/adminguide/prompts.html>.
- Also make sure that you do not rename any files while uploading them.

9. Select all the files that you uploaded and select **Upload**.
Once the files are uploaded, you will receive the

Upload succeeded

message.

(Legacy) Create an Amazon CloudFormation stack

Create an AWS CloudFormation stack to provision all the infrastructure resources required to enable the Conversational IVR feature. You will be populating a template provided by ServiceNow that will then generate the required configuration.

Before you begin

Role required: admin

Ensure that you downloaded the Cloud Formation Template (CFT) YAML file from this [Knowledge Article](#) before creating an Amazon CloudFormation Stack and also make sure that you select the same region as that of the S3 bucket region.

For more information about creating an Amazon CloudFormation stack, refer to [Amazon CloudFormation documentation](#).

Procedure

1. Log in to the Amazon Web Services Console.
2. Navigate to **CloudFormation** > **Stacks**.
3. Click the **Create stack** drop-down and select **With new resources (standard)**.
4. On the Create stack form, under Prepare template section, select **Template is Ready**.
5. In the Template resource section, select **Upload a template file** to choose your downloaded CFT template and click **Next**.
You will be directed to the Specify stack details page.
6. On the Specify stack details page, provide a **Stack name** (for example: sn-ci-cc-amazon-connect-setup-stack) and specify the following details in the Parameters section:

Parameters

Parameters	Description	Example Value
AWS Configuration		
S3 Bucket Name	The name of the S3 Bucket that you created during the IVR setup process. S3 bucket must contain the required files to be uploaded. Populate this parameter with that bucket name.	sn-ci-cc-amazon-connect-setup
ServiceNow Instance Configuration		
ServiceNow Instance	The URL of the ServiceNow instance being used in this configuration. Be sure to include <code>https://</code> .	<code>https://[instance-name].service-now.com</code>
Username	Name of the ServiceNow user to be used for establishing a basic authentication configuration in your ServiceNow instance. The user with this username must have the 'sn_va_as_service.contact_center_api' role.	n/a
Password	ServiceNow user's password to establish a basic authentication configuration in your ServiceNow instance.	n/a

Parameters	Description	Example Value
Token Type	The type of token used in this connection. If you do not know the token type, then use Static.	Static/Hash
Token Value	The secure token value for the connection between Amazon Connect and ServiceNow. Note: Ensure that the token you provide does not contain any non-alphanumeric values and ensure that you save the token value for later use.	rLRU5tyNHVj39MdA
Amazon Connect Instance Configuration - (Ignore if there is an existing amazon connect instance)		
Amazon connect instance alias	Name for the Amazon Connect instance that will be created.	n/a
Prompt audio S3 file key	Provide the name of the Prompt file that you have uploaded in (Legacy) Create an Amazon S3 bucket . The Prompt file is an audio file containing the ringtone when customer connects to an agent.	n/a
Amazon Connect Instance Admin Configuration (Optional)		
Username	Provide an Amazon Connect username to create the administrator for the newly created Amazon Connect instance.	n/a
Email	Email of the administrator for the Amazon Connect instance.	n/a
First Name	First name of the user who is the administrator of the Amazon Connect instance.	n/a
Last Name	Last name of the user who is the administrator of the Amazon Connect instance.	n/a

Parameters	Description	Example Value
Password	Password to log into the Amazon Connect instance as an administrator.	n/a

7. Click **Next**.

8. Review the parameters that you provided for your Stack, select the **I acknowledge that AWS CloudFormation might create IAM resources with custom names.** checkbox, and **Submit**. The Stack creates the required resources needed for the Amazon Connect IVR setup.

9. Review the progress of the CloudFormation Stack to ensure that the process completes with a CREATE_COMPLETE status.
Once the Cloud Formation Stack is created, you will see the Amazon Connect instance.

What to do next

(Legacy) [Claim a phone number](#).

(Legacy) Configure localization in Conversational IVR with Amazon Connect

Configure localization in Conversational IVR to use localization with Virtual Agent in other supported languages.

Before you begin

Role required: admin

Ensure that you have completed the IVR setup on both AWS Console and ServiceNow instance.

Procedure

1. Log in to the AWS Management Console and open the **Amazon Lex** bot named **SN_CI_CC_LexBot**.
2. Change the language of the amazon IVR Contact.
 - a. Navigate to Amazon Connect from the AWS Console.
 - b. On the instance page, open the connect instance.
 - c. Hover over the Routing icon  on the left navigation bar and select **Contact flows**.
 - d. Select the **SN_CI_CC_Inbound_Contact_Flow**.
SN_CI_CC_Inbound_Contact_Flow is the default contact that is shipped to the user for use with Conversation IVR.
 - e. On the Contact flow, select the **Set voice** flow.
 - f. On the Set voice pop-up, select the language that you added from the **Language** drop-down and select the **Set language attribute** check box.
English (US) is the default voice language and the English (US) language code is sent to the LexBot. The LexBot then collects the intents from the English (US) language.

Note: There are different dialects available for a language. Therefore, ensure that you select the correct language with its dialect that you have added previously.

g. Select **Save**.

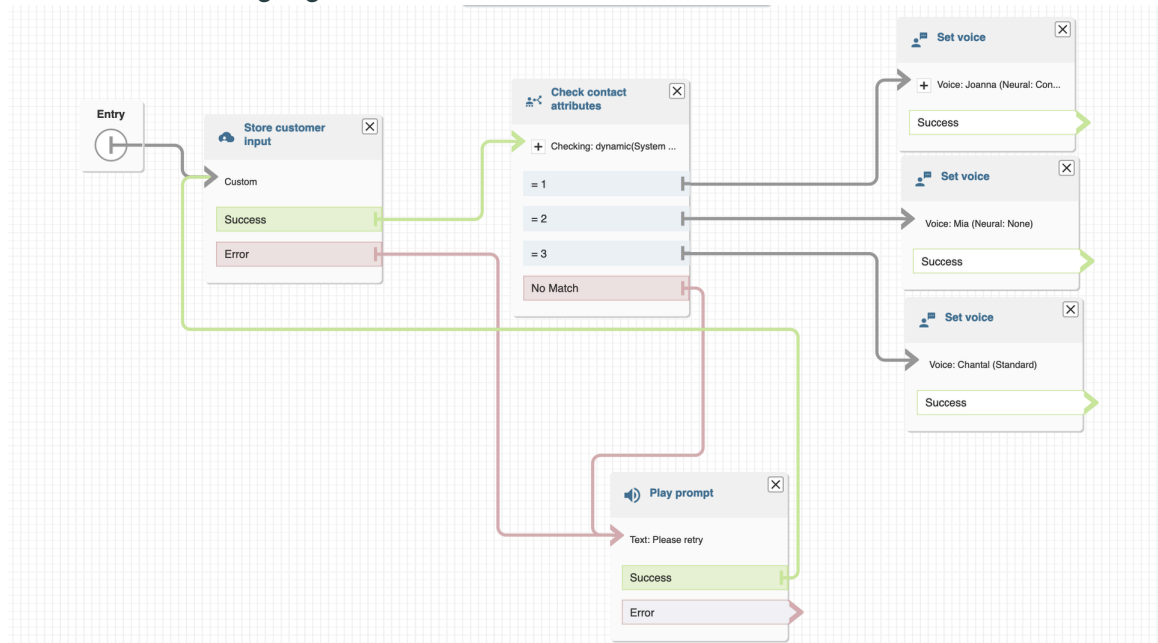
h. Select **Publish** to publish the Contact flow with the new language.

The entire process of setting up the language attribute in **Set voice** block works only if you use Virtual Agent integration with one language.

If you wish to select the language dynamically for every conversation, you must manually add a list of language choices to get the input from the user and use **Set voice** block to set the appropriate language code.

The following image illustrates the flow:

Workflow to set language attribute



(Legacy) Customize keywords in Conversational IVR

Customize the IVR integration-specific keywords that are provided by default for better conversation in another language with the Virtual Agent.

Before you begin

Role required: admin

Ensure that you have completed the IVR setup on both AWS Console and ServiceNow instance.

Note: Any customizations done to the Lex bot must be redone in case of any updates to the Lex bot resource in the future versions of the application.

Procedure

1. Log in to the AWS Admin Console and open the **Amazon Lex** bot named **SN_CI_CC_LexBot**.
2. If you want to customize the default keywords, you can edit the **amz_ivr_keywords** slot type and give preferred values, and here's how you can do that.

- a. Under the Conversation structure section in Slot types, select **View slot types**.
- b. On the Slot types page, select **AMZ_IVR_KEYWORDS** slot type.
The slot type is used for customizing the IVR integration-specific keywords namely **next**, **repeat**, **back**, and **skip**. These keywords can be used when talking to the Virtual Agent to navigate the paginated options/list of choices to skip a control.

Important: Ensure that you are editing the values only on the right column. Do not edit the values on the left column as they should not be changed regardless of the language.

By default the slot type values (on the right column) are in English. If the values on the right are not suitable for the another, change them to equivalent appropriate values, which shall be spoken by you when talking to the Virtual

Slot type values

Modify the list of values used to train the machine learning model to recognize values for a slot.

next	next X Tab or ; for new value X
repeat	repeat X Tab or ; for new value X
back	back X Tab or ; for new value X
skip	skip X Tab or ; for new value X

Maximum 140 characters. Valid characters: A-Z, a-z, 0-9, @, #, \$

Agent.

If you have edited the slot type values on the right column, you must also ensure that you edit their respective bot messages on your instance to reflect these changes. For more information, see [\(Legacy\) Manage bot messages for Conversational IVR](#).

- c. Click **Save Slot type** and click **Build** on the top right of the page.

Note: You must build the Slot types for any new changes you made.

The language is successfully built and on the All languages page, you can notice the **Successfully built** status against the language you have customized.

3. Create a new version of the bot to include both the languages.

- a. On the left navigation, select **Bot versions**.
- b. On the Versions page, select **Create version** on the top-right.

Note: Ensure that all the languages that you need in this bot have the **Successfully built** status before creating the version as only the built languages will be included in the version.

- c. On the Create version page, provide a **Description** for the version and click **Create**.
A version gets created with the next number. For example, Version 2 when there is only the default version 1 on your AWS instance.

4. Associate the version that you created with the production alias.

- a. On the left pane, navigate to **Deployment > Aliases** and select **SN_CI_CC_LexBot_Prod_Alias**, the default production Alias associated with Version 1 for a newly set up integration.
- b. On the Alias page, select **Associate version with alias** and select the version you created for the language being customized.

Note: Ensure to always have the production alias to point to the latest version number.

- c. On the Associate alias to version pop-up, select the version and select

Associate.

At this step, the bot is available for use in the language that you customized.

(Legacy) Claim a phone number

Claim a phone number to set up IVR (Interactive Voice Response).

Before you begin

Role required: admin

Procedure

1. Log into your AWS Console and look for the Amazon Connect Instance you created.
2. Log in as an administrator into your Amazon Connect instance.
3. Navigate to **Channels > Phone numbers** and click **Claim a number**.
4. On the Claim Phone number form, select either the **Toll free** Country or the **DID (Direct Inward Dialing)** Prefix and select the number.
5. Claim a phone number to the SN_CI_CC_Inbound_Contact_Flow from the Phone numbers section in the navigator.

6. Provide a description of your choice in the **Description** field, select **SN_CI_CC_Inbound_Contact_Flow** from the **Contact flow / IVR** drop-down, and click **Save**. After the number is published, customers can make a call and start conversations with the Virtual Agent.
7. Navigate to **Routing > Queues** and select **BasicQueue**.
8. On the Edit BasicQueue page, under Settings, specify a name for **Default caller ID name**.
9. For the **Outbound caller ID number**, select the Phone number you claimed in Step 4.
10. Select **SN_CI_CC_Outbound_Contact_Flow** for the **Outbound whisper flow**.
11. Click **Save**.

What to do next

Invoke an automated caller interaction with bots to fulfill the caller's request within the ServiceNow instance. For more information, see [Configure a contact flow for an automated caller interaction](#).

(Legacy) Create inbound and outbound Amazon Connect contact flows

Create the inbound and outbound Amazon Connect contact flows to set up IVR (Interactive Voice Response).

Before you begin

Role required: admin

Procedure

1. Log in to your AWS account and select **Contact Flows**.
 - a. Select the region where the Lambda function/LexBot was created.
For more information see, [\(Legacy\) Create an Amazon S3 bucket](#).
 - Note:** Ensure that the region that you selected matches across the Amazon Connect setup.
 - b. In the Amazon Lex section, search and select your bot (for example: SN_CI_CC_LexBot) in the **Bot** drop-down, select **SN_CI_CC_LexBot_Prod_Alias** file from the **Alias** drop-down, and click **Add Amazon Lex Bot**.
 - c. In the AWS Lambda section, search for your Lambda function (for example: SN_CI_CC_Process_Request) from the drop-down and click **Add Lambda Function**.
 - d. Navigate to the Approved Origins section, click **Add Domain** to add your ServiceNow instance URL and click **Add Domain**.
 - Note:** Do not select the **Enable Contact flow logs** check box under the Contact flow logs section.
2. Log in to your Amazon Connect Instance as an Administrator.
 - a. Hover over the **Routing**  icon on the left navigation bar and select **Prompts**.
 - b. Click **Create new prompt**, upload a prompt file of your choice with .wav file extension, and click **Create**.

Note: Ensure that the .wav audio file is no more than 10 seconds for optimal results.

- c. Hover over the **Routing**  icon on the left navigation bar and select **Contact flows**.
 - d. Click the drop-down next to Create contact flow button and select **Create customer queue flow**.
 - e. On the Contact flow form, click the drop-down next to the Save button and select **Import flow (beta)**.
 - f. On the Import flow (beta) pop-up screen, select a contact flow JSON file of your choice (for example: SN_CI_CC_Inbound_Customer_Queue_Flow) and click **Import**.
 - g. After the JSON is uploaded, locate and click the **Loop prompts** tile.
 - h. On the Loop prompts pop-up, select an audio file of your choice with the .wav extension (for example: SN_CI_CC_Inbound_Prompt.wav) from the Audio recording drop-down and click **Save**.
- Note:** Ensure that the .wav audio file which you upload, does not exceed more than five-minutes duration.
- i. Click **Save** to save the Contact flow and click **Publish** to publish the Contact flow.
 - j. Navigate to **Routing > Contact flows**, click **Create contact flow** and import the SN_CI_CC_Inbound_Contact_Flow JSON file that you downloaded from the [KB article](#) .
 - k. Locate and click the **Set customer queue flow** tile.
 - l. In the Set customer queue flow pop-up, select the customer queue flow from the drop-down (for example: SN_CI_CC_Inbound_Customer_Queue_Flow) and click **Save**.
 - m. Locate and click the **Invoke AWS Lambda function** tile.
 - n. In the Invoke AWS Lambda function pop-up, select the SN_CI_CC_Process_Request lambda function file from the drop-down, that you have already added at Step 1, C, and click **Save**.
 - o. Locate and click the **Get customer input** tile.
 - p. In the Get customer input pop-up, navigate to the Lex bot section and select the SN_CI_CC_LexBot file from the Name drop-down and SN_CI_CC_LexBot_Prod_Alias file from the Alias drop-down and click **Save**.
 - q. Click the **Play Prompt** tile next to the **Set Working Queue** tile.
 - r. In the Audio prompt drop-down, select the .wav file of your choice and click **Save**.
 - s. Click **Save** to save the Contact flow and click **Publish** to publish the Contact flow.
 - t. Navigate to **Channels > Phone numbers** and click **Claim a number**.

- u. On the Claim Phone number form, select either the **Toll free** Country or the **DID (Direct Inward Dialing)** Prefix and select the number.
- v. Provide a description of your choice in the **Description** field, select `SN_CI_CC_Inbound_Contact_Flow` from the **Contact flow / IVR** drop-down, and click **Save**. You can edit the number description and also associate it with a new contact flow on the Manage Phone numbers page.
After the number is published, customers can make a call and start conversations with the Virtual Agent.

For more information about creating a Contact Flow, see [Amazon Contact flow documentation](#).

For more information about creating Prompts, see [Create prompts](#) in Amazon Connect documentation.

What to do next

Invoke an automated caller interaction with bots to fulfill the caller's request within the ServiceNow instance. For more information, see [Configure a contact flow for an automated caller interaction](#).

(Legacy) Set up transcription for Amazon Connect

Configure Conversational IVR with Amazon Connect application to store the conversation between the agent and the user over Softphone as a transcript.

Before you begin

Role required: admin

About this task

- The voice transcript is stored by Amazon Connect, a third-party provider, post the voice conversation in the `[sys_cs_message]` table.
- Messages between the User and the Agent are fetched by transcript API and attached to the Conversation. Also, the sentiment score from Amazon for each message is considered to derive overall Sentiment of User and Agent Conversation.
- From Utah, the voice transcription is available real-time with the APIs that persist transcribed messages of an on-going phone call in real time. The messages are displayed in the Agent workspace chat panel along with previous conversation history (if enabled) and allows the Agent to leverage features like agent assist and search while actively talking to the caller. For more information about using Transcript API for real-time transcription, see [Voice Interaction Resource API](#).

To date, we ensure that performance is acceptable for the volume of transactions, about 5 million utterances/day/customer.

We have also updated the system to store all details associated to a voice call in standard CI tables (e.g., conversation and interaction tables) instead of the `sn_openframe_phone_log` table.

Procedure

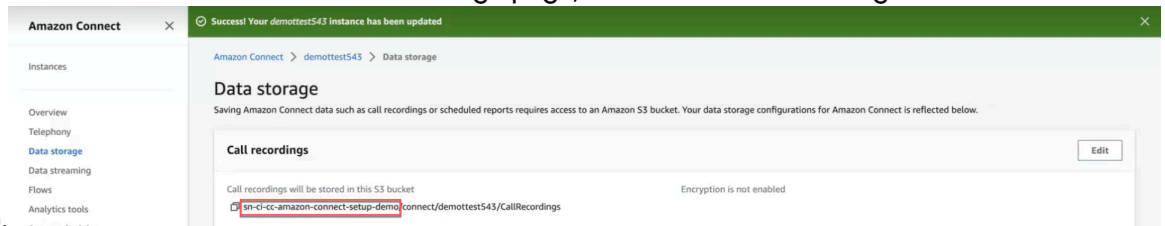
1. Open your Amazon Connect instance page in AWS Console.
2. Navigate to **Analytics tools** page and click **Enable contact lens**.
3. Click **Save**.

4. Navigate to **Data storage > Call recordings** and click **Edit**.
5. On the Call recordings page, select **Enable call recording**.
To enable Call recordings, you can either create a new S3 bucket by selecting **Create a new S3 bucket (recommended)** or use an existing s3 bucket by selecting **Select an existing S3 bucket**.

Note: This procedure explains creating a transcript using an existing S3 bucket.

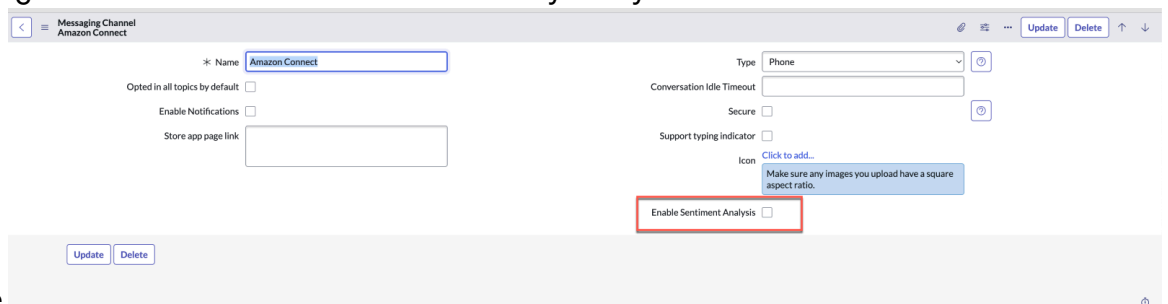
6. Select the **Name** of the existing S3 bucket from the drop-down and click **Save**.
7. Copy the S3 bucket name from the Data storage page, under the Call recordings

section.



8. Navigate to **AWS Lambda > Functions** and select the **SN_CI_CC_ProcessRequest** Function name.
9. Click **Add trigger** and select **S3** from the Select a source drop-down.
10. In the **Bucket** drop-down, paste the copied bucket name.
11. Select the acknowledgement check box and click **Add**.
12. Configure Google Sentiment Analysis.

- a. Log in to your ServiceNow instance and navigate to **All > System Applications > All Available Applications > All**.
- b. Find the Sentiment Analysis (com.glide.cs.sentiment) application using the filter criteria and search bar and click **Install**.
- c. Select the **Enable Sentiment Analysis** check box on the Amazon Connect's messaging channel record to enable Sentiment Analysis in your ServiceNow



instance.

- d. Create a connection for the Google Sentiment Analysis API.
 - Create a service account on Google Cloud and the Cloud Natural Language API. For more information, see <https://cloud.google.com/natural-language/docs/sentiment-analysis-gcloud>.
 - Download JSON file and create a JAVA Key Store Certificate. For more information, see [Create a Java KeyStore certificate](#).
 - Navigate to **Workflow Studio > Connections > Google Sentiment Analysis**.

- Set the following fields using the JSON and generated .jks file.
- Click **Get Auth Token**.

Note: The Connection details shared previously are related to the personal google service account. To set up a new account and get the JSON key file, use see [Google Documentation](#).

After you get that JSON Key file, the .jks file can be generated using the following code:

```
createJKS() {
    cd $(dirname $1)

    cat $1 | jq -r .private_key > GCPNaturalLanguage_pk.pem;

    kid=$(cat $1 | jq -r .private_key_id);

    cert_url=$(cat $1 | jq -r .client_x509_cert_url);

    curl ${cert_url} | jq -r --arg jq_kid "$kid"
    '[$jq_kid]' > GCPNaturalLanguage_cert.pem;

    openssl pkcs12 -export -in GCPNaturalLanguage_cert.pem
    -inkey GCPNaturalLanguage_pk.pem
    -certfile GCPNaturalLanguage_cert.pem -out
    GCPNaturalLanguage_pkcs12.p12;

    keytool -importkeystore -srckeystore
    GCPNaturalLanguage_pkcs12.p12 -srcstoretype pkcs12
    -destkeystore GCPNaturalLanguage.jks -deststoretype JKS
}

createJKS /
Users/firstname.lastname/git/ServiceAccountKey/core-period
-341405-9e1ed1673139.json (Path of JSON Key)
```

(Legacy) Configure Conversational IVR with Amazon Connect

Configure Amazon Connect service provider to integrate with Virtual Agent and use interactive voice response.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings > Virtual Agent**.
2. On the Virtual Agent Settings page, navigate to the **Configure your interactive voice response (IVR)** tile.

Note: To see the **Configure your interactive voice response (IVR)** tile on your Virtual Agent Settings page, ensure that you have updated the Omni-Experience Standard Feature Set plugin (sn_oe_sfs).

3. In the Configure pre-built adapter section, click **Configure IVR**.
4. In the Select IVR service provider page, select **VA Amazon Connect Adapter Provider** as the IVR service provider from the drop-down.

Note: VA Amazon Connect Adapter Provider is available by default, with the Conversational IVR with Amazon Connect application installation. To use the Amazon Connect adapter, get the Conversational IVR with Amazon Connect app from the ServiceNow Store.

Conversational IVR with Amazon Connect supports multiple service provider applications and you can create new ones if you want.

5. To finish setting up Amazon Connect, select the application name from the Provider Channel Identities section.
6. On the form, fill in the fields.

Note: From the AWS Console, copy and paste the authentication information for Amazon Connect below:

Amazon Connect information form

Field	Description
Identifier Type	Indicates the type of identifier for the provider channel identity. For example, you can configure Amazon Connect on your ServiceNow instance via Phone number or ARN.
Phone number	The phone number being configured for this provider channel identity.

Field	Description
	Note: - The Phone number field is available only when you select Phone Number in the Identifier Type drop-down. - From Vancouver release, you can use multiple phone numbers from an AWS account and create provider identity channels for each configuration to accommodate multiple points of contact.
Instance ARN	The instance ARN from the AWS Console.
Static/hash token	Your static or hash token from AWS Console.
Token type	Confirmation for the token provided in the Static/hash token field.
Connect Login URL	The login URL from the AWS Console.

7. Click **Save**.

What to do next

- [\(Legacy\) Sync agents to set up live agent transfer](#)
- [\(Legacy\) Configure user authentication for Conversational IVR](#)
- [\(Legacy\) Manage bot messages for Conversational IVR](#)

(Legacy) Enroll user Soft PIN and Device in ServiceNow instance

Enroll the user Soft PIN and Device in your ServiceNow instance to setup callback authentication.

Before you begin

Role required: admin

Procedure

1. Log in to your ServiceNow instance.
2. Impersonate the user whose Soft PIN and Device must be authenticated.
3. Navigate to **Password Reset > Enroll**.
4. In the SoftPin Verification for Amazon Connect tab, provide the soft Pin in the **Enter the SoftPIN** field and click **Submit**.
5. In the SMS Verification for Amazon Connect tab, authorize the user device.
 - a. Select **Add Device**.
 - b. On the form, fill in the details.

Add an SMS Device pop up

Field	Description
Device name	Name of the device that you are authenticating.
Phone number	Phone number of the user that you want to authenticate.
Service provider	Name of the service provider that you want to authenticate the device with.

c. Click **Submit**.

What to do next

After adding the phone number, verify the device. An OTP is sent to the user's phone number.

(Legacy) Set up the Amazon Connect spoke for Conversational IVR

Set up the Amazon Connect spoke to integrate your ServiceNow instance with Amazon Connect.

Before you begin

Role required: admin

Procedure

To set up the Amazon Connect spoke for Conversational IVR with Amazon Connect, see [Setup Amazon Connect spoke](#) .

(Legacy) Sync agents to set up live agent transfer

After the installation and configuration of Amazon Connect, you must sync agents to enable live transfer. You can sync agents stored in Amazon Connect with the agents on your ServiceNow agents.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings > Virtual Agent**.
2. On the Virtual Agent Settings page, navigate to the Configure your interactive voice response (IVR) section and click **Configure IVR** under Configure pre-built adapter.
3. On the Configure interactive voice response page, select **VA Amazon Connect Adapter Provider** from the Select IVR service provider drop-down.
4. Under Provider Channel Identities, select the identity provider that you want to sync agents for.
5. On the Amazon Connect information form, in the Sync your call center agents tile, click **Sync agents**.
6. Add the following roles to the agents to sync them with your ServiceNow instance and the Amazon Connect account.
 - sn_va_as_service.contact_center_api
 - awa_agent
 - interaction_agent

- agent_workspace_user
- sn_openframe_user
- awa_integration_user

Add each user, who must handle a Live Agent Transfer, to the Agent Phone Group by navigating to **System Security > Users and Groups > Groups**.

7. In the filter navigation bar on your ServiceNow instance, enter `awa_presence_state.list` to find the Presence States table.
8. Open the **Available** state, move the **Phone** Service Channel from the Available field to the Selected field and click **Update**.
Login as the synced user and make sure that the agent is available in Agent Workspace and also login to the Amazon Connect instance with the same ServiceNow user to verify.

(Legacy) Configure user authentication for Conversational IVR

You must configure the authentication level for how the end-user can be authenticated to be the logged-in ServiceNow user using Voice.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings > Virtual Agent**.
2. On the Virtual Agent Settings page, navigate to the Configure your interactive voice response (IVR) section and click **Configure IVR** under Configure pre-built adapter.
3. On the Configure interactive voice response page, select **VA Amazon Connect Adapter Provider** from the Select IVR service provider drop-down.
4. Under Provider Channel Identities, select the identity provider that you want to edit the user authentication for.
5. On the Amazon Connect information form, in the Configure user authentication tile, click **Configure authentication**.
6. On the User authentication method setup form, swipe the **Enable authentication** toggle switch to the right.

Note: Ensure that the application scope of your ServiceNow instance is set to the Conversational IVR with Amazon Connect application before editing the User authentication method setup form.

7. Select the **Authentication style**.

- **Phone:** Customer's phone number.

Note: Only requires the incoming phone number to match the record in [sys_user] profile **Business Phone** field, in order for user to log in.

- **Phone + Soft PIN:** Customer's phone number requiring a pre-configured Soft PIN to authenticate.

Note: Requires not only the phone number to match, but also for end user to identify user's personal Soft PIN registered with the customer's ServiceNow record.

- **Phone + Soft PIN + MFA:** Customer's phone number, requiring a Soft PIN and adds an extra layer of security with MFA (Multi-factor Authentication).

Note: Requires the phone number to match and also for end user to identify user's personal Soft Pin registered with the customer's ServiceNow record, in addition to have the end user authenticate using MFA.

To set up your end users with Soft PIN or MFA, see [Configure your Password Reset process to auto-enroll users](#).

8. Provide the authentication details as per the selected authentication style.

- **Verification question:** Add a verification question of your choice.

Note: This option is only available for Phone + Soft PIN.

- **Verification PIN length:** Set up the length of your Soft PIN.

Note: This option is only available for Phone + Soft PIN.

- **One-time password length:** Set up the length of the one-time password

Note: This option is only available for Phone + Soft PIN and Phone + Soft PIN + MFA.

- **one-time-password expiration time:** Set up the expiration time for the password.

Note: This option is only available for Phone + Soft PIN and Phone + Soft PIN + MFA.

Changing the values or messages updates the record on the Password Reset verification record. For more information, see [Configure your Password Reset process to auto-enroll users](#).

9. Click **Save**.

(Legacy) Manage bot messages for Conversational IVR

Edit your custom messages to ensure that your conversations are optimized for Conversational IVR.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings** and select **Virtual Agent** from the Chat Settings tab.
2. On the Virtual Agent Settings page, navigate to the Configure your interactive voice response (IVR) section and click **Configure IVR** under Configure pre-built adapter.
3. On the Configure interactive voice response page, select **VA Amazon Connect Adapter Provider** from the Select IVR service provider drop-down.
4. Under Provider Channel Identities, select the identity provider that you want to edit the custom messages for.
5. Under Review and edit your virtual agent messages section, click **Review VA messages**.

Additionally, you can also select the **Manage** button in the VA Messages column against the identity provider.

Manage custom messages for Conversational IVR

Virtual agent > Configure interactive voice response

Configure interactive voice response

The interactive voice response feature allows your virtual agent to reuse pre-built topics during voice calls. Select your service provider and then configure the other settings for the adapter.

Select IVR service provider

IVR service provider *

VA Amazon Connect Adapter Provider

[Amazon Connect Configuration Documentation](#)

Provider Channel Identities 1 New

Name	Inbound ID	Agent Sync	VA Messages	User Auth
VA Amazon Connect App - 12345	+12345	Sync	Manage	Configure

- On the Custom virtual agent messages page, select the custom message that you want to update.
- Edit the **Value** for the message and click **Update**.

(Legacy) Provider properties for Amazon Connect

View and update the provider properties available for Amazon Connect

Before you begin

Role required: admin

Procedure

- Select **All** and enter `sys_cs_provider.list` to open the Connections table.
- Select the provider **VA Amazon Connect Adapter Provider**.

servicenow All Favorites History Workspaces Admin

Connections ☆

Search

Actions on selected rows... New Custom

Name	Channel
VA Amazon Connect Adapter Provider	Amazon Connect
VA Bot to Bot Provider	Bot to Bot
VA Contact Center Adapter Provider	Contact Center
VA Voice Call Provider	CC Voice

3. In the Provider Channels form, select the **Provider Properties** tab.

The screenshot shows the ServiceNow interface for editing a Provider Channel record. The 'Provider Properties' tab is active, displaying a table of custom adapter properties. The table has three columns: Name, Value, and Description. The properties listed are:

Name	Value	Description
amazon_connect_pause_break_time	0.5	Property to specify the pause time in seconds, between line breaks, choice options, sentences, bullet points, and so on, in the amazon connect response. The value must be a number.
amazon_connect_reference_number_pause_time	3	Pause time before reading of the submitted request or incident number. Value is in seconds. Maximum value allowed is 10.
amazon_lex_voice_timeout_ms	10000	Property to specify the time, in milli seconds, the bot waits before assuming that the user isn't going to speak.
disable_manual_linking	true	When account linking is enabled and we d...
pagination_enabled	true	Property used to enable pagination at adapter level. Value must be set to true to enable pagination.
pagination_max_choice_limit	3	Property used to specify the maximum number of items per page when pagination is enabled. Value must be an integer.
picker_pagination_experience_supported	true	Property used to enable pagination at server level. Value must be set to true to enable pagination.
support_genai_qa_card	true	
support_skill_card	true	

What to do next

The following table lists the properties.

Important: Unless absolutely necessary, the property values must not be edited.

Provider properties

Name	Description
amazon_connect_pause_break_time	Property to specify the pause time, in seconds, between line breaks, choice options, sentences, bullet points, and so on, in the amazon connect response. The value must be a number.
amazon_connect_reference_number_pause_time	Pause time before reading of the submitted request or incident number. Value is in seconds. Maximum value allowed is 10.
amazon_lex_voice_timeout_ms	Property to specify the time, in milli seconds, the bot waits before assuming that the user isn't going to speak.
pagination_enabled	Property used to enable pagination at adapter level. Value must be set to true to enable pagination. Note: Pagination shouldn't be disabled.
pagination_max_choice_limit	Property used to specify the maximum number of items per page when pagination is enabled. Value must be an integer.
picker_pagination_experience_supported	Property used to enable pagination at server level. Value must be set to true to enable pagination.

Provider properties (continued)

Name	Description
	Note: Pagination shouldn't be disabled.
disable_manual_linking	If the property value is true, manual linking options aren't shown when account linking is enabled. Note: Do not change the property value.
support_genai_qa_card	Internal, do not change.
support_skill_card	Internal, do not change.

(Legacy) Conversational Integration with Alexa

Use the Conversational Integration with Alexa application to empower customers to engage with your business using their Alexa devices. The application connects a requester with a Virtual Agent using your company's Alexa account.

Starting with the Brazil release, Conversational Integration with Alexa is being prepared for future deprecation. It will be hidden and no longer installed on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support Knowledge Base.

Get started with Conversational Integration with Alexa

You can name your Alexa skill and manage it using your company's Amazon account while enabling end users to link their accounts to the ServiceNow instance. You can also customize the way that a virtual agent speaks to you in a voice-friendly manner without having to change the topic.

Note: The Conversational Integration with Alexa supports both screen-less and screen-based Alexa-enabled devices.

Select a tile to get started.

Install  Install Conversational Integration with Alexa.	Configure  Configure your Conversational Integration with Alexa implementation.
--	--

Request apps on the Store

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

Install Conversational Integration with Alexa

You can install the Conversational Integration with Alexa application (sn.va.alexas) if you have the admin role. The application installs the related ServiceNow® Store applications and plugins if they are not already installed.

Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#).
- Role required: external_app_install_admin, va_admin, or admin

About this task

The following applications are installed with Conversational Integration with Alexa:

Conversational Custom Chat Integration (com.glide.cs.custom.adapter)

Provides the custom chat integration framework of scriptable APIs to enable the Virtual Agent application on any conversational interface.

For more information, see [Creating conversational custom chat integrations in Virtual Agent](#).

ServiceNow IntegrationHub Runtime (com.glide.hub.integration.runtime)

Enables the execution of ServiceNow® Integration Hub actions and flows.

Procedure

1. All > System Applications > All Available Applications > All

- Find the Conversational Integration with Alexa application (sn_va_alexas) using the filter criteria and search bar.

You can search for the application by its name or ID. If you cannot find the application, you might have to request it from the ServiceNow Store.

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

- In the Application installation dialog box, review the application dependencies.

All the dependent plugins and applications are listed if they will be installed, or currently installed, or must be installed. If any plugins or applications must be installed, you must install them before you can install Conversational Integration with Alexa.

- Click **Install**.

What to do next

JSON for configuring Alexa

```
{
  "interactionModel": {
    "languageModel": {
      "invocationName": "my agent",
      "intents": [
        {
          "name": "AMAZON.CancelIntent",
          "samples": [ ]
        }
      ]
    }
  }
}
```

```

    },
    {
      "name": "AMAZON.HelpIntent",
      "samples": []
    },
    {
      "name": "AMAZON.StopIntent",
      "samples": []
    },
    {
      "name": "EverythingIntent",
      "slots": [
        {
          "name": "EverythingSlot",
          "type": "Bag_of_words"
        }
      ],
      "samples": [
        "{EverythingSlot}"
      ]
    },
    {
      "name": "AMAZON.NavigateHomeIntent",
      "samples": []
    },
    {
      "name": "VAKeywordIntent",
      "slots": [
        {
          "name": "skip_keyword_slot",
          "type": "Skip_slot_type"
        },
        {
          "name": "repeat_keyword_slot",
          "type": "Repeat_keyword_slot_type"
        },
        {
          "name": "more_keyword_slot",
          "type": "More_keyword_slot_type"
        }
      ],
      "samples": [
        "{more_keyword_slot}",
        "{repeat_keyword_slot}",
        "{skip_keyword_slot}"
      ]
    }
  ],
  "types": [
    {
      "name": "Bag_of_words",
      "values": [
        {
          "name": {
            "value": "name: bag_of_words"
          }
        }
      ]
    }
  ]
}

```

```

    ],
    {
      "name": "Skip_slot_type",
      "values": [
        {
          "name": {
            "value": "skip"
          }
        }
      ]
    },
    {
      "name": "More_keyword_slot_type",
      "values": [
        {
          "name": {
            "value": "more"
          }
        }
      ]
    },
    {
      "name": "Repeat_keyword_slot_type",
      "values": [
        {
          "name": {
            "value": "repeat"
          }
        }
      ]
    }
  ]
}

```

Configure Conversational Integration with Alexa

Install and set up the Conversational Integration with Alexa application to enable users to interact with a virtual agent.

Configure Conversational Integration with Alexa to enable interaction with Virtual Agent through the Alexa voice interface.

1. (Legacy) Set up Conversational Integration with Alexa.
2. (Legacy) Fine-tune Virtual Agent settings and topics for the best Alexa voice chat experience.
3. Set up account linking with Alexa.

(Legacy) Set up Conversational Integration with Alexa

Set up the Conversational Integration with Alexa application so that you can engage customers in conversations with bots.

Before you begin

- Get ServiceNow entitlements for the following products and applications:
 - Integration Hub
 - Conversational Integration with Alexa

For more information, see [Get entitlement for a ServiceNow product or application](#) .

- Install the following applications on your ServiceNow instance:
 - Integration Hub
 - Conversational Integration with Alexa
- Complete the Alexa settings.

1. Create your Amazon Developer account.

For more information, see the [Alexa documentation](#) .

2. (Legacy) Create an Alexa skill.

For more information, see the [Alexa documentation](#) .

3. (Legacy) Build an Alexa skill model.

For more information, see the [Alexa documentation](#) .

4. Configure an Alexa skill.

For more information, see [\(Legacy\) Configure an Alexa skill](#).

5. (Legacy) Test an Alexa skill on the developer console.

For more information, see the [Alexa documentation](#) .

6. (Legacy) Account linking with Alexa.

For more information, see the [Alexa documentation](#) .

Role required: external_app_install_admin, va_admin, or admin

Procedure

1. Associate a provider channel identity record with your Alexa account.
For more information, see [\(Legacy\) Create a provider channel identity record for Alexa](#).
2. Associate inbound message records with a message auth record.
For more information, see [\(Legacy\) Set up message authentication for Alexa](#).

(Legacy) Create an Alexa skill

Create an Alexa-hosted skill using the Alexa developer console. Creating an Alexa skill helps you prepare to use the Alexa app.

Before you begin

Role required: admin

Procedure

1. Log in to the Alexa developer console with your Amazon developer account.
 2. Click **Create Skill**.
 3. In the **Skill name** field, enter a skill name.
 4. From the Default language list, select a default language to add your skill.
 5. Under Choose a model to add your skill, select **Custom**.
 6. Under Choose a method to host your skill's backend resources, select **Alexa-Hosted (Node.js)**.
 7. Click **Create skill**.
 8. To add your skill, select the **Start from Scratch** template.
 9. Click **Continue with Template**.
- Note:** Creating an Alexa-hosted skill takes a few minutes.
10. In the skill, navigate to **Interaction Model > Intents > JSON Editor**.
 11. Replace the **JSON Editor** with the following JSON script.

```
{
  "interactionModel": {
    "languageModel": {
      "invocationName": "now agent",
      "intents": [
        {
          "name": "AMAZON.CancelIntent",
          "samples": []
        },
        {
          "name": "AMAZON.HelpIntent",
          "samples": []
        },
        {
          "name": "AMAZON.StopIntent",
          "samples": []
        },
        {
          "name": "AMAZON.NavigateHomeIntent",
          "samples": []
        },
        {
          "name": "EverythingIntent",
          "slots": [
            {
              "name": "EverythingSlot",
              "type": "Bag_of_words"
            }
          ],
          "samples": [
            "{EverythingSlot}"
          ]
        }
      ]
    }
  },
  "types": [
```

```

{
  "name": "Bag_of_words",
  "values": [
    {
      "name": {
        "value": "value: Hello world"
      }
    },
    {
      "name": {
        "value": "name: bag_of_words"
      }
    }
  ]
}

```

12. Click **Save Model**.

13. Navigate to **Invocations > Skill Invocation Name**.

14. In the **Skill Invocation Name** field, provide the skill Invocation name.

Note: The skill name is the name which you use in your Alexa device to invoke the skill.

For example: <ask <skill name>.

15. Navigate to **Interfaces** and enable **Alexa Presentation Language**.

Note: This option enables all the screen devices which you want to use in Alexa.

16. Click **Save Interfaces**.

(Legacy) Configure an Alexa skill

Configure your Alexa skill to talk to your ServiceNow instance.

Before you begin

Note: Linking your Alexa account with your ServiceNow instance is optional and only the Virtual Agent topics with the public role are accessible with guest user access.

Role required: admin

Procedure

1. Log in to the Alexa developer console with your Amazon developer account.
2. Click the **Code** tab.
3. Click **Import Code**.

Note: Browse for the `lambda_function_sn_va_alex.zip` file that you downloaded from the Supporting Documents section of the Conversational Integration with Alexa application on the ServiceNow Store and click **Import**.

4. In the *endpoint* field, replace the hostname with the host name from your ServiceNow instance URL where your Alexa store app is installed.

Example endpoint: `xxxxxxxxx.service-now.com/api/v1/alexa/message`.

5. In the *secretkey* field, replace `<Provide secret key>` with your token (static or hash-based).

Use the following tokens as per your authentication type.

- Hash-based token

If you are using hash-based authentication, provide the hash token which you provided during the ServiceNow instance setup.

```
`"var security = <Token>
    "var genratedHash = generateHmac(eventJSON,
    secretKey);
    'X-Voice-Type': 'hash',
    'X-Voice-Token': genratedHash, "
```

Note: Hash-based authentication is provided by default.

- Static token

If you are using static authentication, provide the static token.

```
`"var security = <Token>
    'X-Voice-Type': 'static',
    'X-Voice-Token': <Token>,`
```

6. Click **Deploy**.

(Legacy) Build an Alexa skill model

Build your Alexa-hosted skill on the Alexa developer console. Building a saved Alexa skill model helps you prepare the skill for testing.

Before you begin

Role required: admin

Procedure

1. Log in to the Alexa developer console with your Amazon developer account.
2. Select the skill that you want to build.

Note: Selecting a skill navigates you to the Alexa Developer Console.

3. Click the **Build** tab.
4. In the Skill builder checklist, click **Build Model**.

Note: Building the model takes a few minutes.

The build successful message appears and you can test the sample utterances while the build is being trained.

(Legacy) Get the Alexa skill ID

Get the Alexa Skill ID from your Alexa developer console after configuring the skill. The Skill ID is the Alexa identifier for the application.

Before you begin

Role required: admin

Procedure

1. Log in to the Alexa developer console with your Amazon developer account.
You can get the skill ID in two ways.
 - a. On the Alexa developer console:
 - i. Click the **Your Skills** tab.
 - ii. Navigate to the skill name for which you want to copy the skill ID.
 - iii. Under the skill name, click **Copy Skill ID**.
 - b. On the left Custom navigator pane of the Alexa developer console:
 - i. Select a skill from the **Your Skills** tab.
 - ii. Navigate to **Assets > Endpoint** on the Custom navigator pane.
 - iii. In the AWS Lambda ARN section, click **Copy to Clipboard**.
2. In the Provider Channel Identity record of your ServiceNow instance, paste the copied skill ID in the **Inbound ID** field.
3. Click **Update**.

(Legacy) Test an Alexa skill on the developer console

Test your Alexa skill using the Alexa simulator and developer account once the installation is complete and the skill is built.

Before you begin

Role required: admin

- Note:** The Conversational Integration with Alexa application works for guest users. All published Virtual Agent topics (set up topics or topic blocks) are presented even if account linking is not done. For any regular topic, you must specify the Alexa channel in the **Additional channel support** field of the Topic Properties page. For more information about adding channel support to a Virtual Agent topic, see [Deploying Virtual Agent topics in other channels](#).

Role required: admin

Procedure

1. Log in to the Alexa developer console with your Amazon developer account.
2. Click the **Test** tab.
3. In the Alexa Simulator, type or speak the invocation name of your skill.

For example, `ask now virtual agent`.

Alexa responds to the Virtual Agent and returns a greeting message.

(Legacy) Test a skill on the Alexa mobile app

Test your Alexa skill using the Alexa mobile app.

Before you begin

Role required: none

Procedure

1. Log in to the Alexa mobile application using your email address that you used for logging in to the developer console.
2. Speak the invocation name of your skill.

For example, `alexa now virtual agent`.

Alexa responds to the Virtual Agent and returns a greeting message.

(Legacy) Test a skill on the Alexa Echo or Echo Show screen device

Test your Alexa skill using the Alexa Echo or Echo Show screen device.

Before you begin

Role required: none

Procedure

1. Log in to the Alexa Echo or Echo Show using your email address that you used for logging in to the developer console.
2. Speak the invocation name of your skill or use the touch screen option to select the list option.

For example, `alexa now virtual agent`.

Alexa responds to the Virtual Agent and returns a greeting message.

(Legacy) Supported Alexa intents

Use the Alexa intents supported by Conversational Integration with Alexa to receive an appropriate response during custom chat integrations with Alexa.

Supported custom intents

Custom intents

Intent	Utterance	Language understanding
AMAZON.YesIntent	yes, yeah	Sends the message "yes"
AMAZON.NoIntent	no, nope	Sends the message "no"
AMAZON.HelpIntent	help, help me, and can you help me	Help message is displayed
AMAZON.PauseIntent	pause	End conversation; End Alexa Session
AMAZON.StopIntent	stop, off, and shut up	End conversation; End Alexa Session
AMAZON.CancelIntent	cancel, never mind, and forget it	End conversation; End Alexa Session

(Legacy) Create a provider channel identity record for Alexa

Create a provider channel identity record to connect to your Alexa account.

Before you begin

Role required: va_admin or admin

Procedure

1. In the navigation filter of your ServiceNow instance, enter `sys_cs_provider_application.list`.
2. Click **New**.
3. On the form, fill in the fields.

Provider Channel Identity form

Field	Description
Name	Name of your provider.
Provider	Provider channel that you created. Select VA Alexa Adapter Provider as the provider channel. Note: The provider is available with the installation of the Conversational Integration with Alexa plugin (sn_va_alex).
Default portal	Default portal used in the mapping.
Short description	Short description for your channel identifier. For security reasons, the Virtual Agent checks that the URLs for attachments in conversations are from trusted domains specified here. If the URL is not from a trusted domain, the Virtual Agent does not upload the attachment. If an attachment upload fails because Virtual Agent did not trust the domain, Virtual Agent does not inform the end user about the attachment upload failure.
Message auth	Message authentication for the channel identifier. Choose a message authentication type from the following options: - ServiceNow Virtual Agent Alexa App - Static - ServiceNow Virtual Agent Alexa App - Hash
Inbound ID	Identifier for your bot. In this field, provide your Alexa Skill ID that you copied from the Amazon developer console.

Field	Description
	For example: amzn1.ask.skill.XXXXXXX-XXXX-XXXX-XXXX-XXXXXX.

4. Click **Submit**.

(Legacy) Set up message authentication for Alexa

Define a token in your ServiceNow instance to set up a message authentication with your Alexa account.

Before you begin

Role required: admin

Procedure

1. In the navigation filter of your ServiceNow instance, enter `message_auth.list` and click **New**.

2. Select a message authentication type for Alexa and open the record.

Your ServiceNow instance provides you with the following authentication types by default.

- **ServiceNow Virtual Agent Alexa App - Static**
- **ServiceNow Virtual Agent Alexa App - Hash**

3. On the form, fill in the fields.

Message Auth form

Field	Description
Name	Name of the record in the Message Auth [message_auth] table. For example, ServiceNow Virtual Agent Alexa App - Hash or ServiceNow Virtual Agent Alexa App - Static
Provider	Provider of the auth token. Enter <code>Alexa</code> .
Inbound message verification	Name of the Hash or Static Message Verification record that you created for the inbound hash or static messages. Select an inbound message verification option as per the selected authentication type. Your ServiceNow instance provides you with the following authentication tokens by default: ○ ServiceNow Virtual Agent Alexa App Static Token ○ ServiceNow Virtual Agent Alexa App Hash Token

Field	Description
Outbound message creation	Name specified on the Token Verification form (this token interacts with the provider on behalf of the user). Select an outbound message option as per the selected authentication type. Your ServiceNow instance provides you with the following authentication tokens by default: ○ ServiceNow Virtual Agent Alexa App Static Token ○ ServiceNow Virtual Agent Alexa App Hash Token Note: Outbound message verification is not required for Alexa. However, select the same option provided for Inbound message verification because it is a required field.
Outbound service token	Authorized outbound service token. Navigate to the Inbound message verification record to procure the Outbound service token from the Alexa setup and provide it in the Outbound service token field.

4. Click **Update**.

(Legacy) Account linking with Alexa

Link your Alexa account with your ServiceNow instance to retrieve information from your custom skill.

Link your Alexa account with your ServiceNow[®] instance

1. Configure your ServiceNow instance to link it with your Alexa account.

For more information, see [Create an OAuth API endpoint for external clients](#).

2. To configure your Alexa account for account linking, see [\(Legacy\) Configure your Alexa account](#).

3. To link the Alexa events with your ServiceNow instance using your macOS Terminal, see [\(Legacy\) Link Alexa events using the macOS Terminal](#).

4. To link your ServiceNow instance with your Alexa account using the Alexa app, see [\(Legacy\) Link your account using the Alexa app](#).

(Legacy) Configure your Alexa account

Configure your Alexa account to link it with your ServiceNow instance.

Before you begin

Role required: admin

Procedure

1. Log in to your Alexa developer console with your Alexa developer account.
2. Navigate to the **Build > MODELS > ACCOUNT LINKING**.
3. On the Account Linking form, swipe the **Do you allow users to create an account or link to an existing account with you?** toggle switch to the right.
4. In the Settings section of the form, swipe the **Allow users to authenticate using your mobile application** toggle switch to the right.
5. In the Security Provider Information section of the form, click **Auth Code Grant**.
6. On the form, fill in the fields.

Auth Code Grant form

Field	Description
Your Web Authorization URI	The URI that authorizes your web access. For example: <code>https://<instance-name>.service-now.com/oauth_auth.do</code>. Note: The instance-name for Alexa is <code>voice</code>.
Your iOS App Authorization URI	The URI that authorizes your iOS app. Provide <code>voice</code> as the value.
Your Android App Authorization URI	The URI that authorizes your Android app. Provide <code>voice</code> as the value.
Access Token URI	The URI that authorizes the access to the API requests. For example, <code>https://<instance-name>.service-now.com/oauth_token.do</code> Note: The instance-name for Alexa is <code>voice</code>.
Your Client ID	Auto-generated unique ID of the client application requesting the access token. Note: Provide the Client ID generated while creating an OAuth API endpoint for external clients.
Your Secret	The shared secret string that the instance and the OAuth application use to authorize communications with one another.

7. Click **Save**.

8. Copy one of the URLs from the **Alexa Redirect URLs** field in the Auth Code Grant section.

Note: Insert the copied URL in the Redirect URL field of the OAuth API record created in your ServiceNow instance.

If you face an issue with one of the URLs, try to use the next available URL and pick the one that works.

9. Click **Save**.

(Legacy) Link Alexa events using the macOS Terminal

Link Alexa events using your macOS Terminal to complete the Alexa account linking process with your ServiceNow instance.

Before you begin

Note: Copy the Skill ID of your skill from the Alexa developer console. The Skill ID is the same inbound ID used in the `sys_cs_provider_application` record.

Role required: admin

Procedure

1. On your macOS, open the Terminal.

2. Execute the `npm install -g ask-cli` command.

Executing this command installs the Alexa command-line interface on your machine if it was not previously installed.

3. Execute the `ask configure` command.

4. Log in with your Amazon developer account credentials when prompted.

Note: Choose **No** if you are asked the question **Do you want to link your AWS account in order to host your Alexa skills?**

5. To download the manifest file, execute the `ask smapi get-skill-manifest -s {<provide skillId>} > skill.json` command.

6. To edit the `skill.json` file, add the following JSON script inside the manifest object.

```
"events": {
  "endpoint": {
    "uri": <provide lambda ID>.
  },
  "subscriptions": [
    {
      "eventName": "SKILL_ENABLED"
    },
    {
      "eventName": "SKILL_DISABLED"
    },
    {
      "eventName": "SKILL_PERMISSION_ACCEPTED"
    },
    {
      "eventName": "SKILL_PERMISSION_CHANGED"
    }
  ]
}
```

```
{
  "eventName": "SKILL_ACCOUNT_LINKED"
},
]
```

Note: Be sure to edit the URL endpoint with the Lambda ID. You can copy one of the endpoints from the *skill.json* file and replace it with the Lambda ID. You can also fetch it from the Alexa console from **Build > Endpoints**.

7. To upload the updated manifest file, execute the *ask smapi update-skill-manifest -s {<provide skillId>} --manifest "\$(cat skill.json)* command.

Result

Your Alexa account is linked with your ServiceNow instance.

Your Alexa account is linked with your ServiceNow instance.

(Legacy) Link your account using the Alexa app

Link your ServiceNow account using your Alexa mobile application.

Before you begin

Role required: admin

Procedure

1. Download the Alexa app on your Android or iOS device.
2. Log in with the same email address that you used for the Amazon developer account.
3. In the lower-right area of the app, click **More**.
4. Select **Skills & Games**.
5. Select **Your Skills** tab.
6. Click **Dev**.
7. Select the skill that you created.
8. If the **enable skill** button does not appear, click **Disable Skill**.
9. Click **Enable**.
10. Log in with the ServiceNow® instance credentials of any user of the instance.
You should see that the account is linked.

Note: Insert the user record in the provider_user_map record to complete the account linking.

(Legacy) Fine-tune Virtual Agent settings and topics for the best Alexa voice chat experience

Fine-tune your Virtual Agent settings and topics provided by the Virtual Agent Designer for the best voice chat experience with Alexa.

- Virtual Agent Designer is a diagram tool for creating and managing topics, which are blueprints for conversation between a Virtual Agent and a user. For more information, see [Build conversations in the Asset library in Assistant Designer](#).

Note: Be sure that you specify Alexa as the applicable channel in the **Additional channel support** field if you want the topics that you designed using the Virtual Agent Designer to work on Alexa. For more information about the channel selection, see [Deploying Virtual Agent topics in other channels](#).

- Bot messages help you to interact with Alexa. You can change the bot messages for interaction in a voice chat conversation. To access the bot messages, enter `sys_cs_provider_application.list` in the navigation filter and navigate to your Alexa application profile to find the bot messages.

Bot messages for Alexa

Provider Channel Identity
Alexa

Update Delete

Name
Alexa

Message auth
ServiceNow Virtual Agent Alexa App

Provider
VA Alexa Adapter Provider

Inbound ID
amzn1.ask.skill.dd071f55-718a-41ef-b0c1-

Default Portal

Short description

Trusted media domains

Update Delete

Bot Messages New

Search Name Search

1 to 25 of 25

Provider Channel Identity = Alexa

	Name	Value	Description	Message Type
	all_topics_msg	You can also use the screen to pick a to...	Voice guidance for topic picker	Bot Message
	boolean_msg	Please say {0} or {1}.	Voice guidance for boolean control	Bot Message
	card_audio_device_msg	There is an image called {0} . Here is t...	Voice guidance explaining that there is ...	Bot Message
	date_picker_msg	For example, you can say January 16th, 1...	Voice guidance to select Date.	Bot Message
	date_time_picker_msg	For example, you can say January 16th, 1...	Voice guidance to select Date Time.	Bot Message
	error_msg	Error, {0}.	Voice error describing the name of unsp...	Bot Message
	error_response_msg	We're having some issue while processing...	Message instructing for users to error r...	Bot Message
	footer_text_msg	Try asking me for help.	Footer for the Voice-enabled device	Bot Message

- You can change the greeting message and other messages only for the voice channels using the Custom Greeting and Setup page. For example, you can create a custom topic, edit it, and assign it to be used if the end user is on a voice channel. For more information about accessing the Custom Chat and to change the greeting section of the message, see [\(Legacy\) Configure a Virtual Agent NLU chat experience](#).
- You can also change the system-generated messages by entering `sys_properties.list` in the navigation filter, and filter them by the criteria `com.glide.cs` to confirm that these messages work for voice channels. You can review the following key messages:
 - `com.glide.cs.topic_picker_msg`
 - `com.glide.cs.no_topic_found_message`
 - `com.glide.cs.no_topic_sorry_message`
 - `com.glide.cs.link_account_msg`

- com.glide.cs.topic_choice_list_message
- com.glide.cs.topic_confirmation_message

Note: Most of the messages unique to the voice channels are listed in the Bot Messages section of the Provider Channel Identity record.

For more information, see [\(Legacy\) Change the Virtual Agent greeting messages in the Greeting setup topic](#).

- Most components work for screen-based and screen-less devices accessed in Alexa. However, some components are not compatible especially for the screen-less devices.

Note: On the screen-based Alexa enabled devices, the presentation of cards and images has limitations as per the Alexa skill kit specification.

The Conversational Integration with Alexa application supports the following user input controls in Virtual Agent Designer.

Note: Conversational Integration with Alexa also supports touch input for screen-based devices.

- **User input controls**

User input control	Description	Screen	No screen
Text input/output	Text format that is validated when a user enters certain text items.	Yes.	Yes.
Static Choice	User selects an item from a predefined list.	Yes, touch scroll.	Yes, voice pagination.
Dynamic Choice	User selects a choice from the list of dynamically created choices.	Yes, no clicking links.	Yes, voice pagination.
Boolean	User enters a Boolean response to the bot. For example, the user can reply Yes or No in a chat conversation.	Yes.	Yes.
Date Time	User selects a calendar date, time (hours and minutes), or both.	Yes (NLU recommended at the node).	Yes (NLU recommended at the node).
File Picker	User sends a file to the bot.	No.	No.
Pause	Breaks the conversation with Alexa.	No.	No.
Carousel	User selects a single item from the carousel.	Yes, touch scroll.	Yes, reading labels.
Image/Link/HTML output	Bot sends an image, a link, or an HTML to the user.	Yes, no clicking links.	error_msg
Video	User can choose a video card from the header card.	video_screen_device_msg	video_audio_device_msg
Card	Type of header card. Choose the contents: ○ Large image with text ○ Small image with text ○ YouTube Video Card The fields in the dialog box change based on your choice.	Yes, no clicking.	Yes, reading labels.

User input control	Description	Screen	No screen
Table	If you selected Record as the Reference Type , select the table to be searched.	Yes Shows the table headers, followed by rows with column header: value pair, Speak (Table header). Please say Done to continue.	No, reading labels Unfortunately, I cannot show you the content on this device. Please say Done to continue.

- **Note:** To edit or change any of the following bot messages, enter `sys_cs_provider_application.list` in the navigation filter of your ServiceNow instance, select **Alexa > Bot Messages**, and click the name of the bot message that you want to edit.
 - `error_msg`
 - `video_screen_device_msg`
 - `video_audio_device_msg`
 - `table_msg`

If you find the message name `<EMPTY>` and want to add a Boolean confirmation message to the end users, you can configure the bot message with the value `[0]` or `[1]`.

- Conversational Integration with Alexa supports contextual actions that serve an appropriate response from custom chat integrations when user input is mapped to them. For more information, see [\(Legacy\) Contextual actions for Alexa](#).

(Legacy) Contextual actions for Alexa

Use the contextual actions supported by Conversational Integration with Alexa to receive an appropriate response during custom chat integrations with Alexa.

Hi

You can type or speak the `hi` command to initiate a conversation, in the middle of a conversation, or even inside a specific topic.

When you type or say `hi` in the middle of the topic, you are shown an option to either **End conversation** or to **Cancel**. If you end the conversation, the Alexa skill is reset and you can restart the skill by speaking your invocation name. If you cancel the conversation, you are redirected to the last topic that you were at.

Bye

The `Bye` command is used to end a conversation.

You can type `bye` or speak this command in the middle of a conversation to end the conversation.

Help

The `help` command is used to request help using the bot.

You can type `help` or speak this command to ask your Alexa skill any questions. If you want to restart the conversation, say `hi` or restart the conversation.

Restart

The `restart` command is used to end a bot conversation that is either in progress or runs into an error, and then begin a new conversation.

You can type `restart` or speak this command anywhere in the middle of a conversation.

- **Note:** For excluding contextual actions Logout/Notifications for Alexa, you must add the records to the Excluded channel table `[sys_cs_contextual_action_excluded_channel]`.

(Legacy) Closing idle Alexa chat conversations

Enable virtual agents to effectively manage their active Alexa chat conversations by automatically closing the conversations after they have been inactive for a preconfigured amount of time.

Virtual Agent conversations are configured for the Alexa application. By default, any conversation is closed once the session with Alexa closes. Any conversation that is abandoned by requesters remains open or idle until they are automatically closed daily by the *Time Out Abandoned VA Conversations* scheduled job. For more information, see [Closing Virtual Agent and Agent Chat conversations](#).

(Legacy) Analyzing Virtual Agent performance

Analyze the performance of Virtual Agent through preconfigured dashboards.

Starting with the Brazil release, Conversational Analytics is being prepared for future deprecation. It will be hidden and no longer installed on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#)  article in the Now Support Knowledge Base.

Starting with the Brazil release, Virtual Agent for NLU and Virtual Agent Lite are being prepared for future deprecation. It will be hidden and no longer activated on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#)  article in the Now Support Knowledge Base.

(Legacy) Conversational Analytics dashboard in Platform Analytics experience

The Conversational Analytics dashboard in Platform Analytics experience helps you improve Virtual Agent (VA) interactions with users by providing insights into conversational data. The dashboard helps you refine topics and improve the deflection rate of Virtual Agent.

Starting with the Brazil release, Conversational Analytics dashboard in Platform Analytics experience is being prepared for future deprecation. It will be hidden and no longer installed on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#)  article in the Now Support Knowledge Base.

Get started

Select a tile to get started with the Conversational Analytics dashboard.

Explore



For VA users and system administrators to learn about the dashboard.

Set up



For system administrators setting up the dashboard.

Use



For VA users to learn how to use the dashboard.

Reference



Get information about the dashboard roles and system parameters

(Legacy) Exploring the Conversational Analytics dashboard in Platform Analytics experience

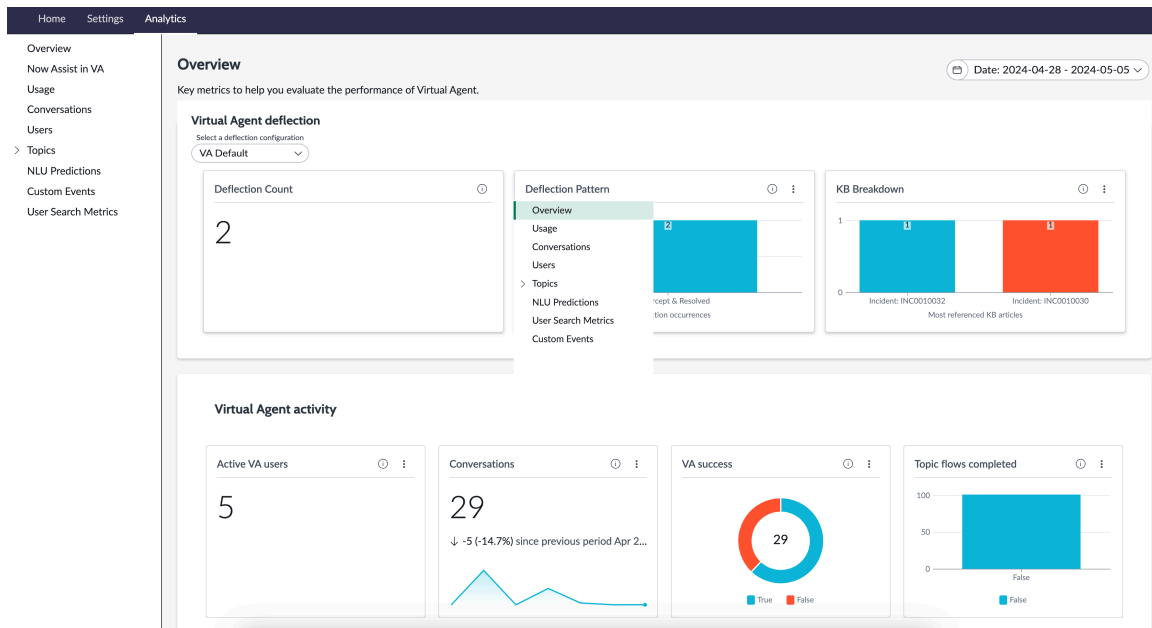
Use Conversational Analytics dashboard to improve Virtual Agent (VA) interactions with users. The dashboard provides insights into conversational data, and helps you refine topics and improve the deflection rate of VA.

Starting with the Brazil release, Conversational Analytics is being prepared for future deprecation. It will be hidden and no longer installed on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#)  article in the Now Support Knowledge Base.

Conversational Analytics dashboard

Conversational Analytics dashboard provides insights into conversations so you can see how well Virtual Agent understood and resolved user issues. Virtual Agent keeps conversational data, that is, records of conversations with the users, and analytics data for up to two years. The dashboard contains indicators which, for example, reveal:

- What percentage of users transfer from VA to a live agent
- How to increase engagement rate and reduce user drop-offs
- Whether the user reached the last node in a topic
- Most and least used topics
- Conversation details using advanced filters
- How to optimize conversation design

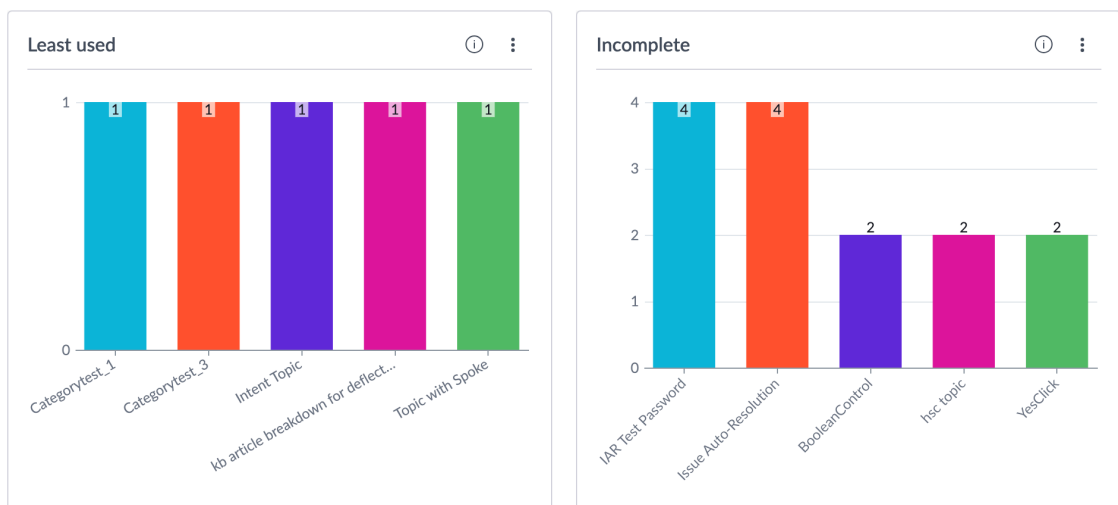


Key features

Underperforming topics

See the underperforming VA topics to investigate and improve topic performance.

Underperforming topics



Conversation details

Discover metadata about each VA interaction, including the user, chat duration, conversation type, and channel.

2024-04-29 22:06:10



Details Transcript

User ID
adela.cervantsz

Conversation type
VA Only

Channel
Web Client

Start	End	Duration
22:06:10	22:07:19	00:01:09

Overview of Conversational Analytics dashboard

The following sections provide a high-level overview of how to use each section of the dashboard from the top down.

Date range of data displayed

The **Start date** and **End date** fields at the top of the dashboard specify the data range of the data summarized on each page.

Start date

2024-04-28

End date

2024-05-05

All data is continually pushed from Virtual Agent to the dashboard in real time, and retained for up to two years.

For information about setting the date range, see [\(Legacy\) Set the date range of the data.](#)

Certain data visualizations might not have data available for the start date and end date selected in the **Start date** and **End date** fields. In such cases, the indicator shows data for a start date and end date based on data availability within the selected date range.

Getting detailed data

The **Overview** tab contains key indicators to help you evaluate the performance of VA. You can view more details in the following ways:

- Select a tab, for example, **Usage**.
- Select an indicator, for example, **Active VA users**.

Dashboard tabs

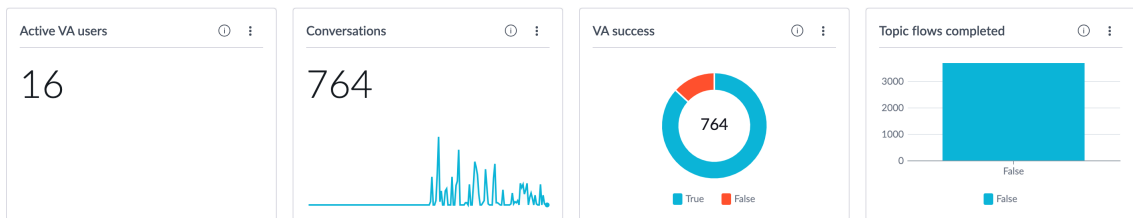
Dashboard tabs

Tab	Description
Overview	View the key indicators of the performance of VA.
ServiceNow Otto for Virtual Agent	View key indicators to monitor the performance of ServiceNow Otto for Virtual Agent. This is visible only when ServiceNow Otto for Virtual Agent is enabled.
Usage	View VA conversation usage, for example, the language and conversation type. You can also drill down to the list of conversations of a certain language or conversation type.
Conversations	View conversation details and troubleshoot individual conversations. Advanced filtering enables you to filter the list of conversations by conversation type, duration, user, and language.
Users	View how your users are conversing with VA. Advanced filtering enables you to filter the list by user, channel, and last conversation.
Topics	View topic performance indicators. Some of the indicators are most and least used topics, topics corresponding to VA conversations that were transferred to a live agent, average length of conversations per topic, and topic blocks used.
NLU Prediction	View NLU performance indicators such as number of times the NLU prediction model accurately understood the intent of the user's conversation or auto-selected a topic. The indicator links to the NLU Workbench if your instance includes NLU.
Custom Events	View the number of custom chat events that you created using the Events page.
Issue Auto-Resolution	View details about the number of user issues intercepted by the auto-resolution service and resolved by the Virtual Agent.

Virtual Agent activity

This area of the dashboard contains indicators that show Virtual Agent activity such as number of active users who interacted with the Virtual Agent, number of conversations initiated on the Virtual Agent, and so on.

Virtual Agent performance



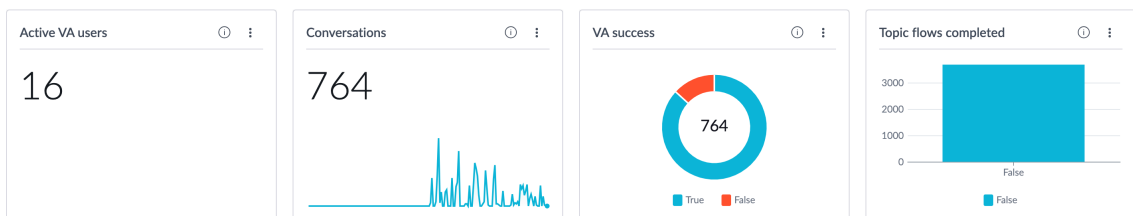
Selecting on the info icon displays the description of the indicator.

Certain trend visualizations on the dashboard such as the trends in intent and topic matching do not support viewing monthly, weekly, and daily data.

Virtual Agent performance

This area of the dashboard contains indicators such as topic performance and user feedback that show how well Virtual Agent topics performed and the feedback from the user.

Virtual Agent performance



(Legacy) Setting up the Conversational Analytics dashboard

Set up custom events and formula definitions to create more targeted analytics.

Starting with the Brazil release, Conversational Analytics is being prepared for future deprecation. It will be hidden and no longer installed on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support Knowledge Base.

The Conversational Analytics dashboard enables you to customize the data you monitor in the following ways:

- **Date range**—Specify the date range for the data displayed on the dashboard.
- **Custom events**—The dashboard can display analytics about custom events you create. All events must relate to conversations. For example, you can store data about every conversation that used a specific channel, such as Slack.
- **Formula Override**—Customize parameter definitions used in analytic reports. For example, by default, duration is the total time from the first to the last exchange in a conversation. You might like to override that formula by subtracting inactive times in the conversation.

Role requirements

For information on roles, see [\(Legacy\) Conversational Analytics dashboard roles](#).

Dependencies

The Conversational Analytics Dashboard requires the Quebec or later version of Virtual Agent.

(Legacy) Install Conversational Analytics Dashboard

Get updates to the Conversational Analytics dashboard from the ServiceNow Store.

Before you begin

- Note:** Starting with the San Diego release, the Conversational Analytics app is automatically installed when you initially activate the Glide Virtual Agent (com.glide.cs.chatbot) plugin. Subsequent updates for this app must be downloaded and installed from the ServiceNow Store.

Role required: Chat Analytics Admin

Procedure

1. Confirm that your instance has the Glide Virtual Agent plugin [com.glide.cs.chatbot] activated. Starting with the San Diego release, the Conversational Analytics Dashboard app is automatically installed when you activate the Glide Virtual Agent plugin [com.glide.cs.chatbot].
2. Go to the [ServiceNow Store](#), and search for analytics .
3. Select the latest version of Conversational Analytics app.
The store installs the updates to the Conversational Analytics app and the analytics data configuration tools. The plugin name is com.sn.conversational.analytics and the scope name is sn_ci_analytics. Some of the main tables for the Conversational Analytics dashboard include:

Table	Description
sn_ci_analytics_conversation	The main table for conversations. It lists Virtual Agent conversations.
sn_ci_analytics_event	List of events. An event is something that happens, for example, an actionable notification. The dashboard can display analytics about default events or ones you create. For more information, see Set up custom events .
sn_ci_analytics_event_prop	List of values used in events.
sn_ci_analytics_formula_override	Lists formula overrides for properties used by the dashboard. For more information, see Set up custom definitions .

- Note:** You do not need a license or a plugin for Performance Analytics.

(Legacy) Create custom events to monitor

Create custom events and monitor them in the Conversational Analytics dashboard.

Before you begin

Role required: Chat Analytics Admin.

About this task

An event is a combination of conditions that apply to a subset of Virtual Agent (VA) conversations. For example, an event might be conversations originating on a Slack channel that VA transferred to a live agent.

Most metrics you see on the dashboard, for example topic and conversation details, are derived from pre-built events. The dashboard displays these events on the **Topics** and **Conversations** tabs. To build custom events, you can use the Custom Events feature. Use custom events to create analytics about data you're interested in, for example:

- Number of conversations on a Slack channel that transferred to a live agent.
- Number of conversations on a Slack channel where the user never returned.



Custom events appear on the **Custom Events** tab. If you haven't configured any custom events, the dashboard won't display any. You can create up to 20 custom events.

Custom events take effect when you create them. You cannot use them to analyze data collected before you created the custom event.

Procedure

1. Navigate to **All > Conversational Analytics > Event Configuration** and select **New**. The Event New record page appears.

2. In the form, fill in the fields.

Field	Description
Name	Custom event's name.
Type	Choose Custom . Choosing any other type changes the default behavior of the dashboard and is not recommended. This field specifies the type of event to include in the dashboard analytics.
Source table	Table of conversations to examine to detect custom events.
Source Table Filter	Use the condition builder to select specific data from the source table.
Conversation Mapping Field	Maps fields in the source table to fields in another conversation-related table. For example, a channel metadata column

Field	Description
	in the interaction table can be mapped to the sys ID column of the conversation table. Every event must be mapped to a Conversation ID.
Active	Select the check box to enable the custom event.
Event Time	Specifies a time-based event, such as the time VA transferred a chat to a live agent. Selecting this check box opens the Event Time Field .
Event Time Field	Specifies the time in an event that you want to monitor, for example, the time a chat was transferred to a live agent. This field appears when you select Event Time .
Apply Post Fetch Filter	Enables you to use a script to filter data that was already filtered by the condition builder, Source Table Filter .
Post Fetch Script	Text field to enter a script that filters the data that has been filtered by the Source Table Filter . This field appears when you select Apply Post Fetch Filter .

3. Click **Submit**.

The Events page appears, which lists all custom events. You've specified the table to look for custom events. Now, you must specify the parameter values that trigger the custom event.

4. Click the custom event you created.

5. In the Event Properties related list, select **New**.

The Event Property New Record page appears where you specify the properties for a custom event that you want to track on the dashboard.

The screenshot shows the 'Event Property New Record' form. It has a header bar with a back arrow, 'Event Property New record', and a 'Submit' button. The form contains several fields: 'Name' with the value 'Slack chat updated by', 'Event' with 'Custom Event Dec', 'Application' with 'Conversational Analytics', 'Event Source Table' with 'interaction', 'Advanced' with an unchecked checkbox, and 'Value Field' with a dropdown menu showing 'Updated by'. A 'Submit' button is located at the bottom left of the form.

In this example, the **Custom Event** tab shows metrics for *Updated by* for the custom event, Messages-from-Slack.

6. In the form, fill in the fields.

Field	Description
Name	Record name for the property you want to collect metrics on.
Event	Name of the custom event associated with this property.
Advanced	Selecting this check box opens a text field in which you can enter a script that specifies the field value you want to filter on. Selecting this check box removes the Value Field field.
Value Field	Specifies the field you want to collect metrics on.
Application	The scope of the custom event.
Event Source Table	The same value for this field you entered on the Event New Record page.

7. Click **Submit.**

The Event page appears.

8. Click **Update.**

The Events page appears, which lists all custom events. You can open the **Custom Events** tab on the dashboard to see the custom event. This custom event is not retroactive; the dashboard only displays new events that satisfy the custom event criteria.

(Legacy) Create custom override definitions

Use scripts to override the default formulas used to create the analytics on the Conversational Analytics Dashboard.

Before you begin

Role required: Chat Analytics Admin

Be sure to set the application scope to Conversational Analytics.

About this task

The Conversational Analytics Dashboard uses formulas to determine analytics, such as how to calculate duration. You can override the default formulas to tailor the analytics to your needs. For example, the default formula for duration in the dashboard is the time between the first and last exchanges in a conversation. You might like to override that formula by subtracting inactive times in the conversation.

The default formulas and formula overrides are in the `sn_ci_analytics_formula_override` table. You can only modify the existing formulas that are in the table by deactivating the default formula and creating a new formula override record. You cannot override some formulas because they are system dependent. You can, however, [create custom events](#) to achieve a similar goal.

The default definitions are:

- **Duration**—Time from the start of a conversation session until the last message is sent, rather than when the conversation session closes. You cannot replace the supplied script for Duration. You can only turn it on or off. If you deselect the **Active** check box, the duration is calculated until the end of the session. If you select the **Active** check box, the duration is calculated to the last message sent.
- **Self-solve rate**—Number of conversations that did not have negative feedback, contained a topic that went through to the last node, and did not escalate to a live agent. The dashboard divides that number by the number of all conversations to get the rate.
- **Feedback**—Defined as positive, neutral, and negative. For example, to override this behavior, first, use Virtual Agent (VA) Designer to create a ranking from 1 to 10. Then, you can use a script to override the dashboard's default behavior by grouping 1–4 as negative, 5–7 as neutral, and 8–10 as positive.
- **End state**—Defined by default in 12 ways. For more information, see [Formula override examples](#).
- **Valid conversation**—Defined as a conversation record that is included in the dashboard results for satisfying at least one of the following criteria.
 - Non-actionable notification conversations, which do not require validation from the user, are counted as active conversations.
 - Actionable notifications that are not part of an existing conversation are considered valid conversations when the status of the notification is either Sent or Completed.
 - Conversation engages Virtual Agent topic discovery or direct live agent conversation.

- Note:** Formula overrides do not change the stored data. They only change how the dashboard displays the data by computing existing data in a different way.

Procedure

1. Navigate to **All > Conversational Analytics > Formula Override**.

Alternatively, you can enter `sn_ci_analytics_formula_override.list` in the Filter Navigator to display the `sn_ci_analytics_formula_override` table.

2. Select the formula you want to override.

You cannot override the Duration formula, you can only activate or deactivate it. You can alter the scripts for other definitions. These are the only definitions you can alter.

The Formula Override page appears and shows the existing formula.

The screenshot shows the 'Formula Override' form in ServiceNow. The 'Type' field is set to 'DynamicProperties' and the 'Key' field is set to 'End State'. The 'Application' field is set to 'Conversational Analytics'. The 'Active' checkbox is checked, and the 'Advanced' checkbox is unchecked. The 'Value Script' field contains the following JavaScript code:

```

1 (function calc(convGr) {
2   var conversationId = convGr.getValue('sys_id');
3   var interactionGr = new GlideRecord('interaction');
4   interactionGr.addQuery('channel_metadata_document', conversationId);
5   interactionGr.addQuery('channel_metadata_table', 'sys_cs_conversation');
6   interactionGr.query();
7   if (interactionGr.next()) {
8     var state = interactionGr.getValue('state');
9     var reason = interactionGr.getValue('state_reason');
10    var isVChat = interactionGr.getValue('virtual_agent');
11    var isLChat = interactionGr.getValue('agent_chat');
12    return new CAUSEX().getEndState(state, reason, isVChat, isLChat);
13  }
14 })(convGr);

```

At the bottom of the form, there is an 'Update' button.

3. Copy the script in the Value Script field.

The default formulas are read-only. So, to modify them, you must make a copy.

4. Deselect the **Active** check box to make the default formula inactive.

5. Click **Update**.

6. Click **New** to create a formula override record that overrides the default formula.

The Formula Override New Record page appears.

The screenshot shows the 'Formula Override New Record' form in ServiceNow. The 'Type' field is set to 'DynamicProperties' and the 'Key' field is set to 'End State'. The 'Application' field is set to 'Conversational Analytics'. The 'Active' checkbox is checked, and the 'Advanced' checkbox is unchecked. The 'Value Field' is set to 'Conversation Type'. At the bottom of the form, there is a 'Submit' button.

7. In the form, fill in the fields.

Field	Description
Type	Select the Type of the default formula you want to override. For example, <i>DynamicProperties</i> .
Key	Specifies the formula you want to override. For example, select <i>End State</i> to override the default formula for the definition of the end state of a conversation.
Value Field	Specifies the new definition of the Key value.
Active	Select the check box to make the new definition active. You can have multiple formulas for a property but only one can be active at a time. When you activate this definition, you must deactivate the default definition if not already done.

Field	Description
Advanced	Selecting this check box removes Value Field and opens the Value Script field. You can paste the script of the default formula you copied earlier and modify it as required to change the existing formula used for the Key value. For example, if the Key value is <i>End State</i> , the script overrides the default formula that defines the end state of a conversation. For example scripts, see Formula override examples .

8. Click **Submit**.

(Legacy) Formula override example

Use the following formula override example to craft your own formula overrides.

Group End State definitions

The end state of a conversation specifies how a conversation ended. For example, it could end with the user not responding, or the user closed the chat window. There are 12 default definitions of end state. For more information on conversation end states, see [Virtual Agent interaction records](#). The following script groups them as follows:

- VA closed the chat session
 - System Closed VA – User No Response
 - System Closed VA – Topic Complete
 - System Closed VA – Left With AI Search
 - System closed VA – Auto Closed
 - System Closed VA – User Never Engaged
- Live agent closed the chat session
 - System Closed LA – User No Response
 - System Closed LA – Chat Complete
 - Agent Closed LA – Clicked End/X
 - System Closed LA – Before Agent Engagement
- User closed the chat session
 - User Closed LA – Clicked End/X
 - User Closed VA – Clicked End/X
 - User Closed LA - Before Agent Engagement

To create these groupings of the 12 end states, follow the instructions for [creating a formula override](#) and use the following script.

```
(function calc(convGr) {
    // Returns 'System Closed VA', 'System Closed LA', 'User Closed' states.
    function getFinalEndState(state) {
        var arrayUtil = new global.ArrayUtil();
        VA_END_STATE = ['System Closed VA – User No Response',
            'System Closed VA – Topic Complete',
            'System Closed VA – Left With AI Search',
            'System closed VA – Auto Closed',
```

```

        'System Closed VA - User Never Engaged'
    ];
    LA_END_STATE = ['System Closed LA - User No Response',
        'System Closed LA - Chat Complete',
        'Agent Closed LA - Clicked End/X',
        'System Closed LA - Before Agent Engagement'
    ];
    USER_CLOSED_END_STATE = ['User Closed LA - Clicked
End/X',
        'User Closed VA - Clicked End/X',
        'User Closed LA - Before Agent Engagement'
    ];
    if (state) {
        if (arrayUtil.contains(VA_END_STATE, state))
            return 'System Closed VA';

        if (arrayUtil.contains(LA_END_STATE, state))
            return 'System Closed LA';

        if (arrayUtil.contains(USER_CLOSED_END_STATE,
state))
            return 'User Closed';
    }
    return state;
}

var conversationId = convGr.getValue('sys_id');
var interactionGr = new GlideRecord('interaction');
interactionGr.addQuery('channel_metadata_document',
conversationId);
interactionGr.addQuery('channel_metadata_table',
'sys_cs_conversation');
interactionGr.query();
if (interactionGr.next()) {
    var state = interactionGr.getValue('state');
    var reason = interactionGr.getValue('state_reason');
    var isVChat = interactionGr.getValue('virtual_agent');
    var isLChat = interactionGr.getValue('agent_chat');
    var endState = new CAUtil().getEndState(state, reason,
isVChat, isLChat);
    return getFinalEndState(endState);
}
})(convGr);

```

(Legacy) Using the Conversational Analytics Dashboard

Use the Conversational Analytics dashboard to get insights into Virtual Agent (VA) conversations.

Starting with the Brazil release, Conversational Analytics is being prepared for future deprecation. It will be hidden and no longer installed on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support Knowledge Base.

The following sections explain how to use the dashboard to investigate VA interactions with users. You must have the Chat Analytics Viewer (chat_analytics_viewer) role to use the Conversational Analytics dashboard.

(Legacy) Set the date range of the data

Set the date range using the date picker on the Overview tab to view the data visualizations for the specified date range. The date range set on this tab applies to all the other tabs on the dashboard.

Before you begin

Role required: Chat Analytics Viewer (chat_analytics_viewer)

About this task

Set the date range for the visualizations using the date picker. You can either select from the standard date ranges available or use the custom range option to select start and end dates.

Procedure

- 1. Navigate to All > Conversational Interfaces > Analytics.**
- 2. Use the date picker on the Overview tab to set the date range.**
 - a. Select the date picker.** .
 - b. Select the start date of the date range.**
 - c. Select the end date of the date range.**

The dashboard highlights the selected date range.

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>

S	M	T	W	T	F	S
23	24	25	26	27	28	1
2	3	4	5	6	7	8
9	10	11	12	13	14	15
16	17	18	19	20	21	22
23	24	25	26	27	28	29
30	31	1	2	3	4	5

Start date

2025-03-01

End date

2025-03-31

Cancel

Apply

d. Select **Apply**.

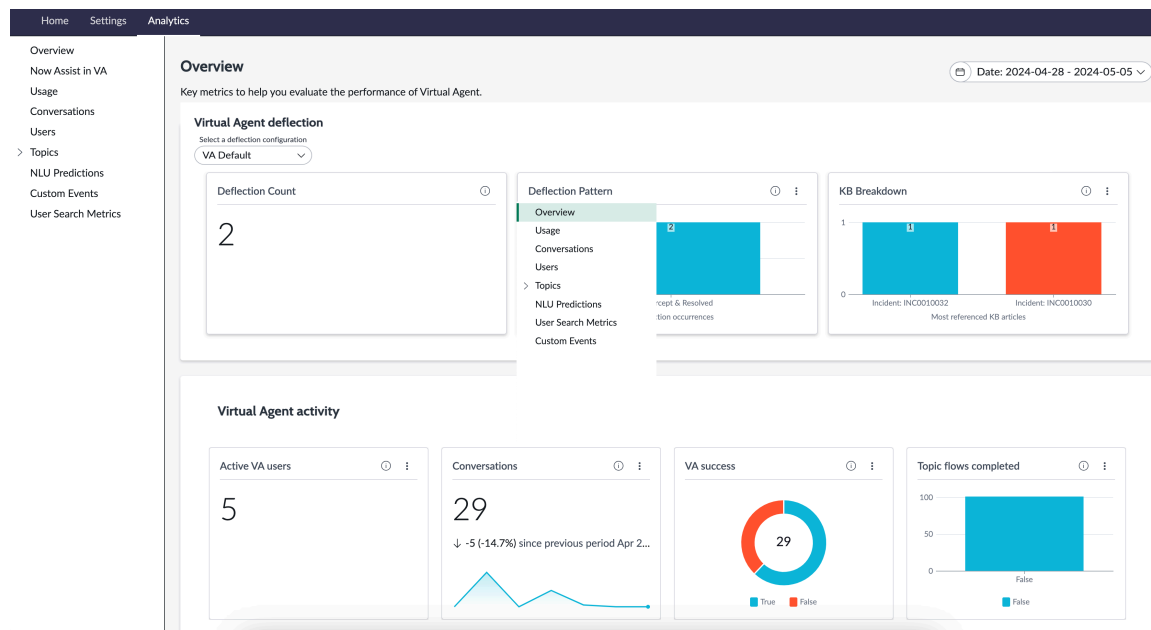
The data displayed on the dashboard adjusts according to the new date range.

(Legacy) Overview tab

Use the Overview tab to view key indicators that help you evaluate the performance of Virtual Agent.

The **Overview** tab is the landing page for the dashboard. The visualizations in the **Overview** tab are important indicators of how VA is performing. You must have the Chat Analytics Viewer (chat_analytics_viewer) role to use the **Overview** tab.

Note: ServiceNow Otto for Virtual Agent Analytics appears in the left navigation only when you have ServiceNow Otto for Virtual Agent enabled.



Key performance indicators

Indicators	Descriptions
Deflection Count	Number of deflection occurrences measured by the execution count of the Deflection topic block. A deflection occurs when Virtual Agent resolves or helps to resolve an issue for a user.
Deflection Pattern	Number of deflections per deflection patterns.
KB Breakdown	Titles of KB articles with the number of times they were presented as part of deflections.
Active VA users	Cumulative number of unique active end users (not agents) who used the conversational interface. Select the indicator to drill down to the list of users.
Conversations	Count of all interactive conversations initiated from the Virtual Agent.

Key performance indicators (continued)

Indicators	Descriptions
	Select the indicator to drill down to the list of conversations.
VA success	Percentage of conversations that were completed without escalation and with an intended topic flow. Completed conversations are those that reach the end of a Virtual Agent topic or conversation, are closed by the user, or are automatically closed. Completed without escalation means that the conversation was not routed to a live agent, and the user did not give negative feedback. (Feedback types include negative, positive, neutral, and no feedback.) Select the chart to drill down to the conversations that were completed successfully.
Topic flows completed	Percentage of topics that end users completed till the last node out of all topics invoked and ran.
Topic Category - Complete	Number of completed conversations shown per topic category. Select a topic category on the bar chart to drill down to the topic category details.
Topic Category - Incomplete	Number of incomplete conversations shown per topic category. Select a topic category on the bar chart to drill down to the topic category details.
Topic - Complete	Number of occurrences per topic when the user completed to the last node. Select a topic on the bar chart to drill down to the topic details.
Topic - Incomplete	Number of occurrences per topic where users abandoned the conversation before the topic reached the last node. Select a topic on the bar chart to drill down to the topic details.
User feedback	Feedback results categorized as good, bad and neutral. The feedback results are calculated from the Feedback Setup topic. Note: A user with Chat Analytics Admin role can change how frequently the Feedback Setup topic shows after the completion of chat using the system properties.

Key performance indicators (continued)

Indicators	Descriptions
	Select a feedback result on the chart to drill down to the list of conversations associated with the feedback.
Channels	Number of conversations executed across the configured channels of the Virtual Agent. Select a channel on the chart to drill down to the list of conversations associated with the channel.
Conversation end state	Number of conversations that have ended in the out-of-the-box conversation end state. Select a Conversation end state on the chart to drill down to the list of conversations associated with the Conversation end state.

Typical actions on the **Overview** tab include:

- Selecting a deflection configuration to view the deflection indicators such as deflection count, deflection patter, and KB Breakdown.
- Selecting the visualized data, for example, a bar in a bar chart, to get additional information about the data.
- Changing the date range of the data displayed.

(Legacy) Usage tab

The **Usage** tab provides usage information related to conversation type, language used in the conversations, and engagement rate of actionable notifications delivered by Virtual Agent (VA).

The indicators in the **Usage** tab provide the following information.

Usage indicators

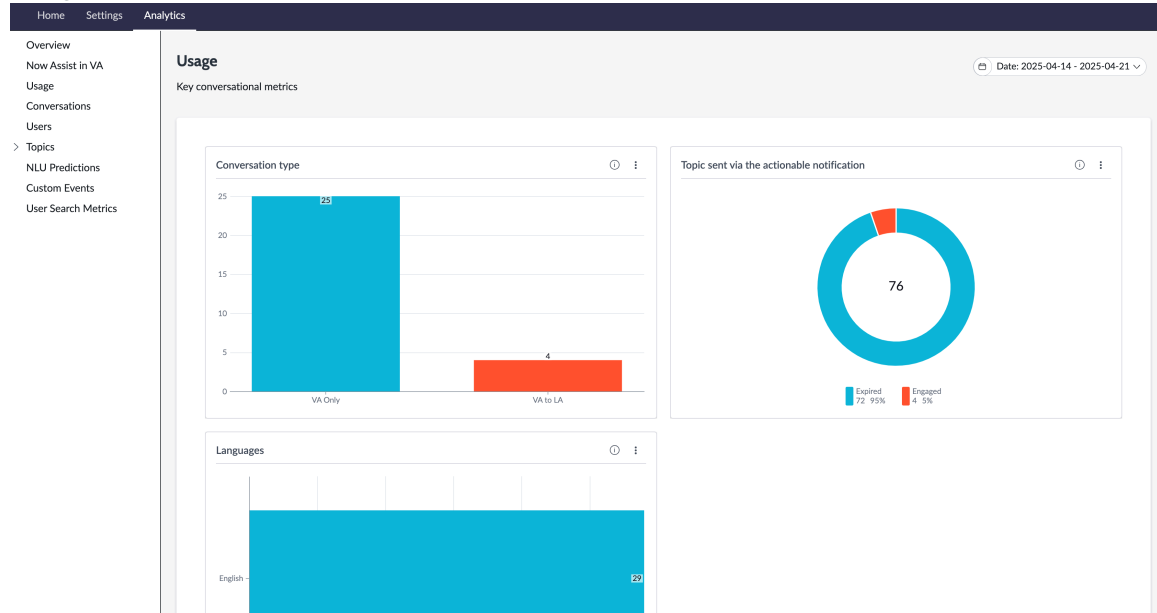
Indicators	Descriptions
Conversation type	Number of conversations escalated from VA to a live agent, initiated and completed in VA only, or initiated and completed by a live agent. This indicator supports drill down to the list of conversations based on the selected conversation type.
Topic sent via the Actionable notification	The number of actionable notifications delivered from virtual agent to the users for the selected time range, and the number and percentage of actionable notifications that users engaged with, and did not engage with.
Languages	Languages used by users and the number of conversations in each language.

Usage indicators (continued)

Indicators	Descriptions
	This indicator supports drill down to the list of conversations based on the selected language.

You must have the Chat Analytics Admin or Chat Analytics Viewer role to access the **Usage** tab.

Usage tab



Click on the data points in the Conversation type and Languages indicators to drill down to the list of conversations based on the selected conversation type and language respectively.

(Legacy) Conversations tab

Use the **Conversations** tab to view the list of Virtual Agent conversations and details of each conversation that occurred during the selected date range.

All conversations from the Conversation table [sys_cs_conversation], that run on the Virtual Agent Designer are listed on the Conversations page, except for notifications, open (ongoing) conversations, and previews.

To tag a conversation as a favorite, select the star icon on the side panel. You can list all conversations that are marked as favorite using the Filter Editor.

Virtual Agent conversations and analytics data is retained for a period of two years.

To access the **Conversations** tab, you must have the Chat Analytics Viewer (chat_analytics_viewer) role.

[View conversation details and troubleshoot individual conversations](#)

 Date: 2024-04-29 - 2024-05-09

Export

2024-04-29 21:35:06

Details

Transcript

Created	Duration	User ID	Device Type	Language	End State
2024-04-29 21:35:06	46 Minutes		Web Client	English	System closed VA - Auto Closed
2024-04-29 21:35:30	21 Seconds	admin	Web Client	English	System closed VA - Auto Closed
2024-04-29 21:35:55	17 Seconds	admin	Web Client	English	System closed VA - Auto Closed
2024-04-29 21:36:16	44 Seconds	admin	Web Client	English	System closed VA - Auto Closed
2024-04-29 21:37:09	3 Minutes	admin	Web Client	English	System closed VA - Auto Closed
2024-04-29 21:40:53	41 Seconds	admin	Web Client	English	System closed VA - Auto Closed
2024-04-29 21:47:48	22 Seconds	admin	Web Client	English	System closed VA - Auto Closed
2024-04-29 22:06:10	1 Minute	adela.cervantsz	Web Client	English	System closed VA - Auto Closed
2024-04-29 22:07:23	40 Seconds	adela.cervantsz	Web Client	English	System closed VA - Auto Closed
2024-04-29 22:07:31	2 Hours 14 Minutes	admin	Web Client	English	System closed VA - User Never Engaged
2024-04-29 22:07:33	2 Hours 14 Minutes	abel.tuter	Web Client	English	System Closed VA - User Never Engaged
2024-04-29 22:10:21	1 Minute	adela.cervantsz	Web Client	English	System closed VA - Auto Closed
2024-04-29 22:11:21	37 Seconds	adela.cervantsz	Web Client	English	System closed VA - Auto Closed
2024-04-29 22:12:07	41 Seconds	adela.cervantsz	Web Client	English	Agent Closed LA - Clicked End/X

User ID

Anonymous

Conversation type

VA Only

Channel

Web Client

Start

21:35:06

End

22:21:34

Duration

00:46:28

The **Conversations** tab enables you to do the following:

- ## Get conversation details

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1302

Conversation details

2024-04-29 22:06:10



Details Transcript

 User ID
adela.cervantsz

 Conversation type
VA Only

 Channel
Web Client

	Start	End	Duration
	22:06:10	22:07:19	00:01:09

To view and download the conversation transcript, select the **Transcript** tab.

2024-04-29 22:07:23



Details

Transcript



Now Support

Download



How was your experience chatting with me today?



Good

Your feedback has been received.

What's your issue or request? Or take a look at what I can help with.



Show me everything

notifications



You'd like help with Show Notification. Is that right?

Export the conversations list

To export the conversations list on the Conversations page to a file, select **Export**. In the Export pop-up window, specify the format for the file such as Excel, CSV, JSON, or PDF, and the delivery type such as email or download.

Note: You can export up to 1000 records only from the list on the page. This limit is not configurable.

Conversation information

The following table describes details of conversations listed in the **Conversations** tab.

User information

Column	Description
Created	Date of the conversation.
Duration	Duration of the conversation.
User ID	Unique identifier that the system creates and permanently assigns to a Virtual Agent user. The Id becomes a part of conversation records. This is not the same as the system user ID.
Device Type	Conversational channel used for the chat.
Language	Language used for the conversation.
End state	How the conversation ended. For more information on various conversation end states, see Virtual Agent interaction records .
Type	Type of conversation, for example, VA Only (conversation initiated and completed in VA).
Conversation	Sys Id of the conversation.

Download the conversation transcript

To download the conversation transcript, select a conversation from the conversations list and click **Download**.

The conversation transcript .txt file includes various data elements such as user input, Virtual Agent response, Flow Designer Integration Hub, flow action, custom controls, and topic block information for the selected conversation. This information helps Virtual Agent administrators to troubleshoot conversations, for example, conversations where there were errors or transfers to a live agent. For more information on the .txt file, see [\(Legacy\) Conversation transcript template](#).

(Legacy) Conversation transcript template

The conversation transcript .txt file contains information used to troubleshoot individual conversations.

Data element	Description
Conversation ID (sys_id)	Unique identifier of the conversation, autogenerated by the Virtual Agent.

Data element	Description
Conversation Start Time	Start time of the conversation.
Channel	Channel from which the conversation was initiated. For example, the Slack application, Microsoft Teams, and so on.
User Name	Name of the user who initiated the conversation.
User Status	Status of the user in the ServiceNow AI Platform [®] instance. For example, Active or Inactive.
Bot Response	Control that displays Virtual Agent responses in a conversation.
User Input	Control that prompts and captures information from the user in a conversation.
Message Date and Time	Timestamp of individual messages.
FDIH logs	Action or Subflow • Id: sys_id of the action or subflow. • Inputs: Input passed to the action or subflow. • Outputs: Output received from the action or subflow.
Topic Block	Name of the topic block defined in the current topic. • Id: sys_id of the topic block invoked. • Inputs: Input passed to the topic block. • Outputs: Output received from the topic block.

(Legacy) Use filters in the Conversation tab

You can filter out conversation for a deeper understanding.

Filtering using the Filter Editor

To filter the conversations, select filter icon and select **Advanced view** button to use the filter editor. You can either select an existing filter from the list or create a new filter condition.

Building filters in the filter editor

Advanced view

The screenshot shows the 'Advanced view' of the Filter Editor. A 'Save Filter' modal is open, allowing the user to save the current filter. The modal includes a 'Filter name' field with the text 'Web client conversation' and a 'Permissions' section with radio buttons for 'Me' (selected), 'Everyone', and 'Group'. At the bottom of the modal are 'Cancel' and 'Save' buttons. In the background, the filter builder interface is visible, showing a list of conditions: 'Channel' with value 'Web Client' and 'Language' with value 'English', connected by 'and' operators. There are also buttons for 'Use existing filter', 'Save filter', '0 results matching criteria', 'Undo', and 'Redo' at the top of the editor.

The filter editor consists of the following:

- **Field:** A list based on relevant tables. For more information about the field options, see [Field options in the Filter Editor](#).
- **Operator:** A list of operators that is contextually generated based on the selected field.
- **Value:** A text entry field or a list that is contextually generated based on the selected field.

To add a dependent condition in the filter editor, either select **or** or **and**. To filter the conversations list using the condition, select **Update**.

To remove a condition, select the delete icon  next to the condition.

To save a condition that you created in the condition builder, select **Save filter**. In the Save Filter pop-up window, specify a name for the filter. You can also set permissions for the filter in the Save Filter window. Users having the Chat Analytics Viewer (chat_analytics_viewer) role can select and modify saved filters.

Field options in the Filter Editor

Field options

Option	Description
Channel	Conversations that used the specified channel.
Conversation Time	Conversations within the specified date and time.
Duration	Conversations within the specified time duration. You can edit the definition of duration to be a session duration, rather than an active messaging duration. For more information, see (Legacy) Create custom override definitions .
End State	Conversations with the specified state that is based on how conversations ended. The values for the end states are stored in the

Field options (continued)

Option	Description
	Interactions [interactions] table. For more information, see Virtual Agent interaction records .
Events	Specific events that are triggered in a conversation.
Feedback Result	Conversations for the specified feedback type.
Language	Conversations for the specified language based on the user's language setting.
Message Count	Conversations for the specified message count in the chat.
Provider Name	Conversations for the specified provider.
VA Success	Conversations resolved by the Virtual Agent.
Setup Topic Types	Conversations that used the specified setup topic type.
Topic Blocks	Conversations that used the specified topic block.
Topic Categories	Conversations that have topics which belong to a specified topic category.
Topic Count	Conversations that used the specified topic count. Each conversation can use multiple topics and this option filters conversations based on the count of topics used in it.
Topics	Conversations that used the specified topics in the chat.
Type	Conversations that are of the specified type such as live agent only or Virtual Agent only.

(Legacy) Users tab

Get detailed information on Virtual Agent users such as the time of the last conversation and duration of the conversation.

The **Users** tab provides information about users who interacted with Virtual Agent in a certain time period.

To access the **Users** tab, you must have the Chat Analytics Viewer (chat_analytics_viewer) role.

Users page

Home	Assistants	Settings	Analytics
Overview			
Now Assist in VA			
Usage			
Conversations			
Users			
> Topics			
NLU Predictions			
User Search Metrics			
Custom Events			

Users			
View how your users are conversing with VA			
			Date: 2025-05-01 - 2025-06-10
			Export
User ID	Is Anonymous	Channels	Last Conversation
allie.pumphrey	false	Web Client, Now Assist Panel	2025-05-18 22:22:46
athena.fontanilla	false	Web Client	2025-05-14 22:39:03
alva.pennigton	false	Web Client, Now Assist Panel	2025-05-14 07:08:14
alejandro.mascall	false	Web Client	2025-05-09 07:42:28
alysa.biasotti	false	Web Client	2025-06-04 01:19:28
abel.tuter	false	Web Client	2025-05-15 10:07:42
testuser1	false	Web Client	2025-05-26 00:26:48
abraham.lincoln	false	Web Client	2025-05-09 07:36:51
callie.leboeuf	false	Web Client	2025-05-21 22:08:25
avery.parbol	false	Web Client	2025-05-14 22:30:31
(empty)	true	Web Client, Now Assist Panel	2025-06-06 04:42:38

Users tab benefits

The **Users** tab enables you to do the following:

- Filter the list of users based on specific conditions using the filter editor. For more information, see [\(Legacy\) Use filters in the Users tab](#)
- View user details. For more information, see User information section on this page.
- Export the list of users to a file. For more information, see Export the list of users section on this page.

Export the list of users

To export the list of users in the Users page to a file, select **Export**. In the Export pop-up window, specify the format for the file such as Excel, CSV, JSON, or PDF, and the delivery type such as email or download.

Note: You can export up to 1000 records only from the list on the page. This limit is not configurable.

User information

The following table describes user details listed on the Users tab.

User information

Column	Description
User ID	User ID of the logged in user. If users don't log in, they appear in sessions as Anonymous .
Is Anonymous	If users didn't log in, they appear in the sessions as anonymous.
Channel	Conversation channel used by the user.
Last conversation	Timestamp of the user's last conversation with the Virtual Agent.

(Legacy) Use filters in the Users tab

You can use filters to get a deeper understanding of User data.

Filter using the filter editor

The filter editor enables you to filter users based on one or more conditions. You can either select an existing filter from the list or create a new filter using the editor.

The filter editor consists of the following:

- Field: A list based on relevant tables.
- Operator: A list of operations that is contextually generated based on the selected field.
- Value: A text entry field or a list that is contextually generated based on the selected field.

To remove a condition, select the delete icon  next to the condition. To add dependent conditions in the condition builder, either select **or** or **and**. To filter the conversations list using the condition, select **Update**.

To save a condition that you created in the filter editor, select **Save filter**. In the Save Filter pop-up window, specify a name for the filter. You can also set permissions for the filter in the Save

Filter window. Users having the Chat Analytics Viewer (chat_analytics_viewer) role can select and modify your saved filters.

Saved condition

Advanced view

Use existing filter ▼ Save filter 0 results matching criteria ↻ Undo Redo

Editor
Build a filter by adding conditions, operators, and value(s).

Channels Web Client or and ×

and Is Anonymous false or and ×

Condition set

Cancel Update

Save Filter

Filter name *

Web client users

Permissions

☒ Me

☐ Everyone

☐ Group

Cancel Save

Field options in the Filter Editor

User filters

Channels	Filters users based on the communication channels.
Created	Filters users based on the date and time when the conversation was created.
Created On	Filters users based on a specific date when the conversation was created.
Created by	Filters users based on the user who created the conversation.
Domain	Filters users based on specific domains related to the conversation.
Is Anonymous	Filters users who had conversations as anonymous users.
Last Conversation	Filters users based on the last conversation.
Sys ID	Filters users based on the Sys Id.
Tags	Filters users based on the tags associated with conversations.
Updated	Filters users based on when the conversation was last updated.

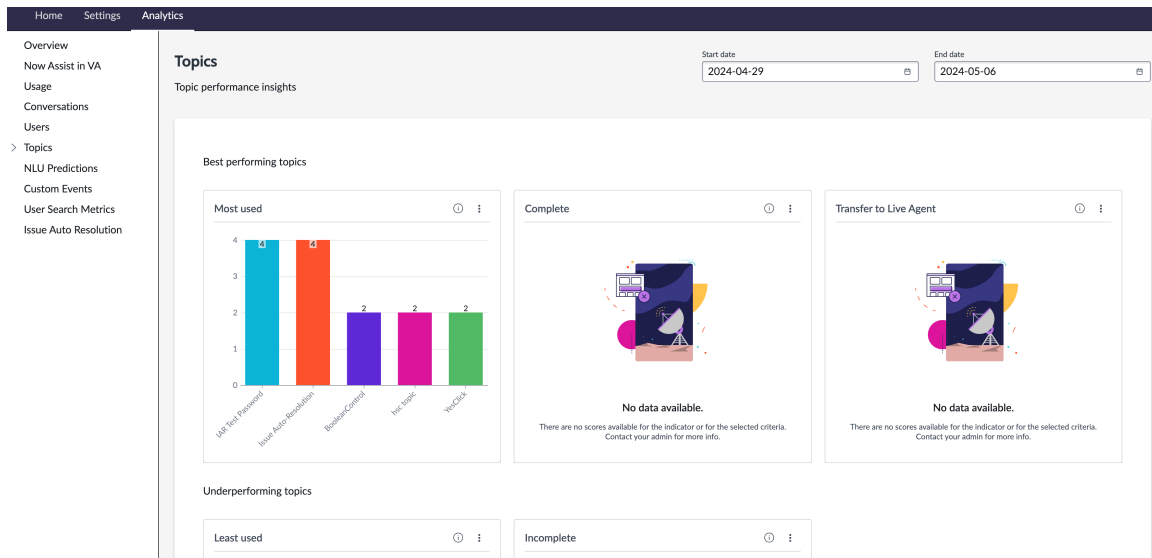
User filters (continued)

Updated by	Filters users based on who last updated the conversation.
Updates	Filters users based on updates to a conversation.
User	Filters users based on user name.
Keywords	Filters users based on keywords related to the conversation.

(Legacy) Topics tab

Use the **Topics** tab in the Conversational Analytics dashboard to identify the best and underperforming topics.

The **Topics** tab provides insights into which Virtual Agent (VA) topics are performing well and which aren't. To use the Topics tab, you must have the Chat Analytics Viewer (chat_analytics_viewer) role.



Best performing topics

The Best performing topics indicators show topics that are performing well. The horizontal axis lists the topics. The count on the vertical axis refers to the number of times the topic was invoked by VA.

- **Most Used**—Topics that were least invoked by VA in conversations.
- **Complete**—Number of times VA completed the topic without transferring to a live agent.

Underperforming topics

The Underperforming topics indicators show topics that didn't perform well. The horizontal axis lists the topics. The count on the vertical axis refers to the number of times the topic was invoked by VA.

- **Least used**— Topics that were least invoked by VA in conversations.
- **Incomplete**—The topics the user abandoned without resolution.
- **Transfer to Live Agent**—The topics that were transferred to a live agent because VA couldn't resolve user's query.

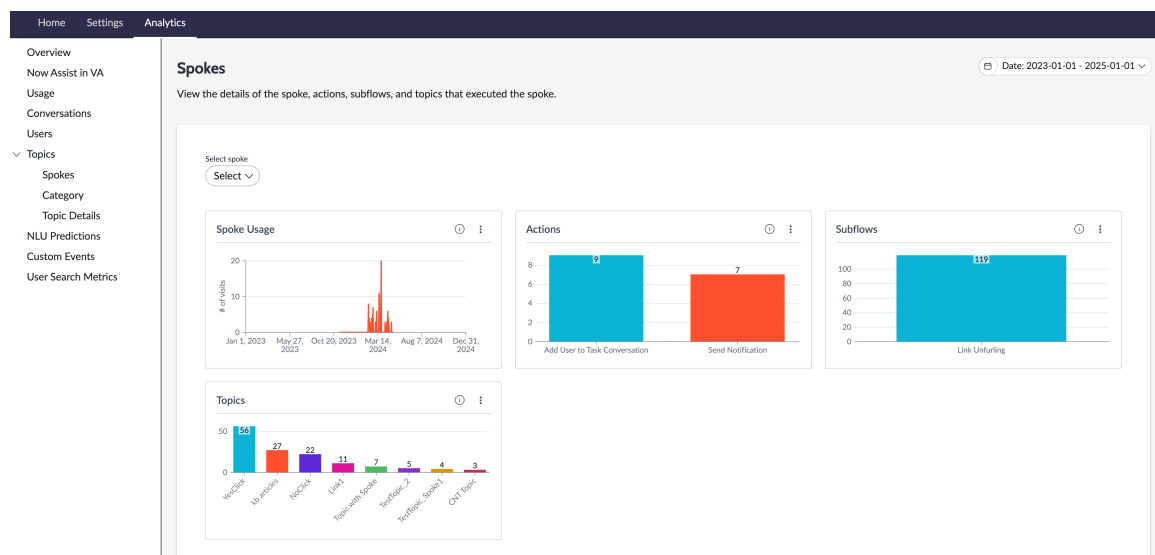
Spokes

The Spokes indicator provides details of the spoke, actions, subflows, and topics that executed the spoke. Select a spoke on the chart to view the details of the spoke. For more information, see [\(Legacy\) Spokes](#).

(Legacy) Spokes

Use the Spokes indicators to view details such as spoke usage, spoke actions, and subflows for the selected spoke.

In Virtual Agent, conversations contain topics, topics contain spokes, and spokes contain spoke actions or subflows. The **Spokes** indicators show which spokes, actions, and subflows were used and how often.



Spokes tab

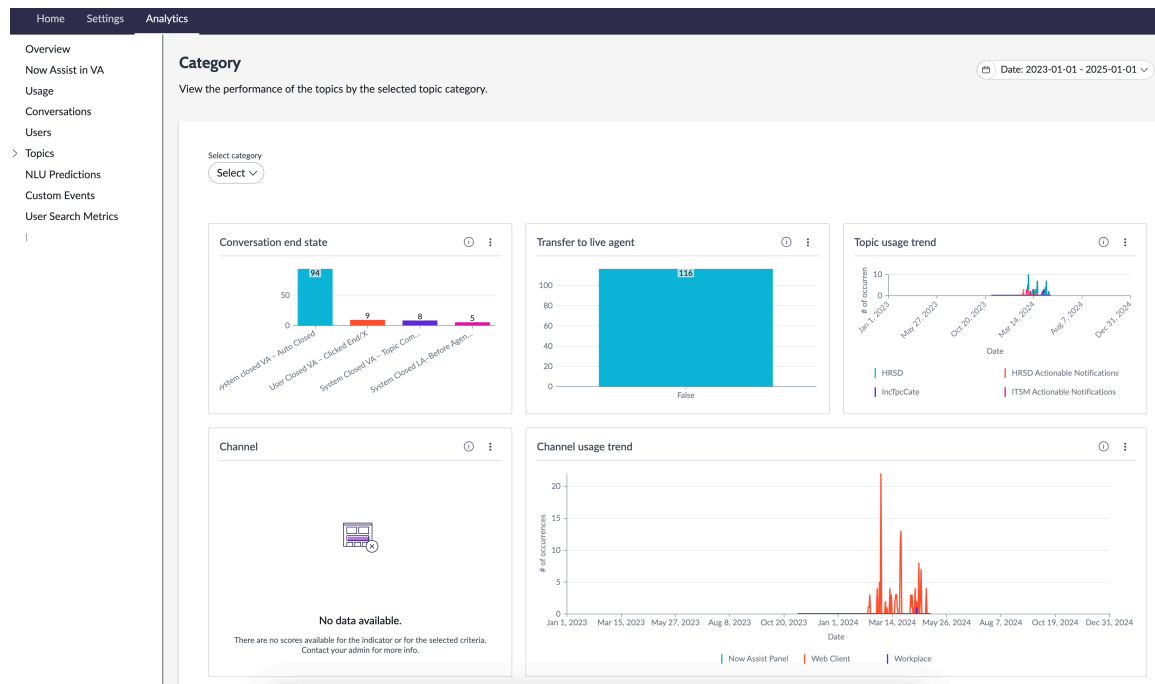
The Spokes tab contains the following indicators.

- **Spoke Usage**—Spoke Usage indicator shows the number of times the selected spoke was executed in the date range.
- **Actions**—Actions indicator shows which actions were executed for the selected spoke, which.
- **Subflows**—Subflows indicator shows which subflows were executed for the selected spoke.
- **Topics**—Topics indicator shows which topics executed the selected spoke. The horizontal axis shows the topics that triggered the spoke. The vertical axis shows the number of times the spoke was triggered in a topic.

(Legacy) Topic categories

Use the Category page in the Conversational Analytics dashboard to view the performance of Virtual Agent (VA) topics by the selected topic category.

Topic categories group related conversation topics. Topics can belong to more than one category. Select the drop-down list to show the categories that you can display in the visualizations. The visualizations show the aggregate performance of Virtual Agent conversations that ran in the topics belonging to a category.



For more information about creating or modifying VA categories, see [Create or modify custom categories](#).

Topic category visualizations

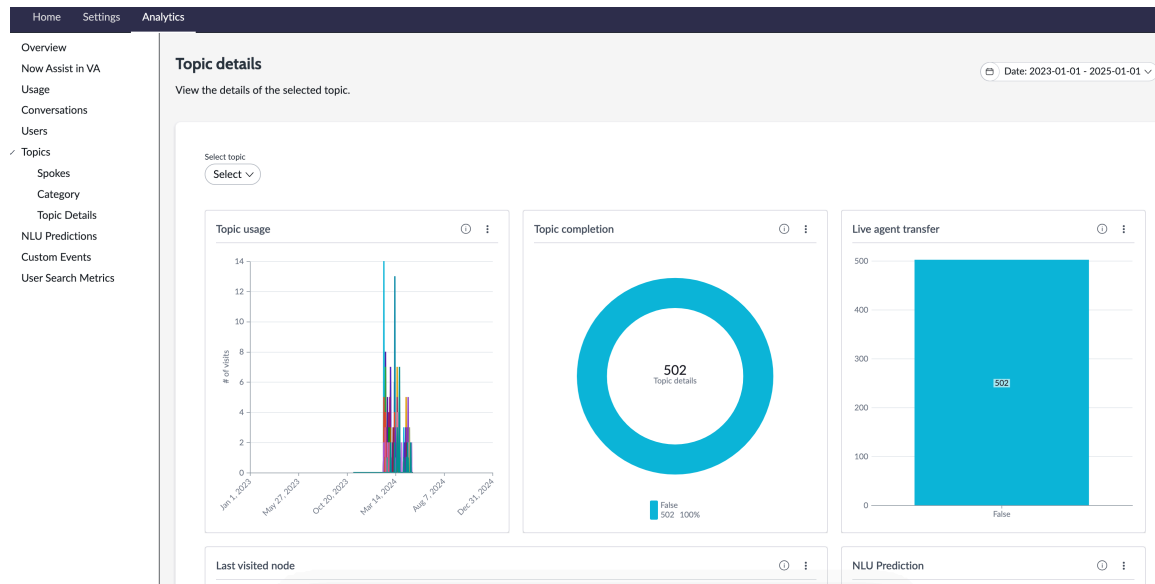
Visualization	Description
Conversation end state	The number of users that reached a specific node in a topic in the VA category. In the example, six users reached the node labeled, System closed VA - Auto Closed. Use this field to see where topics stopped working for users. For definitions of each conversation end state, see Virtual Agent interaction records.
Transfer to live agent	The number of users that transferred from VA to a live agent in that VA category. A high number indicates that the topic is not meeting user needs.
Topic usage trend	Number of topics users used in a specified topic category over the course of the date range. The example shows the number of topics per day users used in the IT category. Use this field to monitor updates to topics.
Channel	The application the user used to chat with VA in that topic category, for example, Slack or chat widget.
Channel usage trend	Number of users using a specified channel over the course of the date range for topics in that VA category.

(Legacy) Topic details

Use the Topic Details page in the Conversational Analytics dashboard to view key performance indicators of Virtual Agent (VA) topics.

Get additional information about the topics

Select a topic from the drop-down to view the indicators associated with the topic.



The Topic Details page provides the following indicators.

- **Topic Usage**—The number of times the topic was used each day.
- **Topic completion**—Number of times the user went to the final node in the topic.
- **Live Agent Transfer**—Number of times the selected topic was invoked by VA and then transferred to a live agent.
- **Last Visited Node**—Last nodes users visited before leaving the chat.

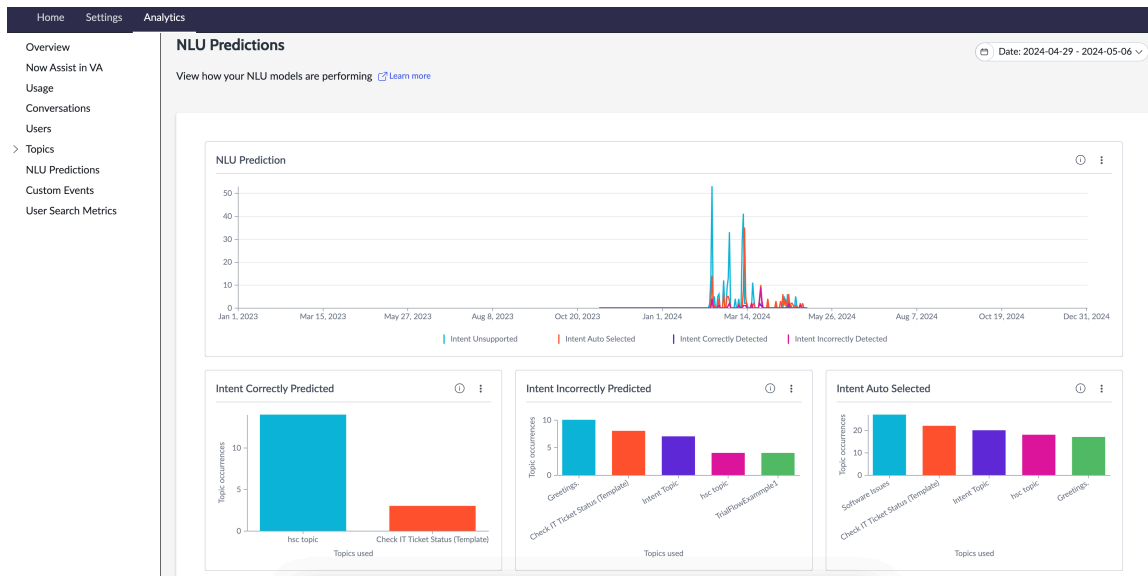
The presumption is the users gave up after the last node they visited.

- **NLU Prediction**—NLU prediction stats for the selected topic.
- **Topic block breakdown**—Execution count of the selected topic block in different topics. Use this indicator to view which topic block is executed the most across topics.

(Legacy) Natural Language Understanding of Virtual Agent responses

Use the **NLU Prediction** tab to see how well NLU predicts intents, and to improve the intents so NLU makes better predictions.

Virtual Agent (VA) uses the Natural Language Understanding (NLU) service to understand user input. **NLU Prediction** tab on the Conversational Analytics dashboard shows how well NLU is understanding user input in VA conversations. Virtual Agent comes with NLU models, but you can use the [Activate the NLU Workbench](#) to modify or create new models.



To use the NLU Prediction tab, you must have the Chat Analytics Viewer (`chat_analytics_viewer`) role.

NLU Prediction indicator

The NLU Prediction indicator shows the daily performance of NLU predictions mapped against the user intent.

- **Intent Unsupported**—NLU did not recognize user intent.
- **Intent Auto Selected**—NLU predicted a single intent based and the user selected the same. Sometimes, NLU returns multiple topics, each from a separate intent, and the user selects one.
- **Intent Correctly Predicted**—NLU predicted multiple intents and the user selected one of them.
- **Intent Incorrectly Predicted**—NLU predicted multiple intents and the user indicated that none of them were what they were looking for.

Note: The vertical axis can have duplicate values because the axis has 10 increments. If the number of intents is less than 10, some values on the vertical axis appear more than once.

The dashboard collects the following data points to arrive at the indicators.

1. Did the NLU prediction model determine an intent?
2. Did the predicted intent match the topic bound in the model to the intent?
3. What's the prediction score and did the dashboard show multiple options to the end user to specify the correct intent, or did the dashboard just display the topic associated with one intent.
4. After showing the user multiple intents, did the user select one?

It's possible for intents to appear in several categories. For example, an intent can appear in the **Intent Correctly Detected** and **Intent Auto Selected** because NLU correctly predicted the intent and only presented a single response, which the user accepted.

Improving NLU predictions

Clicking anywhere on the NLU Prediction indicator opens the Model Performance page. It shows a summary of intents predicted or not predicted over the date range specified on the graph.

NLU Model Performance for Virtual Agent

Here is a breakdown of how well your NLU models did at predicting intents in Virtual Agent based on end user confirmation. Make sure to configure the end user confirmation prompt in [Conversational Interfaces Settings](#) to help with tracking NLU performance.

Click on the bars or the legend to see a detailed breakdown.

☐ Include translated conversations

☐ Show all bars

33.33%

User confirmed as correct

58.33%

User made no confirmation

8.33%

User confirmed as incorrect

Performance Details

Utterance	Predicted intent	Prediction model	Prediction outcome
hello	Greetings	Setup Topics Model	Topic launched, no user confirmation
hyd	Book flight ticket	Book tickets	
I want to book a flight from Bangalore to Mumbai	ConferenceRoomBooking	ITSM NLU for Virtual Agent	Topic menu presented, user selected none
	Book flight ticket	Book tickets	
	Flight Booking	Booking	
I want to book a flight from Bangalore to Mumbai	Flight Booking	Booking	Topic launched, user confirmed as correct
	ConferenceRoomBooking	ITSM NLU for Virtual Agent	

See [Activate the NLU Workbench](#) for information on how to use NLU Workbench to improve NLU predictions.

(Legacy) Modify models

Test and modify the Virtual Agent models so they more accurately predict user intents.

Before you begin

Role required: Chat Analytics Admin

About this task

Many ServiceNow products, such as ITSM, HRSD, and CSM include NLU models for Virtual Agent (VA) topics. The NLU plugin contains entities that are common across all products. You can modify those models. To learn how to train and test the models used for VA conversations, see [\(Legacy\) Natural Language Understanding](#).

Procedure

1. Navigate to **All > Conversational Interfaces > Analytics** and select the **NLU Prediction** tab.
2. Select **View more**.

The Models page opens that displays the models that predict intents in your setup.

Models

You can view details and make updates on these language models. You can also create a new model.									
Model	Language	Status	Last Published	Created for	Enabled intents	Mapped intents	Total Entities	Editors	
Setup Topics Model	16 languages			Virtual Agent					
	English	Primary	Published 3 months ago	2021-04-12 09:45:44	6		0		
	Dutch		Published 3 months ago	2021-04-12 16:50:39	6		n/a		
	Swedish		Published 3 months ago	2021-04-12 17:30:39	6		n/a		
	Norwegian		Published 3 months ago	2021-04-07 16:28:05	6		n/a		

3. **Optional:** If none of the models contain intents and utterances you'd like in your setup, select **Create Model** and follow the instructions in [Create an NLU model](#).
4. Click a model to display the intents the model predicts.

Model to book flights

Model

Delete Clone Train Test

Intents (2) Entities (7) Vocabulary (0) Settings

Review your existing intents or create new ones.

+ New Intent Import Intents

Name	Utterances	Associated Entities	Mapped objects	Created by	Last updated↓
#Intent to book flight 2	2	0	VA Topic: book flight 2 topic	maint	2021-01-08 01:52:37
#Intent to book flight	2	0	VA Topic: book a flight 1 topic	maint	2021-01-08 01:48:09

5. Optional: Click an intent to display the utterances associated with it.

#Intent to book flight

Intent

Delete Train Test Publish

Utterances (2) Associated Entities (0) Settings

Use @ to refer to values (words) in your existing vocabulary source, which you can always add to. To extract specific words from your utterances, select the word to annotate them as entities.

Add

“ I want to book a flight

✎ 🗑

“ Please book a flight for me

✎ 🗑

(Optional)

6. Optional: To create a new intent and add it to the model:

a. Select New Intent.

The **Create a new intent** dialog box opens.

b. Enter the name of the new intent in **Intent Name, a description of it in the **Description** field, and select **Save**.**

A page for your new intent opens.

#intent to book flight 3

Intent

Delete Train Test Publish

Utterances (2) Associated Entities (0) Settings

Use @ to refer to values (words) in your existing vocabulary source, which you can always add to. To extract specific words from your utterances, select the word to annotate them as entities.

What is the airfare? Add

“ I want to buy a ticket.

✎ 🗑

“ I want to make a reservation.

✎ 🗑

(Optional)

c. Enter an utterance for your new intent and select **Add.**

You can repeat this step multiple times to add multiple utterances.

7. Optional: Import one or more intents by selecting **Import Intents**.

The **Import Intents** dialog box opens, which displays the intents you can

Import Intents

We recommend importing in small batches for optimal performance. The underlying entities and utterances will also be imported.

Search intent name

Intent	Model Name ↑	#Utterances	#Entities	Created by	Last updated
▶ Application: ITSM NLU Model for Virtual Agent Conversations (37)					
▶ Application: Global (7)					
▼ Application: Customer Service NLU Model for Virtual Agent Conversations (5)					
☐ GetHelp	[Read Only] Customer Service NLU for VA	38	0	admin	2019-04-26 22:10:30
☒ SubmitRequest	[Read Only] Customer Service NLU for VA	34	1	admin	2019-10-14 02:38:21
☐ GetHelpWithProduct	[Read Only] Customer Service NLU for VA	74	1	admin	2019-04-26 22:23:56

import.

a. Find the intent(s) to import by entering a search term, or by clicking an arrowhead to display the intents in a folder, and then selecting one or more check boxes.

b. Select **Import**.

8. Optional: If you added or imported intents:

a. Select **Train** to add the intents to the model.

b. Select **Train** to train the model.

If successful, a banner at the top reads, **The model has been successfully trained.**

9. To test all the utterances, select **Test** and enter a sentence a user might enter in a chat to see if NLU understands the intent of your sentence.

Intents (4) Entities (7) Vocabulary (0) Settings

Review your existing intents or create new ones.

+ New Intent

Import Intents

Name	Utterances	Associated Entities	Mapped objects	Created by	Last updated ↓
#intent to book flight 4	0	0	--	maint	2021-01-08 14:42:13
#intent to book flight 3	3	0	--	maint	2021-01-08 14:31:14
#Intent to book flight 2	2	0	VA Topic: book flight 2 topic	maint	2021-01-08 01:52:37
#Intent to book flight	2	0	VA Topic: book a flight 1 topic	maint	2021-01-08 01:48:09

Test model Train and publish

ENTER AN UTTERANCE TO TEST ⓘ

How much is airfare? Go

"I want to make a plane reservation."

TRAINED MODEL PREDICTION RESULTS
CONFIDENCE THRESHOLD 60%

89% intent to book flight 3 (Intent)

87% Intent to book flight (Intent)

10. If the models fail to predict the intent, add additional intents to the model, or utterances to the intents, as described in step 6.

(Legacy) Using user search metrics with Virtual Agent

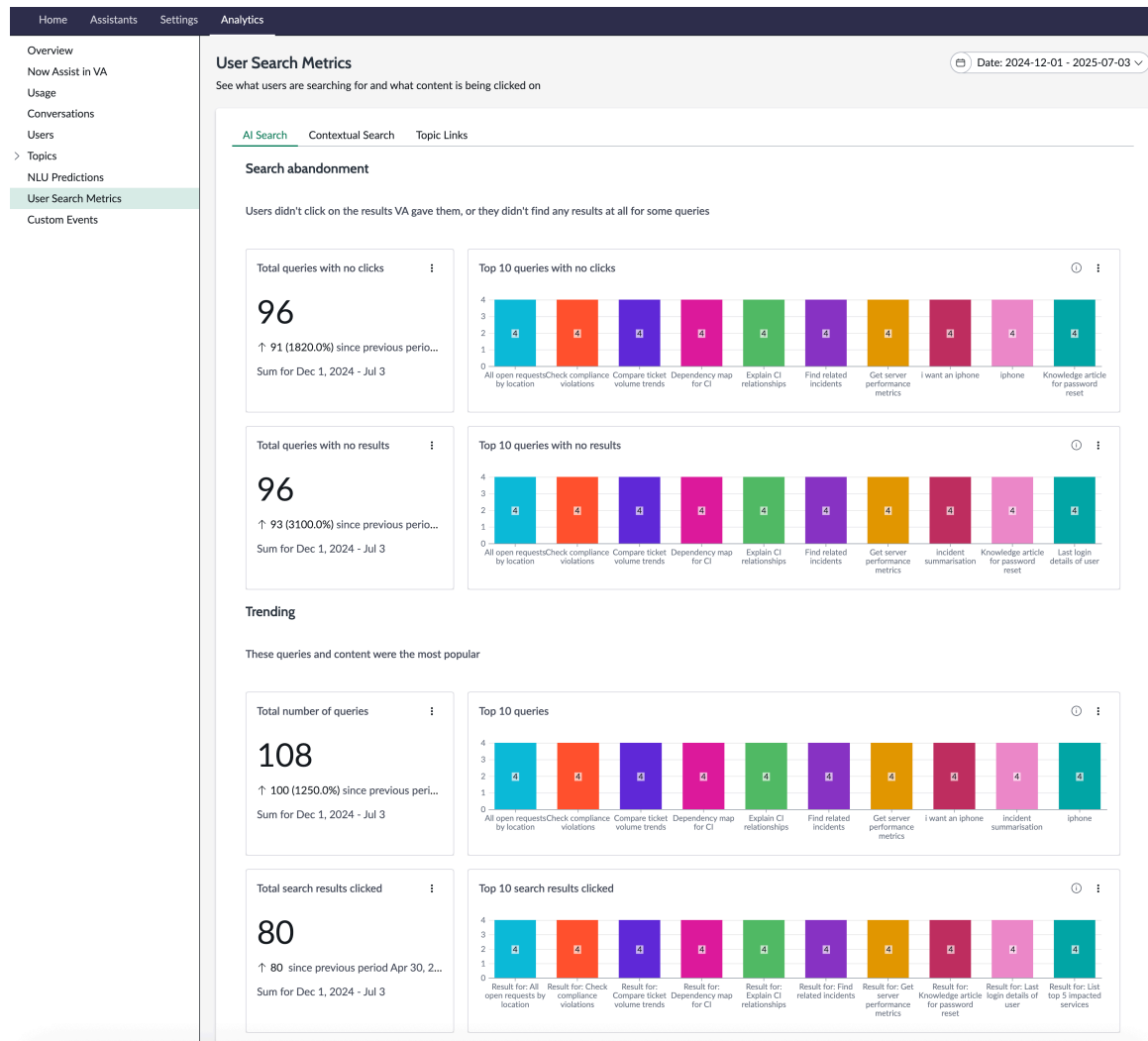
By using user search metrics with the Virtual Agent application, you can see your users' queries and the results from their searches. With these metrics, you can identify the areas where you can improve Virtual Agent to offer more meaningful search results.

Use the **User Search Metrics** tab in the Conversational Analytics dashboard to view key indicators about the queries that users searched on and the corresponding search results. By using this tab, you can get the answers to the following questions:

- Which search results were not useful to the users?
- Which queries did not have any search results?
- Which were the most common queries from users?
- Which search results did the users select most often?

To access the **User Search Metrics** tab, you must have the chat analytics admin role or the chat analytics viewer role. The following example shows the data included in the **User Search Metrics** tab.

User Search Metrics tab



AI Search

Virtual Agent topics may use AI search to suggest helpful resources to the user. When a user enters a query, AI search provides the most relevant results by using intelligent query features.

To know more about AI search, see [AI Search](#) . To integrate Virtual Agent with AI Search, see [\(Legacy\) Implementing AI Search in NLU](#).

Contextual Search

Contextual search matches keywords to an existing database search to find potential matches to a query. Virtual Agent topics may use contextual search to resolve queries. For more information, see [Maximizing code reuse with topic blocks](#).

Topic Links

Some Virtual Agent topics have links to useful resources that are embedded within them. When a user invokes one of these topics, the link shows up without having to do any back-end search.

User Search information

The following table describes user search indicators visualized on the **User Search Metrics** tab.

User search indicators

Visualization	Description
Total number of queries with no clicks	Number of queries that users did not click on any of the search results provided.
Top 10 queries with no clicks	Most commonly asked queries where users did not click on any of the search results provided.
Total number of queries with no results	Number of queries that did not yield any search result.
Top 10 queries with no results	Most commonly asked queries that did not yield any search results.
Total number of queries	Total number of queries handled by Virtual Agent.
Top 10 queries	Most commonly asked queries.
Total number of search results clicked	Number of search results that users clicked on.
Top 10 search results clicked	Search results that users clicked on the most.

(Legacy) Custom Events tab

Use the Custom Events tab to view the list of custom events created for Virtual Agent.

To use the Custom Events tab, you must have the Chat Analytics Viewer (chat_analytics_viewer) role.



The Custom Events tab shows the dates when custom events were triggered. If no one **created custom events**, the list of custom events is empty. The maximum number of custom events displayed is 20.

Use the drop-down list to specify the custom event you want view analytics for.

(Legacy) Funnels tab

Funnels provide cumulative filtering of conversation flows. Using funnels, you can identify whether your conversation flows are performing effectively when users chat with Virtual Agent.

Note: Funnels is accessible only to users who have funnels created prior to upgrading to the new dashboard. Users with funnels created in the legacy dashboard can view the analytics related to funnels and edit the funnels in the new dashboard, however, creation of funnels is no longer supported.

Funnels page

Home	Settings	Analytics
Overview		
Usage		
Conversations		
Users		
> Topics		
NLU Predictions		
User Search Metrics		
Custom Events		
Funnels		
Issue Auto Resolution		

Funnels				
Review metrics on the individual steps of your conversation flows to see where users are dropping off and pinpoint opportunities to improve your Virtual Agent's ability to handle queries.				
Name	Total steps	Created by	Created	Updated
Test Funnel_1	1	admin	2024-05-20 05:35:20	2024-05-20 05:35:20
1 records			1	



Funnels demo Watch this video for an overview of Funnels.

Overview of funnels

Funnels filter conversation flows using steps that are defined when a user creates the funnel.

A funnel can contain up to 10 filtering steps for a conversation flow. Each subsequent step further refines the results from the previous step. This type of cumulative filtering helps you to easily narrow down on the data of interest at each step of the conversation flow.

When you run a funnel for a particular date range, the system displays the following metrics that show the number of users at each step:

- The percentage and number of users who have used the specified conversation flow.
- The percentage and number of users who proceeded to the next conversation step specified in the funnel.

- The percentage of users who dropped off at a particular conversation step.
- The percentage and number of users who completed all specified conversation steps in the flow.
- The biggest drop-off point or step where users left the conversation flow.

Each step in a funnel consists of the following:

- Field: The item on which the step is evaluated.
- Operator: A list of operators that is contextually generated based on the selected field.
- Value: A text entry field or a list that is contextually generated based on the selected field.

Use case for funnels

Consider an example scenario where an admin has to get insights about how Virtual Agent is handling user queries in a conversation flow. To review the efficiency of the conversation flow, the admin might look for information such as the following:

- What percentage or number of users have interacted with Virtual Agent.
- Out of the users who interacted with Virtual Agent, what percentage or number of users have followed a specific node in the topic during the conversation.
- Out of the users who used the specific node, what number of users requested for a transfer to a live agent.

For example, see the following funnel for fetching metrics on a conversational flow that provides software access.

Funnel

Adjust the details of what's happening at each step in the funnel

The screenshot shows a 'Funnel' configuration interface with three steps. Each step has a 'Step' column and a 'Details' column. Step 1: 'Topic > STANDARD' is 'is' 'Software Access'. Step 2: 'Topic > STANDARD' is 'is' 'Software Access', and 'In which' 'Topic Node' is 'is' 'Drive Flow Executed'. Step 3: 'Topic' is 'is' 'Transfer to Live Agent'. Each step has 'Add properties', 'or', and 'x' buttons. An 'Add new step' button is at the bottom.

Step	Details
1	Topic > STANDARD is Software Access Add properties or x
2	Topic > STANDARD is Software Access or x In which Topic Node is Drive Flow Executed x
3	Topic is Transfer to Live Agent Filter properties or x

[Add new step](#)

Here, the funnel has three filtering steps:

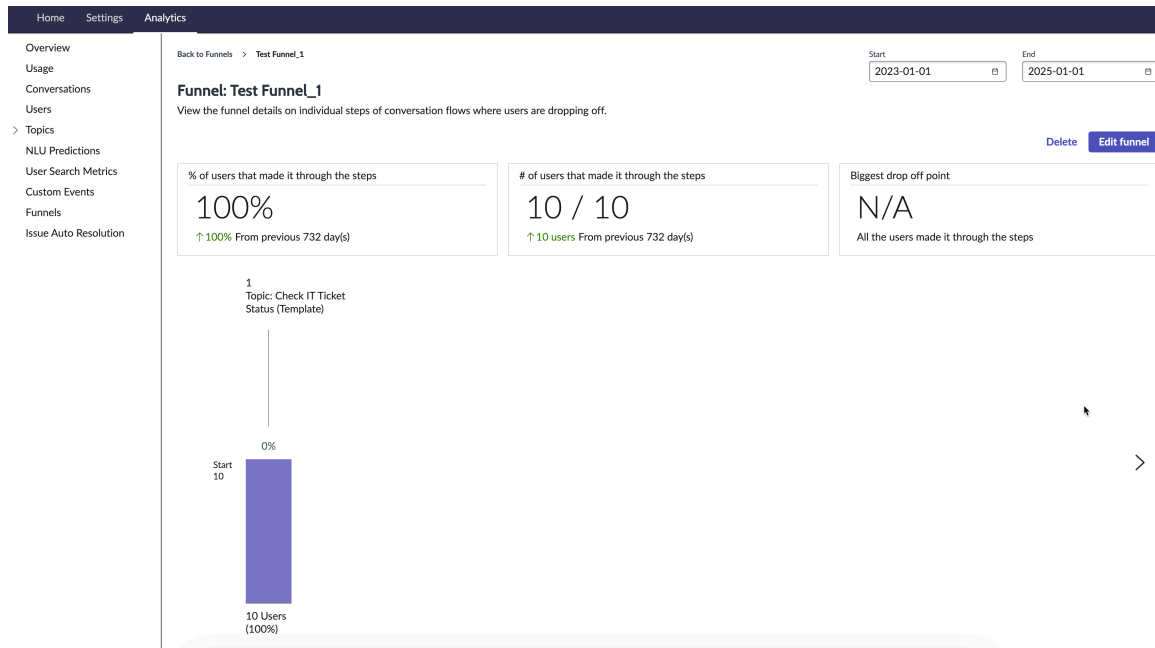
- Step 1 fetches users who have followed the **Software Access** topic while interacting with the Virtual Agent.
- Out of the retrieved users from step 1, step 2 fetches users who requested for a drive access in the **Drive Flow Executed** node.
- Out of the retrieved users from step 2, step 3 fetches users who requested transferring to a live agent.

Metrics for funnels

Using Funnels, you can easily filter conversation flows and get information as metrics. Metrics indicate what percentage or number of users are active at each step of the conversation flow.

You can improve the conversation flows based on the performance metrics derived from using funnels. The metrics help identify opportunities for improving conversation flows so that Virtual Agent can handle your user queries better.

Metrics for funnels



Other benefits of using funnels

You can compare the performance of previous and current conversation flows. Funnels show metrics for the specified date range. Additionally, it shows the comparison for the same number of days in the date range prior to the specified start date. You can know the increase or decrease in users who have made through all the steps.

Previous metrics



(Legacy) Issue auto-resolution tab

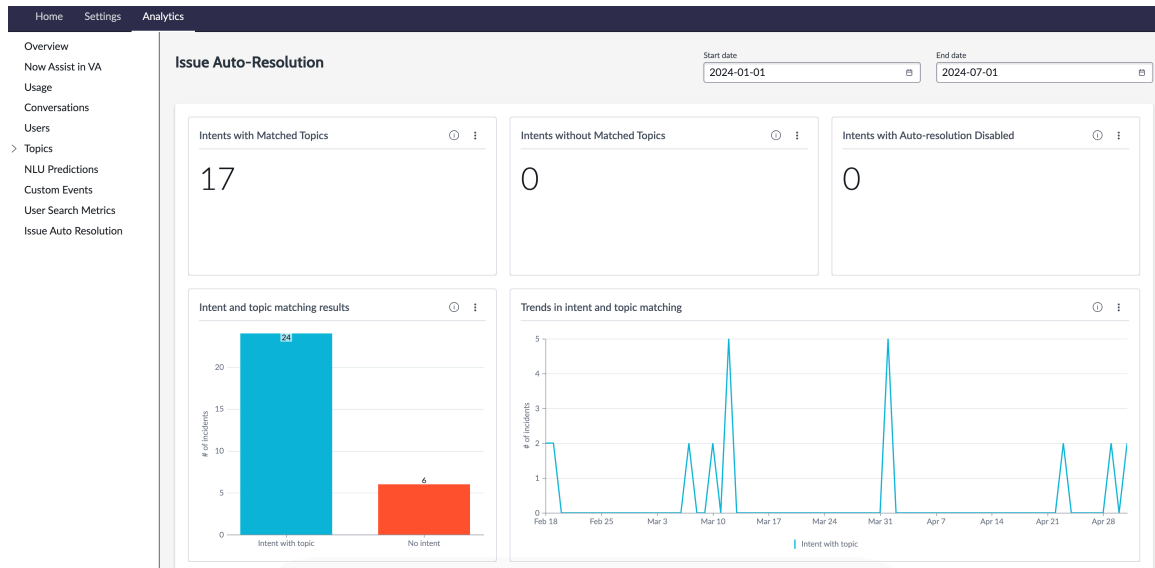
The **Issue auto-resolution** tab helps you understand how well your Virtual Agent (VA) chatbot anticipates user needs. It displays information about the number of user issues intercepted by the auto-resolution service and resolved by VA.

Issue auto-resolution takes place when a user is diverted to VA from a non-conversational interface. For example, a user might request a new keyboard through a service portal or email. The auto-resolution service can detect the user request and use VA to resolve the user's request in a VA chatbot session. For more information, see [Auto Resolution for Virtual Agent](#).

The indicators in the **Issue auto-resolution** tab display how well the auto-resolution service is working. This tab is available only when Issue Auto Resolution is enabled and the **Auto Resolution Configuration** record is set as active.

To access the **Issue auto-resolution** tab, you must have the chat analytics admin role or the chat analytics viewer role.

Issue auto-resolution tab



Selecting the data or pointing to the data in the visualizations displays additional information about the data.

Auto-resolution visualizations

Visualization	Description
Intents with Matched Topics	Number of intents that match topics enabled for auto-resolution. Select the indicator to view the list of intents that match topics enabled for auto-resolution.
Intents without Matched Topics	Number of intents that don't have matching topics. Select the indicator to view the list of intents that don't match topics enabled for auto-resolution.
Intents with Auto-resolution Disabled	Number of intents that match topics not enabled for issue auto-resolution. Select the indicator to view the list of intents that match topics not enabled for auto-resolution.
Intent and topic matching results	Breakdown of incidents by intent matching. For example, incidents with matching intents and topics, and incidents without matching intents. Select the indicator to view the list of incidents with or without matched topics.
Trends in intent and topic matching	Trend showing incidents that have intents with or without matching topics.

Auto-resolution visualizations (continued)

Visualization	Description
	Select the indicator to view the incidents that have intents with or without matching topics.
Auto resolution conversations	Issue auto-resolution conversations that were resolved or unresolved. Resolved means incidents are in the resolved state after the users interacted with VA. Select the indicator to view the list of conversations that were resolved or unresolved.
Auto resolution conversation trends	Usage trend showing all the issue auto-resolution conversations and how many incidents were successfully resolved.
Issue auto-resolution acceptance rate	Shows the issue auto-resolution notifications that were accepted and declined by users.
Top topics in auto resolution conversations	Frequently used topics in auto resolution conversations. Select the indicator to view the list of topics that are frequently used in auto-resolution conversations.

(Legacy) Conversational Analytics dashboard reference

Reference topics provide descriptions about the Conversational Analytics dashboard roles and system parameters to configure the dashboard.

Starting with the Brazil release, Conversational Analytics is being prepared for future deprecation. It will be hidden and no longer installed on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) [🔗](#) article in the Now Support Knowledge Base.

(Legacy) Conversational Analytics dashboard roles

Conversational Analytics dashboard is installed with these roles.

To learn more about managing subscriptions, see [Managing per-user subscriptions in Subscription Management](#) [🔗](#) and contact your account representative.

(Legacy) Virtual Agent administrator [virtual_agent_admin]

Provides read and write access to all dashboard-related tables, for example, sys-conversation.

Contains Roles

List of roles contained within the role.

- chat_analytics_admin
- ui_builder_admin
- chat_analytics_viewer

Groups

List of groups this role is assigned to by default.

None.

Special considerations

Note: Avoid granting an admin role when more specialized roles are available.

(Legacy) Chat analytics administrator [chat_analytics_admin]

Provides access to view dashboard-related tables, create custom events, create custom formula overrides, reconfigure the dashboard using UI Builder, and set system parameters.

Contains Roles

List of roles contained within the role: chat_analytics_viewer.

Groups

List of groups this role is assigned to by default.

None.

Special considerations

Note: Avoid granting an admin role when more specialized roles are available.

(Legacy) UI builder administrator [ui_builder_admin]

Enables you to add, remove, and rearrange dashboard contents. Needs UI Builder, which is a separate ServiceNow product.

Contains Roles

List of roles contained within the role.

- workspace_admin
- canvas_user

Groups

List of groups this role is assigned to by default.

None.

Special considerations

Note: Avoid granting an admin role when more specialized roles are available.

(Legacy) Chat analytics viewer [chat_analytics_viewer]

Provides read access to view the dashboard, Conversations (sys_cs_conversation), and Conversation Consumers (sys_cs_consumer) tables.

Contains Roles

List of roles contained within the role: sn_ace.ace_user.

Groups

List of groups this role is assigned to by default.

None.

Special considerations

None.

(Legacy) System property configuration

Use system properties to configure the functionality of the Conversational Analytics dashboard.

Use the following system properties to configure the functionality of the Conversational Analytics dashboard. You must have the Chat Analytics Admin [chat_analytics_admin] role.

Conversational Analytics dashboard system properties

Functionality	System property	Description
Debug	sn_ci_analytics.logging.verbose	Set this property to "debug" to see the debug logs for conversational analytics. The setting makes the logs verbose with debug information.
Reasons	sn_ci_analytics.ca.reason_max	Sets the maximum length of reason strings. The default is 1000 characters.
Hash	sn_ci_analytics.show_hashed_user_id	- Set this property to true to display hashed user IDs on the Conversations and Users pages in the dashboard. The default is false. - Provide read access to Hashed User ID column in the Users (sys_user) table.
Max search breakdown	sn_ci_analytics.max.search.bkdn	Set the maximum breakdown elements for search. Default value is 10000. The value of this property should not exceed 10000. Use this property in conjunction with the properties in Performance Analytics.

Conversational Analytics dashboard system properties (continued)

Functionality	System property	Description
		Note: If the data on User Search Metrics page does not load due to an invalid configuration error, set the value of <code>com.snc.pa.scorecards.max_breakdown_elements</code> property to 10000. The default value of this property is 1000. If the number of search terms exceeds the limit specified in the <code>com.snc.pa.dc.max_breakdown_elements_limit</code> property, the dashboard will not show any data. Be sure to set the value of <code>com.snc.pa.dc.max_breakdown_elements_limit</code> or <code>com.snc.pa.dc.hsql.max_breakdown_elements_limit</code> property to be greater than or equal to <code>sn_ci_analytics.max.search.threshold</code>. The default value of these properties is 10000. See Breakdown and indicator Performance Analytics properties and Data collector Performance Analytics properties for more information.
Max event breakdown	<code>sn_ci_analytics.max.event_breakdown</code>	Specifies the maximum breakdown elements for custom events. Default value is 100. Maximum can be 10000. Use this property in conjunction with the following properties in Performance Analytics.

Conversational Analytics dashboard system properties (continued)

Functionality	System property	Description
		Note: If the data on User Search Metrics page does not load due to an invalid configuration error, set the value of <code>com.snc.pa.scorecards.max_breakdown_elements</code> property to 10000. The default value of this property is 1000. If the number of custom events exceeds the limit specified in the <code>com.snc.pa.dc.max_breakdown_elements_limit</code> property, the dashboard will not show any data. Be sure to set the value of <code>com.snc.pa.dc.max_breakdown_elements_limit</code> or <code>com.snc.pa.dc.hsqli.max_breakdown_elements_limit</code> property to be greater than or equal to <code>sn_ci_analytics.max.search.threshold</code>. The default value of these properties is 10000. See Breakdown and indicator Performance Analytics properties and Data collector Performance Analytics properties for more information.

(Legacy) Virtual Agent NLU reference

Reference topics provide descriptions about the Virtual Agent Designer interface components and technical details to learn more about scripting methods, Natural Language Understanding system entities, and the Virtual Agent Interactions table.

Starting with the Brazil release, Virtual Agent for NLU and Virtual Agent Lite are being prepared for future deprecation. It will be hidden and no longer activated on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support Knowledge Base.

(Legacy) Virtual Agent Designer interface reference

The Virtual Agent Designer interface lets you create, modify, test, publish, and localize topics, topic blocks, and custom controls.

Virtual Agent Designer provides the following views. Some tabs may not be available, depending on how you configured your instance or the type of topic you are working with.

(Legacy) Virtual Agent Designer Topics page

The Virtual Agent Designer legacy home page lists cards for available topics in your instance.

Legacy topic cards page

Virtual Agent Designer

Migrate Topics to LLM
Localization Insights
See Topic Recommendations

LLM Assistant

Select Assistant
Manage

Manage languages
Manage NLU/keyword test cases
Test active topics

Search by topic name
Explore additional topics

Model Type
Topic Type
Category
Status
NLU Language
Channel
Created by me
Sort by

Create

_initial_skill_discovery_proc...
Published a month ago

agent
Published 9 months ago, Read only

bye
Published 2 years ago, Read only

_empty_skill_picker_
Published 7 months ago, Read only

_empty_topic_
Modified 2 years ago, Read only

_fdi_skill_executor_
Published 12 days ago, Read only

_follow_up_questions_
Published a month ago, Read only

help
Published 3 years ago, Read only

hl
Published 2 years ago, Read only

_link_account_adapter_
Published 10 months ago, Read only

_live_agent_support_
Published 12 months ago, Read only

Topic cards

Each topic is represented by a card on the topic page. A description of the topic (from the **Properties** tab) appears when you hover over the title, and all categories are shown when you hover over the list of tags.

Helps users update their physical address.
Address change
Published a minute ago
Promoted Recommended +1 more

Address change
Published a minute ago
Promoted Recommended +1 more
Promoted Recommended Self Service

Address change
Published a minute ago
Recommended

Filters and options in the Topics page

Field	Description
Localization Insights	Button that opens the Localization Insights dashboard. It shows reports of topics with their translation statuses. For more information, see Localization Insights dashboard .
See Topic Recommendations	Button that opens Topic Recommendations (if installed). Review recommendations and manage jobs. For more information, see (Legacy) Using Virtual Agent Topic Recommendations .
Manage languages	Button that opens the Manage languages page. You can view the localization status of an NLU model and request translations for the model and related topics. This field is available only when NLU discovery is enabled on the instance.
Manage NLU/keyword test cases	Button that opens the Manage test cases page, where you can manage automated testing for Virtual Agent topics. For more information, see Manage test cases .

Filters and options in the Topics page (continued)

Field	Description
	(Legacy) Automated testing for Virtual Agent topics that use NLU topic discovery.
Test Active Topics	Button that opens the chat test window, which runs active topics in the Virtual Agent chat widget. Use this feature to test and verify that your active topics work as intended.
Search by topic name	Option for finding a topic that matches the name or search string that you enter.
Explore additional topics	Link that opens the All prebuilt topics page, which shows prebuilt topics that are available when you activate their dependent spokes or plugins. For more information, see (Legacy) Virtual Agent Designer All prebuilt topics page .
Topic Type	Filter for displaying Virtual Agent assets: • Topics: Lists only topics (and not blocks or custom controls), including prebuilt topics. • Topic Blocks: Lists prebuilt and custom topic blocks. • Setup Topics: Lists topics that are basic conversational elements, such as the conversation greeting or closing. • Small Talk Topics: Lists topics that serve as casual conversations between the bot and end users, where the bot answers questions generally not related to the original task or issue. • Custom Controls: Lists custom controls that represent custom components used in a conversation. By default, the Topics page lists all active (published) and inactive (in development) assets, unless you use filters to list only certain asset types.
Category	Filter that displays a list of topics belonging to a category that you specify. A category is a label that identifies a group of assets, such as setup topics or prebuilt topics for a particular business application. You can also define your own custom categories. For details, see Create or modify custom Virtual Agent categories.
Status	Filter that displays a list of assets by their state: • Active: Display only published assets • Inactive: Display only assets in development
NLU Language	Filter that is displayed only if you're using multi-language NLU models. Lists NLU -enabled topics by the language that you select. Enable the languages for the NLU service in NLU settings.

Filters and options in the Topics page (continued)

Field	Description
	This field is available only when NLU discovery is enabled on the instance.
Channel	If other channels are configured for the instance, this filter lists topics by the channel (chat client) that you select. The default channels for Virtual Agent are the web chat client and the messaging integrations for Slack, Microsoft Teams, Workplace, and Facebook Messenger. Your instance may have other channels, such as SMS that were created using custom chat integrations.
Sort by	Filter that displays topics by the sort filter that you select: • Name: Specified topic or asset. • Updated time: Recently updated topics.
Created by me	Option that, when enabled, displays only the topics that you created.
+ Create	Option that opens the Properties page to create a topic or topic element and define the topic properties.
Topic actions icon ⋮	Icon that opens a drop-down menu with the following options: • Promote topic: Adds a Promoted flag to the topic. Primary assistants only show promoted topics associated with them and not their secondary assistants' promoted topics. The option is deactivated and a tooltip appears when you try to promote any of the following: ◦ Setup topics ◦ Topic blocks ◦ Small talk topics ◦ Unpublished topics ◦ Any NLU/Keyword topics Note: You can promote NLU topics in Conversational Interfaces settings, under Virtual Agent Custom Greetings and Setup. For more information, see (Legacy) Configure a Virtual Agent NLU chat experience. • Demote topic: Replaces the Promote option in a promoted topic, to remove the Promoted flag. • Delete topic: Opens a confirmation dialog box to delete the topic.

(Legacy) Virtual Agent Designer All prebuilt topics page

When you install prebuilt conversations, such as ITSM Virtual Agent, some topics may not appear on the home page unless you install their dependent plugins. This page shows the additional topics that are available.

For more information about ITSM prebuilt topics, see [ITSM Virtual Agent](#).

Explore all prebuilt topics page

Field	Description
Topic	Name of the topic. If its Status is Available to use, select the topic to open it in Virtual Agent Designer.
Documentation	Link to related ServiceNow documentation for the topic.
Dependencies	The plugins that are needed to use the topic. Select a dependency to go to its documentation and learn how to install it. Note: Some plugins may require the admin role to install.
Status	Value denoting whether you need to install a spoke or plugin, or if the requirements are met and the topic is available to use.

(Legacy) Create a topic form

The Create a topic form is used to set the properties for a new conversational topic for Virtual Agent.

The Create a topic form layout is similar to the Edit topic properties form layout found in the [Topic Properties tab](#). When you finish creating a topic using this form, the model type and topic types are locked in the Properties tab.

Create a topic form for NLU/Keyword model types

Create a topic

Enter properties. [Learn about designing topics.](#)

Basic properties

* Application scope ⓘ

Global

X ▼

Model Type ⓘ

NLU/Keyword

▼

* Type

Topic

▼

* Internal name ⓘ

Enter a unique name

* Display name ⓘ

Enter a unique name

Topic description

Describe the purpose and functionality of this topic

Natural Language Understanding (NLU) (recommended)

NLU Model and Intent

Help end users discover this topic with NLU. Mapping a model and intent enables your VA to understand what your users say. You can also come back later and use keywords now. [Learn about NLU models.](#)

NLU Model

Select or create a model

▼

Associated Intent

Select or create an intent

▼

Advanced properties (optional)

▼ Who can access this topic

▼ Live Agent

▼ Additional

Create a topic form

Field	Description
Application scope	Select the application scope where the topic becomes available. Note: The application scope cannot be changed once the topic is created.
Model Type	Select NLU/Keywords for either keyword or NLU discovery. Note: This field is visible only if you installed Now Assist in Virtual Agent.
Type	List of assets that you can create. Select Topic.
Internal name	Internal name for topics, small talk topics, and setup topics that reflects its business purpose. Internal name displays on the Virtual Agent Designer Topics page and must be unique across the platform.
Display name	Topic name that displays to users when they interact with Virtual Agent. Display name must be unique for either NLU/Keywords or LLM model type.
Topic description	Brief explanation of the topic purpose and functionality. If you use single quotes (') in your description, do the following to avoid problems with your conversation: 1. Navigate to All, then enter <code>sys_properties.list</code> in the filter. 2. Search for and select <code>glide.ui.escape_all_script</code>, then set its value to True.
NLU Model	Natural Language Understanding model to be mapped to the topic. The model contains the user utterances that are associated with the trained intents and entities. This combination enables your bot to understand what a user says. Do one of the following: • Choose an existing model. • Select Create Model to create a new model group. 1. In the Model Name field, enter a name for the new model group. 2. In the Intent name field, accept the default value or enter a name for the new intent. Note: New models are created in Draft state. Tip: To see how and where the NLU model is used, navigate to NLU Workbench > Models, and sort the Created for column.
Associated Intent	The intent, when recognized by Virtual Agent, that launches this topic. If you specified or created a model, the intent is required. Do one of the following: • Choose an existing intent. • Select Create intent to create a new intent. In the Intent Name field, accept the default value or enter a name for the new intent.

Create a topic form (continued)

Field	Description
	Note: This option is not available for read-only models.
Enable DialogActs	Toggle switch (active by default in new topics) to enable Virtual Agent to detect when you modify utterances or applies updates in an NLU model, and dynamically reacts to unexpected utterances and modifications. Toggle to the off position to prevent users from using the keyboard instead of the options available in the topic. For more information, see (Legacy) Dialog Acts for Virtual Agent. Note: This toggle is decoupled from the topic switching option found in all User Inputs aside from Grouped Choice and File Picker. It's available for all topic types aside from a Topic Block. This feature is currently available only for English.
Confirm modified values with users	Toggle switch to enable Virtual Agent to send a confirmation message to the user when the Virtual Agent detects a value change. This value is Active by default. Note: This toggle appears when Enable DialogActs is activated.
Advanced properties (optional)	
Who can access this topic	
System Roles	Roles that a user must have to view and run the topic. If a topic is public (available to users, including guest users, who aren't authenticated in the ServiceNow platform), select only the Public role.
Channels	Chat clients in which the topic or topic block will run. These channels are different from the default channels that are natively supported by Virtual Agent. Your instance may have additional channels for custom chat integrations created for it. For more information about channels, see Deploying Virtual Agent topics in other channels.
Context	Expression logic to specify a condition for presenting this topic to users. The condition must evaluate to true. You can set this field using either the condition builder or a script. Condition: Use the condition builder to add or edit conditions. Script: Use the script editor to create or edit a script that contains a condition statement.
Live agent	
Live agent context variables	Live agent context variables that are defined in the General Chat Settings. Select the variables that provide dynamic context, which means information from the Virtual Agent chat. This information is transferred from the bot conversation to the live agent. For information about the default list of live agent variables, see Live agent chat context variables.

Create a topic form (continued)

Field	Description
Available for Agent Autopilot	Toggle switch that determines whether the topic is available to a live agent. When enabled, an agent can search for and invoke the topic. For details, see Conversation Autopilot .
Additional	
Resume flow after topic switching	Toggle switch that lets the user return to the original conversation after changing topics during a conversation. Not applicable to Small Talk topics.
Categories	Label used to identify and group-related topics, topic blocks, or custom controls.
Keywords	List of key phrases or terms that users enter to initiate the conversation with the Virtual Agent. Press Enter after each phrase. Keywords are also used for languages that are currently not available in NLU.

(Legacy) Topic Properties tab for NLU

Use the **Topic Properties** tab to identify a topic and how it's used. You can control who uses the topic and what channels it can run in.

If you enable NLU/Keyword in Virtual Agent settings, the topic **Properties** tab includes fields for identifying the NLU model and intent for the topic.

For more information, see [\(Legacy\) Create a topic form](#) and [\(Legacy\) Creating a Virtual Agent NLU topic](#).

Topic Properties tab with NLU topic discovery

FlowNLU IntentPropertiesLanguages

Edit topic properties

Enter properties. [Learn about designing topics.](#)
Last published 3 years ago

Basic properties

* Application scope ⓘ

ITSM Virtual Agent Conversations

Model Type ⓘ

NLU/Keyword

* Type

Topic

* Internal name ⓘ

Escalate IT Ticket (Template)

* Display name ⓘ

Escalate IT Ticket (Template)

Topic description

ITSM conversation for escalating an incident.

Natural Language Understanding (NLU) (recommended)

NLU Model and Intent

Help end users discover this topic with NLU. Mapping a model and intent enables your VA to understand what your users say. You can also come back later and use keywords now. [Learn about NLU models.](#)

NLU Model

ITSM NLU for Virtual Agent (11 languages)

* Associated Intent

EscalateITTicket

Dialog Acts

With Dialog Acts, the VA will dynamically react to user utterances and modifications. This feature is currently only supported in English. [Learn More](#)

Enable Dialog Acts

Confirm modified values with users ⓘ

Topic properties

Field	Description
Application scope	Select the application scope where the topic becomes available. <i>i</i> Note: The application scope cannot be changed once the topic is created.

Topic properties (continued)

Field	Description
Model type	Type of model for this topic, either LLM or NLU/keyword. The model type is locked when you create the topic. Note: This field is visible only if you installed Now Assist in Virtual Agent.
Type	Type of topic, including basic topic, topic block, setup topic, and small talk topic.
Internal name	Internal name for the topic, not seen by customers.
Display name	Topic name displayed for customers.
Topic description	Description used to denote what this topic is used for.
NLU model	NLU model mapped to the topic.
Associated intent	NLU intent connected to the model and topic.
Enable DialogActs	Toggle to allow Virtual Agent to react dynamically to user statements.
Confirm modified values with users	Toggle to allow Virtual Agent to send confirmation messages to users when a value change is detected.

(Legacy) Topic NLU Intent tab

You can edit and refine ServiceNow NLU models from within Assistant Designer. When a conversation topic is bound to an associated NLU model and intent, use the **NLU Intent** tab to review and edit utterances and associated entities.

Note: An updated Assistant Designer Asset library user interface is available when you install ServiceNow Otto for Virtual Agent. This content assumes that you can see the list view. If ServiceNow Otto for Virtual Agent is not installed, you see the legacy UI and topics page. For more information, see [Virtual Agent Designer legacy topics page](#).

If your topic uses NLU discovery, the topic **NLU Intent** tab appears on the Assistant Designer interface. Test your topic to see the prediction results for topic discovery and the corresponding confidence scores for the results. Depending on the results, you can modify the associated utterances and entities in the NLU model for your topic intent.

Utterances tab

Use the **Utterances** tab to perform the following tasks.

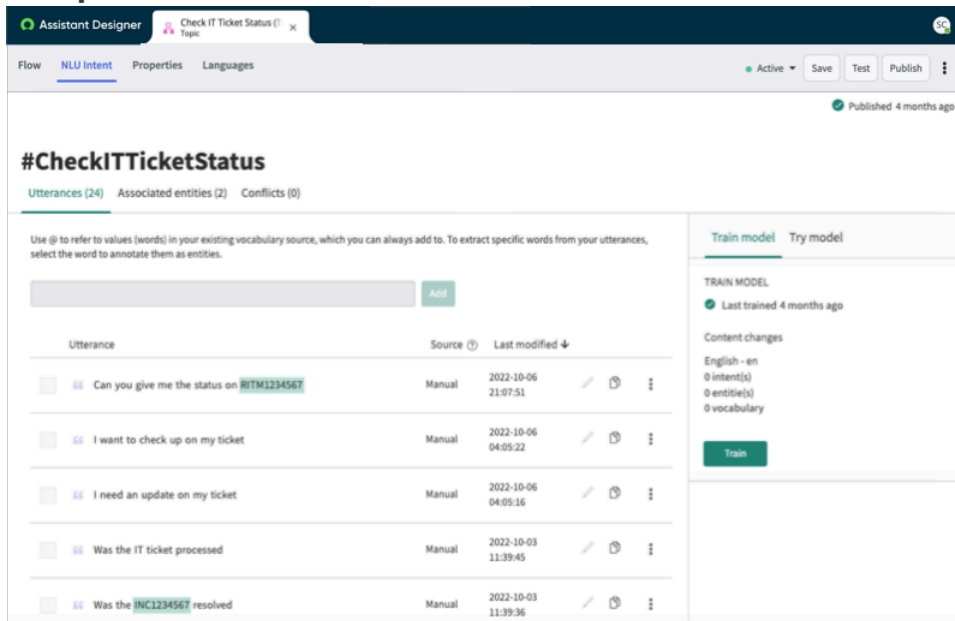
Using the Utterances tab

I want to...	Do this
Add an utterance	Use the Add field to enter an utterance for an intent. Each utterance must be unique and contain fewer than 200 characters.

Using the Utterances tab (continued)

I want to...	Do this
Edit an utterance	Select the Edit icon  next to the utterance.
Duplicate an utterance	Select the Copy icon  next to the utterance.
Move an utterance to another intent	Select the Menu icon  , and then select Move this utterance to another intent .
Delete an utterance	Select the Menu icon  , and then select Delete this utterance .
Define a new entity	1. Select a word in an utterance to use as an entity. 2. In the Create New Entity picker, select the type of entity to be created, such as a simple or system-derived entity. For information about the types of entities that you can define, see NLU entities . For information about system entities, see (Legacy) NLU system entities. When you add an entity, it is also displayed in the Associated Entities tab.

Example utterances on the NLU Intent tab



The screenshot shows the ServiceNow Assistant Designer interface for the NLU Intent tab. The intent is named "#CheckITTicketStatus". The interface displays a list of utterances with their sources and last modified dates. The utterances are:

- Can you give me the status on **RTM1234567** (Manual, 2022-10-06 21:07:51)
- I want to check up on my ticket (Manual, 2022-10-06 04:05:22)
- I need an update on my ticket (Manual, 2022-10-06 04:05:16)
- Was the IT ticket processed (Manual, 2022-10-03 11:39:45)
- Was the **INC1234567** resolved (Manual, 2022-10-03 11:39:36)

The interface also includes a "Train model" button and a "Try model" button. The "Train model" button is highlighted, and the "Try model" button is disabled. The "Train model" button is labeled "Train" and the "Try model" button is labeled "Try model".

Adding entities on the Utterances tab

Assistant Designer Check IT Ticket Status Topic

Flow **NLU Intent** Properties Languages Active Save

#CheckITTicketStatus

Use @ to refer to values (words) in your existing vocabulary source, which you can always add to. To extract specific words from your utterances, select the word to annotate them as entities.

Add

Utterance	Source	Last modified
Can you give me the status on RITM1234567	Manual	2022-10-06 21:07:51

Find entity name or value

Create New Entity

Entity Type	Count
Simple entities	1
Mapped entities	12
Pattern entities	4
System-derived entities	0
Open-ended entities	0

Entity Name
device
meetingActionType
meetingroomissue
printerissue
tasktype

Entity Name
incident
requested item

Associated Entities tab

Use the **Associated Entities** tab to view the entities defined for the intent. Select the name to view the utterances that the entity is associated with.

Entities defined for an intent named UpdatePhoneNumber

#UpdatePhoneNumber

Utterances (42) **Associated Entities (2)** Conflicts (1)

These entities are pieces of info that users provide to help identify the specifics on what they need.

Name ↓	Type	Associated Intents	Utterances	Intent match
phonetype	Simple	1	9	
phonenumber	Pattern	3	14	

You can also associate system entities, such as date and time, with an intent. For more information about supported system entities, see [\(Legacy\) NLU system entities](#).

Conflicts tab

Use the **Conflicts** tab to view conflicts among your intents. For example, if two different intents use the same utterance, this will appear as a conflict in both Assistant Designer and

NLU Workbench. Identifying and resolving conflicts improves the effectiveness of NLU topic discovery.

Utterance conflict between two intents

The screenshot shows the Assistant Designer interface for a topic named 'Hardware Issues'. The 'NLU Intent' tab is selected, showing a conflict between two intents. The conflict is labeled 'Critical' and involves the utterance 'generic problem' which is mapped to both 'Hardware Issues' and 'Software Issues'.

Assistant Designer | Hardware Issues Topic

Flow | **NLU Intent** | Properties | Languages

Active | Save | Test | Publish

Trained 5 minutes ago

#Hardware Issues

Utterances (16) | Associated Entities (2) | **Conflicts (1)**

We found overlapping utterances in these intents.
Remove or edit any utterances so that each utterance only applies to one intent. Any changes you make will automatically update the model and improve performance.

☐ Hide moderate conflicts

Critical	This intent: Hardware Issues	Conflicting intent: Software issues
1	“ generic problem	“ generic problem

(Legacy) NLU Topic Languages tab

Use the **Languages** tab to view the topic's translation status for languages that have been activated in Virtual Agent. If NLU is enabled on your instance, you can also view model mappings for each language.

Some features on the Languages tab require the appropriate localization roles. For more information, see [\(Legacy\) Localization roles for Virtual Agent](#).

Translations tab

Example Translations tab

Flow NLU Intent Properties **Languages** Active Save Test Publish ⋮

Translations NLU language mapping

View, edit, or request translations for the topic using the ServiceNow Localization Framework. If you want to translate this topic into additional languages, you will need to activate I18N plugins. For assistance, check with your ServiceNow Administrator.

Translate this topic with their associated topics and NLU Model. [Manage languages](#)

This status reflects your most recent published state: 3/28/2023, 6:03:06 PM.

Language ⓘ	Topic translation status	Topic translations	Localization request	Test
☐ English	✔ Complete			Test
☒ Português (Brasil)	⊖ Not started	Edit	Request translation	Test

☐ Request translations

Translations tab columns

Column	Description
Language	List of available languages in Virtual Agent. Only installed languages are displayed (the language plugins are activated). If a language appears as unavailable, it means the language plugin is installed, but it has not been activated in Virtual Agent settings or in the Localization Framework. For more information, see (Legacy) Configure Natural Language Understanding in Virtual Agent and Languages table 🔗.
Topic translation status	Indicates translation status: • Complete: Topic is completely translated • Partial: Topic is partially translated • In progress: Translation is in progress • Not started: Translation has not begun • Needs publishing: Topic is unpublished or in Draft state The ServiceNow platform provides translations for interface features and prebuilt topics, so languages may display as partially translated.
Topic translations	Depending on the state of the localization process and your role, you can either view the current content for the language, or you can edit the language content. Only users with the Localization editor [localization_editor] role can edit translated content.
Localization request	Click Request translation to create a Localization Framework task. Translation will begin depending on how the flow was set up in the Localization Framework.

Translations tab columns (continued)

Column	Description
	If translation has already begun and you have the Localization fulfiller [localization_fulfiller] role, click View requested item to view the task.
Test	Click the link to test the topic in a particular language.

NLU language mapping tab

If you've enabled NLU on your instance, you can view or modify the topic mappings on this tab. You can also map your entities and test the translated topic here.

Note: Unless you're using legacy, single-language models, all secondary languages in a topic must be mapped to the same model group. In most cases, changing the mapping for one secondary language will change the mappings for all secondary languages in the topic. For more information, see [\(Legacy\) NLU model mapping in Virtual Agent Designer](#).

Example NLU language mapping tab

Flow NLU Intent Properties **Languages** Active Save Test Publish

Translations NLU language mapping

NLU Language Mapping

The topic can be mapped to an intent in each of the supported languages. Select a trained model and one of its intents so that your users can discover this topic.

Intent mapping

The topic is bound to NLU models for these languages: Deutsch, English, Français.

Language to edit: Deutsch X

English	Deutsch
Test this topic	Test this topic
Model Internal IT (3 languag... X	Model Internal IT DE (3 lang... X
* Intent Hardware Issues X	* Intent Hardware Issues X

Entity mapping

Map entities across your NLU language models.

Node Name	Prompt	English	Deutsch
Hardware Type	What are you having a problem with?	-- Select --	-- Select --

(Legacy) Virtual Agent Designer user input controls for NLU

Use the collection of input controls provided by Virtual Agent Designer to prompt and capture information from the user in a conversation.

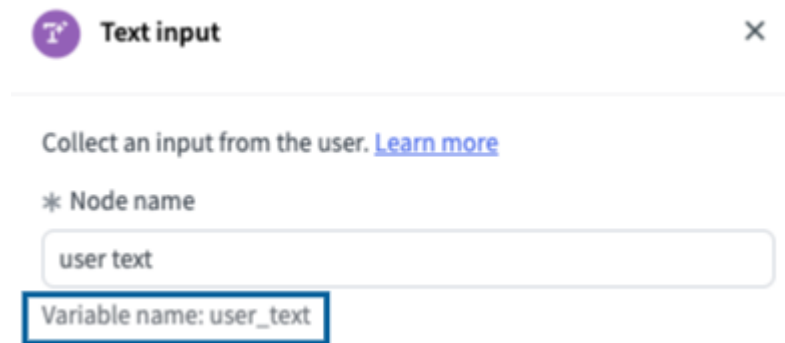
Common input control properties

In addition to [data pills](#) and [condition controls](#), each input control has the following common properties:

Input variable for the user response

Each control stores the user response in an input variable that is accessible from other controls within the same topic using the `getValue` and `getDisplayValue` methods. The variable name is based on the name that you assign to the input control. For example, if you assign the name `First prompt` to an input control, the variable name is `first_prompt`. The variable name is lowercase, with an underscore character instead of a space. For more information on these methods, see [Virtual Agent scripts](#).

The Variable name field is populated automatically



The screenshot shows a configuration interface for a 'Text input' control. At the top, there's a header 'Text input' with a close button. Below it, a description says 'Collect an input from the user. [Learn more](#)'. Under the heading '* Node name', there is a text input field containing 'user text'. Below this field, a box highlights the text 'Variable name: user_text', indicating that the system automatically generates the variable name based on the node name.

Natural Language Understanding (NLU) entity properties

If NLU is enabled, the following properties are displayed in the property sheet for the **Text**, **Static Choice**, **Dynamic Choice**, **Boolean**, **Date Time**, and **Carousel** input controls. To view or enable these properties, go to the Advanced options section.

- **NLU entity:** The entity that corresponds to the input variable for the control. You select the entity from the list of entities associated with the topic intent, as defined in the NLU model that you're using for the topic. When Virtual Agent recognizes the entity value in user utterances and if the value meets the entity prediction confidence threshold, then Virtual Agent extracts the value. The value is stored in the input variable for the node. This storing action is called slot filling. Slot filling recognizes when multiple values for the same NLU entity occur in a conversation. Users are prompted with a list to confirm which node value to select when multiple nodes are tied to the same NLU entity. This property is available only for NLU topic discovery.
- **Enable NLU to switch topics:** Enables NLU prediction for the node. If enabled, users can enter text to answer questions, regardless of the type of input control being used. Virtual Agent uses this utterance to match another existing intent, letting the user switch topics. To enable this property on a node, navigate to **Advanced options > Topic switching**.

Additional Advanced properties include:

Default value

An input prompt can have a preset value that you define. This value can be either a string or a script that returns a string. This property is in the Advanced options section.

Confirmation messages

These bot response messages signal the end of the node interaction and ask the users to confirm their response. This property is in the Advanced options section.

(Legacy) Text user input control for NLU

The Text user input control in a Virtual Agent topic prompts the user for a text string.

Text user input control properties for NLU topic discovery

Property	Description
Node name	Name that identifies this node in the topic flow.
Variable name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the Node name property.
Prompt	Prompt or question for the user. The prompt can be either a text string or a script that returns text. This value is used only when the default value is not specified. For example: What ' s your name ?
Input format	Text format that is validated when a user enters certain text items. If the user doesn't enter the expected format, an error message indicates that the format is not valid and asks the user to reenter the text. Choose the format of the text item to be validated: • Text: Any text string (no validation). • Email: Format that consists of an email prefix (user name), the @ symbol, and domain. • IP address (IPV4, IPV6): Data communication delivery format for Internet Protocol version 4 or version 6. • Phone number (E.164): Internationally recognized standard phone number format. • URL: Web address format. • Custom: A script that provides a validation rule for a custom text format. The script should include related error messages that are displayed when the expected format is not entered. For phone and IP address format examples, see E.164 phone formats and IP address field types.
NLU entity	Option to associate an NLU entity with the node. If an NLU entity is associated with the input variable for this node, Virtual Agent can slot-fill the specified value based on the user's utterance. Select an entity from the list of entities associated with the topic intent. When you specify an entity for the node, the Do not ask users to confirm recognized entity toggle switch is displayed. When enabled, users are not prompted to confirm the extracted entity.
Advanced	
Make this input secure	

Property	Description
Enable	Toggle switch that encrypts the input control. When enabled, the user input is masked and appears as a series of dots in the chat window.
Hash function [Visible when Make this input secure is enabled]	The method digest algorithm based on the standard WS-security standard. Choose one of the following: • SHA-256 (lower case) • SHA-1 (lower case) For more information about the WS-security standards, see WS-Security properties .
Encryption salt [Visible when Make this input secure is enabled]	Random data that is used as an additional input to a one-way function that hashes data.
Default value	
Predefine a value for user input	Predefined value for the user response to the question or prompt. The response defined in the Default value confirmation field asks the user to confirm the default value. If the user responds with no, the value becomes null. The default value can be either a text string or a script that returns text. For example, if you're using dot-walking, the default value might be: <code>Script Variables > Last username</code> . Or if you're using a script, the default value might be: <code>{{vaScripts.lastUsername}}</code> .
Confirmation messages	
Input completion confirmation	Bot response shown to the user when the node interaction is complete. The message can be either a text string or a script that returns text. For example, if you're using dot-walking: <code>Thanks, (Input Variables > Username) !</code> Or if you're using a script, the acknowledgement might be: <code>Thanks, {{vaInputs.username}} !</code>
Default value confirmation	Message that asks the user to verify that the value in the Default value field is correct. This message is used instead of a value in the Prompt field. It can contain either a text string or a script that returns text. For example, if you're using dot-walking: <code>Are you (Input Variables > Username)?</code> Or if you're using a script, the confirmation message might be: <code>Are you {{vaScripts.lastUsername}}?</code>
Conversation switching	
Turn on to let users change the subject	Option to enable NLU prediction for this node. If enabled, users can enter text to answer questions, regardless of the type of input control being used. Virtual Agent uses this utterance to match another existing intent, letting the user switch topics.

Property	Description
Hide or skip this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script.
Skip reprompting	No-code condition statement or low-code script that specifies a condition for letting users skip reprompting in the conversation. When a preceding node is revisited through a topic loopback or Dialog Act, Virtual Agent bypasses this node and automatically retains its original value.

Channel support

Note: Virtual Agent Designer controls may display and function differently in other channels.

Channel support for the Text user input control

Channel	NLU/keyword support	Constraints
Web UI	Supported	None.
Mobile UI	Supported	None.
Microsoft Teams	Supported	None.
Slack	Supported	Slack users can edit text previously entered in a conversation. However, Virtual Agent processes messages as they are first entered. If a Slack user edits text input, such as a comment to update a case, then Virtual Agent does not evaluate the edited update.
SMS Twilio	Supported	None.
LINE	Supported	The maximum character limit is 5000 characters.
WhatsApp (powered by Twilio)	Supported	None.
WhatsApp	Supported	The maximum limit is 4,096 characters.
Apple Messages for Business	Supported	None.
Alexa (Voice)	Supported	For screen devices, character limits may apply. For more information, see the Alexa developer documentation .

(Legacy) Static Choice user input control

Use the Static Choice user input control in a Virtual Agent topic to list predefined choices available to the user. You can select only one item from a choice list.

Choice display

The choice list contains up to 10 items per page. When more than 10 items exist in an NLU conversation, you have the option to show the additional items and also filter the search results.

The choice list prompt contains a search icon  that users can select to filter the results.

The Static Choice control provides the option to add a header card that displays above the choice list. Header cards are supported in web and mobile channels.

- The header card can contain a large or small image or a YouTube video card, along with descriptive text. The choice list contains up to five items by default, but the search feature is suppressed. If there are more than five items, users can choose to show the additional items.
- To control the number of items displayed below a header card, add the `com.glide.cs.web_header_picker_page_limit` system property. Use the **Value** to specify the number of items displayed in the choice list. For details about creating a system property, see [Add a system property](#).

Static Choice user input control properties for NLU topic discovery

Property	Description
Node name	Name that identifies this node in the topic flow.
Detail description	The one piece of information needed from the user. For example, Ask the user which service catalog item they need.
Variable name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the Node name property.
Prompt	Prompt or question for the user. The prompt can be either a text string or a script that returns text. This value is used only when the default value is not specified. For example: What's your name? You can create rich text to alter the styling of the prompt: • Use single asterisks or underscores for italic text. For example, <code>*text*</code> or <code>_text_</code>. • Use double asterisks or underscores for bold text. For example, <code>**text**</code> or <code>__text__</code>. • Use triple asterisks or underscores for italic and bold text. For example, <code>***text***</code> or <code>___text___</code>. • Use a spaced hyphen to add a bullet point to a line. For example, <code>- text</code>. • Use a spaced right angle bracket to create a block quote. For example, <code>> text</code>.

Property	Description
	- Use between one and six hash marks to create headers. For example, <code>#text#</code> or <code>#####text#####</code> - Use brackets and parentheses to create a hyperlink. For example, <code>[Link text](url)</code>. Add an exclamation point to a hyperlink to display an image. For example, <code>![alt text](image url)</code>
NLU entity	Option to associate an NLU entity with the node. If an NLU entity is associated with the input variable for this node, Virtual Agent can slot-fill the specified value based on the user's utterance. Select an entity from the list of entities associated with the topic intent. When you specify an entity for the node, the Do not ask users to confirm recognized entity toggle switch is displayed. When enabled, users are not prompted to confirm the extracted entity. This field is available only when NLU discovery is enabled on the instance.
Choices	
Display name	For each choice, the text that appears to the user for that choice. Use short phrases in your choice lists. - Slack has a limit of 30 characters for choice list labels. - Workplace has a limit of 20 characters for choice list labels.
Value	For each choice, the string that is stored in the variable when the corresponding choice is selected.
Advanced	
Header card	Toggle to open a field to add cards which may include images or YouTube videos. For more information, see Insert a header card in a Static Choice or Dynamic Choice control
Default value	
Default Value	Predefined value for the user response to the question or prompt. The response defined in the Default value confirmation field asks the user to confirm the default value. If the user responds with no, the value becomes null. The default value can be either a text string or a script that returns text. For example, if you're using dot-walking, the default value might be: <code>Script Variables > Last username</code>. Or if you're using a script, the default value might be: <code>{{vaScripts.lastUsername}}</code>.
Confirmation messages	
Input completion confirmation	Bot response shown to the user when the node interaction is complete. The message can be either a text string or a script that returns text. For example, if you're using dot-walking: <code>Thanks, (Input Variables > Username) !</code> Or if you're using a script, the acknowledgement might be: <code>Thanks, {{vaInputs.username}} !</code>

Property	Description
Default value confirmation	Message that asks the user to verify that the value in the Default value field is correct. This message is used instead of a value in the Prompt field. It can contain either a text string or a script that returns text. For example, if you're using dot-walking: Are you (Input Variables > Username)? Or if you're using a script, the confirmation message might be: Are you {{vaScripts.lastUsername}}?.
Conversation switching	
This section is available only when NLU discovery is enabled on the instance.	
Turn on to let users change the subject	Option to enable NLU prediction for this node. If enabled, users can enter text to answer questions, regardless of the type of input control being used. Virtual Agent uses this utterance to match another existing intent, letting the user switch topics.
Hide or skip this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script.
Skip reprompting if	No-code condition statement or low-code script that specifies a condition for letting users skip reprompting in the conversation. When a preceding node is revisited through a topic loopback or Dialog Act, Virtual Agent bypasses this node and automatically retains its original value.

Example Static Choice user input control for NLU topic discovery

Note: Virtual Agent Designer controls may display and function differently in other channels.

Input properties

Static choice input control basic properties

Static choice input

Allow the user to select from a list of predefined choices. [Learn more](#)

* Node name

Fruit choice

Variable name: fruit_choice

* Prompt

Pick one:

NLU entity

Define an NLU entity from a model

* Choices

	Display name	Value to store	
1	Apples	10	
2	Pears	20	
3	Oranges	30	

Advanced (optional)

Header card

Default value

Confirmation messages

Conversation switching

Hide or skip this node

List prompt

Web UI Static Choice list prompt

OK, what's the urgency of your issue?

1 - High

2 - Medium

3 - Low

Web UI Static Choice list prompt with more than 10 items

Here are the breakfast items

eggs

bacon

toast

butter

jam

sausage

hash browns

orange juice

strawberries

waffles

Show 2 more...

Please pick an option.

The choice list displays 10 items per page. When 10 or more results are returned, the following occurs:

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Input properties	List prompt
Add card dialog box (Header card advanced option) Add card * Card type Large image with text To view supported channels, open Large image with text Map data to fields on the card * 1. Title Input Variables→Fruit...   2. Description   * 3. Image Retail_GettyImages-539831324_1645643404252.jpg  URL Link Change Image 4. Image alt text You chose Input Variables→Fruit...  	Get your favorite candy From your neighborhood candy store Visit us! Lollipops Gummy treats Bubble gum Jawbreakers Chocolate bar Show 5 more... Please pick an option.

The choice list contains five items per page. When five or more results are returned, the list provides an option to show more results.

Note:

The search feature is suppressed when a header card is used.

Channel support

Channel support for the Static Choice user input control

Channel	LLM support	NLU/ keyword support	Constraints
Web UI	Not supported	Supported	None
Mobile UI	Not supported	Supported	None
Now Assist panel	Not supported	Supported	None
Microsoft Teams	Supported	Supported	None
Slack	Not supported	Supported	Header cards aren't supported. When a choice list has three or fewer choices, Slack displays the list as buttons.
SMS Twilio	Supported	Supported	Header cards aren't supported.
LINE	Not supported	Supported	In a quick reply, the label has a maximum limit of 20 characters. You can view only 13 quick replies at a time. If there are more than 13 quick replies, the pagination format is used to view more options. The default value of the maximum number of replies for a page is set in the <i>sn_val_line.max_picker.choices</i> system property. The property is located in the System Property [sys_properties] table.
WhatsApp (powered by Twilio)	Supported	Supported	None
WhatsApp	Not supported	Supported	Header cards aren't supported. The prompt or body text has a maximum limit of 1,024 characters. For list buttons: - Each button label can have a maximum of 24 characters. - Only 10 list buttons are visible at a time. - If there are more than 10 buttons, the system automatically uses pagination to show additional options.
Apple Messages for Business	Not supported	Supported	None

Channel support for the Static Choice user input control (continued)

Channel	LLM support	NLU/ keyword support	Constraints
Alexa (Voice)	Not supported	Supported	For screen devices, use touch scroll. For nonscreen devices, use voice pagination.

(Legacy) Grouped Choice user input control

Use the Grouped Choice user input control in a Virtual Agent topic to list multiple groups of choices in one message.

Grouped Choice list display

The Grouped Choice list prompts users to select related choices in one message through the default **Select a choice** button. You can enable multi-select for each choice's group and also provide images and short descriptions to create a richer user experience. Users are presented with groups of choices where they're required to submit one selection before returning to the Virtual Agent topic.

Inputs are recorded on the Interactions [interactions] table. For more information, see [Virtual Agent interaction records](#).

Grouped Choice user input control properties

Property	Description
Node name	Name that identifies this Grouped Choice user control node in the topic flow.
Prompt	Prompt or question for the user. The prompt can be either a text string or a script that returns text. For example: Please select your meal preference.
Group name	Name that identifies the grouped choice list in the property sheet. Add one (required) or multiple groups of related choices. Users must select one choice out of all groups. Use short phrases in your choice lists.
Choices	Number of choices added to each group.
Add a group of choices dialog box	
This dialog box only appears after Add is selected.	
Group name	Name that identifies the grouped choice list in the property sheet. A limit of 40 characters for choice list labels exists. The Variable name field is automatically generated from the group name. This read-only variable name appears in all lower-case text and substitutes any spaces in the group name for underscores. If multiple lists with the same name exist, the variable name is appended with _1, _2, _3, and so on. Use this variable in your conversation flow to retrieve user responses for each group within the Grouped Choice node.
Display as	Group heading title that appears in the rendered client.

Property	Description
Display name	Choice name that is displayed to users. At least two unique choices are required.
Value	String that is stored in the variable when the corresponding choice is selected. This value is automatically generated from the display name, but you can edit the field as needed.
Image	Option to add an image for the choice. Individual choice images are entered after you select Add details. To set this field, do one of the following: - Specify the URL link by either entering the link text, using a data pill, or using a script. - Upload an image file by selecting Upload Image.
Description	Option to provide additional information about the choice. Individual choice descriptions are entered after you select Add details. For example: If the grouped choice list is about passengers selecting airplane amenities, like headphones, you could include a description about the type of headphones such as <code>Over - ear wired headphones</code>.
Allow the user to select more than one choice	Option to allow users to choose multiple options from the choice list by selecting Yes .
Advanced	
Customize group selection	
Update title	Option to customize the title of the grouped choice's prompt button. A limit of 40 characters for choice list labels exists. If this field is left empty, the default title that users see is <code>Select a choice</code> .
Image	Option to add an image for the grouped choice's prompt button. To set this field, do one of the following: - Specify the URL link by either entering the link text, using a data pill, or using a script. - Upload an image file by selecting Upload Image.
Confirmation messages	
Input completion confirmation	Bot response shown to the user when the node interaction is complete. The message can be either a text string or a script that returns text. For example, if you're using dot-walking: <code>Thanks , (Input Variables > Username) !</code> Or if you're using a script, the acknowledgement might be: <code>Thanks , {{vaInputs.username}} !</code>.
Hide this node	

Property	Description
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Example Grouped Choice user input control

Note: Virtual Agent Designer controls may display and function differently in other channels.

Input properties	List prompt														
Grouped choice input control basic properties  Grouped choice input > Display multiple groups of related choices in one message. Available for select channels. Learn more * Node name Flight information * Prompt ⓘ Please select your preferred flight information   * Add at least one group of choices ⓘ <table border="1"> <thead> <tr> <th>Group name</th> <th>Choices</th> </tr> </thead> <tbody> <tr> <td>Airline carrier</td> <td>4</td> </tr> <tr> <td>Choose seat</td> <td>3</td> </tr> <tr> <td>Choose food</td> <td>5</td> </tr> </tbody> </table>  Add Advanced (optional) <table border="1"> <tbody> <tr> <td>Customize group selection</td> <td>></td> </tr> <tr> <td>Confirmation messages</td> <td>></td> </tr> <tr> <td>Hide this node</td> <td>></td> </tr> </tbody> </table>	Group name	Choices	Airline carrier	4	Choose seat	3	Choose food	5	Customize group selection	>	Confirmation messages	>	Hide this node	>	Web UI Grouped Choice list default prompt Welcome to our travel agency's portal. Please select your preferred flight information Select a choice > Web UI Grouped Choice list with customized title and image Welcome to our travel agency's portal. Please select your preferred flight information Select flight information  >
Group name	Choices														
Airline carrier	4														
Choose seat	3														
Choose food	5														
Customize group selection	>														
Confirmation messages	>														
Hide this node	>														

Input properties	List prompt
Add a group of choices dialog box Add a group of choices What is this group about? * Group name Choose food Variable name: choose_food * 1. Display as ⓘ What would you like to eat on your flight * Add two or more choices 2. Display name Value 1 Pretzels Pretzels ^ Added: description. Add more details Image Link to an image file you want to include Upload Image Description Extra salt 2 Honey Stinger Waffle Honey Stinger Waffle Allow the user to select more than one? ☐ Yes	Web UI Grouped Choice list Select your seat class type -Choose 1- ☐ First Class First class offers a premier experience with spacious seats ☐ Business Class Business class offers wider seats with more legroom ☐ Economy Class The most basic class Select your meal type -Choose 1- ☐ Chicken BBQ chicken with salad ☐ Beef Ground beef with potatoes ☐ Vegetarian Kale-and-Chickpea grain bowl Clear Submit

Channel support

Channel support for the Grouped Choice user input control

Channel	Support	Constraints
Web UI	Supported	None
Mobile UI	Not supported	Not applicable
Now Assist panel	Supported	None
Microsoft Teams	Not supported	Not applicable
Slack	Not supported	Not applicable
SMS Twilio	Not supported	Not applicable
LINE	Not supported	Not applicable
WhatsApp (powered by Twilio)	Not supported	Not applicable
WhatsApp	Not supported	Not applicable
Apple Messages for Business	Not supported	Not applicable
Alexa (Voice)	Not supported	Not applicable

(Legacy) Dynamic Choice user input control

Use the Dynamic Choice user input control in a Virtual Agent topic to dynamically create a list of available choices for your users. Create these choices by querying a table or by using a script to dynamically create them.

Choice list display

The Dynamic Choice list contains up to 10 items per page. When more than 10 items exist in an NLU conversation, you have the option to show the additional items and also filter the search results. The choice list prompt contains a search icon  that users can select to filter the results.

Tip: If you want to change the default number of listed items per page for NLU conversations, you can modify the `com.glide.cs.picker_page_limit` system property. The default value is 10.

If selecting multiple choices is turned on, you can search within the **Search for options** field for filtering search results. Select or type all choices that apply, and then select the send icon .

The Dynamic Choice control also provides the option to add a header card that displays above the choice list. Header cards are supported in web and mobile channels.

- The header card can contain a large or small image or a YouTube video card, along with descriptive text. The choice list contains up to five items by default, but the search feature is suppressed. If there are more than five items, users can choose to show the additional items.
- To control the number of items displayed below a header card, add the `com.glide.cs.web_header_picker_page_limit` system property. Use the **Value** to specify the number of items in the choice list. For details about creating a system property, see [Add a system property](#) .

Note:

If you populate a Dynamic Choice list node with only one choice, when testing or using the node, you receive a message reading “We have [choice] as [node name], is this correct?”. Use multiple choices in the Dynamic Choice list node to avoid receiving this message.

You can also alter the message content by navigating to **ALL > sys_properties.list** and editing the `glide.cs.retry_question_message` system property. This message value is by default a string We have {0} as {1}, is this correct? and is used for slot-filling in multiple cases outside the Dynamic Choice list. Any changes you make are reflected in every use of this property.

Dynamic Choice user input control properties for NLU topic discovery

Property	Description
Node name	Name that identifies this node in the topic flow.
Variable name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the Node name property.

Property	Description
Prompt	Prompt or question for the user. The prompt can be either a text string or a script that returns text. This value is used only when the default value is not specified. For example: What ' s your name? You can create rich text to alter the styling of the prompt: • Use single asterisks or underscores for italic text. For example, <code>*text*</code> or <code>_text_</code>. • Use double asterisks or underscores for bold text. For example, <code>**text**</code> or <code>__text__</code>. • Use triple asterisks or underscores for italic and bold text. For example, <code>***text***</code> or <code>___text___</code>. • Use a spaced hyphen to add a bullet point to a line. For example, <code>- text</code>. • Use a spaced right angle bracket to create a block quote. For example, <code>> text</code>. • Use between one and six hash marks to create headers. For example, <code>#text#</code> or <code>#####text#####</code> • Use brackets and parentheses to create a hyperlink. For example, <code>[Link text](url)</code>. Add an exclamation point to a hyperlink to display an image. For example, <code>![alt text](image url)</code>
NLU entity	Option to associate an NLU entity with the node. If an NLU entity is associated with the input variable for this node, Virtual Agent can slot-fill the specified value based on the user's utterance. Select an entity from the list of entities associated with the topic intent. When you specify an entity for the node, the Do not ask users to confirm recognized entity toggle switch is displayed. When enabled, users are not prompted to confirm the extracted entity. This field is available only when NLU discovery is enabled on the instance.
Choices	
Populate choices by	Type of dynamic variable to be used. Select one of the following options:

Property	Description
	• Record: Returns records from the table selected. The values for these options are GlideRecord objects. • Script: Expression that returns an array of options. Note: For more efficient pagination return results for a large data set when using a script expression, review the following script and determine whether you want to use this script: <pre>(function execute() { var pagingUtil = new global.VirtualAgentChoicePagingUtil(null, "sys_user", null, "user_name,name", "active=true", null, vaVars); var gr = pagingUtil.getPagingGlideRecordSecure("name", false); var options = pagingUtil.getSecureOptions(gr, null, 'user_name', ['user_name', 'name']); return options; })();</pre> For more information about the preceding scripting details, review information about GlideRecords and the additional information: ◦ <i>fieldName</i>: Field name is optional information. Pass with <code>null</code>. ◦ <i>table</i>: Table name to query for displaying the available options. ◦ <i>pageSize</i>: Page size is optional information. Pass with <code>null</code>. ◦ <i>searchColumns</i>: Table columns in a comma-delimited list that applies to any <i>searchText</i>. ◦ <i>encodedQuery</i>: Initial query to apply to table rows. For example, <code>active=true</code>. ◦ <i>searchText</i>: Search text is optional information. Pass with <code>null</code>. ◦ <i>vaVars</i>: Reference to virtual agent context variables (<code>vaVars</code>). ◦ <i>orderByColumn</i>: Table column used to order the options. ◦ <i>orderDescending</i>: Options appear in descending order. Only <code>true</code> or <code>false</code> values accepted. ◦ <i>gr</i>: Glide record name. ◦ <i>startRow</i>: Starting row is optional information. Pass with <code>null</code>. ◦ <i>valueColumn</i>: Table column name to use as the value of each option. ◦ <i>labelColumns</i>: Array of table columns to use for each option display.

Property	Description
Table	Table to be searched, available only if you selected Record as the method to populate choices.
Filter choices	Option to use the condition builder or provide a script. Select one of the following: • Condition Builder: Creates a filter used to select a subset of records from the table. • Script: Defines the enumeration list for the options (choice list) to be displayed. The name-value pair is stored as a string object. This field is available only when the Record option is selected.
Allow the user to select more than one choice	Option to allow users to choose multiple choices from the choice list.
No records response message	Message displayed to the user when the table search doesn't return any records. The message can be either a text string or a script that returns text.
Advanced	
Header card	Toggle to open a field to add cards which may include images or YouTube videos. For more information, see Insert a header card in a Static Choice or Dynamic Choice control
Default value	
Default Value	Predefined value for the user response to the question or prompt. The response defined in the Default value confirmation field asks the user to confirm the default value. If the user responds with no, the value becomes null. The default value can be either a text string or a script that returns text. For example, if you're using dot-walking, the default value might be: <code>Script Variables > Last username</code> . Or if you're using a script, the default value might be: <code>{{vaScripts.lastUsername}}</code> .
Confirmation messages	
Input completion confirmation	Bot response shown to the user when the node interaction is complete. The message can be either a text string or a script that returns text. For example, if you're using dot-walking: <code>Thanks, (Input Variables > Username) !</code> Or if you're using a script, the acknowledgement might be: <code>Thanks, {{vaInputs.username}} !</code>
Default value confirmation	Message that asks the user to verify that the value in the Default value field is correct. This message is used instead of a value in the Prompt field. It can contain either a text string or a script that returns text. For example, if you're using dot-walking: <code>Are you (Input Variables > Username)?</code> Or if you're using a script, the confirmation message might be: <code>Are you {{vaScripts.lastUsername}}?</code>

Property	Description
Conversation switching	
This section is available only when NLU discovery is enabled on the instance.	
Turn on to let users change the subject	Option to enable NLU prediction for this node. If enabled, users can enter text to answer questions, regardless of the type of input control being used. Virtual Agent uses this utterance to match another existing intent, letting the user switch topics.
Hide or skip this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script.
Skip reprompting if	No-code condition statement or low-code script that specifies a condition for letting users skip reprompting in the conversation. When a preceding node is revisited through a topic loopback or Dialog Act, Virtual Agent bypasses this node and automatically retains its original value.

Example Dynamic Choice user input control for NLU topic discovery

Note: Virtual Agent Designer controls may display and function differently in other channels.

The dynamic choice list displays 10 items per page. When 10 or more results are returned:

- The list includes a link at the end of the list to show more results.
- A search icon  displays in the prompt for filtering search results. Users select the icon to open a search box and enter the filter.
- When selecting multiple choices, you can search within the **Search for options** field for filtering search results. If you input the script to enable secondary fields found in this topic, the search filter results apply to the secondary fields, too. Select or enter all choices that apply, and then select the send icon .

When a header card is used, the choice list contains five items per page. When five or more results are returned, the list provides an option to show more results.

Note: The search feature is suppressed when a header card is used.

Dynamic Choice script examples

The following script example can be used in the **Define choices** field only if the value for **Populate choice by** is set to **Script**. This script enables requesters to see their previously selected choices if they choose to edit their choices later in the conversation. This script also displays secondary fields to requesters, such as an email address, gender marker, or both, to help them further differentiate their available choices. Displaying the secondary field to requesters can be especially helpful when dealing with similar values, such as selecting the

correct employee name when working with the same or similar names (that is, Christopher Smith or Chris Smith).

```
(function execute() {
    var pagingUtil = new
    global.VirtualAgentChoicePagingUtil(null, "sys_user", 10,
    "user_name,name",
    "active=true", null, vaVars);
    var selectedOptions =
    pagingUtil.getSavedSelectedOptions("user", vaSystem);
    if (!selectedOptions || selectedOptions.length == 0) {
        // Secondary labels can be passed to selected options
        selectedOptions.push({ "value": "abel.tuter", "label":
        "Abel Tuter"
        , "secondary_label": ["abel.tuter@example.com", "male"]
        });
        selectedOptions.push({ "value": "Beth.anglin", "label":
        "Beth Anglin"
        , "secondary_label": ["beth.anglin@example.com",
        "female"]
        });
    }
    vaSystem.setSelectedOptions(selectedOptions, "user", false);
    // Topic authors have the ability to define which values
    should go in the
    // secondary labels by adding secondary label functions
    pagingUtil.addSecondaryLabelFunction(function (gr) {
        return gr.getValue("email");
    });
    pagingUtil.addSecondaryLabelFunction(function (gr) {
        return gr.getValue("gender");
    });
    var gr = pagingUtil.getPagingGlideRecordSecure("name",
    false);
    var options = pagingUtil.getSecureOptions(gr,
    null, 'user_name', ['user_name']);
    return options;
})();
```

Example Dynamic Choice list value expression

```
(function execute(table) {
    var options = [];
    var gr = new GlideRecordSecure(table);
    gr.addEncodedQuery('active=true');
    gr.setLimit(5);
    gr.query();
    while(gr.next()) {
        options.push({ 'value': gr.getUniqueValue(),
        'label': gr.getValue('short_description') });
    }
    return options;
})(table)
```

The script in the *Choice Value Expression* property defines and returns an array of choices. In the example, the script creates an array called `options`, and adds each record found in a `GlideRecord` query to this array. Each element in the array is given a value in the `value` and

label keys using data from that GlideRecord. The *Table* property of the control defines the table used by the script. This example script uses `gr.setLimit(5)` to limit the number of records returned to 5. Using this method helps prevent returned records from creating an overly large choice list.

Dynamic choice control value expression keys

Key	Description
value	The value for the choice. When a user selects a choice from the control, this value is stored in the variable named in the <i>Variable name</i> property.
label	The label that appears for this choice in the choice list.

Channel support

Channel support for the Dynamic Choice user input control

Channel	NLU/ keyword support	Constraints
Web UI	Supported	None
Mobile UI	Supported	None
Now Assist panel	Supported	None
Microsoft Teams	Supported	None
Slack	Supported	Header cards aren't supported.
SMS Twilio	Supported	Header cards aren't supported.
LINE	Not supported	Not applicable
WhatsApp	Supported	None
Apple Messages for Business	Supported	None
Alexa (Voice)	Supported	For screen devices, use touch scroll; clicking links not supported. For nonscreen devices, use voice pagination.

(Legacy) Boolean user input control

Use the Boolean user input control in a Virtual Agent topic to present a Yes/No prompt to the user.

Boolean user input controls prompt the user to answer a Yes/No question, and store the response as a string with a value of *true* or *false*. Use this value in topic utilities, such as the prompted Decision utility, to branch the topic flow based on the answer.

When you place this control on the canvas, a window appears with the header **Add a decision node?** The window message reads **A decision node will be added following this node and has **No** and **Yes** options. If you select **No**, you must add a**

Decision utility to complete the Boolean. You can customize the names of the output values on the Decision node. For more information, see [Decision utility](#).

Boolean user input control properties for NLU topic discovery

Property	Description
Node name	Name that identifies this node in the topic flow.
Variable name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the Node name property.
Prompt	Prompt or question for the user. The prompt can be either a text string or a script that returns text. This value is used only when the default value is not specified. For example: What ' s your name?
NLU entity [NLU topic discovery only]	Option to associate an NLU entity with the node. If an NLU entity is associated with the input variable for this node, Virtual Agent can slot-fill the specified value based on the user's utterance. Select an entity from the list of entities associated with the topic intent. When you specify an entity for the node, the Do not ask users to confirm recognized entity toggle switch is displayed. When enabled, users are not prompted to confirm the extracted entity.
Advanced	
Default value	
Predefine a value for user input	Predefined value for the user response to the question or prompt. The response defined in the Default value confirmation field asks the user to confirm the default value. If the user responds with no, the value becomes null. The default value can be either a text string or a script that returns text. For example, if you're using dot-walking, the default value might be: <code>Script Variables > Last username</code> . Or if you're using a script, the default value might be: <code>{{vaScripts.lastUsername}}</code> .
Confirmation messages	
Input completion confirmation	Bot response shown to the user when the node interaction is complete. The message can be either a text string or a script that returns text. For example, if you're using dot-walking: <code>Thanks , (Input Variables > Username) !</code> Or if you're using a script, the acknowledgement might be: <code>Thanks , {{vaInputs.username}} !</code>
Default value confirmation	Message that asks the user to verify that the value in the Default value field is correct. This message is used instead of a value in the Prompt field. It can contain either a text string or a script that returns text. For example, if you're using dot-walking: <code>Are you (Input Variables > Username)?</code> Or if you're using a script, the confirmation message might be: <code>Are you {{vaScripts.lastUsername}}?</code>
Conversation switching	

Property	Description
This section is available only when NLU discovery is enabled on the instance.	
Turn on to let users change the subject	Option to enable NLU prediction for this node. If enabled, users can enter text to answer questions, regardless of the type of input control being used. Virtual Agent uses this utterance to match another existing intent, letting the user switch topics.
Hide or skip this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script.
Skip reprompting if	No-code condition statement or low-code script that specifies a condition for letting users skip reprompting in the conversation. When a preceding node is revisited through a topic loopback or Dialog Act, Virtual Agent bypasses this node and automatically retains its original value.

Example Boolean user input control for NLU topic discovery

Note: Virtual Agent Designer controls may display and function differently in other channels.

Input properties	Input prompt
Boolean user input control basic properties  Boolean input > Prompt the user to answer a yes/no question. Learn more * Node name Boolean Test Variable name: boolean_test * prompt ⓘ Choose a response:   NLU entity ⓘ Define an NLU entity from a model  Advanced (optional) Default value ▼ Conversation switching ▼ Topic switching ▼ Hide or skip this node ▼	Web UI Boolean user input prompt Would you like to add a comment? Yes No Slack Boolean user input prompt Would you like to add a comment? Yes No

Channel support

Channel support for the Boolean user input control

Channel	NLU/keyword support	Constraints
Web UI	Supported	None
Mobile UI	Supported	None
Now Assist panel	Supported	None
Microsoft Teams	Supported	None
Slack	Supported	None
SMS Twilio	Supported	None
LINE	Supported	None
WhatsApp	Supported	None
Apple Messages for Business	Supported	None
Alexa (Voice)	Supported	None

(Legacy) Date Time user input control

Use the Date Time user input control in a Virtual Agent topic to enable the user to select a calendar date, time (hours and minutes), or both.

The Date Time user input control accepts inputs from a calendar selection, or by entering plain language in the Virtual Agent chat window. If you type your answer, the Virtual Agent accepts different inputs depending on how your region handles dates. For example, if you're in the United States, the input control supports the MM-DD-YYYY format, while a user in Spain enters the date in DD-MM-YYYY format.

Date Time user input control properties for NLU topic discovery

Date Time property	Description
Name	Name that identifies this node in the topic flow.
Variable Name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the Node name property.
Prompt	Prompt or question for the user. The prompt can be either a text string or a script that returns text. This value is used only when the default value is not specified. For example: What 's your name?
NLU entity [NLU topic discovery only]	Option to associate an NLU entity with the node. If an NLU entity is associated with the input variable for this node, Virtual Agent can slot-fill the specified value based on the user's utterance. Select an entity from the list of entities associated with the topic intent. When you specify an entity for the node, the Do not ask users to confirm recognized entity toggle switch is displayed. When enabled, users are not prompted to confirm the extracted entity.
Input format	Type of Date Time control to be displayed. Select one of the following formats: • Date: Shows only the monthly calendar for the user to select the date. • DateTime: Shows both a monthly calendar and time picker. • Time: Shows only the time picker for the user to select the time (hours and minutes).
Advanced	
Default value	
Predefine a value for user input	Predefined value for the user response to the question or prompt. The response defined in the Default value confirmation field asks the user to confirm the default value. If the user responds with no, the value becomes null. The default value can be either a text string or a script that returns text. For example, if you're using dot-walking, the default value might be: <code>Script Variables > Last username</code>. Or if you're using a script, the default value might be: <code>{{vaScripts.lastUsername}}</code>.

Date Time property	Description
Confirmation messages	
Input completion confirmation	Bot response shown to the user when the node interaction is complete. The message can be either a text string or a script that returns text. For example, if you're using dot-walking: Thanks, (Input Variables > Username) ! Or if you're using a script, the acknowledgement might be: Thanks, {{vaInputs.username}} !
Default value confirmation	Message that asks the user to verify that the value in the Default value field is correct. This message is used instead of a value in the Prompt field. It can contain either a text string or a script that returns text. For example, if you're using dot-walking: Are you (Input Variables > Username)? Or if you're using a script, the confirmation message might be: Are you {{vaScripts.lastUsername}}?.
Conversation switching	
This section is available only when NLU discovery is enabled on the instance.	
Turn on to let users change the subject	Option to enable NLU prediction for this node. If enabled, users can enter text to answer questions, regardless of the type of input control being used. Virtual Agent uses this utterance to match another existing intent, letting the user switch topics.
Hide or skip this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script.
Skip reprompting if	No-code condition statement or low-code script that specifies a condition for letting users skip reprompting in the conversation. When a preceding node is revisited through a topic loopback or Dialog Act, Virtual Agent bypasses this node and automatically retains its original value.

Example Date Time user input control for NLU topic discovery

Note: Virtual Agent Designer controls may display and function differently in other channels.

Input properties	Date Time prompt																																																	
Date Time user input control basic properties  Date time input > Prompt the user to enter a date, time, or date/time combination. Learn more * Node name Departure date Variable name: departure_date * Prompt ⓘ When do you want to leave?   Input format ⓘ DateTime NLU entity ⓘ DepartureDate Do not ask users to confirm recognized entity ⓘ ☐ Advanced (optional) Default Value Confirmation messages Conversation switching Hide or skip this node	Web UI Date Time prompt  Now Support +    When would you like to schedule your departure date? June 2026 ▾ < ○ > <table border="1"> <thead> <tr> <th>S</th> <th>M</th> <th>T</th> <th>W</th> <th>T</th> <th>F</th> <th>S</th> </tr> </thead> <tbody> <tr> <td>31</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> <td>5</td> <td>6</td> </tr> <tr> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> <td>12</td> <td>13</td> </tr> <tr> <td>14</td> <td>15</td> <td>16</td> <td>17</td> <td>18</td> <td>19</td> <td>20</td> </tr> <tr> <td>21</td> <td>22</td> <td>23</td> <td>24</td> <td>25</td> <td>26</td> <td>27</td> </tr> <tr> <td>28</td> <td>29</td> <td>30</td> <td>1</td> <td>2</td> <td>3</td> <td>4</td> </tr> <tr> <td>5</td> <td>6</td> <td>7</td> <td>8</td> <td>9</td> <td>10</td> <td>11</td> </tr> </tbody> </table> Select 2026-06-03  ➔	S	M	T	W	T	F	S	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11
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Channel support

Channel support for the Date Time user input control

Channel	NLU/keyword support	Constraints
Web UI	Supported	None
Mobile UI	Supported	None
Now Assist panel	Supported	None
Microsoft Teams	Supported	None
Slack	Supported	None
SMS Twilio	Not supported	Not applicable
LINE	Supported	None
WhatsApp	Supported	None

Channel support for the Date Time user input control (continued)

Channel	NLU/keyword support	Constraints
Apple Messages for Business	Supported	None
Alexa (Voice)	Supported	For best results, enable NLU at the node.

(Legacy) File Picker user input control

Use the File Picker user input control in a Virtual Agent topic to prompt a user to upload an image or any file type. After the user uploads an image file, the image appears immediately in the Virtual Agent client.

File Picker user input control properties

All file types are supported by the file picker, except the SVG format for image files. Although the image can be high resolution, the image displayed in the Virtual Agent client is scaled based on the aspect ratio. Images scale to fit within the chat window.

In Microsoft Teams, a file can be uploaded through the paper clip (attachment) icon, or using drag-and-drop. Copying and pasting only works for image files. Users can share attachments on Microsoft Teams through the Virtual Agent file picker user input control, and by sending attachments while chatting with a live agent.

The live agent picker scenario:

- Doesn't support the SVG format for image files.
- Supports a combination of text, files, and emojis. However, orders may show up differently between how a user sends these items versus how an agent views these items.
- Doesn't support formatted text.

When a file upload is in progress, you can't upload or enter text for the file picker control. The uploaded files go through a virus scan and validation.

You can link an uploaded file to a case you create using the Record Action utility. For more information, see [Record Action utility](#).

The following table lists the details about the properties of the File Picker.

File Picker properties

Property	Description
Node name	Name that identifies the File Picker user input control node in the topic flow.
Variable name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the <i>Node name</i> property.
Prompt	Prompt or question asking the user to upload the item. The prompt can be a text string that includes variables or a script that returns text.
Allow user to upload	Type of file to upload. All file types are supported, except the SVG format for image files.
Advanced	

File Picker properties (continued)

Property	Description
Confirmation messages	
Input completion confirmation	Bot response shown to the user when the node interaction is complete. The message can be either a text string or a script that returns text. For example, if you're using dot-walking: Thanks, (Input Variables > Username)! Or if you're using a script, the acknowledgement might be: Thanks, {{vaInputs.username}}!
Default value confirmation	Message that asks the user to verify that the value in the Default value field is correct. This message is used instead of a value in the Prompt field. It can contain either a text string or a script that returns text. For example, if you're using dot-walking: Are you (Input Variables > Username)? Or if you're using a script, the confirmation message might be: Are you {{vaScripts.lastUsername}}?.
Hide or skip this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script.
Skip reprompting if	No-code condition statement or low-code script that specifies a condition for letting users skip reprompting in the conversation. When a preceding node is revisited through a topic loopback or Dialog Act, Virtual Agent bypasses this node and automatically retains its original value.

Using the File Picker control in different client interfaces

The process to select an image differs based on the Virtual Agent client interface. Use the following steps to select an image in the client interface of your choice.

The following table lists details about the File Picker control in different client interfaces.

File Picker control in different client interfaces

Platform	Steps to select an image or file
Web UI	1. Select Click here to upload an image. or Click here to upload a file. 2. Select a file from your local computer. All file types are supported.
Slack	1. Select the Green + icon. 2. Select Your computer. 3. Select an image file from your local computer. All file types are supported.
Microsoft Teams	1. On your local computer, copy an image file. 2. Paste the image file into the text input field in Microsoft Teams.
ServiceNow mobile	1. Touch Upload an image. 2. Select an image file from the photo library on your mobile device. i Note: The Upload a file button is only available when you enable the All file types file picker property.

Example of a File Picker user input control

i Note: Virtual Agent Designer controls may display and function differently in other channels.

File Picker properties

File Picker user input control
basic properties

File picker input

Prompt a user to upload an image or any file type. [Learn more](#)

* Node name

Upload file

Variable name: upload_file

* Prompt ⓘ

Select a file to upload|

* Allow user to upload

☒ Image

☐ All file types

Advanced (optional)

Confirmation messages

Hide or skip this node

File Picker prompt

Web UI file picker prompt
(image)

Please upload your image.

Click here to upload an image.

ServiceNow mobile file picker
prompt

Please upload a file for the detailed
description of the case

Upload an Image

Take Photo

Upload a File

Channel support

The following table lists the details about the channel support for the File Picker user input control.

Channel support for the File Picker user input control

Channel	Support	Constraints
Web UI	Supported	None
Mobile UI	Supported	Prompt that users see asking for permission for the app to access a camera or file system if the user has not already given the permission. "Mobile" Would Like to Access the Camera ServiceNow requires your permission in order to take photos and videos for you to upload and scan barcodes Don't Allow OK
Now Assist panel	Supported	None

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Channel support for the File Picker user input control (continued)

Channel	Support	Constraints
Microsoft Teams	Supported	None
Slack	Supported	None
SMS Twilio	Partial support	Image files only
LINE	Supported	Supported file types are JPG, PNG, BMP, and MP4. The files have a maximum size limit based on the file type: • For images, the maximum size limit is 10 MB. • For videos, the maximum size limit is 200 MB.
WhatsApp	Supported	None
Apple Messages for Business	Supported	None
Alexa (Voice)	Not supported	Not applicable

(Legacy) Carousel user input control

Use the Carousel user input control in a Virtual Agent topic to present a prompt and a horizontal series of labeled images. The user can select a single item from the carousel.

 **Tip:** If you want to change the default number of listed items per page, you can modify the `com.glide.cs.picker_page_limit` system property. The default value is 10.

Carousel input control properties for NLU topic discovery

Property	Description
Node name	Name that identifies this node in the topic flow.
Variable name	Name of the variable that stores the user response to this prompt. The variable name is automatically created from the Node name property.
Prompt	Prompt or question for the user. The prompt can be either a text string or a script that returns text. This value is used only when the default value is not specified. For example: What 's your name?
NLU entity	Option to associate an NLU entity with the node. If an NLU entity is associated with the input variable for this node, Virtual Agent can slot-fill the specified value based on the user's utterance. Select an entity from the list of entities associated with the topic intent.

Property	Description
	When you specify an entity for the node, the Do not ask users to confirm recognized entity toggle switch is displayed. When enabled, users are not prompted to confirm the extracted entity. This field is available only when NLU discovery is enabled on the instance.
Define carousel items	Use a script to create items for selection in your carousel. The script should return an array containing one or more items. See the Example carousel item expression section in this topic.
No records response message	Message displayed to the user when the table search doesn't return any records. The message can be either a text string or a script that returns text.
Advanced	
Default value	
Default value	Predefined value for the user response to the question or prompt. The response defined in the Default value confirmation field asks the user to confirm the default value. If the user responds with no, the value becomes null. The default value can be either a text string or a script that returns text. For example, if you're using dot-walking, the default value might be: <code>Script Variables > Last username</code>. Or if you're using a script, the default value might be: <code>{{vaScripts.lastUsername}}</code>.
Confirmation messages	
Input completion confirmation	Bot response shown to the user when the node interaction is complete. The message can be either a text string or a script that returns text. For example, if you're using dot-walking: <code>Thanks, (Input Variables > Username) !</code> Or if you're using a script, the acknowledgement might be: <code>Thanks, {{vaInputs.username}} !</code>
Default value confirmation	Message that asks the user to verify that the value in the Default value field is correct. This message is used instead of a value in the Prompt field. It can contain either a text string or a script that returns text. For example, if you're using dot-walking: <code>Are you (Input Variables > Username)?</code> Or if you're using a script, the confirmation message might be: <code>Are you {{vaScripts.lastUsername}}?</code>
Conversation switching	
This section is available only when NLU discovery is enabled on the instance.	
Turn on to let users change the subject	Option to enable NLU prediction for this node. If enabled, users can enter text to answer questions, regardless of the type of input control being used. Virtual Agent uses this utterance to match another existing intent, letting the user switch topics.
Hide or skip this node	
Conditionally show this node if	No-code condition statement or low-code script that specifies a condition for presenting this node in the conversation. The condition must evaluate to true.

Property	Description
Allow user to skip this node if	No-code condition statement or low-code script that specifies a condition for letting users skip this node in the conversation. The condition must evaluate to true. You can set this field using either the condition builder or a script.
Skip reprompting if	No-code condition statement or low-code script that specifies a condition for letting users skip reprompting in the conversation. When a preceding node is revisited through a topic loopback or Dialog Act, Virtual Agent bypasses this node and automatically retains its original value.

Example Carousel input control for NLU topic discovery

Note: Virtual Agent Designer controls may display and function differently in other channels.

Carousel properties

Carousel input

Present a prompt and a horizontal series of labeled images. The user can select a single item. [Learn more](#)

* Node name

T-shirt carousel

Variable name: t_shirt_carousel

* Prompt ①

These T-shirts are available:

NLU entity ①

Define an NLU entity from a model

When defining your enumeration list in javascript ensure that you assign keys of Name, Value and Body. Other logic in the topic can then retrieve the values from the keys.

* Define carousel items ①

```
(function execute(){ var options = []; options.push(
```

* No records response message

No T-shirts found.

Advanced (optional)

Default Value

Confirmation messages

Conversation switching

Hide or skip this node

Carousel prompt

Web UI carousel prompt

Now Support

Please select an image from the carousel.

Assistant Designer Asset Library
Assistant Designer Asset Library

Select

Please type your response here

ServiceNow mobile carousel prompt

Please select one of the catalog items

iMac 21"

Customize your 21.5-inch iMac with Retina 4K display

Select

Example carousel item expression

```
(function execute() {
    var options = [];
    options.push(
        {
            'Name': 'Item 1',
            'Value': 'item_1',
            'Description': 'Acme keyboard model 200',
            'Body':
                'https://images.pexels.com/photos/688666/pexels-photo-688666.jpeg'
            'Card_name': 'AcmeCard'
            'Card_data': {"identifier": "IT hardware and
software", "header": "Acme keyboard model 200", "description": "The
model 200 keyboard is a ten-key-less keyboard."}
        }
    );
    options.push(
        {
            'Name': 'Item 2',
            'Value': 'item_2',
            'Description': 'Acme keyboard model 300',
            'Body':
                'https://images.pexels.com/photos/916472/pexels-photo-916472.jpeg'
            'Card_name': 'AcmeCard'
            'Card_data': {"identifier": "IT hardware and
software", "header": "Acme keyboard model 300", "description": "The
model 300 keyboard is a full-size keyboard with a ten-key
pad."}
        }
    );
    return options;
})();
```

The script in the *Carousel Item Expression* property defines and returns an array containing the items that appear in your carousel. The elements of this array must contain name, value, and body keys. In the example, the script creates an array called `options` and adds two elements, each with the required keys. The images here are hard-coded as an example.

Example code key

Key	Description
Name	Name of the carousel item. This name is shown below the image on the carousel.
Value	Value for the item. When a user selects a carousel item, this value is stored in the variable named in the <i>Variable name</i> property.
Description	Text string that describes the carousel item. The description is shown below the image name. A carousel with more than three items displays left and right arrows for scrolling through the images and a Select button under each item. If a description is over 140 characters, users can expand the content.
Body	Image used in the carousel item. The value is a URL for an image file.

Example code key (continued)

Key	Description
Card_name	Text string header identifying the card shown in the carousel.
Card_data	Array containing text strings to be presented on the card. Values include identifier, header, and description.

Channel support**Channel support for the Carousel user input control**

Channel	NLU/ keyword support	Constraints
Web UI	Supported	None
Mobile UI	Supported	None
Now Assist panel	Supported	None
Microsoft Teams	Supported	None. If the carousel contains more than 10 items, users must select Next to review the remaining items.
Slack	Supported	None
SMS Twilio	Not supported	Not applicable
LINE	Supported	The title for an image has a maximum limit of 40 characters. The text for the image has a maximum character limit of 60 characters. A user can view only 10 images at a time. If there are more than 10 images, the pagination format is used to view more options. The default value of the maximum number of images in the carousel for a page is set in the <i>sn_va_line.max.carousel.cards</i> system property. The property is located in the System Properties [sys_properties] table.
WhatsApp	Supported	None
Apple Messages for Business	Supported	None
Alexa (Voice)	Supported	For screen devices, use touch scroll. For nonscreen devices, use voice pagination.

(Legacy) Virtual Agent Designer bot response channel support for NLU

Virtual Agent Designer offers various controls for displaying bot responses in a conversation. Because the bot responses occur in third-party platforms, the format for each output may vary.

The following tables describe channel support for each NLU bot response control.

NLU Channel support for the Text bot response control

Channel	Support	Constraints
Web UI	Supported	None
Mobile UI	Supported	None
Now Assist panel	Supported	None
Microsoft Teams	Supported	None
Slack	Supported	None
Workplace	Supported	None
Facebook Messenger	Supported	Plain text string only
SMS Twilio	Supported	None
LINE	Supported	None
WhatsApp	Supported	None
Apple Messages for Business	Supported	None
Alexa (Voice)	Supported	For screen devices, full support. For nonscreen devices, the header is read.

NLU channel support for the Image bot response control

Channel	Support	Constraints
Web UI	Supported	The maximum image size is determined by the <i>com.glide.attachment.max_size</i> system property. The default value is 1024 MB.
Mobile UI	Supported	The maximum image size is determined by the <i>com.glide.attachment.max_size</i> system property. The default value is 1024 MB.
Now Assist panel	Not supported	Not applicable
Microsoft Teams	Supported	None
Slack	Supported	For details about the maximum image size allowed, check the Slack documentation.
Workplace	Supported	For details about the maximum image size allowed, check the Workplace documentation.
Facebook Messenger	Supported	For details about the maximum image size allowed, check the Facebook Messenger documentation.
SMS Twilio	Supported	File size limits may vary. For Twilio limitations, check their Accepted Content Types for Media .
LINE	Supported	File size limits may vary. For details, see the LINE documentation.
WhatsApp	Supported	File size limits may vary. For details, see the WhatsApp documentation.

NLU channel support for the Image bot response control (continued)

Channel	Support	Constraints
Apple Messages for Business	Supported	None
Alexa (Voice)	Partial support	Supported on devices with screens. For nonscreen devices, the user receives a message: We found an image. For details, see (Legacy) Fine-tune Virtual Agent settings and topics for the best Alexa voice chat experience .

NLU channel support for the Link bot response control

Channel	Support	Constraints
Web UI	Supported	None
Mobile UI	Supported	None
Now Assist panel	Supported	None
Microsoft Teams	Supported	None
Slack	Supported	None
Workplace	Supported	None
Facebook Messenger	Supported	The web link appears as a URL button in the conversation.
SMS Twilio	Supported	None
LINE	Supported	None
WhatsApp	Supported	None
Apple Messages for Business	Supported	Any URLs must be added to the allowed domain list [sys_cs_hostname_allow_list] table.
Alexa (Voice)	Partial support	Supported on devices with screens. For nonscreen devices, the user receives a message: We found a link. For details, see (Legacy) Fine-tune Virtual Agent settings and topics for the best Alexa voice chat experience .

NLU channel support for the HTML bot response control

Channel	Support	Constraints
Web UI	Supported	None
Mobile UI	Supported	None
Now Assist panel	Supported	None

NLU channel support for the HTML bot response control (continued)

Channel	Support	Constraints
Microsoft Teams	Supported	Since HTML is rendered as an image in Microsoft Teams, other controls are recommended. For example, use images or cards instead of HTML for Microsoft Teams.
Slack	Supported	None
Workplace	Supported	None
Facebook Messenger	Not supported	Not applicable
SMS Twilio	Not supported	Not applicable
LINE	Not supported	Not applicable
WhatsApp	Not supported	Not applicable
Apple Messages for Business	Not supported	Not applicable
Alexa (Voice)	Partial support	Supported on devices with screens. For nonscreen devices, the user receives a message: We found a link. For details, see (Legacy) Fine-tune Virtual Agent settings and topics for the best Alexa voice chat experience .

NLU channel support for the Multi-response bot response control

Channel	Support	Constraints
Web UI	Supported	None
Mobile UI	Supported	None
Now Assist panel	Not supported	Not applicable
Microsoft Teams	Supported	None
Slack	Supported	None
Workplace	Supported	None
Facebook Messenger	Not supported	Not applicable
SMS Twilio	Not supported	Not applicable
LINE	Not supported	Not applicable
WhatsApp	Not supported	Not applicable

NLU channel support for the Multi-response bot response control (continued)

Channel	Support	Constraints
Apple Messages for Business	Not supported	Not applicable
Alexa (Voice)	Partial support	Supported on devices with screens. For non-screen devices, the user receives a message if unsupported elements are used: We found a link. For details, see (Legacy) Fine-tune Virtual Agent settings and topics for the best Alexa voice chat experience .

NLU channel support for the Script bot response control

Channel	Support	Constraints
Web UI	Supported	None
Mobile UI	Supported	None
Now Assist panel	Not supported	Not applicable
Microsoft Teams	Supported	None
Slack	Supported	None
Workplace	Supported	None
Facebook Messenger	Not supported	Not applicable
SMS Twilio	Not supported	Not applicable
LINE	Not supported	Not applicable
WhatsApp	Not supported	Not applicable
Apple Messages for Business	Not supported	Not applicable
Alexa (Voice)	Partial support	Support depends on the type of response. For example, images and links may only be available on devices with screens. For details, see (Legacy) Fine-tune Virtual Agent settings and topics for the best Alexa voice chat experience .

NLU channel support for the Card bot response control

Channel	Support	Constraints
Web UI	Supported	None
Mobile UI	Supported	None

NLU channel support for the Card bot response control (continued)

Channel	Support	Constraints
Now Assist panel	Partial support	Record cards and record cards with action only.
Microsoft Teams	Supported	The video control displays a thumbnail image of the video that users select to open the video in their preferred web browser.
Slack	Supported	Conversational Integration with Slack Version 2.0.0 and later. The video control displays a thumbnail image of the video that users select to open the video in their preferred web browser.
Workplace	Partial support	Image card output not available. Facebook apps no longer support vertical list templates. The card layout uses a horizontal, scrollable carousel template effective August 15, 2019. Cards also feature a button template.
Facebook Messenger	Supported	None
SMS Twilio	Supported	Records and image cards only.
LINE	Partial support	Records and image cards only.
WhatsApp	Partial support	Records and image cards only.
Apple Messages for Business	Supported	None
Alexa (Voice)	Partial support	Some types of output are only available on devices with screens. For nonscreen devices, the card title is read. For details, see (Legacy) Fine-tune Virtual Agent settings and topics for the best Alexa voice chat experience .

NLU channel support for the Table bot response control

Channel	Support	Constraints
Web UI	Supported	None
Mobile UI	Supported	None
Now Assist panel	Not supported	Not applicable
Microsoft Teams	Supported	None
Slack	Supported	None
Workplace	Supported	None
Facebook Messenger	Not supported	Not applicable

NLU channel support for the Table bot response control (continued)

Channel	Support	Constraints
SMS Twilio	Not supported	Not applicable
LINE	Supported	None
WhatsApp	Not supported	Not applicable
Apple Messages for Business	Supported	None
Alexa (Voice)	Partial support	Supported on devices with screens. For nonscreen devices, the table will be read, if possible. For details, see (Legacy) Fine-tune Virtual Agent settings and topics for the best Alexa voice chat experience .

NLU channel support for the Video bot response control

Channel	Support	Constraints
Web UI	Supported	None
Mobile UI	Supported	None
Now Assist panel	Not supported	Not applicable
Microsoft Teams	Supported	The video control displays a thumbnail image of the video that users select to open the video in their preferred web browser.
Slack	Supported	Conversational Integration with Slack version 2.0.0 and later. The video control displays a thumbnail image of the video that users select to open the video in their preferred web browser.
Workplace	Supported	None
Facebook Messenger	Not supported	Not applicable
SMS Twilio	Not supported	Not applicable
LINE	Not supported	Not applicable
WhatsApp	Not supported	Not applicable
Apple Messages for Business	Not supported	Not applicable
Alexa (Voice)	Not supported	Not applicable

(Legacy) Virtual Agent NLU technical reference

Use these topics to learn more about scripting methods, NLU system entities, and the Virtual Agent Interactions table.

Virtual Agent utilizes a queuing system to process incoming messages coming from asynchronous channels. Dedicated worker threads pull from this queue and process the messages in their own transactions. This enables Virtual Agent to scale to meet traffic volume. Virtual Agent transactions run as non-interactive (the scriptable method `gs.isInteractive()` will return false).

Various roles and tables are available when you activate Virtual Agent. For more information, see [\(Legacy\) Plugins installed with Virtual Agent for NLU](#). Virtual Agent also has a data retention policy to manage table size. For more information, see [Data management in Conversational Interfaces](#).

The following technical reference topics are available.

(Legacy) Domain separation and Virtual Agent for NLU

Domain separation is supported in the Virtual Agent application. Domain separation enables you to separate data, processes, and administrative tasks into logical groupings called domains. You can control several aspects of this separation, including which users can see and access data.

Support level: Standard

- Includes all aspects of **Basic** level support.
- Application properties are domain-aware as needed.
- Business logic: The service provider (SP) creates or modifies processes per customer. The use cases reflect proper use of the application by multiple SP customers in a single instance.
- The instance owner must configure the minimum viable product (MVP) business logic and data parameters per tenant as expected for the specific application.

Sample use case: An admin must be able to make comments required when a record closes for one tenant, but not for another.

For more information on support levels, see [Application support for domain separation](#) .

Domain separation allows you to partition your organization's data and administrative control into separate domains. This lets you isolate the data and control access to it, which is particularly important in environments where multiple tenants share a common platform.

Domain separation in Virtual Agent works by creating separate Virtual Agent views that are isolated from each other. The chat configuration, branding, NLU settings, and topics and components can be assigned to a given domain within Virtual Agent. Users within a domain can only access the Virtual Agent conversations that are associated with their domain. This means that users in one domain cannot access data or functionality that belongs to another domain, including Virtual Agent conversations. Additionally, administrators who are assigned to a domain cannot see or manage Virtual Agent conversations in other domains, ensuring complete separation and security.

Domain separation is best for customers with any of the following requirements:

- You need to enforce absolute data segregation between business entities (data separation).
- Customize business process definitions and user interfaces for each domain (delegated administration).
- Maintain some global processes and global reporting in a single instance.

- Separate data between customers or sub-organizations.
- The session scope is set upon session establishment to the domain listed in the user's user record. Users can manually change their session domain scope with the domain picker.
- The record scope uses the domain of the record and is active when viewing the form of any record.

By default, the record scope takes precedence over the session scope so that users in higher-level domains adhere to each record's data and process constraints. However, these users can choose to expand or collapse the domain scope to show or hide data from other domains. For example, a user in the service provider (SP) global domain also has visibility into child domains such as the ACME domain. When looking at an incident record from the ACME domain, the user can choose to expand the domain scope to show values from the MSP domain or collapse the domain scope to show only record values that match the record's ACME domain.

Note: Users always have access to data from domains that have been explicitly granted to them by domain visibility.

When domain separation is used, guest users are restricted to the domain used in the session. For custom chat channels, the domain of the [provider application](#) is used. For the chat widget, you can associate a domain ID with the chat portal. For details, see [Associate a domain ID with a chat portal](#).

For more information, see [Domain scope](#).

Requirements

All domain support features require the Domain Support - Domain Extensions Installer [com.glide.domain.msp_extensions.installer] plugin. For details, see [Request domain separation](#).

Configuring Virtual Agent with domain separation

Branding

Service providers can create a [chat branding configuration](#) per domain.

Chat experiences

Chat experiences, including the default experience and any custom experiences, allow for domain separation. Each chat experience profile belongs to a domain. Each child customization, such as a setup topic change, belongs to a domain. Each child customization implements system overrides so that sub-domains can override parent-domain customizations.

NLU settings

Only one NLU service provider can be set per domain-separated instance for all Virtual Agent clients. The managed service provider (MSP) logs in as a global user for the domain to configure NLU. For details, see [\(Legacy\) Configure Natural Language Understanding in Virtual Agent](#).

Creating topics in subdomains in Virtual Agent Designer

Roles required: admin or virtual_agent_admin

The service provider either logs in to one of the subdomains and creates and publishes topics or allows subdomain admin users to [create](#) and [publish](#) their own topics.

Topic names within a domain must be unique, but Virtual Agent does allow you to create topics with the same name in other domains. For example, each domain might have a topic called **Greeting**.

Only service provider admins can do the following:

- Activate Virtual Agent conversation plugins or store apps for other ServiceNow business applications, such as ITSM, CSM, or HRSD, to enable pre-built topics for the subdomain.
- Assign roles on a particular subdomain to control which topics can be run by users.

Admin users assigned to the subdomain can do the following:

- Create topics in the instance.
- Be logged into the global domain and impersonate a user in the subdomain.
- Publish all available topics in the subdomain to chat widgets and messaging applications.

Domain separation in the chat widget channel

The chat widget does not support domain separation. However, you can provide a domain-separated chat experience in the chat widget channel by using separate, domain-separated portals. For example, you can create two separate support portals that are restricted to separate domains. Use the *domain_id* in the portal script to designate the domain. This gets passed as the *sysparm_domain_id* parameter in the portal URL.

To configure the portal, see [Associate a domain ID with a chat portal](#).

For information about URL parameters, see [Virtual Agent URL parameters](#).

Domain separation and Virtual Agent messaging app integrations

Roles required: admin or virtual_agent_admin

The domain-separated instance has one setup record for Slack, Microsoft Teams, Workplace, or Facebook Messenger.

Customers on the subdomain license either Slack, Microsoft Teams, or Workplace independently of the ServiceNow instance.

The admin of the subdomain installs the integrations within the subdomain and configures the appropriate credentials to access Virtual Agent from the third-party client. For details, see [Integrating Virtual Agent with messaging apps](#).

Related topics

[Domain separation for service providers](#) 

(Legacy) Virtual Agent roles for NLU

Virtual Agent adds several roles for users operating as Virtual Agent administrators.

To learn more about managing subscriptions, see [Managing per-user subscriptions in Subscription Management](#)  and contact your account representative.

Role description

Roles that are installed with Virtual Agent are listed below with the following information:

Role title [name]

Name of the role. Text within brackets matches the **Name** field in the Roles [sys_user_role] table.

Description

Description of the role and its intended use.

Contains Roles

List of roles contained within the role.

Groups

List of groups this role is assigned to by default.

Considerations

Warnings or other considerations for administrators.

Installed roles

Note:

Simplify user administration by creating groups that contain all the roles necessary for specific personas rather than to individual users. You can then assign individual users to those groups. When users transition to new roles, you can then re-assign their group memberships, and avoid scenarios where users retain unexpected roles.

For details on the administration of users, groups, and roles, see [User Administration](#) .

Automated testing framework designer [atf_test_designer]

Creates and runs automated tests to confirm proper instance function after making changes to the instance.

Contains Roles

List of roles contained within the role: impersonator.

None.

Groups

List of groups this role is assigned to by default.

None.

Special considerations

None.

Chat analytics administrator [chat_analytics_admin]

Sets up the Conversational Analytics dashboard, reconfigures its contents, and creates funnels to review performance of conversation flows.

Contains Roles

List of roles contained within the role: chat_analytics_viewer.

Groups

List of groups this role is assigned to by default.

None.

Special considerations

Note: Avoid granting an admin role when more specialized roles are available.

Chat survey administrator [chat_survey_admin]

Controls and configures post-chat surveys for gathering feedback on user experience, or for chat queues defined in Advanced Work Assignment.

Contains Roles

List of roles contained within the role: survey_admin.

Groups

List of groups this role is assigned to by default.

None.

Special considerations

Note: Avoid granting an admin role when more specialized roles are available.

Conversational Interfaces guided setup administrator [sn_ci_gs_content.ci_guided_setup_admin]

Creates a guided setup to assist users with planning the roll-out of Conversational Interfaces materials, and performs the basic configurations to go live.

Contains Roles

List of roles contained within the role.

None.

Groups

List of groups this role is assigned to by default.

None.

Special considerations

Note: Avoid granting an admin role when more specialized roles are available.

Issue auto resolution administrator [iar_admin]

Configures the delivery of automated task resolution messages in Virtual Agent, email, or SMS.

Contains Roles

List of roles contained within the role.

- *evam_admin*
- *search_application_admin*

Groups

List of groups this role is assigned to by default.

None.

Special considerations

Note: Avoid granting an admin role when more specialized roles are available.

Localization requestor [localization_requestor]

Creates translation requests, and views completed translations in the Localization Framework.

Contains Roles

List of roles contained within the role.

None.

Groups

List of groups this role is assigned to by default.

None.

Special considerations

None.

NLU administrator [nlu_admin]

Creates NLU models and associated intents in the NLU Workbench.

Contains Roles

List of roles contained within the role.

- *sn_nlu_workbench.nlu_feedback_admin*
- *nlu_editor*
- *nlu_user*

Groups

List of groups this role is assigned to by default.

None.

Special considerations

Note: Avoid granting an admin role when more specialized roles are available.

(Legacy) Live agent chat context variables for NLU

Use chat context variables to pass certain information from the topic to share with a live agent or to control how bot conversations are routed to live agents. Virtual Agent includes some default variables, and you can define new ones.

Note: The Interaction table is part of the interaction management framework, which is activated through the Interactions Management plugin (com.glide.interaction). This plugin is included with the Agent Chat (com.glide.interaction.awa) and Connect Support (com.glide.connect.support) plugins.

Live Agent variables included with Virtual Agent

Variable	Description
<i>application</i>	Application scope of the chat. For example, <i>Global</i> , <i>HR</i> , <i>CSM</i> , or <i>ITSM</i> .
<i>auto_resolution_context_id</i>	If Auto Resolution is enabled, the ID of the record created when a requester is redirected to Virtual Agent.
<i>case</i>	Case ID (from the [sn_customerservice_case] table) that is used with the Customer Service Management application when a case is related to the chat.
<i>csp_category</i>	Category defined in the Consumer Service portal in the CSM application (requires the com.glide.service-portal.consumer-portal plugin). For more information, see Using the Consumer Service Portal .
<i>csp_email</i>	Requester's email address, as entered in a pre-chat survey on the Consumer Service Portal.
<i>csp_first_name</i>	Requester's first name, as entered in a pre-chat survey on the Consumer Service Portal.
<i>csp_last_name</i>	Requester's last name, as entered in a pre-chat survey on the Consumer Service Portal.
<i>devicetype</i>	Type of device being used for the chat. For example, <i>mweb</i> (chat widget), <i>android</i> , or <i>ios</i> .
<i>esc_pre_chat_ask_a_question</i>	Requester response to a pre-chat survey selection from within the HR Service Delivery application ESC view of the HR Case record.
<i>hr_topic_id</i>	ID of the current topic. Used in Advanced Work Assignment to determine which HR queue to transfer the user for live agent chat.
<i>interaction_account</i>	Used with CSM chats that are initiated by B2B users who are tracked as contacts for a particular account. Corresponds with the <i>Account</i> field on the Interaction [interaction] table, which references the Accounts [customer_account] table.

Live Agent variables included with Virtual Agent (continued)

Variable	Description
<i>interaction_consumer</i>	Used with CSM chats that are initiated by B2C users who are tracked as consumers. Matches the <i>interaction.consumer</i> field referencing the <i>csm_consumer</i> table. Corresponds with the <i>Consumer</i> field on the Interaction [interaction] table, which references the Consumers [csm_consumer] table.
<i>interaction_contact</i>	Used with CSM chats that are initiated by B2B users who are tracked as contacts for a particular account. Corresponds with the <i>Contact</i> field on the Interaction [interaction] table, which references the Contacts [customer_contact] table.
<i>interaction_id</i>	Sys_id of the interaction record associated with the chat session. For more information, see Virtual Agent interaction records .
<i>language</i>	Two-letter language code for the requester's chat. Note: Language values use ISO standard two-character language codes. For more information, see ISO 639.1 language codes .
<i>mandatory_skills</i>	Required skills and skill level for an agent. For example, German language proficiency with an associated high skill level may be required for German-speaking requesters. You can define mandatory skills and activate skill levels in Advanced Work Assignment. For more information, see Configure agent assignment rules .
<i>optional_skills</i>	Skills and skill levels that would be useful for a given chat scenario. You can define optional skills in Advanced Work Assignment. For more information, see Configure agent assignment rules .
<i>page</i>	The specific page (within a portal) that the chat was accessed from.
<i>portal</i>	Name of the portal that the chat was accessed from.
<i>post_assessment_instance</i>	Reference to the post-chat survey (Assessment Instances [asmt_assessment_instance] table), if there is one.
<i>post_chat_survey_name</i>	Name of a post-chat survey that is used to gather feedback from the requester.

Live Agent variables included with Virtual Agent (continued)

Variable	Description
	For information about creating surveys, see (Legacy) Create chat surveys. For information about creating surveys in Connect Chat, see Configure a survey in Connect Chat support.
<i>pre_assessment_instance</i>	Reference to the pre-chat survey (Assessment Instances [asmt_assessment_instance] table), if there is one.
<i>pre_chat_survey_name</i>	Name of a pre-chat survey that is used to gather information from the requester. For information about creating surveys, see (Legacy) Create chat surveys. To learn more about how chat context variables from pre-chat surveys are used in Advanced Work Assignment to route work to live agents, see Work item queues. For information about creating surveys in Connect Chat, see Configure a survey in Connect Chat support.
<i>queue</i>	Sys_id of the pre-built Connect Support chat queue (deprecated).
<i>search_text</i>	Search terms entered by the requester. Used to search Virtual Agent topics.
<i>short_description</i>	Used to set the short description in the interaction record associated with the chat.
<i>sys_id</i>	Sys_id of a record that relates to the interaction. Typically, this is the record being viewed in the portal when the chat is requested.
<i>table</i>	Table containing the record that relates to the interaction. Typically, this is the record being viewed in the portal when the chat is requested.

Additional resources

- [How to transfer a chat to a specific queue using context variables](#)
- [Virtual Agent and Natural Language Understanding \(NLU\) community forum](#)
- [Conversational Interfaces Academy](#)

(Legacy) NLU system entities

Use globally defined NLU entities to identify system information that Virtual Agent can extract from the conversation. You can define entities as "nodeless" input variables for a topic. These

variables can be slot-filled from NLU service provider predictions or provided outside of the scope of the topic.

System entities are enabled in NLU models by default. You can view them on the model **Entities** tab in NLU Workbench.

GLOBAL.DATE system entity

The DAY SubType returns a date string that is accurate to a specific date.

GLOBAL.DATE SubType = DAY usage

Usage	Example
Format	YYYY-MM-DD
Regular expression	\\d\\d\\d\\d-\\d\\d-\\d\\d
Input example	Mr. Smith left Friday, February 4, 2019.
Normalized value	2019-02-04
Code example	<pre>{ "name": "DATE", "value": "...", "score": 1.0, "normalization": "2019-02-04" }</pre>

The WEEK SubType returns a date string of a specific week of a year.

GLOBAL.DATE SubType = WEEK usage

Usage	Example
Format	YYYY'W'WW
Regular expression	\\d\\d\\d\\d\\dW\\d\\d
Input example	Mr. Smith left the third week of 1999.
Normalized value	1999W3
Code example	<pre>{ "name": "entity:GLOBAL.DATE", "value": "...", "score": 1.0, "normalization": { "type": "GLOBAL.DATE", "subType": "WEEK", "value": "1999W3" } }</pre>

The MONTH SubType returns a date string of a specific month of a year.

GLOBAL.DATE SubType = MONTH usage

Usage	Example
Format	YYYY'M'MM
Regular expression	\\d\\d\\d\\dM\\d\\d
Input example	Mr. Smith left in February of 1999.
Normalized value	1999M02
Code example	<pre>{ "name": "entity:GLOBAL.DATE", "value": "...", "score": 1.0, "normalization": {"type": "GLOBAL.DATE", "subType": "MONTH", "value": "1999M02"} }</pre>

The YEAR SubType returns a date string of a specific year.

GLOBAL.DATE SubType = YEAR usage

Usage	Example
Format	YYYY
Regular expression	\\d\\d\\d\\d
Input example	Mr. Smith left in 1999.
Normalized value	1999
Code example	<pre>{ "name": "entity:GLOBAL.DATE", "value": "...", "score": 1.0, "normalization": {"type": "GLOBAL.DATE", "subType": "YEAR", "value": "1999"} }</pre>

The SEASON SubType returns a date string of a specific season of the year.

GLOBAL.DATE SubType = SEASON usage

Usage	Example
Format	One of the following: • Winter: YYYYWI • Spring: YYYYSP

GLOBAL.DATE SubType = SEASON usage (continued)

Usage	Example
	• Summer: YYYYSU • Fall: YYYYFA
Regular expression	One of the following: • Winter: \\d\\d\\d\\dWI • Spring: \\d\\d\\d\\dSP • Summer: \\d\\d\\d\\dSU • Fall: \\d\\d\\d\\dFA
Input example	Mr. Smith left in the fall of 1999.
Normalized value	1999FA
Code example	<pre>{ "name": "entity:GLOBAL.DATE", "value": "...", "score": 1.0, "normalization": {"type": "GLOBAL.DATE", "subType": "SEASON", "value": "1999FA"} }</pre>

GLOBAL.TIME system entity

The TIME SubType returns a time string that is accurate to an hour and a minute.

GLOBAL.TIME SubType = TIME usage

Usage	Example
Format	T'HH:mm
Regular expression	T\\d\\d:\\d\\d
Input example	Mr. Smith left at ten minutes to three.
Normalized value	T02:50
Code example	<pre>{ "name": "entity:GLOBAL.TIME", "value": "...", "score": 1.0, "normalization": {"type": "GLOBAL.TIME", "subType": "TIME", "value": "T02:50"} }</pre>

The PARTSOFDAY SubType returns a time string that specifies parts of the day.

GLOBAL.TIME SubType = PARTSOFDAY usage

Usage	Example
Format	One of the following: • Morning: TMO • Afternoon: TAF • Evening: TEV • Night: TNI
Regular expression	One of the following: • Morning: TMO • Afternoon: TAF • Evening: TEV • Night: TNI
Input example	Mr. Smith left in the morning.
Normalized value	TMO
Code example	<pre>{ "name": "entity:GLOBAL.TIME", "value": "...", "score": 1.0, "normalization": { "type": "GLOBAL.TIME", "subType": "PARTSOFDAY", "value": "TMO" } }</pre>

GLOBAL.DATE_TIME system entity

The DATE_TIME SubType returns a date string that is accurate to a specific date and time string that is accurate to an hour and a minute.

GLOBAL.DATE_TIME SubType = DATETIME usage

Usage	Example
Format	YYYY-MM-DD'T'HH:mm
Regular expression	\\d\\d\\d\\d-\\d\\d-\\d\\dT\\d\\d:\\d\\d
Input example	Mr. Smith leaves on October 31st at 5:00 p.m.
Normalized value	2022-10-31T17:00
Code example	<pre>{ "name": "DATE_TIME",</pre>

GLOBAL.DATE_TIME SubType = DATETIME usage (continued)

Usage	Example
	<pre>"value": "October 31st at 5:00 p.m", "normalization": "2022-10-31T17:00", "confidence": "1" }</pre>

GLOBAL.DURATION system entity

This entity returns a duration string that specifies the duration of the activity.

GLOBAL.DURATION usage

Usage	Example
Format	One of the following: • Second: 's'ss • Minute: 'm'mm • Hour: 'h'hh • Day: 'D'DD • Week: 'W'WW • Month: 'M'MM • Year: 'Y'YY
Regular expression	One of the following: • Second: s\\d\\d • Minute: m\\d\\d • Hour: h\\d\\d • Day: D\\d\\d • Week: W\\d\\d • Month: M\\d\\d • Year: Y\\d\\d
Input example	Mr. Smith stayed in Boston for 48 hours.
Normalized value	h48
Code example	<pre>{ "name": "entity:GLOBAL.DURATION", "value": "...", "score": 1.0, "normalization": {"type": "GLOBAL.DURATION", "value": "h48"} }</pre>

GLOBAL.LOCATION system entity

This entity returns a location string.

GLOBAL.LOCATION usage

Usage	Example
Format	String value. Example: Santa Clara
Regular expression	Not applicable.
Input example	Mr. Smith works in Santa Clara.
Normalized value	Santa Clara
Code example	<pre>{ "name": "entity:GLOBAL.LOCATION", "value": "...", "score": 1.0, "normalization": {"type": "GLOBAL.LOCATION", "value": "Santa Clara"} }</pre>

GLOBAL.PERSON system entity

This entity returns a name string.

Usage	Example
Format	String value. Example: Joe Smith
Regular expression	Not applicable.
Input example	Joe Smith works in Santa Clara.
Normalized value	Joe Smith
Code example	<pre>{ "name": "entity:GLOBAL.PERSON", "value": "...", "score": 1.0, "normalization": {"type": "GLOBAL.PERSON", "value": "Joe Smith"} }</pre>

GLOBAL.MONEY system entity

This entity returns a currency string.

GLOBAL.MONEY usage

Usage	Example
Format	String value. Example: USD 2000
Regular expression	Not applicable.
Input example	Show me laptops for less than \$2000.
Normalized value	USD 2000 Note: The normalized value uses the three-letter ISO 3166 country code of the source currency.
Code example	<pre>{ "name": "entity:GLOBAL.MONEY", "value": "...", "score": 1.0, "normalization": { "type": "GLOBAL.MONEY", "value": "2000", "currency": "USD" } }</pre>

GLOBAL.NUMBER system entity

This entity returns a number.

Usage	Example
Format	String value. Example: 5 . 0
Regular expression	Not applicable.
Input example	I want to see the previous 5 transactions from my account.
Normalized value	5.0
Code example	<pre>{ "name": "entity:GLOBAL.NUMBER", "value": "...", "score": 1.0, "normalization": { "numericValue": "5", "normalizedValue": "5" } }</pre>

GLOBAL.SOFTWARE

Returns a software string.

Usage	Example
Format	String value. Example: Java
Regular expression	Not applicable.
Input example	How do I install Java?
Normalized value	Java
Code example	<pre>{ "name": "entity:GLOBAL.SOFTWARE", "value": "Java", "score": 0.99930537, "normalization": { "type": "entity:GLOBAL.SOFTWARE", "subType": "SOFTWARE", "value": "Java" } }</pre>

GLOBAL.HARDWARE

Returns a hardware string.

Usage	Example
Format	String value. Example: printer
Regular expression	Not applicable.
Input example	How do I order a printer?
Normalized value	printer
Code example	<pre>{ "name": "entity:GLOBAL.HARDWARE", "value": "printer", "score": 1.0, "normalization": { "type": "entity:GLOBAL.HARDWARE", "subType": "HARDWARE", "value": "printer" } }</pre>

Example NLU prediction result using Software system entity

```
{ "status": "success",
  "response": {
    "utterance": "How do I install Java?",
    "intents": [
      {
        "intentName": "test intent",
```

```

    "nluModelName": "ml_x_snc_global_global_268a97a9dbd23c107906265d1396191a",
    "score": 0.90401393,
    "intents": [
      ],
      "entities": [
        {
          "name": "entity:GLOBAL.SOFTWARE",
          "value": "Java",
          "score": 0.99930537,
          "normalization": {
            "type": "entity:GLOBAL.SOFTWARE",
            "subType": "SOFTWARE",
            "value": "Java"
          },
          "startingPosition": -1
        }
      ]
    },
    "properties": {
      "all:ml_x_snc_global_global_268a97a9dbd23c107906265d1396191a": "0.55",
      "entity:all": "0.01",
      "inference.sspace.time": "4",
      "inference.time": "33",
      "intent:all": "0.01",
      "nluPlatformLanguage": "en",
      "nluPlatformVersion": "rome.0"
    }
  }
}

```

Example NLU prediction result using DATE system entity

```

{
  "utterance": "We should meet next Sunday at Starbucks.",
  "intents": [
    {
      "intentName": "intent:Desire.Desire",
      "score": 0.83452,
      "entities": []
    },
    {
      "intentName": "intent:Meeting.MeetRequest",
      "score": 0.8919042,
      "entities": [
        {
          "entityName": "entity:Meeting.MeetRequest.Where",
          "value": "Starbucks",
          "score": 1
        }
      ]
    }
  ]
}

```

```

    "entityName": "entity:GLOBAL.DATE",
    "value": "Sunday",
    "normalization": { "type": "DATE",
      "subType": "DAY",
      "value": "1999-10-01"
    },
    "score": 0.87
  },
}
}
}
}
}

```

(Legacy) Prebuilt Virtual Agent topics, topic blocks, and ServiceNow NLU models

Prebuilt Virtual Agent conversations (topics), reusable topic blocks, and ServiceNow NLU models are available for the Virtual Agent platform and various business applications, such as Customer Service Management, HR Service Delivery, IT Service Management, and more.

These predefined conversations help users with common self-service tasks in each business area, such as creating or updating cases or providing answers to frequently asked questions. Prebuilt topic blocks are reusable components (similar to subflows) that perform a specific function or task and can be added to a conversation topic. Prebuilt NLU models define the business-specific language understanding needed for Virtual Agent to understand and process user requests. Each NLU intent in a model maps to a single Virtual Agent conversation topic.

Summaries of prebuilt topics and topic blocks

For more information on the Virtual Agent prebuilt topics and topic blocks provided by various ServiceNow applications, refer to the documentation for those applications. For example, the CSM, HRSD, and ITSM applications provide information on their prebuilt topics in the following sections:

Predefined topics and topic blocks	Activation
Customer Service Virtual Agent conversations 	Plugin name: com.sn_csm.virtualagent For more information about activating a plugin, see Activate a plugin .
Field Service Virtual Agent Conversations 	Request the Field Service Virtual Agent Conversations and Field Service NLU Model for Virtual Agent Conversations apps from the ServiceNow Store. Visit the ServiceNow Store  to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the ServiceNow Store version history release notes .
Human Resources Virtual Agent conversations 	Request the HR Service Delivery Virtual Agent Conversations app from the ServiceNow Store.

Predefined topics and topic blocks	Activation
	Visit the ServiceNow Store to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the ServiceNow Store version history release notes .
ITSM Virtual Agent Conversations	Request ITSM Virtual Agent and the ITSM NLU Model for Virtual Agent Conversations from the ServiceNow Store. Visit the ServiceNow Store to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the ServiceNow Store version history release notes .
Legal Virtual Agent Conversations	Request Legal Virtual Agent Conversations from the ServiceNow Store. Visit the ServiceNow Store to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the ServiceNow Store version history release notes .
Virtual Agent Platform topics and topic blocks Virtual Agent Designer setup topics (Legacy) Virtual Agent pre-built topic blocks for NLU (such as Agent Availability, AI Search, and FAQ Conversation Builder)	Plugin name: com.glide.cs.chatbot For more information about activating a plugin, see Activate a plugin .

Note: The plugins for the CSM, HR Service Delivery, and ITSM predefined conversations also install their prebuilt ServiceNow NLU models and topic blocks. The Glide Virtual Agent plugin installs the prebuilt NLU model for setup topics, as well as platform topic blocks.

After installing the plugins or apps, you can preview (test) the topics and topic blocks using Virtual Agent Designer. You can review the intents, utterances, and entities in the prebuilt NLU models using ServiceNow NLU Workbench or within Virtual Agent Designer if your NLU-enabled topics are associated with intents in ServiceNow NLU models.

Working with prebuilt topics and topic blocks in Virtual Agent Designer

- Previewing topics and topic blocks – After you install the plugins for prebuilt topics, admins or Virtual Agent admins can access the prebuilt topics and topic blocks in the Virtual Agent Designer home page. Select the topic and in the **Flow** tab, select **Test**. Review the conversation as it runs in the test window to determine the topics and topic blocks that you want to use.

- Using prebuilt topics and topic blocks – Although prebuilt topics and topic blocks are read only and can't be changed, you can reuse them by [duplicating](#) and modifying them as needed. After you test a duplicated topic and are ready to deploy it to your Virtual Agent clients, [publish](#) the topic. Similarly, after testing a duplicated topic block, publish it to make it available for use in conversation (calling) topics.

For details on creating, testing (previewing), duplicating, and publishing a topic, see [Build conversations in the Asset library in Assistant Designer](#). For details on working with topic blocks, see [Maximizing code reuse with topic blocks](#).

Working with prebuilt ServiceNow NLU models in ServiceNow NLU Workbench

- Reviewing a prebuilt NLU model – After you install the plugins for predefined topics, you can view the prebuilt models in NLU Workbench. The prebuilt NLU models for ServiceNow applications define the intents, entities, and utterances used for the predefined topics. These models are also trained and published. You can also review the utterances for a prebuilt model in Virtual Agent Designer. However to copy a prebuilt model, you use NLU Workbench.
- Duplicating prebuilt NLU models – Although prebuilt NLU models are read only and can't be edited, you can [Duplicate an NLU model](#)  prebuilt NLU models to create your own NLU models and [Import an NLU intent](#)  from prebuilt models or other NLU models that you create in NLU Workbench.

For details on creating, training, and publishing ServiceNow NLU models, see [\(Legacy\) Natural Language Understanding](#) .

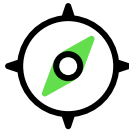
Agent Chat

Agent Chat provides features that streamline the agent and requester chat experience and enables managers to monitor and assist agents.

Provide your agents with a workspace that has built-in productivity features for engaging with customers. Your agents can do the following:

- Use shortcuts, known as [quick actions](#), for common activities, such as transferring a chat to another queue or displaying contextual info related to the chat.
- Reuse common responses, such as greetings or answers to frequent questions, with [response templates](#) .
- Get possible solutions for issues, derived from searches of related issues in Knowledge articles, Q&A, and previous incidents or cases with [Agent assist](#) .
- Interact with customers in their native language using [Dynamic Translation for Agent Chat](#).
- Manage work assignments delivered to agents' inboxes, enabling them to set their availability and accept, reject, or transfer chats.
- Trigger a Virtual Agent self-service topic that walks end users through a task with [Conversation Autopilot](#).
- Provide agents with the option to add work notes or updates after they finish a support session with [Interaction wrap up](#) .

Get started

Explore  Learn about Agent Chat concepts and features.	Configure  Install and configure Agent Chat and activate relevant plugins.
Use  Use Agent Chat to help agents have discussions with others to solve issues faster.	Reference  Get Agent Chat details for domain separation, building reports, and interaction related records.

Exploring Agent Chat

Agent Chat enables live agents to interact directly with end users through chat. Your end users can chat with a live agent to ask questions and receive information.

Agent Chat overview

The chat system starts with virtual chat, which is an autonomous chat powered by artificial intelligence. The requester can then ask to chat with a live agent using Agent Chat. Using Agent Chat, agents can communicate with requesters, create incident or case records, or transfer chats to another agent or queue.

Agent Chat uses a persistent widget for chat conversations on any portal page of the portal that you're using. You can establish assignment rules to enable chat conversations to reach the best agent available who has the capacity and skills to handle the job or the agent can transfer the chat to another agent. Agents can use response templates to enable reusable, consistent messages to requesters.

Virtual chat conducts a survey before and after the Agent Chat. The pre-survey gets preliminary information about the requester to aid in the chat session. The post-chat survey gets feedback on the requester's satisfaction with the agent who helped.

Note: Starting with the Quebec release, legacy Agent Workspace is no longer deployed, enhanced, or supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support Knowledge Base.

Agent Chat benefits

Benefit	Feature	Users
Agents and chat managers have a conversation without the requester knowing.	Agent Whisper	Agents, chat managers
Gather important information from end users through conversational questionnaires.	Chat surveys	Agents
Download a transcript of the conversation between the agent and the requester.	Chat transcript downloads for requesters	Requester
Carry out a conversation in another language.	Dynamic Translation for Agent Chat overview	Agent, requester
Initiate conversations with requesters on a messaging app of the requester's choice.	Agent-Initiated Messaging Interface	Agent, requester
Read a summarization of the chat (this is available only if you have Now Assist installed).	Summarize a chat 	Agent

Routing chats

Requesters start chats with virtual chat. When they request to chat with a live agent on Agent Chat, their request goes into a queue controlled by Advanced Work Assignment (AWA), which routes chats to different agents based on availability, queue length, and expertise.

Unfurling links

If an agent or requester enters a link during an Agent Chat conversation, the links are "unfurled" or displayed with a preview of the website's content. Links in Agent Chat conversations are unfurled in the same manner as Virtual Agent. For more information, see [Using link unfurling in Virtual Agent](#).

Cross-channel conversation history and cross-channel message-level sentiment

Agents can see cross-channel conversation history and cross-channel message-level sentiment in real time when an agent is having a live conversation with a requester in the chat panel in Agent Chat.

Agent Whisper

Agent Whisper lets agents and chat managers have a conversation without the requester knowing.

During a chat between a requester and an agent, the agent may want to privately ask a chat manager for assistance or a chat manager and an agent may want to converse without the requester knowing. Using Agent Whisper, the agent can request help and the chat manager and agent can send messages to each other without the requester knowing.

For example, if an agent is newly hired, still in training, or unsure about how to proceed with a requester's request, the agent can ask a chat manager to join the conversation to help walk the agent through the steps of the procedure privately.

Another scenario is if an agent needs to escalate a customer conversation to a chat manager. Agents can request help and chat managers can join the chat conversations publicly to communicate directly with the customer to help deescalate the situation.

You activate Agent Whisper in Agent Chat settings. For details, see [Setting up Agent Chat](#).

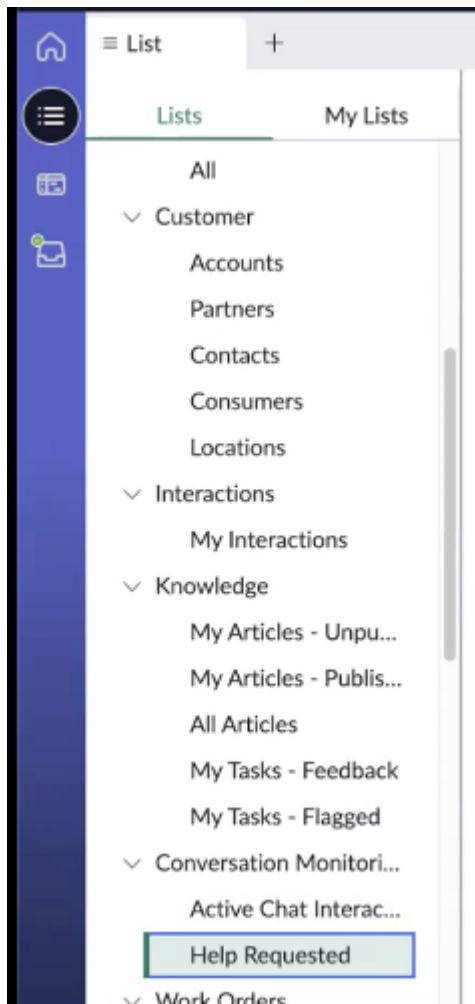
Using the Help quick action

Agents can ask chat managers to join chat conversations with requesters by raising the help flag. Agents can open the Quick Action menu or enter `/help` to request for help. When using the help quick action, agents can also type a brief private message explaining what they need help with. This way, when a chat manager enters the conversation, they already know what the agent needs.

Chat managers can view the conversations with help requested from different views: interactions list view, manager dashboard, and lists.

- **Interactions list view:** Agents can navigate to the interactions list view and add in the help requested column to see which conversations agents have requested help in. From here, managers can click directly into the interaction record and join the conversation with the agent and requester.
- **Manager dashboard:** With the Workforce Optimization for Customer Service (com.snc.wfo.csm) plugin installed, managers can see that the Help requested tile on the manager dashboard homepage.

- **Lists:** From Conversation Monitoring > Help Requested, managers can view a list of chat interactions in which agents have requested help.



To learn more about Workforce Optimization for CSM, see [Workforce Optimization for Customer Service](#).

Sending and receiving messages in Private Chat

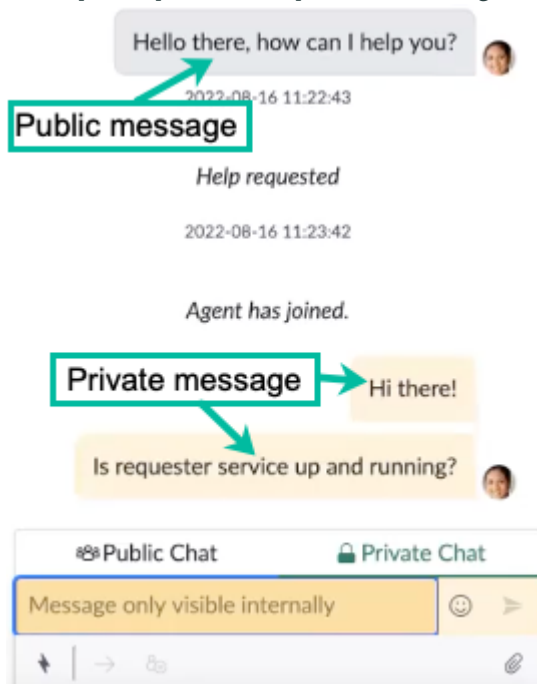
The agent and chat manager can converse without the requester knowing that they are having a conversation. Messages that only seen by the agent and chat manager are private messages. The requester does not see private messages. The agent and chat manager can toggle between the public and private messages using the **Public Chat** and **Private Chat** tabs. The **Private Chat** tab has a yellow background with "Message only visible internally" and private messages appear on the yellow background. When someone types in the **Private Chat** tab, the typing event indicator does not display. For example, when the chat manager types in the **Private Chat** tab, the agent's and requester's screen do not display the typing event indicator.

The tab that the agent types on and sends the message from determines whether a message is posted privately or publicly. If an agent starts typing a message on the **Public Chat** tab and then switches to the **Private Chat** tab, the **Private Chat** tab does not display the message. If the agent then goes back to the **Public Chat** tab, the message is still there. However, agents can see private messages regardless of whether they are on the **Private Chat** tab or the **Public Chat** tab.

Public versus Private chat

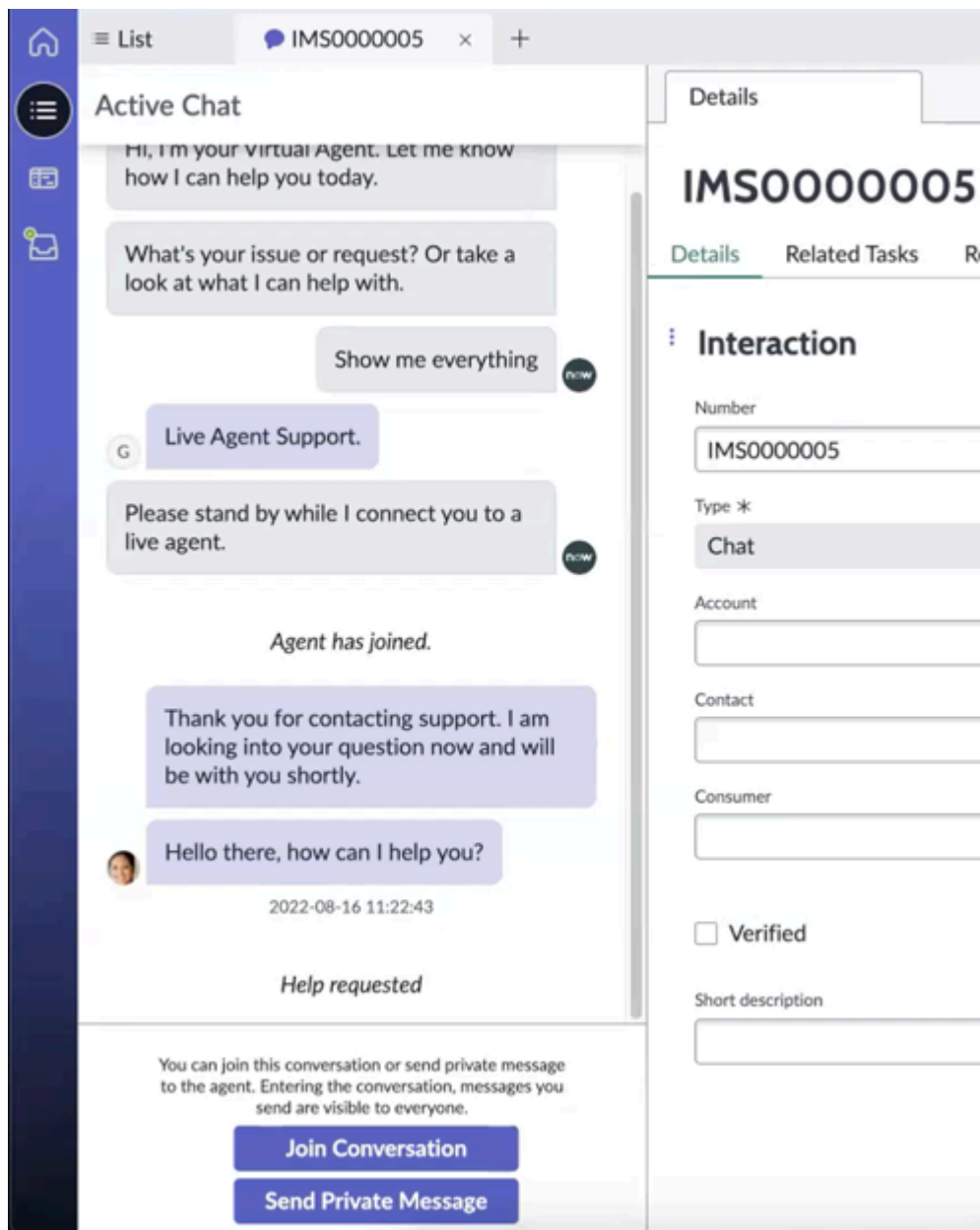
Example of Public Chat	Example of Private Chat
Active Chat Hi, I'm your Virtual Agent. Let me know how I can help you today. What's your issue or request? Or take a look at what I can help with. Show me everything now G Live Agent Support. Please stand by while I connect you to a live agent. now <i>Agent has joined.</i> Thank you for contacting support. I am looking into your question now and will be with you shortly. Hello there, how can I help you? Public Chat Private Chat Message visible to everyone	Active Chat G Live Agent Support. Please stand by while I connect you to a live agent. now <i>Agent has joined.</i> Thank you for contacting support. I am looking into your question now and will be with you shortly. Hello there, how can I help you? 2022-08-16 11:22:43 <i>Help requested</i> 2022-08-16 11:23:42 <i>Agent has joined.</i> Hi there! Is requester service up and running? Public Chat Private Chat Message only visible internally

Example of public and private messages



Joining a chat conversation in Private Chat

The first time a chat manager switches from a private conversation (on the **Private Chat** tab) to a public conversation (on the **Public Chat** tab), a dialog box displays. The dialog box informs the chat manager that they are about to join the public conversation and the requester will be notified that the chat manager is joining the conversation. The chat manager can select **Yes, I'm sure** to join the public conversation or select **Cancel** to remain in the private conversation.



Sharing attachments in Private Chat

If agents send an attachment while on the **Private Chat** tab, the attachment is sent only to the agent and chat manager. Message Sent confirmation messages do not display for private message conversations.

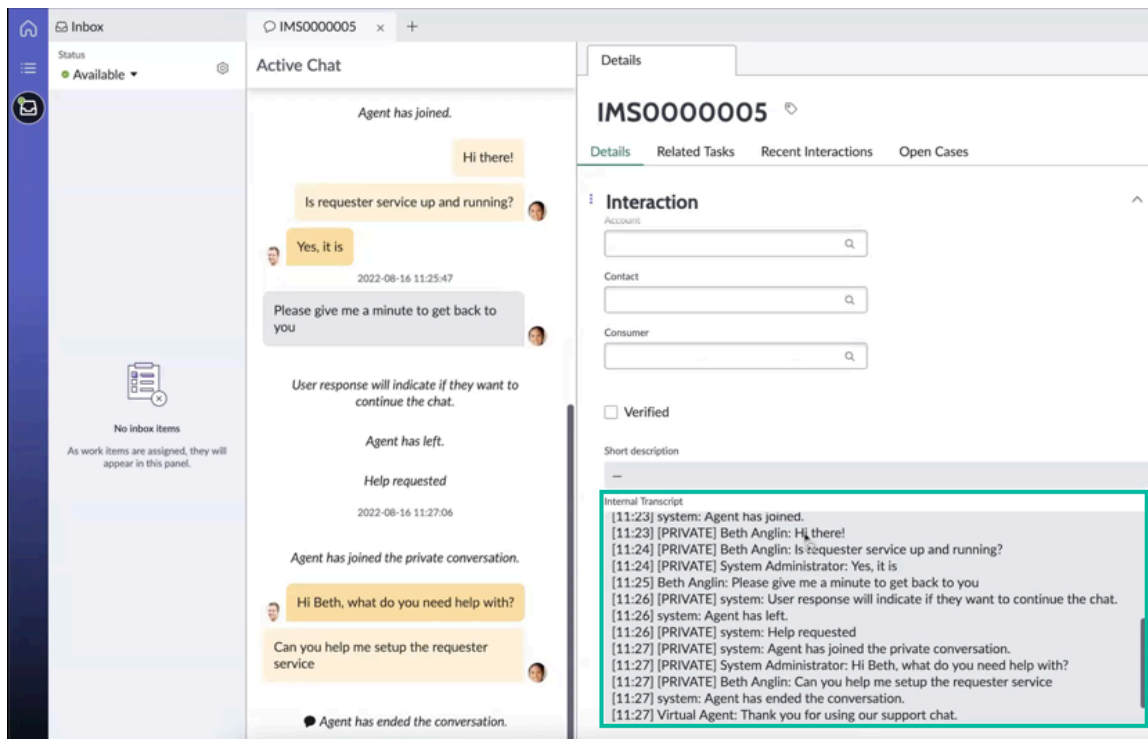
Private messages stored in internal chat transcripts

Once the conversation ends, one external transcript and one internal chat transcript are generated.

The public chat transcript does not include private messages and is accessible for the requester to download if the Download Transcript capability has been enabled.

The private chat transcript is shown on the interaction record by default and does include private messages exchanged between agents and managers. Private messages are prefixed with the word [PRIVATE] to clearly indicate when a message came through the Private Chat.

To learn more about downloading the chat transcript, see [Chat transcript downloads for requesters](#).



Custom report

Admins can build a custom report to track the number of help requests, see [Build a report to track the number of help requests](#) for instructions.

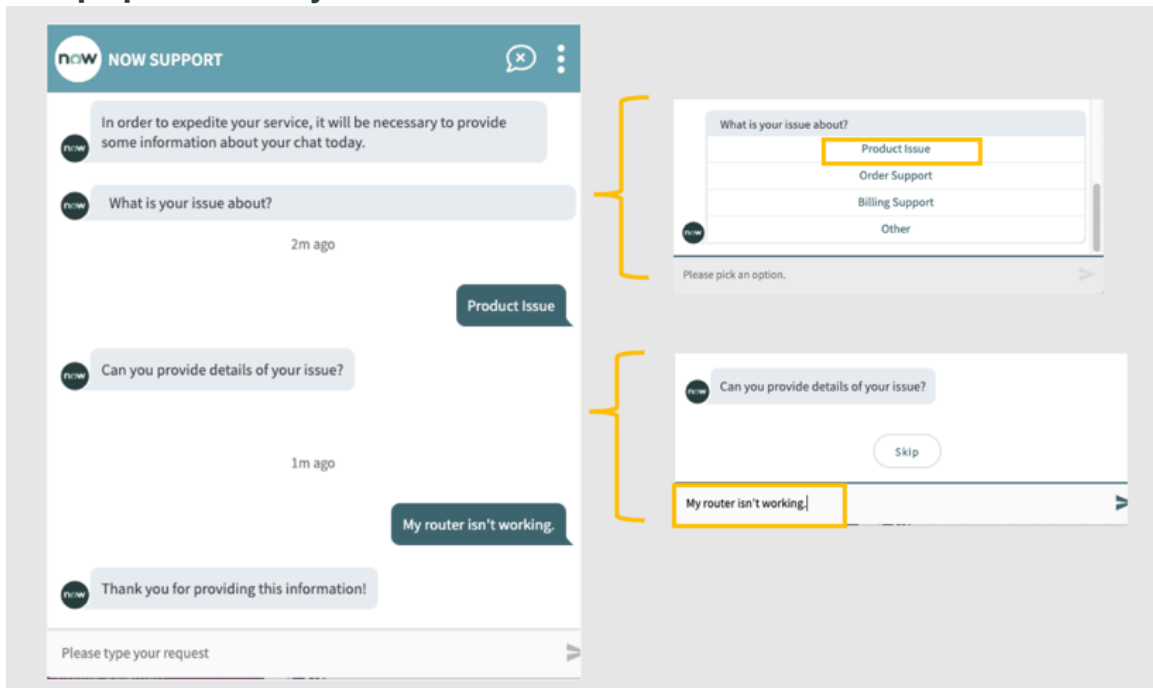
Chat surveys

Display conversational questionnaires to your end users to gather important information from them, before and after they chat with a live or virtual agent.

How chat surveys work

Instead of using forms to collect information from your requesters, you can create different questionnaires that run in the chat client to capture preliminary user information or post-chat feedback. The questions in the following pre-chat survey example ask users to identify their service issue and to provide additional details.

Example pre-chat survey conversation



Survey administrators and administrators use [Survey Designer](#) to:

- **Build survey content:** Survey Designer provides various controls for defining survey questions. The example above shows the choice list control, which displays a list of items that your users can choose from. Each survey question has corresponding properties that you can set to manage survey behavior. For instance, you can make a survey response mandatory. If you make a survey response optional, users can skip the question in the survey. You can also configure your survey so that an introductory note starts the survey and an end note displays after users finish the survey.
- **(Optional) Save certain survey responses as chat context:** When defining your survey, you can map a particular survey question to a chat context variable so that survey responses are stored in the context variable. You can then use these variables to route chats to live agents in certain queues, by specifying the chat context variables in routing conditions or to the virtual agent.

After creating the surveys, administrators configure the surveys to run as conversations in the chat client. The chat client renders the chat survey as a live chat conversation.

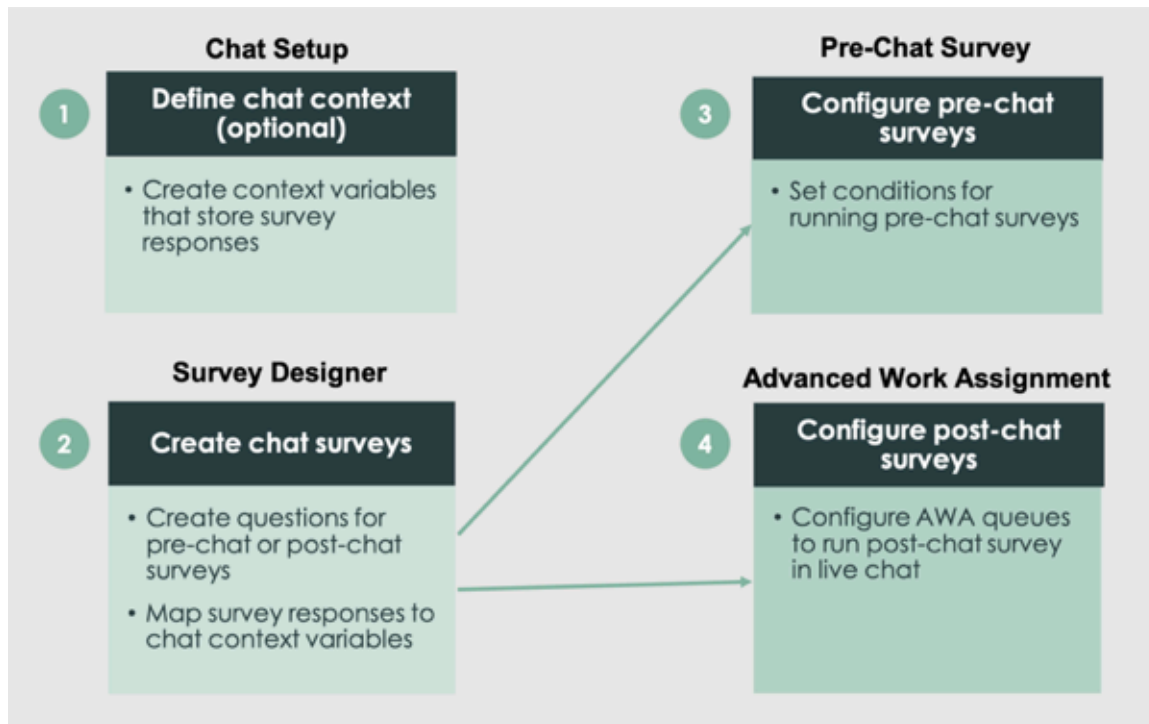
Activating and deactivating pre-chat surveys in Now Assist

By default, you can manage pre-chat surveys by navigating to **All > Conversational interfaces > Settings** and opening **Pre-chat surveys** in the **General** tab. Now Assist honors these settings in both Virtual Agent and Self-service.

You can also turn pre-chat surveys on and off specifically for Now Assist Self Service. Navigate to **All > sys_properties.list**, and under *com.glide.cs.nass.prechat.enabled* set the value to **True** or **False**.

What to do next

Setting up chat surveys involves these main steps:



1. (Optional) Define chat context.

Configure the chat context variables for storing survey responses using **Context Variables** in Chat Settings.

2. Create chat surveys

In Survey Designer, build your conversational questionnaires for gathering pre-chat information and post-chat feedback from your requesters. If you defined chat context variables to store certain survey responses, you can map the appropriate survey question to the corresponding chat context variable.

3. Define pre-chat survey configurations.

Determine the pre-chat questionnaire to be presented to your requesters based on conditions that you apply.

4. Define post-chat survey configurations.

Control the post-chat questionnaire displayed to your requesters to gather feedback on their experience with live agents.

5. If using Virtual Agent, define context topic intent configurations.

Use pre-chat survey information to determine the appropriate Virtual Agent conversation topic automatically displayed to your requesters, rather than prompting them to choose from a list of conversation topics.

The Interaction Related Records list stores the post-survey chat results and creates a related record that links the assessment to the live agent (fulfiller).

Chat transcript downloads for requesters

Once a conversation between a requester and a live agent ends, the requester can download a transcript of the conversation.

After a conversation between a requester and a live agent ends, the requester's chat window displays a **Download** button that enables the requester to download a chat transcript. If the requester clicks the **Download** button, a .txt file is automatically downloaded from the window of the requester's current web browser. The chat transcript contains only the written text from

the conversation; attachments and images from the conversation appear as URLs. Even after the requester starts a new chat session, the **Download** button from the previous session is still available if the requester scrolls up. The chat transcript files are generated at the end of each chat session and multiple chat sessions are not combined into one file.

The requester must be configured for chat transcript downloads for the **Download** button to appear. For information about configuring the download of chat transcripts, see [Setting up Agent Chat](#).

Two types of chat transcripts are generated from the conversation: internal and external.

Internal chat transcripts:

- Are available only to the agent and chat supervisor.
- Include any conversations between the requester and virtual agent.
- Include any conversations between the agent and chat supervisor that occurred through Agent Whisper.
- Include customer sentiments (if Agent Chat is configured to display customer sentiments).

The internal transcript field in the interaction table contains all private and public messages and is populated as soon as the chat is close completed.

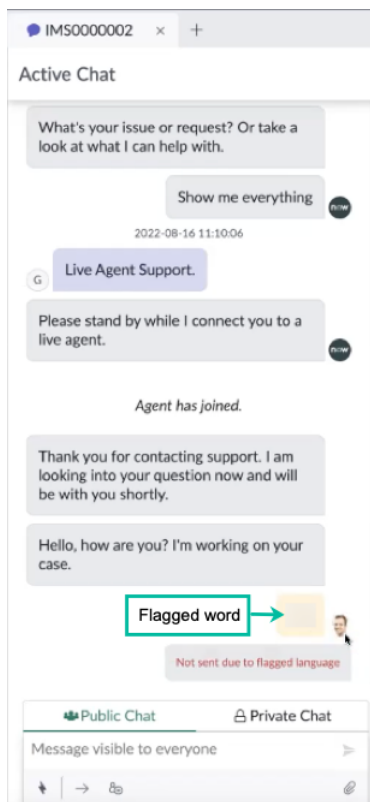
External chat transcripts:

- Are available to the requester.
- Include only conversations between the requester and the live agent.
- Do not include pre- or post-chat survey information.

Profanity Filter for Agent Chat overview

The Profanity Filter for Agent Chat prevents agents from sending messages to requesters that include profane language (also known as forbidden keywords). If an agent is upset and tries to send a message with offensive language, the Profanity Filter prevents the requester from seeing the message.

If an agent tries to send a message with profane language, the Profanity Filter blocks the message and flags the forbidden keywords. The Profanity Filter warns the agent that the message contains forbidden keywords and alerts the chat manager to the agent's use of profane language.



When the Profanity Filter detects forbidden keywords in a message entered by the agent:

- the message containing the forbidden keywords is highlighted in the agent's chat window.
- the agent receives a notification that they have used a forbidden keyword.
- the message with the forbidden keyword is not sent to the requester.
- if the agent has exceeded the number of forbidden keywords in a specified amount of time, a message is sent to the chat manager.
- the forbidden keyword is marked in the transcript of the chat conversation.

Notifying the chat manager

You can configure the Profanity Filter to notify the chat manager if an agent tries to use more than the specified number of forbidden keywords over the specified time. The Profanity Filter considers all conversations owned by the agent when determining the number of forbidden keywords used. If the agent tries to send a message with a forbidden keyword, the chat manager receives a notification. If the Manager Workspace or Agent Workspace is the active window, a real-time notification displays. If the Manager Workspace or Agent Workspace isn't the active window, a notification displays on the summary view in the Workspace notification menu. In the incident entry, the chat manager can review the incident and the chat log and privately message the agent.

Machine learning-based or keyword-based

The Profanity Filter uses a machine learning-based model or a keyword-based model to determine whether a message includes forbidden keywords. The machine learning-based model analyzes keywords and phrases in the context of the agent's entire message before determining whether any forbidden keywords in the message should be considered profane. For example, the statement "I made a silly mistake" would be considered not profane while "You sound so silly" would be considered profane. The machine learning-model is not on each instance individually – you cannot change the model directly to account for customized keywords and phrases.

The keyword-based model compares a message against a list of forbidden keywords to determine whether something should be considered profane. You can allow certain keywords or phrases even if those keywords are considered profane in a generic sense. Common examples are book or movie titles that might contain forbidden keywords and but should still be allowed in a conversation. Conversely you can configure the Profanity Filter to block certain keywords or phrases even if the words may not always seem profane. The Profanity Filter analyzes each message against the list of allowed and forbidden keywords before running it through the model-based mode.

Example of machine learning-based model

Allowed keyword	Forbidden keyword	Message to be analyzed	System behavior
		You are a dummy.	Message is blocked.
UNIX for Dummies		The reference book "UNIX for Dummies" might be useful.	Message is allowed.
UNIX for dummies	stupid	"UNIX for Dummies" is a stupid book.	Message is blocked.
	foolish	I feel so foolish for not knowing the answer to your question.	Message is blocked.
		I feel so foolish for not knowing the answer to your question.	Message is allowed.

Example of keyword-based model

Allowed keyword	Forbidden keyword	Message to be analyzed	System behavior
	dummy	You are a dummy.	Message is blocked.
		You are a dummy.	Message is allowed.

Domain separation

The Profanity Filter works with domain separation. If the domain is set to Global, then the keywords apply to both the agent and requester domains. For the agent and requester to see each other's domain, the administrator must do one of the following:

- Include the domain where the regular expression should be visible as a child domain to the corresponding parent domain.
- Grant necessary access to the appropriate domain if it's a sister domain.
- Set the keywords under a global domain.

Sensitive Data Handler

During an Agent Chat or Virtual Agent conversation, the agent or requester may accidentally enter sensitive data. The Sensitive Data Handler detects and masks the sensitive data so it is not viewed by the agent or requester. The Sensitive Data Handler can also collect sensitive data as part of a business process, such as user authentication.

Note: This feature is being prepared for future deprecation. It will be hidden and no longer available for installation but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support knowledge base.

Install the Data Privacy application as a replacement. For more information, see [Data Privacy](#).

Possible situations when the Sensitive Data Handler might detect and mask sensitive data include:

- A requester enters sensitive data, such as a social security number, during a conversation with a live agent or virtual agent.
- An agent enters company information, such as a manager's confidential email address, that the requester should not have access to.
- A requester enters sensitive data in a pre-chat or post-chat survey.

The Sensitive Data Handler detects and masks sensitive data when the requester is conversing through the chat widget, mobile (iOS/Android), or any of the supported adapter channels (SMS/Slack/Teams/Workplace).

You can configure the following:

- Regular expressions for each type of sensitive data (for example, social security number or credit card number).
- Whether sensitive data handling works only for inbound (from a requester) messages, outbound (from a live agent) messages, or both.
- Messages that displays to the requester or agent informing them that sensitive data has been masked.

If the requester sends a message containing sensitive data to an agent, a system message is sent to the requester and agent notifying both that the message contained sensitive data. The sensitive data is masked on the transcript and marked as sensitive on the internal transcript.

If an agent tries to send a message containing sensitive data to a requester, the message is not sent to the requester. Instead, an error is displayed to the agent and the message is tagged as sensitive in the internal transcript.

The Sensitive Data Handler can be configured to pass user authentication information to another entity. The requester might provide sensitive data during a conversation to prove their identity (for example, social security number, date of birth, email address).

The Sensitive Data Handler plugin [com.glide.sensitive_data_handling] can be installed by itself, without a Glide Virtual Agent or Agent Chat plugin. Regular expressions can be added, edited, and deleted from the Sensitive Data Handling module.

Regular Expressions

The base system of the Sensitive Data Handler comes with pre-defined regular expressions for credit/debit card numbers, social security numbers, and email addresses. When the Sensitive Data Handler detects a regular expression, it uses the defined masking pattern to mask sensitive data. To define your own regular expressions and patterns to mask other sensitive data, see [\(Legacy\) Configuring sensitive data handler](#). If a regular expression is not properly configured, the system may get stuck while attempting to match the regular expression with the message. To prevent the system from getting stuck, the system times out after one second.

Pre-defined Regular Expressions

Name	Regular expression	Details
Credit Card - Visa	<code>\b4[0-9]{12}(?:[0-9]{3})?\b</code>	- Card number starts with 4. - New card number has 16 digits, old card number has 13 digits.
Credit Card - American Express	<code>\b3[47][0-9]{13}\b</code>	- Card number starts with 34 or 37. - Card number has 15 digits.
Credit Card - Mastercard	<code>\b(?:5[1-5][0-9]{2} 222[1-9] 22[3-9][0-9] 2[3-6][0-9]{2} 27[01][0-9] 2720)[0-9]{12}\b</code>	- Card number starts with a number between 51-55 or 2221-2720. - Card number has 16 digits.
Credit Card - Diners Club	<code>\b3(?:0[0-5] [68][0-9])[0-9]{11}\b</code>	- Card number starts with 36, 38, or 300-305. - Card number has 14 digits. - Cards that start with 5 and have 16 digits should be processed like a MasterCard.
Credit Card - Discover	<code>\b6(?:011 5[0-9]{2})[0-9]{12}\b</code>	- Card number starts with 65 or 6011. - Card number has 16 digits.
Social security number	<code>\b(?:666 000 9\d{2})\d{3}-(?!00)\d{2}-(?!0{4})\d{4}\b</code>	- First 3 digits cannot be 000, 666, or 900-999. - Hyphen (-) - Middle 2 digits should be 01-99 and cannot be 00. - Hyphen (-) - Last 4 digits should be 0001-9999 and cannot be 0000.
Email	<code>\b[\w!#\$%&'*/+=?`{ }~^.-]+(?:\.[\w!#\$%&'*/+=?`{ }~^.-]+)*@(?:[a-zA-Z0-9-]+\.)+[a-zA-Z]{2,6}\b</code>	- Word - Period (.) - Word @ symbol

Pre-defined Regular Expressions (continued)

Name	Regular expression	Details
		• String of alphanumeric characters at least one character long. • Period (.) • Alphabetical string 2-6 characters long.

Dynamic Translation for Agent Chat overview

Dynamic Translation for Agent Chat (DTAC) translates chat conversations from one language to another. This translating enables agents and requesters to have chat conversations with each other without the need of a shared language.

For example, a requester who speaks only French starts a chat conversation with a live agent who speaks only English. From the requester's view, the entire conversation is conducted in French, while from the agent's view, the entire conversation is conducted in English.

DTAC enables cross-locale support teams and merger and acquisition projects to save time and money by handling larger volumes of chat conversations from other regions.

***i* Note:**

- DTAC is supported on Agent Workspace, not on Connect Support.
- DTAC is currently not supported when autopilot is in progress. When the requester responds to prompts from autopilot topics, these responses are not translated for the agent, even if DTAC is turned on for that conversation. See [Conversation Autopilot](#) for more information.

How DTAC works

DTAC uses [Dynamic translation](#)  and a translation service provider to translate chat conversations in real time. Available translation service providers include:

- [Set up Google cloud translator service spoke](#) 
- [Microsoft Azure Translator Service spoke](#) 
- Microsoft Azure OEM

Mobile clients

DTAC is available for requesters on Agent Chat in mobile for iOS and Android.

Translation support limited to one language

DTAC can only support translation from one language to another therefore additional agents or managers joining chat sessions should speak the same language as the primary agent.

- Agent chat transfers – Agents transferring a chat conversation should both speak the same language.
- Managers joining chat conversation – Managers joining chat conversation to monitor or assist agents should speak the same language as the primary agent.

Chat summarizations

DTAC also translates chat summarizations.

Agent presence states

DTAC does not translate agent presence states.

Attachments within DTAC

When inserting an attachment into a chat, DTAC does not translate the file name or the contents of the attachment.

Agent-Initiated Messaging Interface

Enable agents to initiate conversations with customers on a messaging app of customers' choice by using the ServiceNow® Agent-Initiated Messaging Interface application.

Request apps on the Store

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

Overview of Agent-Initiated Messaging Interface

The Agent-Initiated Messaging Interface application supports agent-initiated conversations for any type of messaging channels such as SMS.

Note: The messaging channels are available based on the application associated with the service channel you install. For more information, see [Service channels](#).

By default, the application is configured for the Conversational SMS service channel in the CRM Workspace. For more information, see [Conversational SMS service channel](#) and [Initiate messaging conversations from the CSM Configurable Workspace](#).

Configuring Agent Chat

Configure Agent Chat to enable customers to ask questions and receive information by chatting with a live agent.

Review these sections on configuring Agent Chat features.

Setting up Agent Chat

Configure Agent Chat to enable live agents to chat with customers and manage various conversation features for agents and end users. Through Agent Chat, agents interact with end users, create incident or case records, or transfer chats to another agent or queue.

Before you begin

Configure the following before starting this task:

- Install the Agent Chat plugin (com.glide.interaction.awa).
- If you want to use the Profanity Filter, activate the Profanity Filter plugin (sn_va_profanity).
- In Advanced Work Assignment:

- Configure [service channels](#).
- Define [work item queues](#).
- Set up [work assignments](#).
- [Update your Live Feed profile](#)  to display agent names and avatars in the chat client.
- [Configure Agent Chat in Service Portal](#) 

Role required: workspace_admin

 **Note:** You must be in the global view to edit the settings.

About this task

Use Agent Chat settings to do the following:

- Activate or deactivate:
 - Agent Chat (enabled by default).
 - Display of agent names and avatars the chat window.
 - Display of the agent name in the header.
 - Chat transcript downloads.
 - Display of estimated wait time for live chat support (transfer from the virtual agent to a live agent).
 - Agent Whisper, which enables supervisors to message agents privately when agents are interacting with an end user. For new instances, Agent Whisper is enabled by default.
 - Emojis.
 - Conversation history.
 - Conversational autopilot client system messages.
- Set the system messages that are displayed when a live agent transfer occurs.
- Manage Quick Action controls.

Procedure

1. Navigate to **All > Conversational Interfaces > Home**.

2. Select the **Agent Chat** tile.

The Agent Chat settings screen titled "Customize how your users chat with live agents" appears.

 **Note:** Agent Chat is automatically activated when the Agent Chat plugin is installed. If you're not using Agent Chat, slide the toggle switch to deactivate it and select **Save**.

3. Activate Agent Chat by enabling the **Activate** option.

4. Configure the options.

User chat settings

Field	Description
Agent names and avatars	Slide the toggle switch to activate or deactivate the display of the agent names and avatars in the Agent Chat client when a live agent enters, transfers, or exits a chat.

Field	Description
	Agents set their names and pictures in their Live Feed profiles. ○ If activated, the Agent name in header is automatically activated and displays the agent name at the top of the chat client. ○ If deactivated, agent identities remain anonymous. No names or avatars are displayed in the chat window.
Agent name in header	Slide the toggle switch to activate or deactivate the display of the agent name in the header of the chat window. This option is active by default. This field appears if Agent names and avatars is active.
Transcripts	Slide the toggle switch to activate or deactivate the ability for requesters to download a transcript of the conversation they had with an agent.

Chat statuses and messages

Field	Description
Live chat wait status	Select whether to display the estimated wait time for live agent support in the chat menu for chat widgets. If you're using the Conversational Integration with Microsoft Teams, the wait time displays in a card that shows the approximate wait time to chat with an agent. ○ The wait time is the estimated time, in minutes, for the transfer from the virtual agent to a live agent. ○ The wait time updates once per minute. Wait time is based on the Queue Average Wait Time minus the waiting time.
Agent Transfer Message	Enter the message that users see when they are transferred to a live agent or another queue. For example: "Please stand by while I connect you to a live agent." i Note: You can define only one transfer message and it is displayed for all queues in your instance. The Agent Transfer message does not support HTML, only plain text.
"No agent available" message	Enter the message that users see when a live agent is not available. For example: "No agents are available at the moment. Please try again later." i Note: You can define only one agent availability message and it is displayed for all queues in your instance.

Agent chat features

Field	Description
Agent Whisper	Slide the toggle switch to activate or deactivate Agent Whisper, which enables supervisors to message agents privately when agents are interacting with a requester. Note: If you deactivate Agent Whisper, you must manually deactivate the /help quick action.
Emojis	Slide the toggle switch to activate or deactivate emojis.
Conversation Autopilot	Slide the toggle switch to activate or deactivate notifications related to Conversation Autopilot, which enables agents to use autopilot quick actions to invoke Virtual Agent topics.
Dynamic language translation	Slide the toggle switch to activate or deactivate the dynamic translation of end user's messages.
Profanity detection	Select View all to display the Profanity Filter settings screen. This option only displays if the Profanity Filter plugin has been installed. For more information, see Configuring the Profanity Filter settings .
Conversation History	Select View all to display the Conversation History screen. Set maximum number of past conversation to display in the conversation window and apply filters to only show what is most relevant to agents based on channel type, assignment group, and more. For details on configuring the Conversation History options, see Setting up conversation history.

Quick action configurations

Field	Description
Quick action configurations	Select View all to display the Quick Action Toolbar Controls screen. For details on configuring the toolbar controls, see Setting up quick action toolbar controls.

5. Select **Save**.

Configuring Agent-Initiated Messaging Interface

Set up the Agent-Initiated Messaging Interface application to enable agents to send messages to customers through different messaging channels.

Agent-Initiated Messaging Interface configuration tasks

Task	Description
1. Install agent-initiated messaging interface.	Install the Agent-Initiated Messaging Interface application to integrate a messaging channel with your ServiceNow instance.
2. Set up agent-initiated message interface for a messaging channel.	Set up the Agent-Initiated Messaging Interface application to send messages from a messaging channel.
3. (Optional) Associate user profiles with agent-initiated messages.	Use scripted extension points to call custom scripts for associating user profiles with agent-initiated messages.
4. (Optional) Validate recipient IDs for agent-initiated messages Validate recipient IDs for agent-initiated messages .	Use scripted extension points to call custom scripts for validating the format of a recipient ID associated with a messaging channel.
5. (Optional) Determine whether messaging channels are available for agent-initiated messages.	Use scripted extension points to call custom scripts for determining whether a messaging channel is applicable to a user profile in an agent-initiated message.

Install Agent-Initiated Messaging Interface

You can install the Agent-Initiated Messaging Interface application (sn_agent_initiated) if you have the admin role. The application installs related ServiceNow® Store applications and plugins if they are not already installed.

Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#) .

Role required: admin

About this task

The following items are installed with Agent-Initiated Messaging Interface:

- Plugins
- Store applications
- Tables

For more information, see [Components installed with Agent-initiated messaging interface.](#)

Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.
2. Find the Agent-Initiated Messaging Interface application (sn_agent_initiated) using the filter criteria and search bar.

You can search for the application by its name or ID. If you cannot find the application, you might have to request it from the ServiceNow Store.

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

3. In the Application installation dialog box, review the application dependencies.

Dependent plugins and applications are listed if they will be installed, are currently installed, or need to be installed. If any plugins or applications need to be installed, you must install them before you can install Agent-Initiated Messaging Interface.

4. Optional: If demo data is available and you want to install it, select the **Load demo data** check box.

Demo data are the sample records that describe application features for common use cases. Load the demo data when you first install the application on a development or test instance.

5. Select **Install**.

Set up Agent-Initiated Messaging Interface for a messaging channel

Set up the Agent-Initiated Messaging Interface application to send messages from a messaging channel.

Before you begin

- [Install agent-initiated messaging interface](#).
- [Review the list of messaging channels available for the Agent-Initiated Messaging Interface application](#).
- Set the application scope to the application associated with the messaging channel using the application picker. For more information, see [Application picker](#).

For example, for using the SMS messaging channel, set the application scope to the Conversational SMS service channel application.

Role required: admin

About this task

A messaging channel is available when you install the application associated with a service channel.

For example, use the SMS messaging channel to send an SMS message to a customer. The SMS messaging channel is available when you have installed the [Conversational SMS service channel](#) application.

Procedure

1. In the navigation filter, enter `sn_agent_initiated_msg_config.list`.
2. In the Agent initiated messaging configurations list, modify an existing configuration or create another configuration for a messaging channel.

- To modify an existing configuration, in the **Active** column, click the value link corresponding to the messaging channel displayed in the **Channel** column.

For example, to send messages by using the SMS messaging channel, click the link in the **Active** column corresponding to the **SMS** channel.

- To create another configuration for a messaging channel, click **New** in the Agent initiated messaging configurations list.

3. On the form, fill in the fields.

Agent initiated messaging configuration form

Field	Description
Channel	Messaging channel using which agents can initiate messages to connect with requesters.
Check if active recipient profile exists	Option to ensure that an active channel user profile exists when sending messages to the user from the channel. If there are no active channel user profiles, the associated channel is not available for agent-initiated messages. In this case, the channel does not appear in the Channel field of the Compose Message form. For information on the Compose Message form available in CRM Workspace, see Initiate messaging conversations from CSM Configurable Workspace  .
Show option to enter recipient ID manually	Option to display the field to manually enter recipient ID. For example, select this check box to enable agents to enter a phone number manually for sending an SMS message to a consumer.
Application	Scope of the application that contains the channel. This field is automatically set based on the application scope selected in the application picker.
Active	Option to activate the use of the channel for agent-initiated messages.
Order	Order number for each channel in which they appear for agent on the Compose Message form when composing messages. The channel that has the lowest order number is displayed first. For information on the Compose Message form available in CRM Workspace, see Initiate messaging conversations from CSM Configurable Workspace  .

4. Save the configuration setting.

- If you created a new configuration setting, click **Submit**.
- If you modified an existing configuration setting, click **Update**.

Associate user profiles with agent-initiated messages

Use scripted extension points to call custom scripts for associating user profiles with agent-initiated messages.

Before you begin

Install the Agent-Initiated Messaging Interface application. For more information, see [Install agent-initiated messaging interface](#).

Role required: admin

About this task

An agent can compose messages from an interaction of type other than Message in the CRM Workspace. By default, the *AgentMessagingInteractionUserDocument* script include is available for retrieving user profiles associated with consumers and customer contacts in an interaction record.

By using extension points, you can easily integrate customizations without having to alter the base code. You can extend standard base functionality using customized scripts. For more information, see [Using extension points to extend application functionality](#).

Procedure

1. Navigate to **All > System Extension Points > Scripted Extension Points**.
2. In the **API Name** column, search for and select **sn_agent_initiated.AgentInitiatedMessagingUserDocument**.
3. On the Extension Point form, either modify a script include to use the *sn_agent_initiated.AgentInitiatedMessagingUserDocument* extension point or create and register a custom script include.
 - Create and register a custom script include.
 - Modify the existing script include by going to the Implementations related list and selecting a script include in the **Class** column.

Note: By default, the *AgentMessagingInteractionUserDocument* script include that use the *sn_agent_initiated.AgentInitiatedMessagingUserDocument* extension point is available for the Agent-Initiated Messaging Interface application. This script include is configured to retrieve user profiles associated with consumers and customer contacts from the Interaction [interaction] table record.

4. Associate user profiles for an agent-initiated messages by adding the *sn_agent_initiated.AgentInitiatedMessagingUserDocument* extension point to the script include.
You can create multiple implementations for an extension point and provide an order number for each implementation. The implementation that has the lowest order number is executed first.

Customization	Implementation
Associate a table record from which the message was initiated	Include the <i>isValidForTableRecord</i> method in the <i>sn_agent_initiated.AgentInitiatedMessagingUserDocument</i> extension point.
Retrieve the user details associated with the table record from which the message was initiated	Include the <i>getUserDocument</i> method in the <i>sn_agent_initiated.AgentInitiatedMessagingUserDocument</i> extension point.

Note: Based on the table record set in the *isValidForTableRecord* method, the user details are retrieved for sending agent-initiated messages in the *getUserDocument* method.

5. On the Extension Point form, click **Update**.

Validate recipient IDs for agent-initiated messages

Use scripted extension points to call custom scripts for validating the format of a recipient ID associated with a messaging channel.

Before you begin

Install the Agent-Initiated Messaging Interface application. For more information, see [Install agent-initiated messaging interface](#).

Role required: admin

About this task

By using extension points, you can easily integrate customizations without having to alter the base code. You can extend standard base functionality using customized scripts. For more information, see [Using extension points to extend application functionality](#).

Procedure

1. Navigate to **All > System Extension Points > Scripted Extension Points**.
2. In the **API Name** column, search for and select **global.ChannelSendToValidation**.
3. On the Extension Point form, either modify a script include to use the *global.ChannelSendToValidation* extension point or create and register a custom script include.
 - Create and register a custom script include.
 - Modify the existing script include by going to the Implementations related list and selecting a script include in the **Class** column.

Note: The *PhoneNumberValidationExtPointImpl* script include that use the *global.ChannelSendToValidation* extension point is available for validating recipient IDs profiles associated with the [Conversational SMS service channel](#) application.

4. Associate user profiles for an agent-initiated messages by adding the *global.ChannelSendToValidation* extension point to the script include. You can create multiple implementations for an extension point and provide an order number for each implementation. The implementation that has the lowest order number is executed first.

Customization	Implementation
Associate a channel ID for which the message was initiated	Include the <i>isValid</i> method in the <i>global.ChannelSendToValidation</i> extension point.

Customization	Implementation
Retrieve the recipient ID associated with the channel for which the message was initiated	Include the <i>channelSendToValidation</i> method in the <i>sn_agent_initiated.AgentInitiatedMessagingUserDocument</i> extension point.

Note: Based on the channel ID set in the *isValid* method, the recipient details are retrieved for validating a recipient ID in the *channelSendToValidation* method.

5. On the Extension Point form, click **Update**.

Determine whether messaging channels are available for agent-initiated messages

Use scripted extension points to call custom scripts for determining whether a messaging channel is applicable to a user profile in an agent-initiated message.

Before you begin

Install the Agent-Initiated Messaging Interface application. For more information, see [Install agent-initiated messaging interface](#).

Role required: admin

About this task

By using extension points, you can easily integrate customizations without having to alter the base code. You can extend standard base functionality using customized scripts. For more information, see [Using extension points to extend application functionality](#).

Procedure

1. Navigate to **All > System Extension Points > Scripted Extension Points**.
2. In the **API Name** column, search for and select **sn_agent_initiated.ChannelsQualifyingFoAgentMessaging**.
3. On the Extension Point form, create and register a custom script include.
4. Determine whether a messaging channel is applicable to a user profile in an agent-initiated message by adding the *sn_agent_initiated.ChannelsQualifyingForAgentMessaging* extension point to the script include.
You can create multiple implementations for an extension point and provide an order number for each implementation. The implementation that has the lowest order number is executed first.

Customization	Implementation
Associate a messaging channel ID for agent-initiated messages with the	Include the <i>isValidForChannel</i> method in the <i>sn_agent_initiated.ChannelsQualifyingForAgentMessaging</i> extension point.

Customization	Implementation
custom script	
Check whether a user qualifies for the messaging channel for agent-initiated messages	Include the <i>isChannelValidForAgentInitiatedMessaging</i> method in the <i>sn_agent_initiated.ChannelsQualifyingForAgentMessaging</i> extension point.

Note: Based on the messaging channel ID set in the *isValidForChannel* method, the users are evaluated for sending agent-initiated messages in the *isChannelValidForAgentInitiatedMessaging* method.

5. On the Extension Point form, click **Update**.

Components installed with Agent-Initiated Messaging Interface

Several types of components are installed with installation of the Agent-Initiated Messaging Interface application, including tables, plugins, and ServiceNow Store applications.

Note: The Application Files table lists the components that are installed with this application. For instructions on how to access this table, see [Find components installed with an application](#).

Tables installed

Table	Description
Agent initiated messaging configuration [sn_agent_initiated_msg_config]	Extends the application file. Base table for all service channel configurations for composing agent-initiated messages.

Plugins installed

Plugin	Description
Conversational Messaging (com.glide.messaging.awa	Enables messaging actions that are performed when an event occurs.

ServiceNow Store applications installed

Application	Description
Agent Messaging Component	Contains UI components for composing agent-initiated messages.

Messaging channels for Agent-Initiated Messaging Interface

Install and configure applications to enable a messaging channel for use with the Agent-Initiated Messaging Interface application.

The following table describes the messaging channels available for use with the Agent-Initiated Messaging Interface application and applications required for using those messaging channels.

Messaging channels for Agent-Initiated Messaging Interface

Channel	Required applications
SMS	Conversational SMS service channel Twilio spoke  Conversational SMS Integration with Twilio  Note: The Conversational SMS Integration with Twilio application installs the Conversational SMS service channel and Twilio spoke applications, if not already installed.

Associating user profiles on messaging interactions

Use extension points to call custom scripts.

Before you begin

Role required: admin

About this task

When a requester sends a message, the system checks if there is an existing user profile that has a matching identifier (such as a phone number) and channel details. If there is a matching user, then the system will populate the interaction record with the identifier, channel details, and the user profile in the Opened for field. If there is no user profile that matches the identifier and channel, then the system creates a channel user profile.

Procedure

1. Navigate to **All > System Extension Points > Scripted Extension Points**.
2. Click the desired extension point to view the record details.
You can create multiple implementations for each extension point and assign an order number for each implementation. The implementation that has the lowest ordered applicable implementation is executed first.

Extension point	Description
global.ChannelUserProfileExtPoint	Use channel_user_id to find record to channel_user_profile user_table/ user_document
global.InteractionChannelUserProfileExtPoint	Defines how users are synchronized between the interaction and channel_user_profile tables
global.AgentInitiatedConversationUtil	Get From and To options to show in UI for agent initiated conversations

Add Agent Chat to a portal

Give your users a place to interact with your bot and human agents. Choose a Service Portal chat configuration provided with your base system, such as the Service Portal Agent Chat configuration used for Agent Chat and Virtual Agent. Your end users can initiate and maintain a bot or Agent Chat conversation in any page of the portal.

Before you begin

Activate the Glide Virtual Agent (com.glide.cs.chatbot) or the Agent Chat (com.glide.interaction.awa) plugin. You can activate the Glide Virtual Agent plugin only if you have a subscription.

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Home**.
2. Under **Add your bot to a portal**, select **Add to portal** to configure the base system portal. For example, to configure the portal used for Agent Chat and Virtual Agent, select Service Portal Agent Chat Config.
3. On the form, update the portal configuration.

Field	Description
Active	Option to make the configuration active. The base system Service Portal configurations are automatically active.
Name	Unique name for the configuration record.
Portals	The portals in which you would like to use this chat configuration. If no portal is selected, the configuration applies to all portals in the system.
Application	Read-only application scope for the record.
Public	Option to make the portal available to users before they log in.
Roles	Roles that a user must have to use the portal. If you don't select a role, Agent Chat and Virtual Agent is available to all users regardless of their role.
Order	Number that indicates the order in which the configurations should run. Only one configuration applies per portal. If there are multiple configurations on a portal, the system runs the first configuration found from lowest to highest.
Server script	A script that passes page and widget data to an Agent Chat conversation when a user initiates the conversation. For example, pass a field to the chat conversation to enable Agent Chat to access the value. Data passed in this script is available to every page in the portal associated with this record. This script has access to the GlideSPScriptable  API.

Field	Description
	Note: The portal suffix, page ID, and language are automatically available to Agent Chat and do not require a custom script. Sys ID and table are automatically available to Agent Chat when they are present in the URL. The following example returns an object containing the list of catalogs associated with the portal to the current conversation. <pre>(function (\$sp) { return { catalogs: \$sp.getValue('catalogs') }; })(\$sp);</pre> When Agent Chat opens in an <code>iframe</code> HTML element, the list of catalogs is included in the <code>iframe</code> URL. Parameters from this field override any conflicting page data passed to Agent Chat.

4. Select **Update**.

Result

Your end users can initiate and maintain an Agent Chat or Virtual Agent conversation from any page in the selected portal.

What to do next

See your portal in action

Return to Conversational Interfaces Home and under **Add your bot to a portal**, select the second navigation dot at the bottom of the card. When the card changes to **Interact with your bot**, use the **Open portal** menu to select the portal to view. When the specified portal page opens, select the chat icon in the lower right corner to start a bot conversation.

Configure other Service Portal Agent Chat features

In Service Portal, you can customize the Agent Chat button and pass page data to Agent Chat. For more information, see [Configure Agent Chat in Service Portal](#).

Controlling idle live chat sessions

Configure how active chat sessions are handled by the system when live chats become idle.

By default, the system automatically checks live chat sessions every two minutes through the Idle Chat Timer Task scheduled job to ensure that chat sessions are still active. If the requester does not respond within 180 seconds (three minutes) during an active chat session, the session becomes idle. The user receives a reminder message that the conversation is timing out and asks if they are still there. If they don't respond, the system automatically cancels (times out) the chat session 360 seconds (six minutes) after the requester's last response.

You can change the idle chat reminder message and the default time after which the system displays the reminder message and closes an idle chat.

i Important:

Idle live chats are not available for Connect Support. Starting with the Paris release, Connect Support no longer receives enhancements or non-priority bug fixes. Consider moving to ServiceNow® Advanced Work Assignment and Agent Chat in workspace to automatically assign chat requests and other work items to agents. For details, see [Move from Connect Support to Advanced Work Assignment and Agent Chat](#).

Change the idle chat reminder message

The default idle chat reminder message displayed to requesters is: The conversation is timing out, are you still there? Agents receive the message: User response will indicate if they want to continue the chat.

You can modify the default message sent to requesters by updating the `com.glide.cs.idle_chat_reminder_message` property.

1. As admin, navigate to **All**, and then enter `sys_properties.list` in the filter.
2. Open the `com.glide.cs.idle_chat_reminder_message` property.
3. In the **Value** field, enter the new reminder message to be displayed.
4. Select **Update**.

Change the idle chat timeout values

Add the `com.glide.cs.idle_chat_reminder_timeout` and the `com.glide.cs.idle_chat_cancel_timeout` properties to the System Property [sys_properties] table to set the chat reminder message timeout and the idle chat cancel timeout values. Create both properties at the same time.

1. As admin, navigate to **All**, and then enter `sys_properties.list` in the filter.
2. Select **New** to add the `com.glide.cs.idle_chat_reminder_timeout` property.
 - a. On the form, fill in the fields.

Field	Value
Name	System property name. Enter: <code>com.glide.cs.idle_chat_reminder_timeout</code>
Description	Explanation for this property. For example: Idle chat reminder timeout (in seconds)
Type	Data type. Select integer.
Value	Enter the number of seconds before the idle chat reminder message is displayed, after the requester's last response. This value must be equal to or greater than 120 seconds, since the Idle Chat Timer Task job runs every 120 seconds to check active chat sessions. For example, if the idle chat reminder message is to be displayed 5 minutes after the requester's last response, enter 300 seconds.

Field	Value
	i Note: If you want to set an idle chat message reminder timeout that is under 120 seconds, you must also change the time at which the Idle Chat Timer Task job runs. The job must check for idle chats within a shorter time frame. For example, if the reminder message timeout is 60 seconds after the requester's last response, set the Idle Chat Timer Task job to run every 60 seconds. For more information on base system scheduled jobs, see System scheduler.

b. Select Submit.

- 3.** In the System Properties table, select **New** to add the *com.glide.cs.idle_chat_cancel_timeout* property.

a. On the form, fill in the fields.

Field	Value
Name	System property name. Enter: <code>com.glide.cs.idle_chat_cancel_timeout</code>
Description	Explanation for this property. For example: Idle chat cancel timeout (in seconds)
Type	Data type. Select integer.
Value	Number of seconds before an idle chat is canceled (times out). This value must be larger than <i>com.glide.cs.idle_chat_reminder_timeout</i>, where the difference between this value and <i>com.glide.cs.idle_chat_reminder_timeout</i> is larger than or equal to 120 seconds (2 minutes, which is when the Idle Chat Timer Task job runs). For example, if the reminder message timeout value is 300 seconds (5 minutes), the idle chat cancel timeout value must be 420 seconds or greater. i Note: If you changed the Idle Chat Timer Task job, the difference between the chat cancel timeout value and the idle chat reminder timeout must be larger or equal to the Idle Chat Timer Task job time. For example, if the reminder timeout is 60 seconds and the Idle Chat Timer Task job is also 60 seconds, the idle chat cancel timeout value must be 120 seconds or greater.

b. Select Submit.

Set the inactivity timeout behavior

The `com.glide.cs.start_idle_timeout_after_agent_response` property determines the timeout behavior when inactivity is triggered. When this property is `true`, the inactivity timer does not start until the agent sends a non-automated response to the requester.

1. As admin, navigate to **All**, and then enter `sys_properties.list` in the filter.
2. Select **New** to add the `com.glide.cs.start_idle_timeout_after_agent_response` property.
 - a. On the form, fill in the fields.

Field	Value
Name	System property name. Enter: <code>com.glide.cs.start_idle_timeout_after_agent_response</code>
Description	Explanation for this property. For example: Timeout behavior when inactivity should be triggered.
Type	Data type. Select <code>true/false</code> .
Value	Either <code>true</code> or <code>false</code> .

- b. Select **Submit**.

Set the server disconnect timeout for guest conversations

The `com.glide.cs.chat_disconnect_timeout` property determines how long the system will wait to reconnect a disconnected conversation before it ends the chat. If communication is reestablished during that timeframe, the conversation resumes.

1. As admin, navigate to **All**, and then enter `sys_properties.list` in the filter.
2. Select **New** to add the `com.glide.cs.chat_disconnect_timeout` property.
 - a. On the form, fill in the fields.

Field	Value
Name	System property name. Enter: <code>com.glide.cs.chat_disconnect_timeout</code>
Description	Explanation for this property. For example: Timeout behavior for disconnected guest conversations.
Type	Data type. Select <code>integer</code> .
Value	Number of seconds before a disconnected guest chat is canceled (times out). The client will try to reconnect during that time.

- b. Select **Submit**.

Examples

These examples show how the `com.glide.cs.start_idle_timeout_after_agent_response` system setting may affect how the system handles idle chats. In the following examples, the inactivity timeout is set to 60 seconds and the inactivity reminder is set to 30 seconds.

Example 1: In this example, `com.glide.cs.start_idle_timeout_after_agent_response` does not affect how the system handles an idle chat.

1. Agent enters the chat.
2. System sends automated message Thank you for contacting support. I am looking into your question now and will be with you shortly.
3. Agent sends the message What can I help you with today?
4. If the requester does not respond after 30 seconds, then the system sends the message The conversation is timing out, are you still there?
5. If the requester does not respond within 60 seconds after the agent's message, then the system sends the message It seems you have left the conversation and ends the chat.

Example 2: In this example, `com.glide.cs.start_idle_timeout_after_agent_response` affects how the system handles an idle chat.

1. Agent enters the chat.
2. System sends automated message Thank you for contacting support. I am looking into your question now and will be with you shortly.
3. If the agent does NOT send a message, one of the following occurs:
 - If `com.glide.cs.start_idle_timeout_after_agent_response` is not set or is set to false, then
 - a. The system starts the inactivity timer.
 - b. If the requester does not respond after 30 seconds, then the system sends the message The conversation is timing out, are you still there?
 - c. If the requester does not respond within 60 seconds after the automated message, then the system sends the message It seems you have left the conversation and ends the chat.
 - If `com.glide.cs.start_idle_timeout_after_agent_response` is set to true, the system does not start the inactivity timer and the chat will not time out.

Controlling the browser experience for chat guest sessions

Anonymous users (unauthenticated guests) can chat with support agents in the web chat client, without logging in to a service portal. Admins can control certain aspects of the conversational experience for unauthenticated guest users, such as enabling resumable chat sessions after a browser refresh.

When guest users refresh the browser window while chatting with an agent, the refresh automatically starts a new conversation and chat session. By default, the ongoing conversation and chat session history are not retained.

You can change the default guest session behavior to let your guest users resume an ongoing conversation and see the chat session history after a browser refresh. You can also set the

duration of the guest chat session user cookie, to let guest users resume chat sessions after they close and reopen their browser.

Enable resumable guest sessions

As admin, use the `com.glide.cs.guest_session_resumable` system property to the change the default chat guest session behavior for guest users.

1. Navigate to **All**, and in the Filter enter `sys_properties.list`.
2. Open the `com.glide.cs.guest_session_resumable` property.
3. In the **Value** field, enter `true` to enable resumable guest chat sessions and retain the chat session history.
4. Select **Update**.

After a browser refresh, your guest users can continue their conversations with agents and see the chat session history in the chat panel.

Change the guest chat session cookie time

The guest chat session cookie time is the length of time (duration), in seconds, of the guest session user cookie. Use the `com.glide.cs.guest_session_cookie_max_age` property to change the guest session cookie time, in case your guest users want to resume a chat after closing and reopening their browser.

For security reasons, the default property value is -1, which means the guest session cookie is immediately deleted when the browser is closed. But you can specify a maximum time length that sets the duration of the guest session cookie, for example 900 seconds (15 minutes).

1. As admin, navigate to **All**, and in the Filter enter `sys_properties.list`.
2. Open the `com.glide.cs.guest_session_cookie_max_age` property.
3. In the **Value** field, enter the maximum length of time (seconds) for the guest session cookie.

For example, the value 900 is the duration of the guest session cookie in seconds (15 minutes), to give your guest users time to resume a chat session after closing and reopening the browser.

4. Select **Update**.

Configuring quick actions

Quick actions are shortcuts that perform Agent Chat tasks. Agents can work more efficiently with customers by using quick actions because they don't have to enter as many characters to perform a task.

Activate quick actions

To enable your agents to use quick actions, you must activate the and [related plugins for Advanced Work Assignment](#), which is required for chat in Workspace.

Default quick actions

The following quick actions are available by default with Workspace chat:

Command name	Toolbar button	Action	Default parameter
autopilot		Starts a Virtual Agent topic (Conversation Autopilot).	Available topics
help		Indicates to the chat supervisor that an agent needs help with a conversation. To use this quick action, new customers must enable Agent Chat and Agent Whisper and update customers must enable Agent Whisper on chat setup.	
r		Uses Response templates  to insert as text in a conversation. Note: Only response templates that have a condition of <i>[Type][is][Chat]</i> are available in Agent Chat.	Available response templates
search-kb		Starts a KB article search. The agent is prompted to search for the relevant KB article. Based on the search term the agent enters, the agent is able to view the KB articles that match the search term. The agent can then select the KB article.	
ta		Transfers the conversation to another agent.	Available agents
tq		Transfers the conversation to another queue.	Available queues

Creating a quick action

Create a quick action so that agents can use shortcuts for performing actions in Agent Chat.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Quick Actions > Actions**, and then select **New**.
2. On the form, fill in the fields.

Field	Description
Name	Name of the quick action.
Active	Option for activating the quick action.
Description	Description of the quick action.
Command Name	Text that triggers the quick action when entered after the forward slash (/) in a conversation.
Applies to	Work item that the quick action is available for. Filter the table that you select in the Table field to qualify a certain kind of work item. For example, to make the quick action available only for conversations that are assigned to Beth Anglin, you would first select the Interaction [interaction] table in the Table. Then, in the Applies to field, you would create the following filter: [Assigned to] [is] [Beth Anglin].
Table	Work item table that the quick action is available for. Note: Quick actions are supported only in the Interaction [interaction] table.
Apply to all groups	Option for making the quick action available to all user groups.
Apply to groups	List of which groups can use the quick action. This field appears only if you clear the Apply to all groups option.
Script	JavaScript code to control what the quick action does. In this script, you have access to: - The <i>record</i> variable, which for Agent Chat is the Interaction [interaction] record - The <i>params</i> array, if you defined quick action parameters If provided, all free-form text entered after all the other parameters are captured as the last item in the <i>params</i> array. Set the value of <i>answer</i> as follows: <pre>answer = { success: <Boolean>, message: <success_or_error_message> };</pre> Note: If you do not script a message, the agent receives a default message instead.
Application	Application scope of the quick action.
Accepts string parameter	Option to indicate that the script accepts text input after any defined parameters.
Parameter label	Parameter name that displays next to the quick action.

Field	Description
Parameter hint text	Text that displays as a hint when the agent enters a quick action.

3. Select **Submit**.

What to do next

If your quick action requires a secondary menu, define a quick action parameter so that agents can further control the quick action. For more information, see [Define a quick action parameter](#).

Optionally, you can make the quick action available in Agent Chat as a button. For more information, see [Configuring a quick action button](#).

Defining a quick action parameter

Define a quick action parameter to allow agents to further control a quick action in Workspace chat.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Quick Actions > Parameters**, and then click **New**.
2. On the form, fill in the fields.

Field	Description
Name	Name of the parameter.
Action	Quick action that uses the parameter.
No Matching Results Message	Message to agents if no records match the record query. If you do not create a No Matching Results Message , a default message is provided.
Display value field	Field from the parameter record that appears in Workspace chat. This field appears when you select Basic in the Query mode field.
Query mode	Type of query. You can select Scripted or Basic . To query records with a script, select Scripted . To query records by whichever table that you specify in the Table name field, select Basic .
Table name	Table to query for parameters. This field appears when you select Basic in the Query mode field.
No Results Message	Message to agents if there are no available records to query. If you do not create a No Results Message , a default message is provided.
Value field	Field from the parameter record that agents can enter in Workspace chat to invoke the parameter item. For example, to transfer a conversation to Beth Anglin, an agent would enter / t a "beth . anglin". In this case, the User ID field in the User [sys_user] record is the Value field .

Field	Description
	This field appears when you select Basic in the Query mode field.
Query Script	JavaScript code to determine which records qualify for your parameter. You are given a <i>query</i> variable that represents the search query that the agent provided. Set the value of the <i>answer</i> variable as follows: <pre>answer = { items: [{ value: <value>, displayValue: <displayValue>}] };</pre> The array of items should contain objects with a <i>value</i> and a <i>displayValue</i>. Note: This field shows only if you select Scripted in the Query mode field.
Application	Application scope of the parameter.
Order	Order that the parameter is available for the quick action.

3. Click **Submit**.

Configuring a quick action button

Configure a quick action button so that agents can perform actions in Agent Chat with a single click.

Before you begin

Role required: admin

About this task

The toolbar of the Workspace chat window contains three buttons. Selecting the left button () attaches a file in a conversation, selecting the center button () initiates a queue transfer, and selecting the right button () initiates an agent transfer. You can't configure the left button, but you can assign different quick actions to the center and right buttons.

Procedure

- Navigate to **All > Conversational Interfaces > Chat Settings > Agent Chat**.
- In the Agent Experience section, select **View all** next to Quick actions.
 - To configure the arrow button () , select **Transfer to Queue**.
 - To configure the add user button () , select **Transfer to Agent**.
 - To create a new button, select **New**.
- On the form, fill in the fields.

Field	Description
Quick Action	Action that is performed when the button is selected.

Field	Description
Name	Name of the quick action
Use custom icon	Select this if you want to specify what image should be used for the icon
Icon	Button icon that appears on the toolbar of the Workspace chat window.
Active	Select if you want this quick action to be active.
Application	Name of the application for which the icon display on the toolbar.
Order	Position of the button on the toolbar. If the value is 100, the button appears at the center of the toolbar. If the value is 101, the button appears at the right side of the toolbar. You can't change the button order.
Available on private chat tab	Select this to have the icon display on the Agent Chat toolbar.
Parameter value(s)	
Auto-submit	
Apply to all groups	

4. Save your changes.

- To update an existing record, select **Update**.
- To create a new record, select **Save**.

Setting up quick action toolbar controls

Customize the quick actions that appear on the chat toolbar.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Select **Agent Chat** and then on the Agent Experience card, select **View All** next to Quick actions.
3. Do one of the following:
 - To create a quick action workspace action, select **New**.
 - To modify a quick action workspace action, select the quick action workspace action record you want to update.
4. On the screen, fill in the fields.

Configurable Toolbar Control

Field	Definition
Quick Action	Quick action performed.
Name	Name of the quick actions workspace action.
Use custom icon	Option to display a custom, downloaded icon in the toolbar.

Field	Definition
Icon	Image to display on the toolbar when Use custom icon is selected. Select Click to add... and on the Choose an image screen, select an image file. Note: Use an image with a square aspect ratio.
Active	Indicates whether this configurable toolbar control is active.
Application	Application scope of the quick action.
Order	Value of this quick action. Quick actions are executed from lowest order to highest order, so a quick action with an order of 100 is considered before a quick action of 200.
Available on private chat tab	Option that defines whether the quick action is available on the private chat tab.
Applies to	Condition that determines when the quick action is available. ○ Add Filter Condition- Filter the table that you select in the Table field to qualify a certain type of work item. ○ Add "OR" Clause- Add an "or" clause to the condition. For example, to make the quick action available only for conversations assigned to Beth Anglin, you select the Interaction [interaction] table in the Table. Then, in the Applies to field, you create the following filter: [Assigned to] [is] [Beth Anglin].
Parameter value(s)	Parameters needed for the quick action.
Auto-submit	Option for the agent to select a button and have the quick action and parameter post to the chat.
Apply to all groups	Option for making the quick action available to all user groups.

5. Select **Submit** or **Update**.

Activating chat context quick actions

Activate context quick actions to enable agents to view context relevant to a chat interaction. When launched in a chat, display cards show: sysparm_portal, sysparm_page, table, sys_id, or sysparm_language.

Before you begin

Role required: admin

About this task

Context quick actions are a default quick action, but require activation.

Procedure

1. Navigate to **All > Quick Actions > Actions**.

2. In the **Get Chat Context Variables** record, use the list editor to set the **Active** value to

The screenshot shows the 'Quick Actions' list editor in ServiceNow. The table has columns: Name, Apply to all groups, Apply to groups, Command Name, Applies to, Description, Table, and Active. Three records are visible: 'Generate Resolution Notes', 'Get Chat Context Variables', and 'Insert'. The 'Active' checkbox for 'Get Chat Context Variables' is checked and highlighted with a green border.

Name	Apply to all groups	Apply to groups	Command Name	Applies to	Description	Table	Active
Generate Resolution Notes	true		resolutionNotesGeneration		Used to generate resolution notes by mak...	Task [task]	true
Get Chat Context Variables	true		context		Get context variables of chat	Interaction [interaction]	☒
Insert	true		insert		Insert Button provided by NAcm	OneExtend Capability [sys_one_extend_capability]	true

true.

Sending missed chat activity emails

Send email to users with summaries of chat messages sent to them while they were offline.

Before you begin

Role required: virtual_agent_admin

About this task

You can send email summaries to an authenticated user or users who are verified by a live agent.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.

2. Select the **General** tab.

3. In the **Missed activity emails** card, select **View Settings**.

4. Enable the Missed activity emails feature by toggling **Activate** option.

5. In the Offline threshold drop-down, set the time duration that the user is inactive before sending email notification.

- 15 minutes (default)
- 2 hours
- 8 hours
- Custom (enter a custom duration of minutes or hours)

6. Select **Save**.

Result

Email notifications of missed chat messages are automatically sent at the specified time interval.

Configuring Profanity Filter

Configure the Profanity Filter for Agent Chat to detect flagged words in the manner that best suits your company's needs.

Before you begin

Role required: admin, virtual_agent_admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings > Chat Settings > Agent Chat**.
2. On the Chat settings card, select **View settings** next to Profanity detection.
3. On the Profanity detection page, slide the **Active** toggle switch to activate the profanity filter.
4. In the Choose how to detect flagged words card, configure the settings:

Option	Description
Use Machine Learning model to detect flagged words	Use model-based mode to determine which words should be marked as flagged words.
Use list of flagged words if no matches are found	Use a keyword-based approach to determine which words should be marked as flagged words. The list of flagged words can be configured on the Flagged Words tab.
Number of messages before notifying manager	If the number of messages with flagged words that an agent has sent is equal to or exceeds this number within the time threshold, the Profanity Filter sends a message to the manager.
Time threshold (in hours)	Number of hours during which the number of messages with flagged words is tracked.

5. On the *Flagged Words* tab, specify words that the Profanity Filter should flag:

Flagged words Agent system messages Manager system messages Flagged words 7 Refresh Reset Delete Export New Last refreshed just now.					
☐ Word	Keywords	Allowed	Language	Status	
shill	shilly, shills, shills	Forbidden	English	Inactive	
stupid	stupidly, stupidity	Forbidden	English	Inactive	
idiot	idiotic, idiocy, idiots	Forbidden	English	Inactive	
Inglorious Bastards	Inglorious Bastards, Inglorious Bastards	Allowed	English	Inactive	
silky	siliness, silliness	Allowed	English	Inactive	

Flagged words	
Word	Word that the Profanity Filter should flag.
Keywords	Similar words that the Profanity Filter should also flag.
Allowed	○ Forbidden - the word is considered profane and will be flagged. ○ Allowed - the word is not considered profane and will not be flagged.
Language	Language that the Profanity Filter applies to.

Status

- **Active** - if the Profanity Filter detects this word, it will determine whether it is forbidden or allowed.
- **Inactive** - if the Profanity Filter detects this word, it will not do anything.

6. On the **Agent system messages** tab, configure the messages that the agent might see:

Flagged words

Agent system messages

Manager system messages

Agent system messages

Last refreshed 17m ago.

Export

Description	Value	Updated	Updated by
First agent message	This is your first violation.	2021-10-07 17:54:40	admin
Manager notification message	You have made three or more violations. Your manager will be notified.	2021-10-07 17:56:22	admin
Second agent message	This is your second violation.	2021-10-07 17:55:09	admin

Agent system messages

Description	Description of the system message.
Value	Exact wording of the system message that displays to the agent.
Updated	Date and time the message was most recently updated.
Updated by	Name of the user who most recently updated the message.

7. On the **Manager system messages** tab, configure the messages that the manager might see:

Flagged words

Agent system messages

Manager system messages

Manager system messages1

Export

Last refreshed 17m ago.

Description	Value	Updated	Updated by
Manager message	{0} has sent {{1}} message(s) with flagged words.	2021-10-07 18:00:11	admin

Manager system messages

Description	Description of the system message.
Value	Exact wording of the system message that displays to the manager.
Updated	Date and time the message was most recently updated.
Updated by	Name of the user who most recently updated the message.

Configuring Dynamic Translation for Agent Chat

Activate Dynamic Translation for Agent Chat (DTAC) so chat conversations can be translated from one language to another.



[Dynamic Translation for Agent Chat](#) 📺 Watch this video for more information on global support with Dynamic Translation for Agent Chat.

Prerequisite steps

These tasks must be completed prior to activating DTAC:

- [Integrate with a translation service provider](#) 
- [Migrate to version v3 of a translator configuration](#) 
- [Translate a knowledge article](#) 

Activating DTAC

DTAC translates chat conversations from one language to another. The preferred languages for the agent and requester are based on their user profiles and a translation service translates the messages into the defined language of the other participant. Translation service providers support language detection for requesters who are not logged in to ServiceNow®, also referred to as guest users.

DTAC is inactive by default. Before activating DTAC, the following requirements must be completed:

- [Dynamic translation](#) 
- [Set up Agent Chat](#)
- [Activate a language](#) 

Activate the Dynamic Translation for Agent Chat plugin (com.glide.cs.dynamic.translation.agent.chat).

This also activates these plugins:

- Dynamic Translation (com.glide.dynamic_translation)
- Conversational Dynamic Translation (com.glide.dynamic_translation.va_async)

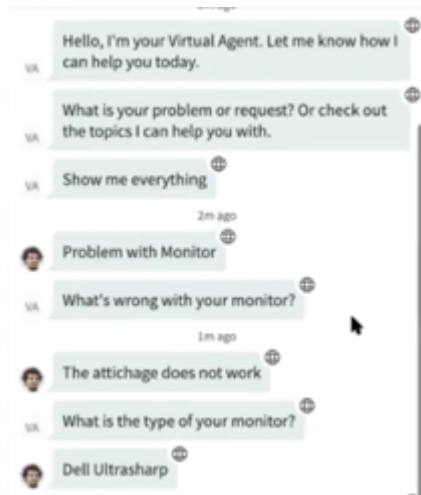
and these system properties:

- true - sync
- false - async
- absence of this property - async

Transferring from Virtual Agent to a live agent

Once an agent accepts a chat, they can see the chat history between the Virtual Agent and requester in their preferred language for more context.

Virtual Agent topics must be set up in the desired languages prior to using DTAC. To learn more about how to set up topics, see [Build conversations in the Asset library in Assistant Designer](#).



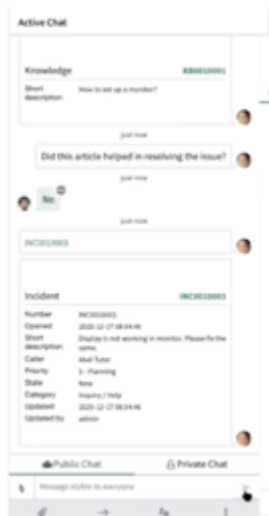
Translation support in chat conversations

When DTAC is enabled, these items are translated in chat conversations:

- Users' messages
- System messages
- Virtual Agent chat history
- Record card field values
- Rich controls

Type	Rich Control
User input	String
User input	Static choice list
User input	Reference choice
User input	Boolean
User input	Date time
User input	File picker
User input	Carousel
Bot response	Text
Bot response	Single link
Bot response	Multiple links
Bot response	Multi-flow output
Bot response	Script output
Bot response	Record card

DTAC does not support record card labels. For this functionality to operate, system localization properties must be configured. Navigate to **System Properties > System Localization**. For more information, see ServiceNow® product documentation on Localization settings.



Analytical reports for DTAC

You can generate a report that counts the number of DTAC chats, to assess how many conversations use the DTAC option.

Monitor the number of true values in the Translated column in the Interaction table.

Setting up conversation history

Enable and customize the conversation history options that are available on the conversation history screen.

Before you begin

Conversation history provides the capability to easily access historical conversations on the same channel. The agent can be more efficient by reviewing those conversations without opening multiple tabs and reviewing the transcripts. This page provides options to enable conversation history and to configure how many to display and optional filtered view for the agents.

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Select **Agent Chat** and then on the Agent Experience card, select **View Settings** next to Conversation History.
3. To turn on conversation history, toggle on the Activate switch.
4. In the Number of conversations to display field, enter the number of previous conversations that should display on the screen.
The maximum number of conversations that can display is 25.
5. To create a conversation history filter, select **New**.
6. On the Create New Conversation History Filter screen, fill in the fields.

Field	Definition
Name	Name of the conversation history filter.

Field	Definition
Active	Select the check box if this filter should be applied.
Description	Description of the conversation history filter.
Order	Order in which the filters should be prioritized. The filter with the lowest order matching the agent's groups is used to filter the interactions.
Apply to all groups	Option for making the conversation history filter available to all user groups.

7. Select **Set conditions** to display the Condition dialog.
8. On the Condition dialog, build a filter for the conversation history.
For more information, see [Condition builder](#) .
9. Select **Set**.
10. On the Create New Conversation History Filter screen, select **Submit** or **Update**.

Disable live agent support for a channel

Add the *disable_live_agent* property to the Channel Properties related list to exclude it from live agent support.

Before you begin

Role required: admin

About this task

The *disable_live_agent* property is replacing the *com.glide.cs.exclude.liveagent.support* system property to indicate that the channel doesn't support a live agent. If the *disable_live_agent* parameter is not set for the channel, the older system property will still be honored for the time being.

Note: This feature is usable only for NLU/Keyword conversations. It is unavailable in Virtual Agent conversations using Large Language Model (LLM) topic discovery.

Procedure

1. Navigate to **All**, and then enter `sys_cs_channel.list` in the filter.
2. Select a channel name in the table.
For example, select **Alexa**.
3. In the **Channel Properties** related list, select **New**.
4. On the Custom Adapter Property New record form, fill in the fields.

Field	Description
Name	Enter <code>disable_live_agent</code> .
Value	Enter <code>true</code> .

5. Select **Submit**.

Result

The *disable_live_agent* parameter displays in the Channel Properties related list.

The screenshot shows the configuration page for a Messaging Channel named 'Alexa'. The page includes various settings such as Name, Application, Type, Conversation Idle Timeout, Secure, Support typing indicator, and Icon. Below the configuration fields, there are 'Update' and 'Delete' buttons. At the bottom, there is a 'Channel Properties' table with columns for Name, Value, and Description. The table contains one row with the property 'disable_live_agent' set to 'true'.

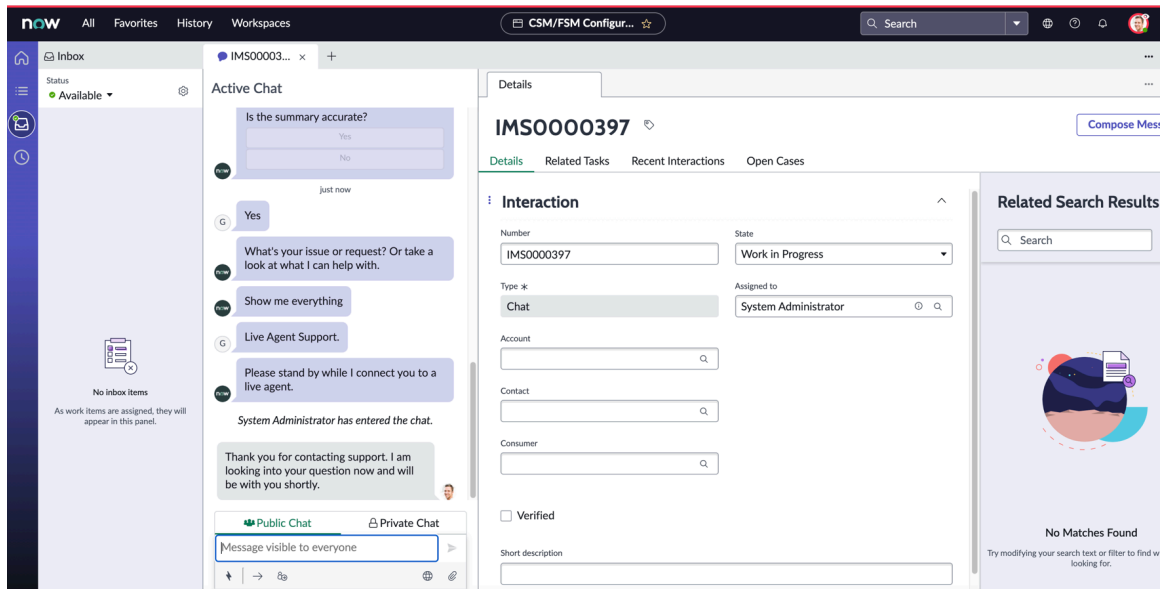
Name	Value	Description
disable_live_agent	true	

Using Agent Chat

Agent Chat enables live agents to have conversations with requesters and for managers to help agents and monitor them.

Workspace displays a chat inbox icon  that agents use to enter chats. Agents set their status to **Available** or **Away** to open or close their inbox for chat requests. The icon displays numbers when chats are waiting to be answered.

The chat interface is integrated into the workspace so agents can chat while working onscreen with other features provided by the workspace.



The following sections explain how to use Agent Chat.

Using quick actions in Agent Chat

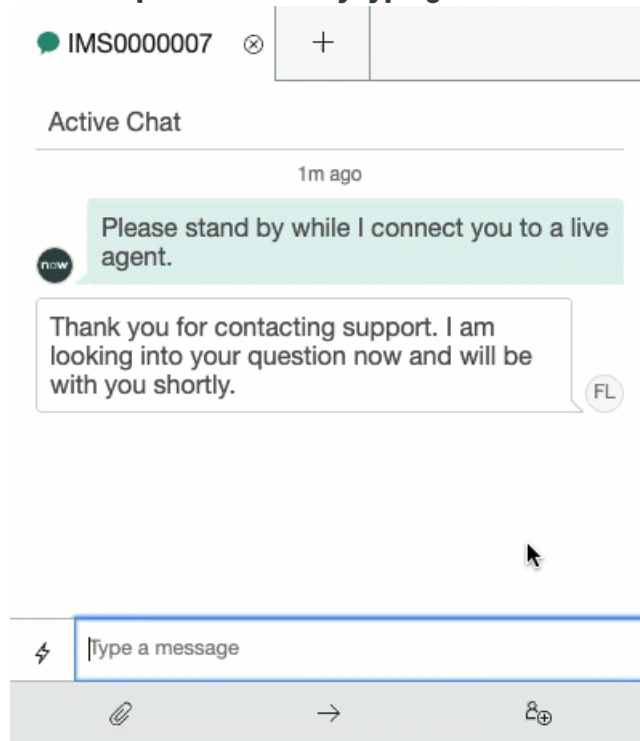
Use shortcuts, known as quick actions, for common activities that are performed frequently.

In Agent Chat, an agent can insert a quick action in any of the following ways:

- Enter a command after the forward slash (/).
- Select the lightning bolt icon (⚡) and select a quick action from the menu.
- Select the quick action button on the toolbar (if available).

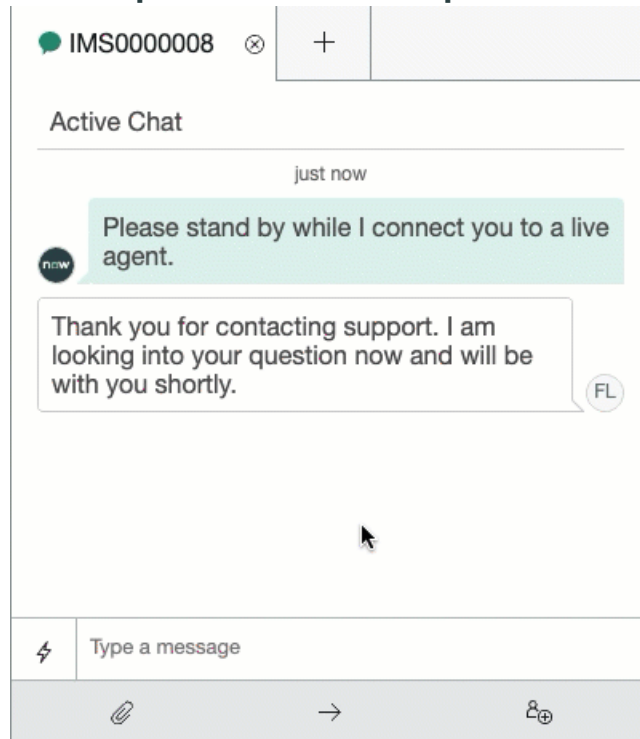
For example, an agent can transfer a conversation to another queue by entering / tq in the message field.

Initiate a queue transfer by typing



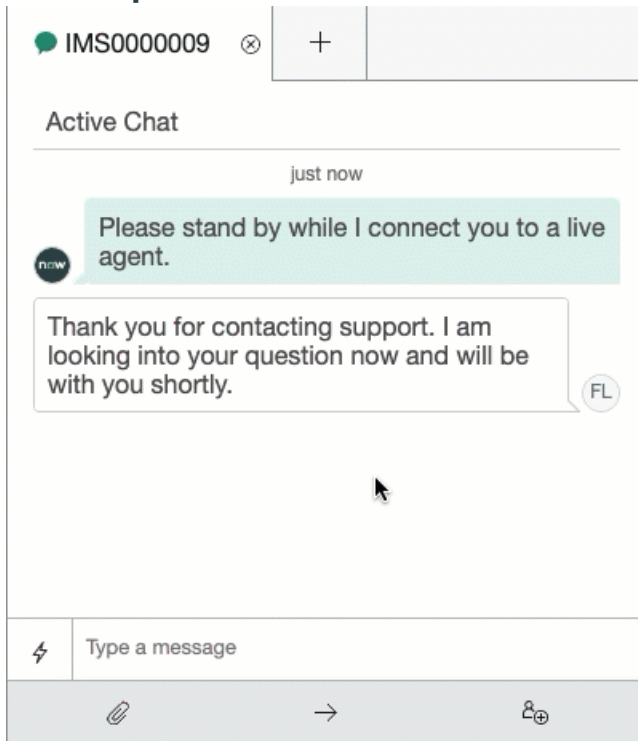
An agent can also initiate a queue transfer by selecting the lightning bolt icon and then selecting **/tq** from the menu.

Initiate a queue transfer from the quick action menu



Alternatively, an agent can transfer to another queue by selecting the arrow button (→) on the toolbar.

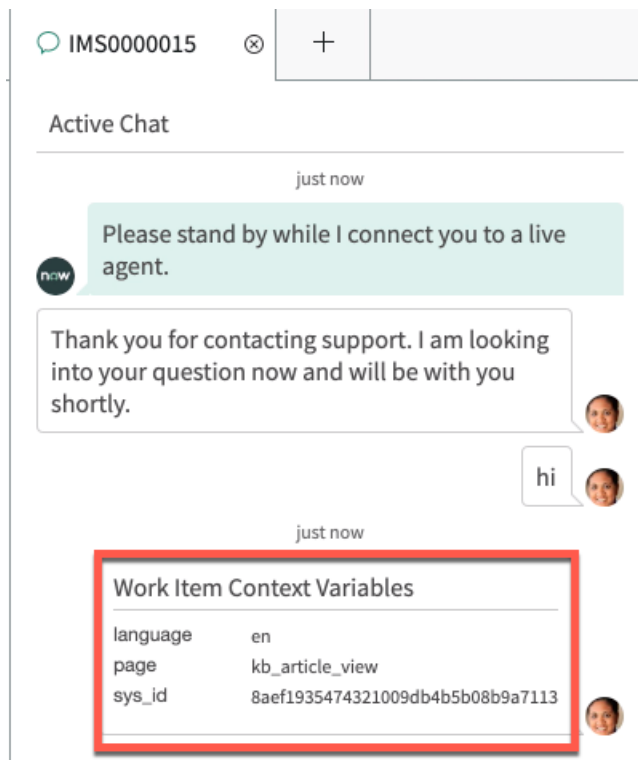
Initiate a queue transfer from the toolbar



Note: Agents must have the quickactions_user role to use quick actions.

Display chat context details

An agent can view the context relevant to a chat interaction. An agent can use a context quick action to show a card with context variables: sysparm_portal, sysparm_page, table, sys_id, and sysparm_language. The agent can initiate this quick action by entering `/context` in the message field.



Generate a recommended response using Now Assist context menu

An agent can use Now Assist context menu to generate a response to enter in a chat. The agent initiates this quick action by entering `/recommend` in the message input field. An error message appears if it takes too long to generate the recommended response or the LLM server isn't available.

Parameters

Some quick actions require a secondary menu so that agents can further control the quick action. For example, after an agent initiates a queue transfer, the agent must select which queue to transfer to. The items that appear on the secondary menu are called parameters.

The following figure shows that, after an agent inserts a quick action to transfer to another queue, the agent sees a list of available queues. The default parameters for the quick actions are queues that are available to agents.

← Available Queues	
Billing Support QUE91005	2
Customer Service QUE91002	1
Product Support QUE91003	2
Order Support QUE91004	1
/tg	

To create a quick action that requires a secondary menu, you must define parameters for the quick action. For more information, see [Define a quick action parameter](#).

Automatically displaying topics with Conversation Autopilot

Agents can use Conversation Autopilot to display Virtual Agent topics during Agent Chat conversations. While the requester interacts with the Virtual Agent topics, agents can multitask and work on other items. Conversation Autopilot is not available for HR Service Delivery (HRSD).

While talking to a requester in an Agent Chat conversation, agents can start Conversation Autopilot by using autopilot quick actions to invoke Virtual Agent topics. Depending on the information entered by the requester, agents can search for a specific Virtual Agent topic and display it with parameters. The requester views the topic and responds as needed and Virtual Agent captures the requester's input.

Note: For the best experience, enable the Agent Chat setting that turns on system messages during autopilot. For details, see [Setting up Agent Chat](#).

Configuring Autopilot

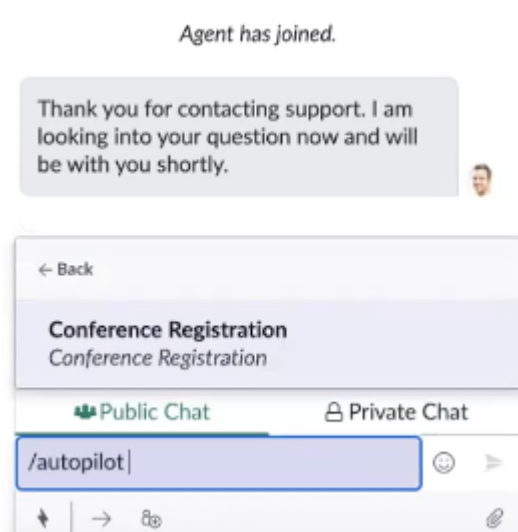
You must have the Glide Virtual Agent plugin and the Agent Chat plugin installed to view and access the quick action for Autopilot. Admins can setup which Virtual Agent topics are available to agents in Agent Chat.

Note: Admins must be able to configure a quick action based on their organization's business need and set it up for agents to use as required.

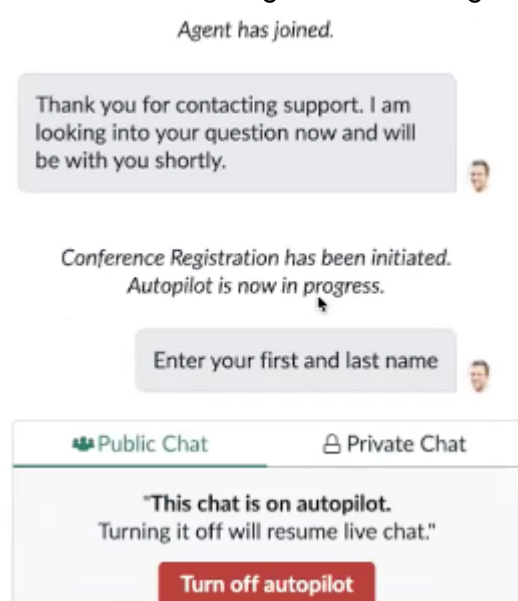
For information on using quick actions in Agent Chat, see [Using quick actions in Agent Chat](#).

Using Autopilot

The agent is able to use quick actions to search for and invoke an Autopilot topic of their choice during their conversation with a requester. The agent can only select Autopilot topics that are relevant to the channel. For example, only topics optimized for SMS are selectable when conversing with a requester who is using SMS.



The agent is informed by system messages when an Autopilot topic has been initiated and ended. These messages can be configured by admins.



While Autopilot is on

While Autopilot is on, the requester can use the rich controls for text but agents see a read-only version of the rich controls rendered to the requester.

When will you be arriving for the conference?

August 2022

S	M	T	W	T	F	S
31	1	2	3	4	5	6
7	8	9	10	11	12	13
14	15	16	17	18	19	20
21	22	23	24	25	26	27
28	29	30	31	1	2	3
4	5	6	7	8	9	10

Select Time

11 : 35 AM

Select

Public Chat

Private Chat

"This chat is on autopilot.
Turning it off will resume live chat."

Turn off autopilot

When Autopilot is in use, public chat with the requester is disabled, but agents can contact other agents and supervisors for help. If Agent Whisper is on, the **Private Chat** tab in Agent Whisper functions normally during Autopilot. While Autopilot is in use, the agent's capacity is not freed up and messaging actions configured by customers are disabled.

When Autopilot is ended

The agent receives a desktop notification in the **Notifications** tab in Workspace stating that the Virtual Agent topic has ended or been completed by the requester. At this point, the agent resumes control of the conversation.

G Tuesday, August 16th 2022, 11:35 am

You are now registered for the conference.

Topic completed successfully. Autopilot is now off.

Public Chat

Private Chat

Message visible to everyone

👤 → 📎

Conveying emotions using emojis

Use emojis in Agent Chat conversations to convey emotions to requesters. This helps requesters feel like they're having a conversation with a friend and builds customer brand loyalty.

Before you begin

Emojis must be enabled before agents can use them in Agent Chat. See [Setting up Agent Chat](#) for instructions on enabling emojis.

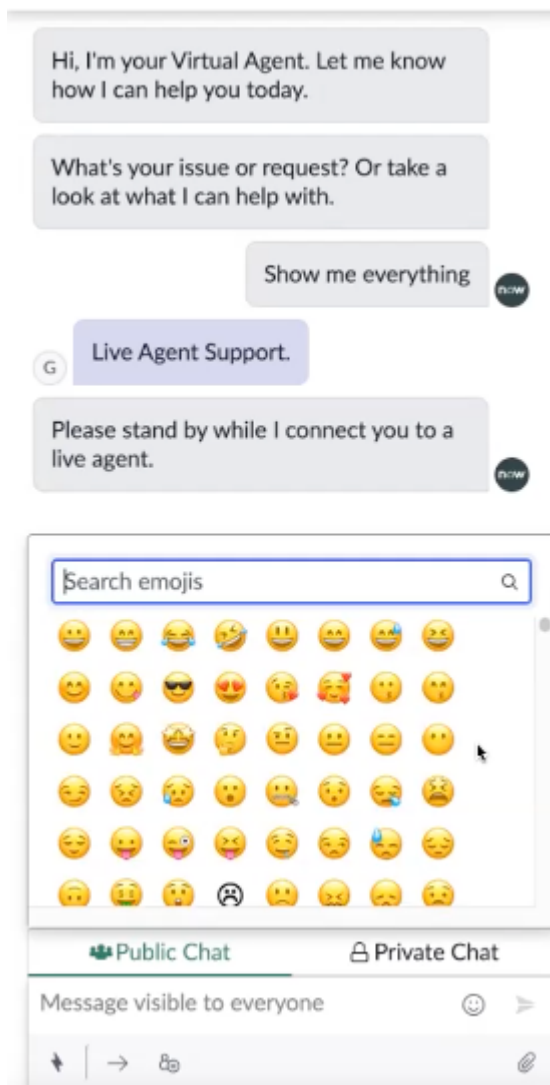
Role required: admin

Procedure

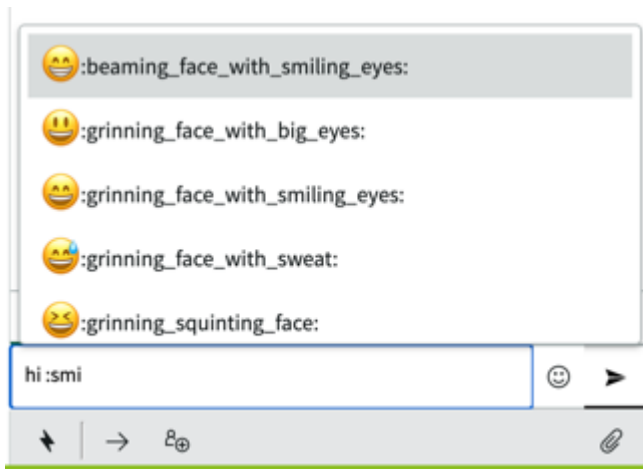
1. While in an active chat, there are several ways to include an emoji:

- Select the Insert emoji icon  to display the emoji palette. Then select an emoji from the palette or search for an emoji by entering a name in the search bar of the emoji palette.

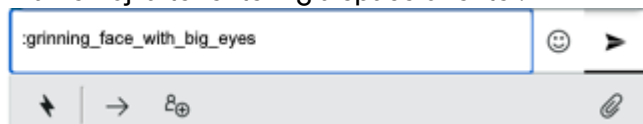
Active Chat



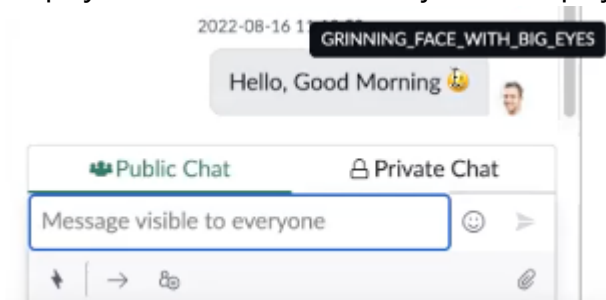
- Enter a colon followed by the first few characters of the emoji name. When the pop-up menu of emojis displays, select one.



- Enter a special character combination or short name which is automatically converted into an emoji after entering a space or enter.



- Display the short name of an emoji as a tooltip by positioning the cursor over the emoji.

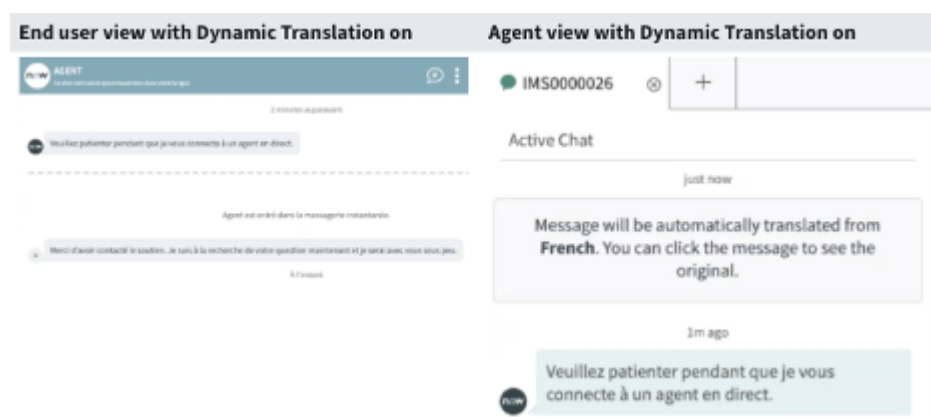


Conversing in a different language with Dynamic Translation for Agent Chat

Use Dynamic Translation for Agent Chat (DTAC) to have a chat conversation with a requester who uses a different language.

Translation indicators

When DTAC is enabled, both the agent and the requester will see a banner at the top of the chat conversation that indicates the conversation is being translated. Bilingual agents can determine if they're fluent enough in the requester's language to temporarily turn off DTAC for individual chat sessions as needed.



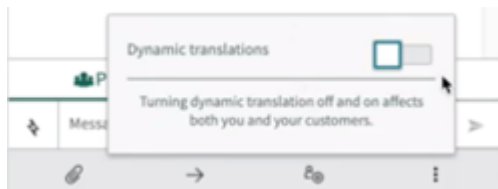
Dynamic translations control for bilingual agents

When a bilingual agent accepts a chat conversation to which they're fluent in the requester's language, DTAC is not necessary. With the Dynamic translations chat session control, agents can turn off DTAC for individual chat sessions.

Agents can select the ellipsis (⋮) at the bottom of the chat window then select the **Dynamic translations control** to the off position.

When DTAC is switched off, a notification displays at the top of the agent's and the requester's chat windows, highlighting the change in status, for this chat session.

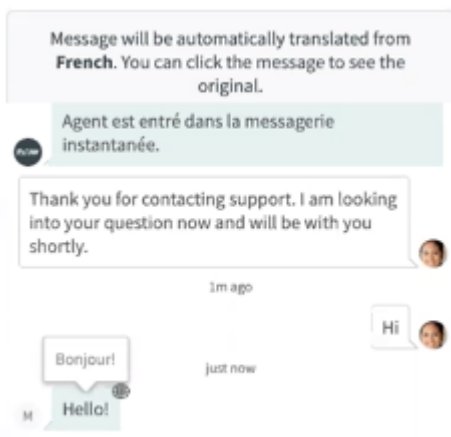
The translation capability is switched off for both the requester and the agent, for this specific chat session. The selection in one chat session does not affect the selection in other chat sessions and the agent can turn DTAC off and back on within one chat session.



Troubleshoot translated messages

Translation services do not understand idioms or jargon and it is possible that some user messages are lost in translation. You can use the translation-indicator icon to view the requester's original message and look up its meaning as needed.

You can navigate to the individual chat message and select the translation-indicator icon (🌐) to see the requester's original, untranslated message.

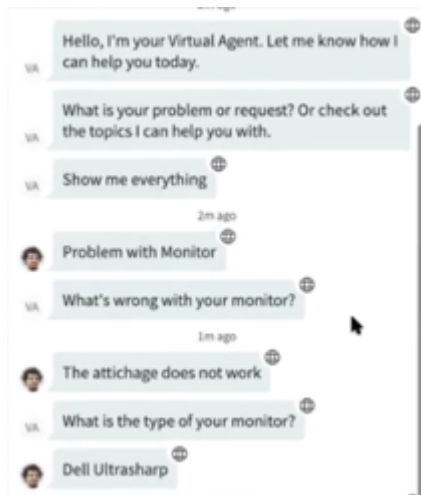


Translated chat transcripts

Two chat transcripts are generated at the end of each DTAC chat session. One for the requester to download and save in the requester's language. The other is the agent's transcript which contains the text as seen in the agent's chat window. If an agent used DTAC in part of the chat, the transcript contains both the translated and non-translated text. For more information, see [Chat transcript downloads for requesters](#).

Chat transferred from Virtual Agent

Once you accept a chat from a requester, you can see the chat history between the Virtual Agent and requester in their preferred language for more context.



Attachments within DTAC

When inserting an attachment into a chat, DTAC does not translate the file name or the contents of the attachment.

Sending an agent-initiated message during an async chat

Send a message to a requester even when the requester isn't online while working on issues in Workspace. A long-running conversation between an agent and a requester who are not online concurrently is called an asynchronous, or async, chat.

Before you begin

Role required: admin

Procedure

1. On the Interaction record, select **Compose Message**.
The Compose message form displays for interactions that aren't Chat or Messaging.
2. On the form, fill in the fields.

Compose Message form

Field	Value
Channel	Messaging channel with which agents can initiate messages to connect with requesters. For async chat, select mweb .
From	ID of the agent who is sending the message.
To	ID of the requester who will receive the message.
Message	Enter the message you want to send to the requester.
Attachment	Select Attach File to specify a file to attach to the message.

3. Select **Send**.

Related topics

[Asynchronous chat](#)

[Configure asynchronous chat for the web channel](#)

Using the action bar in chat interaction records

Use the action bar in chat interaction records to access a range of actions that help manage and respond to records efficiently.

The action bar includes the following actions:

- End Chat: Enables an agent to end the chat conversation.

Note: In contact-center-as-a-service (CCaaS) powered chats, End Chat is replaced with Leave Chat, which enables an agent to leave the chat conversation without ending it for other agents.

- Discuss: Opens a pop-up window to start a Sidebar discussion.
- Create Case: Creates a new case record.
- Save: Saves changes to the interaction record.
- More Actions: Perform additional actions such as creating a request or associating a record.
 - Create Consumer: Creates a new Consumer record in a subtab.
 - Create Request: Creates a new Request record in a subtab and adds the record to the Related Tasks related list.
 - Associate Record: Opens a new record in a subtab that the agent can use to link a record to the current interaction. This new record is displayed in the Related Tasks related list.

Note: The specific actions available are determined by factors such as the user role and other attributes.

Agent Chat reference

Reference topics provide descriptions about Agent Chat.

Domain separation and Agent Chat

Domain separation is supported in the Agent Chat application. Domain separation enables you to separate data, processes, and administrative tasks into logical groupings called domains. You can control several aspects of this separation, including which users can see and access data.

Support level: Standard

- Includes all aspects of **Basic** level support.
- Application properties are domain-aware as needed.
- Business logic: The service provider (SP) creates or modifies processes per customer. The use cases reflect proper use of the application by multiple SP customers in a single instance.
- The instance owner must configure the minimum viable product (MVP) business logic and data parameters per tenant as expected for the specific application.

Sample use case: An admin must be able to make comments required when a record closes for one tenant, but not for another.

For more information on support levels, see [Application support for domain separation](#) .

Requirements

All domain support features require the Domain Support - Domain Extensions Installer [com.glide.domain.msp_extensions.installer] plugin. For details, see [Request domain separation](#) .

Configuring Agent Chat with domain separation

Domain separation allows organizations to segment their data and processes based on specific criteria such as business unit, geography, or other factors.

A service provider (SP) has one chat setting (Agent Chat) record in the global domain when the instance is provisioned.

The admin of a subdomain can specify Agent Chat settings for that subdomain, such as work queues and assignment groups. For details, see [Setting up Agent Chat](#).

When a user logs into a subdomain, a seeded Agent Chat settings record is created.

When using domain separation in Agent Chat, keep the following points in mind:

- Domain Separation applies to both the agent side and the customer side of the chat. This means that agents will only be able to access chat records and data that are in their domain, and customers will only be able to see chat records that are associated with their domain.
- Agent Chat records are automatically tagged with the domain of the agent who handled the chat. This ensures that the chat record is associated with the correct domain, and that agents can only view chat records that are associated with their domain.
- When an agent is assigned to a chat, the chat is automatically assigned to the domain of the agent. This ensures that the chat record is associated with the correct domain from the start.
- If an agent needs to transfer a chat to another agent or escalate the chat to a higher level of support, the chat is transferred to an agent who is in the same domain as the original agent. This ensures that the chat record stays within the correct domain.

Building a report to track the number of help requests

Create a report that tracks the number of help requests.

Before you begin

Role required: admin

Procedure

1. Activate the Interaction Events business rule.
 - a. Navigate to **Interaction > All**.
 - b. Right-click the **Number** heading.
 - c. Click **Configure > Business Rules**.
 - d. On the Business Rules screen under the **Name** column, click **Interaction Events**.
 - e. On the Business Rules - Interaction Events screen, select the **Active** check box if it is not already selected.
 - f. Click **Update**.

2. Create a new metric definition for Interaction "help requested" on the Metric Definition - New record screen by entering **Interaction** in the **Table** field and selecting **Help Requested** from the **Field** list.
For detailed steps on creating metric definitions, see [Define a metric](#) .
3. Create a new chat as a requester.
4. Accept the same chat as an agent.
5. While still logged in as that agent, enter the quick action `/help`.
6. Navigate to **Metrics > Instances** and record the ID of the single instance record created for `help_requested=true`.
7. Navigate to the Admin window and open the interaction from the previous step.
8. Join the conversation (either privately or publicly).
9. Navigate to **Metrics > Instances** and observe that one instance record was created for `help_requested=true`.
For more information about using the Metric Instance Table, see [Metric instance](#) .

Agent Chat Interaction related records

The Interaction related record [`interaction_related_record`] table tracks tasks and Knowledge Base (KB) articles that are created, updated, or viewed in the context of a particular interaction. The Interaction related record table references the interaction, related document, whether the relationship is to a task or KB article, and what type of operation on the related document formed the basis for the relationship.

Interaction related record table overview

The Interaction related record table tracks task and KB article records that were created, updated, or viewed in a particular interaction. The Interaction related record table records

- the interaction
- the related document
- whether the relationship is to a KB article or a task
- what type of operation on the related document formed the basis of the relationship

Creating Interaction related records

Interaction related records can be created manually or automatically.

- Manually - records are manually created via an Interaction related record form. The form is opened on a workspace through an Associated record UI action. When this form is used to create the relationship, the operation field is not set to any value.
- Automatically created via business rules
- Automatically created via client calls from a workspace

Configuring automatic creation of interaction related records

You can update or create entries in the Interaction relationship policy [`interaction_relationship_policy`] table to manage which types of operations result in the auto-creation of interaction related records. These determine whether interaction related records may be created for each of the following actions:

- Insert - record created from workspace in the context of the interaction.
- Update - record updated from workspace in the context of the interaction.

- Mention - record number mentioned in a chat, resulting in the rendering of a record card.
- Open - record opened in workspace in the context of the interaction.
- Unknown - interaction related record created by automated logic other than via agent actions from workspace.

Two policies that are included with the base system govern behavior for relationships to the task and kb_knowledge table. To override behavior for a particular task type, you can add an additional entry for the appropriate Document

Interaction Relationship Policies

for text

Search

Actions on selected rows...

New

All

☐	Document table	Create on insert	Create on update	Create on mention	Create on open	Create on unknown operation
	task	true	true	true	false	true
	kb_knowledge	true	true	true	true	true

table.

The com.glide.interaction.autocreate_relationships property is set to true by default. If it is set to false, only relationships created via the interaction_related_record form are created. All others are blocked by the "Block relationship autocreation" business rule.

Sidebar

Agents can collaborate with others through Sidebar discussions, either as standalone conversations or linked to a Workspace record.

https://player.vimeo.com/video/995464032?h=eff269086e&badge=0&autoplay=0&player_id=0&app_id=58479

Get started

Explore



Learn about Sidebar concepts and features.

Configure



Install and configure Sidebar and activate relevant plugins.

Use



Use Sidebar to help agents have discussions with others to solve issues faster.

Reference



Get Sidebar details for domain separation.

Troubleshoot and get help

- [Search the Known Error Portal for known error articles](#) 
- [Contact Customer Service and Support](#) 

Exploring Sidebar

Using Sidebar, agents can have real-time collaboration with others as a standalone conversation or based around a Workspace record. These Sidebar discussions facilitate the exchange of information and knowledge to help resolve issues faster and with higher-quality outcomes.

Sidebar overview

An agent can initiate a Sidebar discussion as a standalone conversation or from a Workspace record. Agents enter preliminary information and context and adding subject matter experts. For Sidebar discussions created from a Workspace record, the agent can create multiple discussions for a record.

Sidebar workspaces

Sidebar is supported in these workspaces:

- Customer Service Management (CSM) Configurable Workspace.
- CSM Manager Workspace
- Human Resources (HR) Agent Workspace
- IT Service Management (ITSM) Manager Workspace
- Security Incident Response Workspace
- Vendor Management Workspace

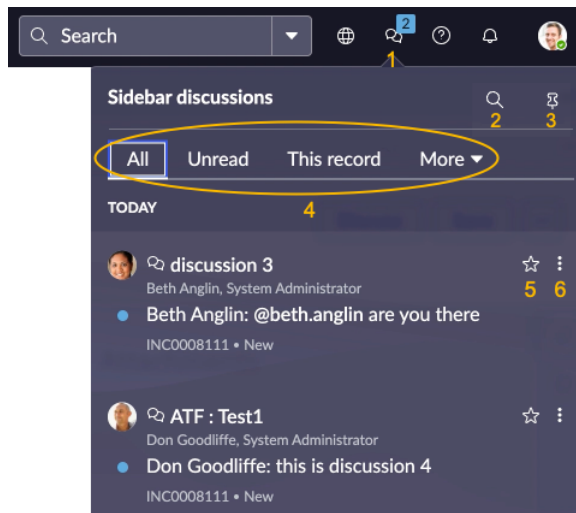
For information on adding the **Discuss** button to a supported workspace, see [Adding the Discuss button](#).

For information on adding the **Discuss** button to any workspace not listed (such as the Service Operation Workspace), see [KB article KB1213249](#) .

Sidebar components

Sidebar discussion panel

When you select the Sidebar discussion icon , the Sidebar discussion panel appears:



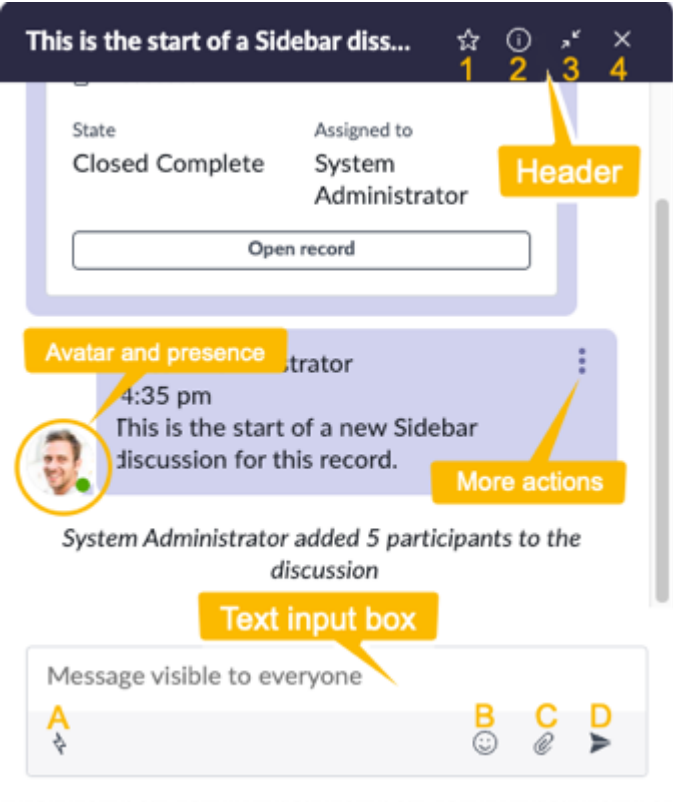
The Sidebar discussion panel includes:

Icon	Description
1 -	This is the magnifying glass. Display Sidebar discussions dialog. If a number in a blue square appears, the number indicates the number of Sidebar discussions that are currently active.
2-	Search within the Sidebar discussions. When you select the Search icon, the Search field appears and you can enter the text you want to locate. The search results display below the search field and are grouped by user message then file name. Select Cancel to clear the search field and return to the Sidebar discussion. You can filter the search results by discussions, messages, and attachments and sort by most relevant or date. To use the Search KB quick action, enable AI Search. For more information, see AI Search and AI Search Availability [KB0867751].
3 -	Permanently pin the menu to the side of the screen.
4 -	Select what types of discussions that you want to view: • All - all discussions. • Unread - all unread discussions. • This record - all discussions related to the record that's currently open in the background. The most recent information displays and is updated when a new message is received, there's an unread message, or a new discussion is created for the record. You can also create discussions for the record by selecting New discussion. • Mentions - discussions that mention you with @yourusername. • Favorites - discussions that you marked as favorites.
5 -	Marks the Sidebar discussion as a favorite. Discussions that have been marked as favorites display under the Favorites tab. You can undo a discussion as a favorite by selecting the star icon again.
6 -	Displays options for the discussion:

Icon	Description
	- Dismiss discussion - close the discussion dialog (but don't exit the discussion). - Leave discussion - exit the discussion.

Docked chat windows

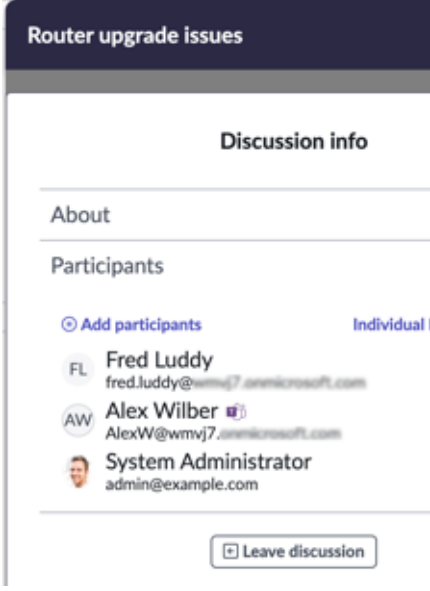
You can access multiple Sidebar discussions at the same time using the docked windows feature. Docked chat windows include these features:



Header icons

Icon	Description
1 -	Marks the Sidebar discussion as a favorite. Discussions that have been marked as favorites display under the Favorites tab. You can undo a discussion as a favorite by selecting the star icon again.
2 -	Opens the Discussion info panel that includes the About submenu, Participants submenu, and Leave

Header icons (continued)

Icon	Description
	discussion button. On the About submenu, you can view information about the discussion. On the Participants submenu, you can add and remove participants. If you want to exist the discussion, select Leave discussion. For a standalone discussion, select the drop-down arrow next to the About submenu and select the Link to record to link the discussion to a record.
3 - 	Collapses the discussion so it displays only as a tab at the bottom of the screen.
4 - 	Closes the window.

User avatar and presence

User avatar and presence	Description
	Displays the user's avatar and presence (online status). The dot indicates the user's presence depending on whether they're logged in to the platform: • Green dot - user is logged in. • No dot - user isn't logged in. • Orange dot - user recently logged out. If Sidebar and Microsoft Teams are integrated, Microsoft Teams users are differentiated from Sidebar users with a Microsoft Teams  icon. If Sidebar and Slack are integrated, Slack users are differentiated from Sidebar users with a Slack icon ().

More actions icon

Icon	Description
	Display additional actions for this message including: • Post to activity stream • Remove from activity stream • Edit message • Delete message

Text input box icons

Icon	Description
A - 	Access base system or custom quick actions. The agent can start a KB article search by selecting the quick actions icon and then entering <code>search - kb</code>. The agent is prompted to search for the relevant KB article. Based on the search and the term that the agent enters, the agent is able to view the KB articles that match the search term. The agent can then select the KB article and include it in the discussion. The KB article is displayed as a record card in the Sidebar discussion. The KB article search is available with the base system. You can summarize a discussion by entering the <code>/summarize</code> quick action.
B - 	Display the emoji menu so you can add emojis to the discussion.
C - 	Add attachments to the current discussion so they can be shared with others in the discussion. You can drag files and select the send arrow icon or you can use the attachment icon.
D - 	Send the message.

If you minimize a docked window, it appears as a tab in the overflow menu at the bottom of the screen. Hovering over a minimized docked window shows the record number and chat title to help identify the content. You can select any tab to access that discussion again. The overflow menu can hold up to 25 docked windows and this limit is configurable. If there are more docked windows than can be displayed

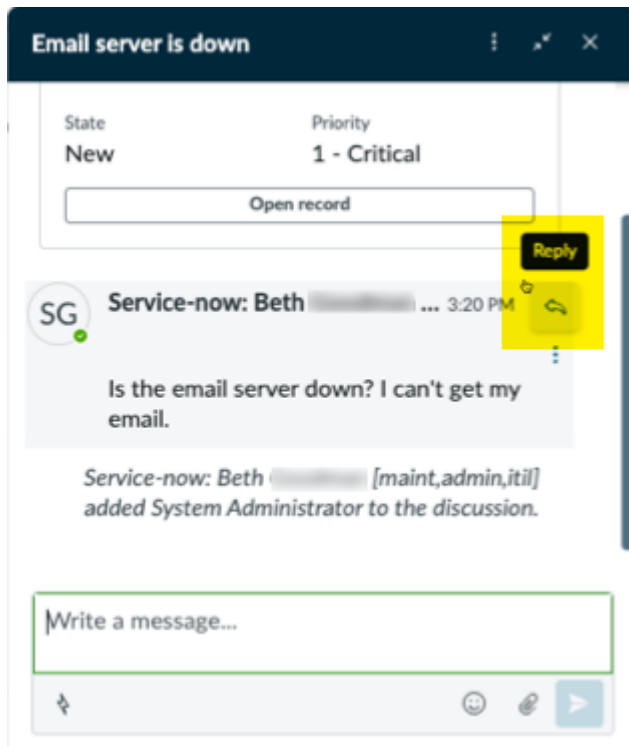
as tabs in the overflow menu, a tab with a number indicates how many extra docked windows aren't displayed.

Threaded replies

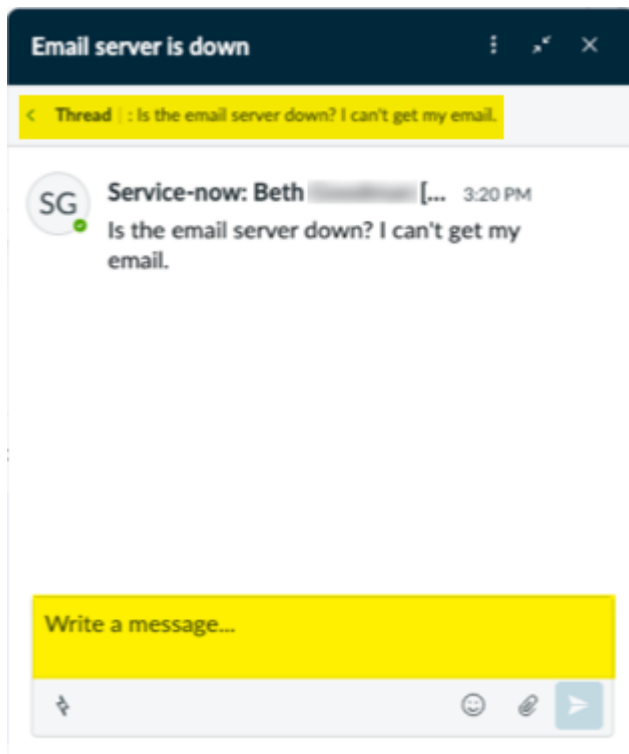
Use threaded replies to keep related messages grouped within Sidebar discussions. When you respond using a threaded reply, your message is added to the specific message you're replying to, rather than the main discussion.

To start a threaded reply to a message:

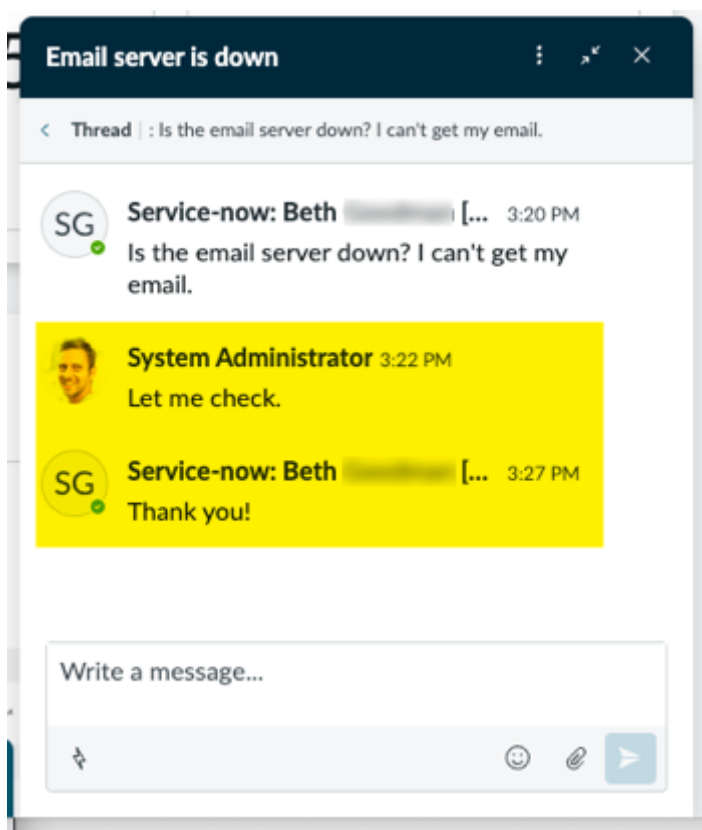
1. Select reply arrow (↩) next to the message you want to reply to:



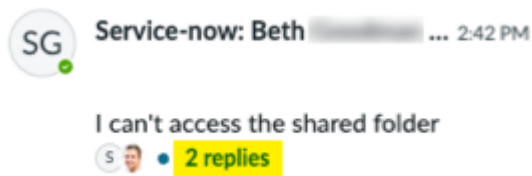
2. The panel displays "Thread" followed by the discussion subject. Type your message in the text input box:



3. Select the send arrow (➤).
4. Your messages appear under the parent message:



5. If threaded reply has multiple messages, you can expand them to view all of the messages or you can collapse them and the number of messages displays instead.



- Note:** If you delete a message with threaded replies, a warning appears letting you know that all its threaded replies will also be deleted.

Activity stream and Sidebar

To enable agents to post Sidebar discussions to the activity stream, you must integrate Sidebar with the activity stream. For instructions on integrating Sidebar with the activity stream, see [Integrating Sidebar and activity stream](#). For information on using Sidebar with the activity stream, see [Activity stream in Sidebar](#).

Installing and configuring Sidebar

The Sidebar configuration settings are available via the Sidebar tab under **Conversational Interfaces > Settings**. For instructions, see [Installing Sidebar](#). After Sidebar is installed, see [Configuring Sidebar](#) for instructions on configuring the admin settings.

Using Sidebar

For information on how to use Sidebar, see [Using Sidebar](#) for more information.

Key Sidebar features include:

- Custom discussion buttons
- Core UI forms with Sidebar
- Sidebar unread conversation badge count
- Docked chat window
- Favorite discussions
- Discussion information panel
- Discussion participant suggestions
- Quick actions
- Integration with activity stream
- Integration with AI search
- Drag-and-drop file sharing
- Emojis
- Mentioning a user with @

Using Sidebar and Microsoft Teams

After Sidebar and Microsoft Teams are integrated, users of both applications can collaborate with each other. For more information on integrating Sidebar with Microsoft Teams, see [Sidebar and Microsoft Teams](#).

Core UI

You can create Sidebar discussions on interaction records from Next Experience Core UI.

Domain Separation

For information about domain separation in Sidebar, see [Domain separation and Sidebar](#).

More information

To learn more, see the [Now learning course on Sidebar](#).

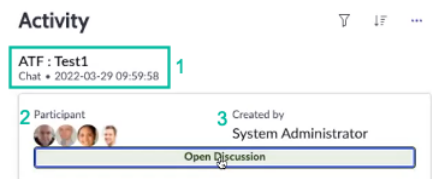
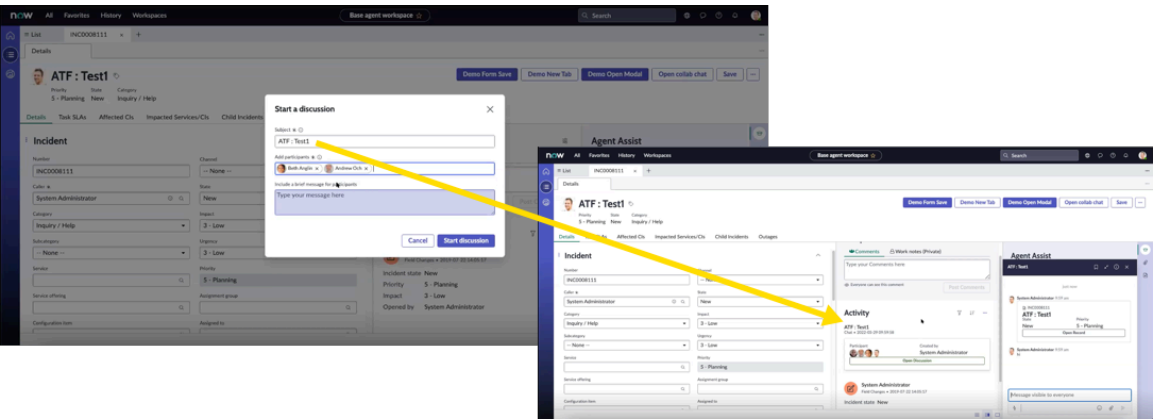
Activity stream in Sidebar

If Sidebar is integrated with the activity stream, you can create links to discussions and post discussion messages directly to the related record as an activity stream record.

Note: Sidebar and discussion tiles are available only with Next Experience and not in Core UI.

When a Sidebar discussion is created, a corresponding Sidebar discussion tile is automatically added to the activity stream. Users who have access to the record can also access the discussion from the activity stream. Sidebar users can post messages from discussions into the activity stream as Sidebar posted messages. These messages can be posted to the activity stream as editable entries that can be added and removed as necessary. For generalized information about activity streams, see [Activity streams](#).

When you start a Sidebar discussion, a tile corresponding to the discussion is automatically added to the activity stream.



Sidebar tile

1	Sidebar discussion name, type of conversation, date/time discussion started.
2	Profile pictures of the participants (if there are more than 5 participants, then a badge

Sidebar tile (continued)

	displays the number of additional participants whose profile photos can't be seen.)
3	Name of user who created the Sidebar discussion.

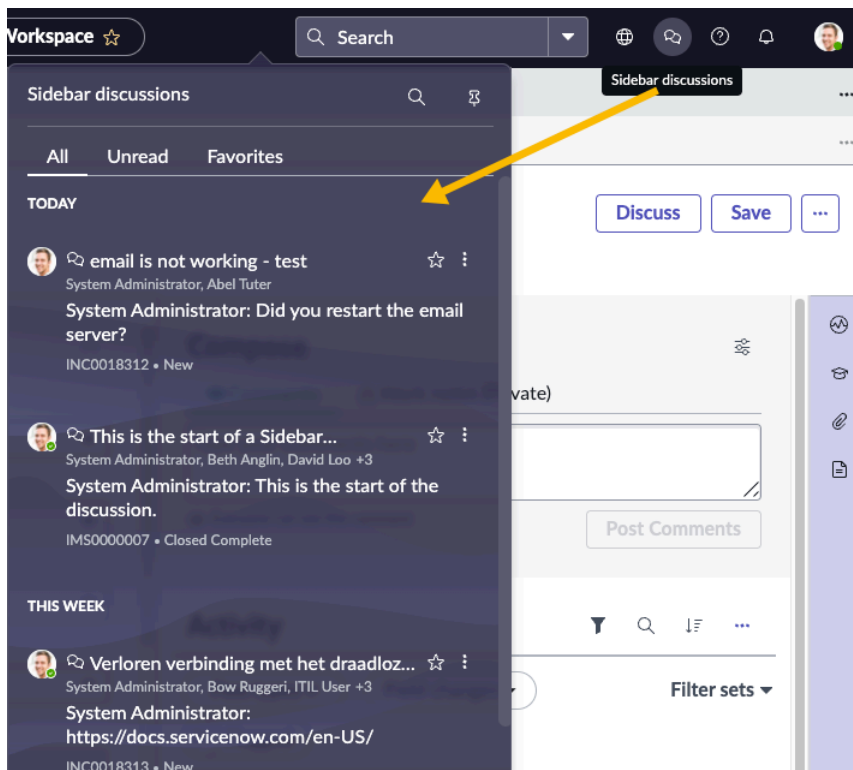
The primary record card appears as part of the activity stream and displays the following:

- Record ID
- Short description
- Type
- State
- Assigned to
- Link that opens the record
- Priority (for task-based record cards)



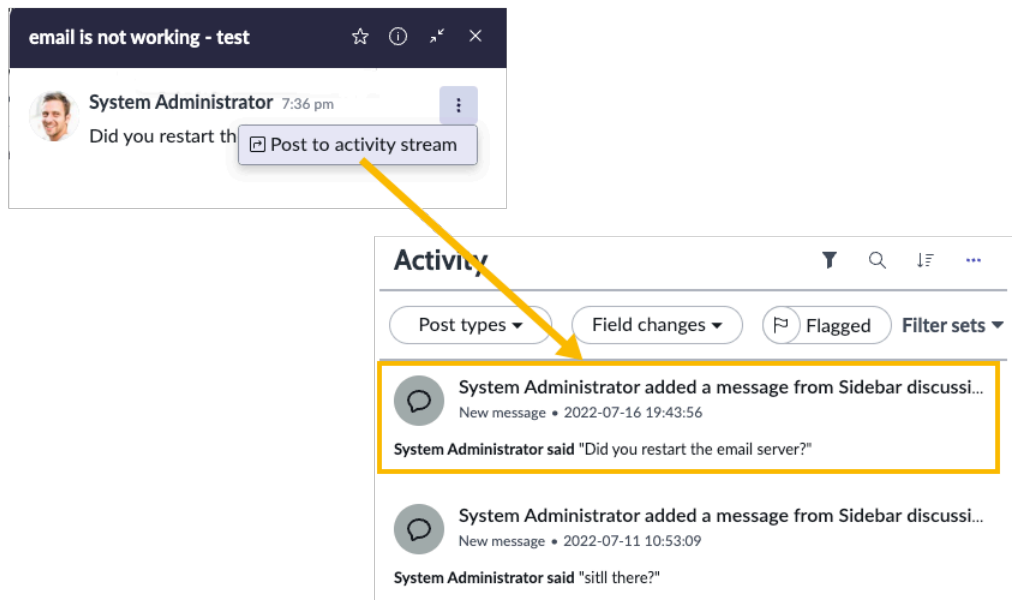
Starting a discussion

If you select **Open Discussion**, then the Sidebar panel opens and displays the Sidebar discussions. Customers and non-fulfiller roles don't have access to the record don't have access to the conversation tile, similar to work notes.

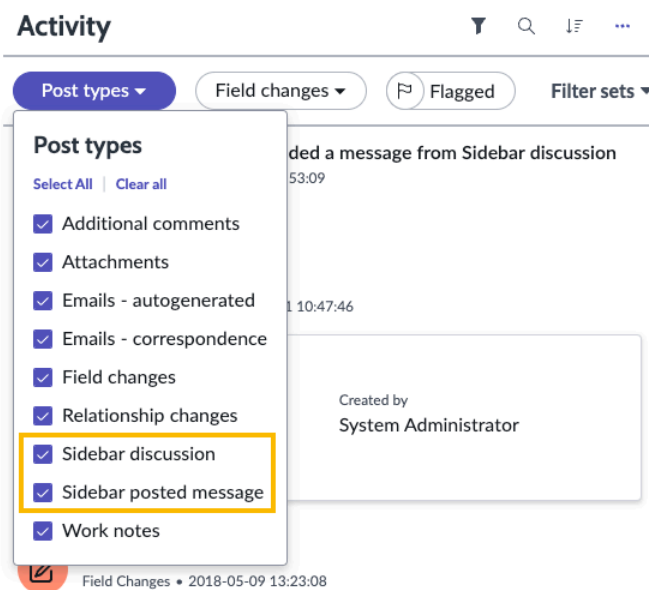


Posting a message

You can select any message in the Sidebar discussion panel and post it to the activity stream. When you post a message from the Sidebar discussion to the primary records activity stream, the most important information is tied directly to the record. This enables you to access collaborative conversations from a record so that you can add yourself to the discussion and view the conversation history.

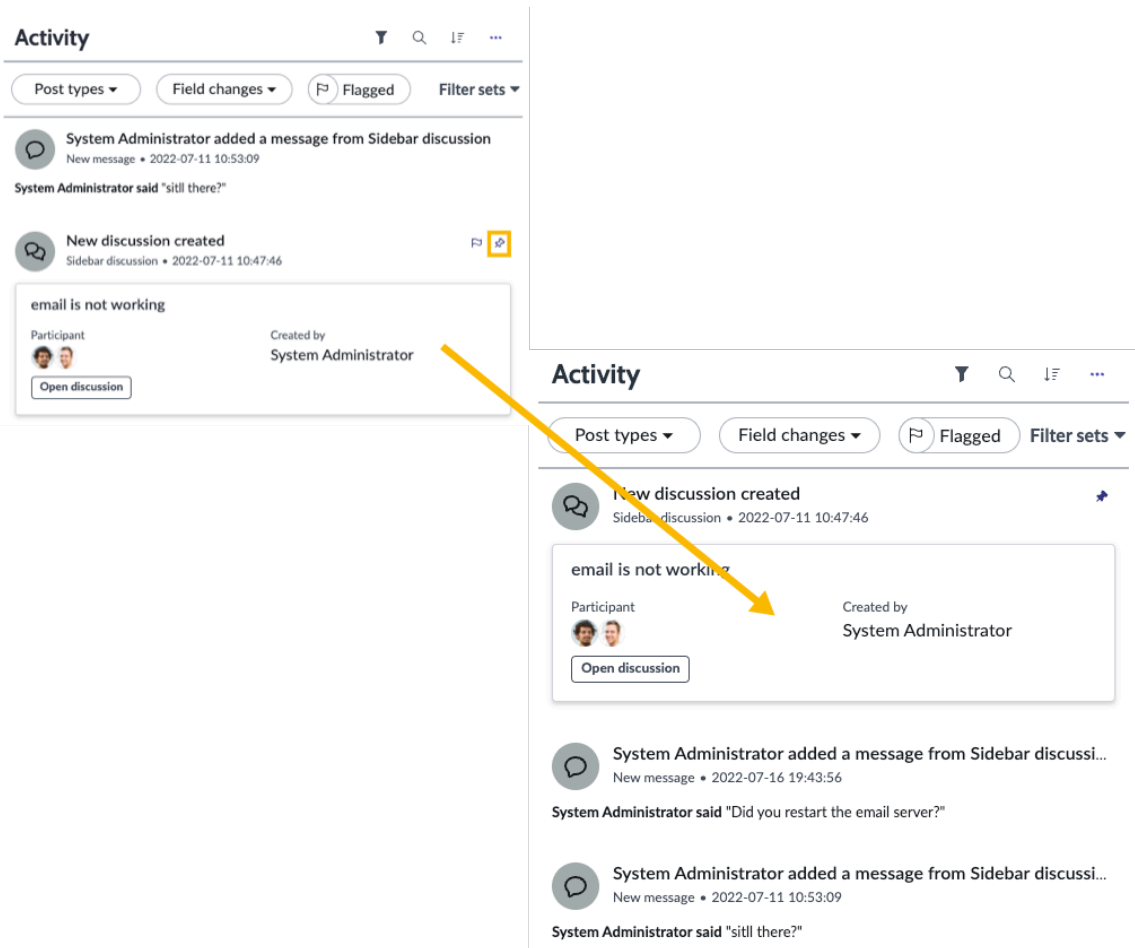


If Sidebar messages posted to the activity stream aren't appearing, ensure **Sidebar discussion** and **Sidebar posted message** are selected in the activity stream filter.



Pinning a discussion tile

To pin a discussion tile in the activity stream, select the pushpin icon to pin a discussion tile to the activity stream. Pinning a discussion tile ensures that the discussion always stays at the top of the activity stream.



Editing or Deleting a message in Sidebar

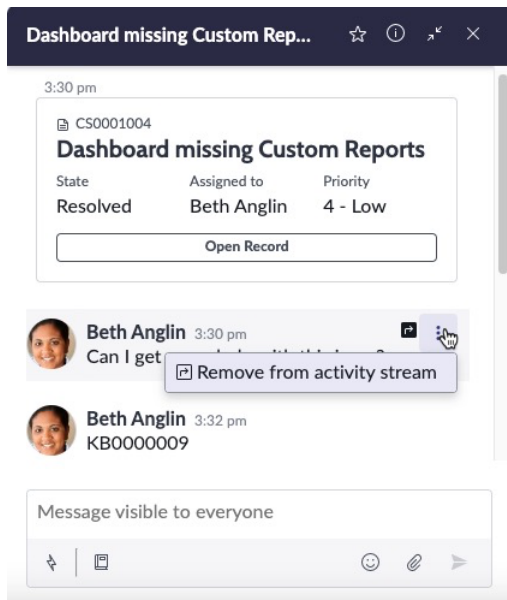
If you edit a message in a Sidebar discussion that was already posted to the activity stream, then any changes that you made to the message are reflected in the activity stream.

If you posted a message with an attachment in a Sidebar discussion and the message was already posted to the activity stream, any changes made to the attachment will be reflected in the activity stream. For example, if you post a message with an attachment in a Sidebar discussion and it's posted to the activity stream and you later delete the attachment and replace it with a different one, the activity stream displays the new attachment.

If you delete a message in a Sidebar discussion after the original message was already posted to the activity stream, then the message is removed from the activity stream.

Deleting a message from the activity stream

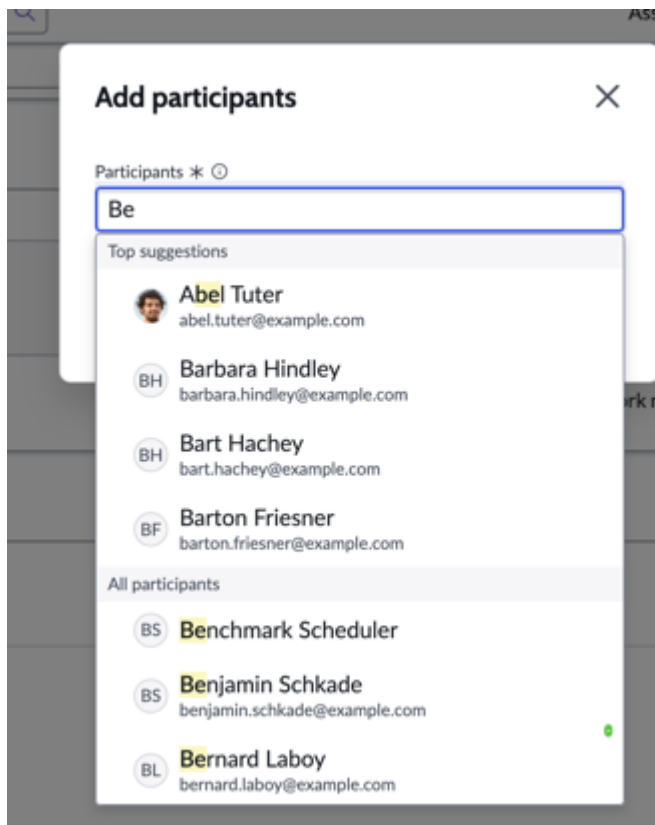
To remove a message from the activity stream, select the **More Actions** menu for each chat bubble within a Sidebar discussion and then select **Remove from activity stream**.



Participant suggestions in Sidebar

Activate Participant suggestions to display a list of users and user groups who may be helpful additions to a Sidebar discussion.

When you add participants to a Sidebar discussion, a drop-down list displays users and user groups that can be added. If Participant suggestions are activated, the top of the list displays "top suggestions." The participant suggestions include users or user groups who may be helpful due to their related expertise and also have access to the record.



Requirements

Participant suggestions have the following requirements:

- **Plugin requirements:** To access the base Participant suggestions service, you must download the Participant suggestions plugin (com.glide.sn_participant_suggestions). Participant suggestions are optimized only for interactions, tasks, and the task's child tables. If you want to receive participant suggestions for any other table, you have to customize the Participant suggestions service. The Participant suggestions plugin works in conjunction with the Sidebar/Omni-Experience Standard feature Set plugin. Both the Participant suggestions plugin and the Sidebar plugin must be installed before you can view the list of suggested users.
- **Lookup table:** The lookup table (suggestion_service_lookup) for participant suggestions applies only to the base Participant suggestion service and not to any third-party participant suggesting services.

Configuring Sidebar

Install and configure Sidebar so agents can have real-time collaboration with others.

Configuration overview

Configuring Sidebar involves installing Sidebar, adding the Discuss button, configuring the Sidebar member query, and configuring participant finder. There are also additional steps if you want to integrate Sidebar with Microsoft Teams.

1. [Install Sidebar.](#)

You can install Sidebar, which is part of the Omni-Experience Standard Feature Set, if you have the admin role.

2. [Set up Sidebar.](#)

Activate and configure options.

3. [Add the Discuss button.](#)

Add the Discuss button to assets that do not have it installed and to custom workspaces where you need to enable Sidebar on an asset.

4. [Configure the Sidebar member query.](#)

Configuring the Sidebar member query causes the participants list on the Start a Sidebar discussion screen to be pre-populated.

5. Enable Sidebar and Microsoft Teams users to communicate with each other by integrating the applications:

- [Sidebar and Teams integration overview.](#)
- [Integrate Sidebar and Microsoft Teams.](#)
- [Enable or configure the Microsoft Teams integration.](#)

Installing Sidebar

You can install Sidebar, which is part of the Omni-Experience Standard Feature Set, if you have the admin role.

Before you begin

Ensure that the application and all of its associated ServiceNow® Store applications have valid ServiceNow® entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#).

Role required: admin

About this task

The following items are installed with Sidebar:

- Plugins
- Roles
- Tables

Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.
2. To find the Sidebar application, enter `omni - experience standard feature set` in the filter criteria.

If you cannot find the application, you might have to request it from the ServiceNow Store.

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

3. In the Application installation dialog box, review the application dependencies.

Dependent plugins and applications are listed if they will be installed, are currently installed, or need to be installed. If any plugins or applications need to be installed, you must install them before you can install Sidebar feature.

4. **Optional:** If demo data is available and you want to install it, select the **Load demo data** check box.
Demo data are the sample records that describe application features for common use cases. Load the demo data when you first install the application on a development or test instance.
5. Select **Install**.
6. If you want to use the Search KB quick action, enable AI Search.
For more information, see [AI Search](#) and [AI Search Availability \[KB0867751\]](#).

Setting up Sidebar

Enabling participant suggestions in Sidebar displays a list of knowledgeable users who can help with the issue. After you enable participant suggestions, you can configure who Sidebar decides is knowledgeable user and which groups have access. After installing Sidebar, activate and configure Sidebar so agents can collaborate with others to resolve issues.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Select **Sidebar** from the left menu.
The Sidebar setting screen titled "Adjust how live agents collaborate to support your users" appears.

Record types

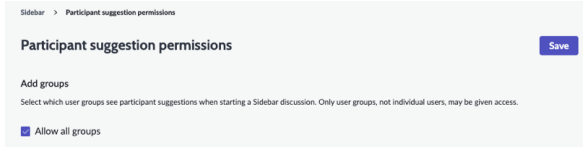
Field	Description
Automatic Task and Interaction record activation	Slide the toggle switch to activate Sidebar discussions for interaction and task-based records.
Custom selection	Select View settings to display the Sidebar Enabled Tables screen.
Requester mapping	Select View settings to display the Sidebar requester mapping . The requester is the person requesting the record and any updates about unread messages in related Sidebar discussions will be sent to the requester.
Discussion subject mapping	To change the default subject for Sidebar discussions, select View settings to display the Discussion subject mapping. This screen enables admins to configure which field populates the discussion title in Sidebar discussions. See Sidebar discussion subject mapping for more information.

Participants

Field	Description
User query	If you select View settings one of the following lists displays: - Users that are automatically pre-filled for the agent to add to a discussion - Users that display when the agent searches for participants to add to a discussion For more details, see Configuring Sidebar member query.

Participant suggestions

Field	Description
Activate	Slide the toggle switch to activate or deactivate participant suggestions. Use the participant suggestions to display a list of users and user groups who may be helpful in the Sidebar discussion. For detailed information on participant suggestions, see Participant suggestions in Sidebar.
Configure settings	If you activate participant suggestions, the Manage drop-down list appears. Select a configuration option: - View Configuration - displays the Participant suggestions table and related lists. - View Permissions - displays the Participant suggestions permissions page where you configure whether participant suggestions display for specific

Field	Description
	groups or all groups. To enable all groups to view participant suggestions, select Allow all groups and then Save. Permissions can't be configured at an individual user level, so ensure that any users you want to be included belong to a relevant group.  For detailed information on participant suggestions configuration settings, see Participant suggestions in Sidebar.

Integrations

Field	Description
Microsoft Teams	If Sidebar isn't already integrated with Microsoft Teams, select Set up to configure the options for the first time. See Enable or configure the Microsoft Teams integration for more information. If Sidebar has already been integrated with Microsoft Teams, the Manage drop-down list appears. Select a configuration option: ○ View configuration (for more information, see Enable or configure the Microsoft Teams integration). ○ View permissions (for more information, see Manage Microsoft Teams permissions) ○ Remove integration - if you select this option, a warning message displays that the integration between Sidebar and Microsoft Teams will be removed. Select Cancel if you don't want to remove the integration or select Remove if you want to remove the integration.
Slack	If Sidebar isn't already integrated with Slack, select Set up to configure the options for the first time. If Sidebar has already been integrated with Slack, the Manage drop-down list appears. Select a configuration option: ○ View configuration ○ Remove - if you select this option, a warning message displays that the integration between Sidebar and Slack will be removed. Select Cancel if you don't want to remove the integration or select Remove if you want to remove the integration.

Sidebar can be integrated with either Microsoft Teams or Slack, it can't be integrated with both at the same time. The messaging system that is currently integrated with Sidebar is indicated with the On icon () next to it.

5. Select **Save**.

Sidebar requester mapping

Create a requester mapping to define the requesting user for a record. This requester is used to identify the main contact for a record and Sidebar sends an email notification to the requester when they have unread messages in their discussions in the last 24 hours.

Before you begin

Role required: admin

Procedure

On the Sidebar Requester Mapping screen, fill in the fields:

Field	Description
Active	Activates the requester-mapping record.
Inherit	Extends and applies the feature to the child tables.
Table	Table to which the requester mapping should be applied.
Order	Order of the configuration. You can define multiple requester mapping configurations for a single table. The system executes the query in the descending order.
Requester	Requester for a record.
Domain	Domain for the record.

Sidebar discussion subject mapping

Create a requester mapping to customize what displays in the subject field of a Sidebar conversation. The subject field defaults to the short description.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Select Sidebar.
3. In the Discussion subject mapping section, select **View settings**.
4. On the Sidebar Discussion Subject Mapping screen, select **New** to create a new record or select an existing record and fill in the fields:

Field	Description
Active	Activates the requester-mapping record.
Inherit	Extends and applies the feature to the child tables.
Table	Table to which the requester mapping should be applied.
Order	Order of the configuration. You can define multiple requester mapping configurations for a single table. The system executes the query in the descending order.
Subject	Subject for a record.
Domain	Domain for the record.

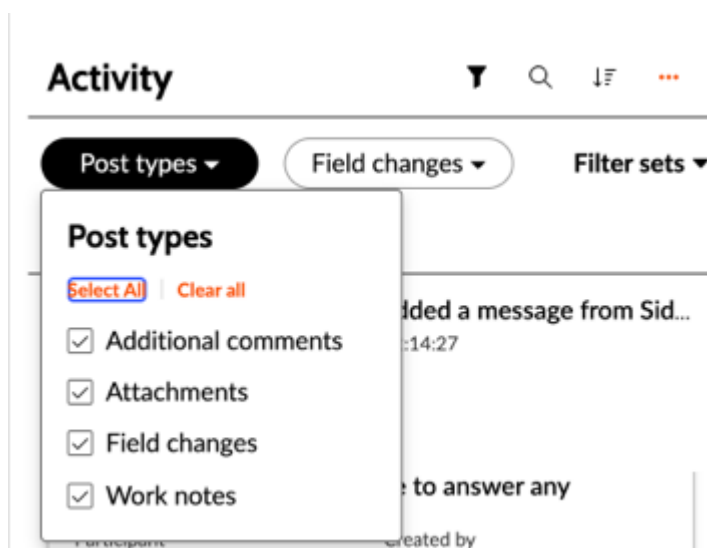
Integrating Sidebar and activity stream

For agents to post Sidebar discussions in the activity stream, Sidebar must be integrated with the activity stream and Sidebar options must display in the post filters. If the Sidebar options don't display in the post filters, you must add them.

Before you begin

Role required: admin

Note: List of post types without Sidebar options:



Procedure

1. If Sidebar was automatically installed in the workspace:

- a. Check the `sys_properties` file for the record `glide.ui.{table_name}_activity.fields` where `{table_name}` is the parent record table name.
- b. If the `sys_properties` file record exists for the record table, check whether it includes **Sidebar discussion** and **Sidebar posted message**. If it doesn't, add **Sidebar discussion** and **Sidebar posted message** at the end of the existing value.

The screenshot shows the 'System Property' configuration page for the record `glide.ui.incident_activity.fields`. The page includes the following fields and options:

- Name:** `glide.ui.incident_activity.fields`
- Application:** Global
- Description:** List of fields (comma-separated) that appear in the activity formatter for Incident.
- Choices:** (Empty text area)
- Type:** string
- Value:** `assigned_to,cmdb_ci,incident_state,impact,priority,opened_by,work_notes,comments,*Email*;*Relations*;*Attachments*;*close_code;*close_notes;*Sidebar discussion*;*Sidebar posted message*`
- Ignore cache:** ☐
- Private:** ☐
- Read roles:** [incident_manager](#)
- Write roles:** [incident_manager](#)

2. If Sidebar was manually added for a record in a workspace:

- a. Check the `sys_properties` file for `glide.ui.{table_name}_activity.fields` where `{table_name}` is the parent record table name.
- b. If the `sys_properties` file record exists for the record table, check whether it includes **Sidebar discussion** and **Sidebar posted message**. If it doesn't, add **Sidebar discussion** and **Sidebar posted message** at the end of the existing value.

System Property
glide.ui.incident_activity.fields

Name: Application:

Description:

Choices:

Type:

Value:

Ignore cache: ☐

Private: ☐

Read roles:

Write roles:

c. If the `sys_properties` file record doesn't exist for the record table, it loads the default filters which contain Sidebar filters.

Note: List of post types with Sidebar options:

Activity

Post types:

Post types

Select All | Clear all

- ☒ Additional comments
- ☒ Attachments
- ☒ Emails - autogenerated
- ☒ Emails - correspondence
- ☒ Field changes
- ☒ Relationship changes
- ☒ Sidebar discussion
- ☒ Sidebar posted message
- ☒ Work notes

Created by System Administrator

Field Changes • 2018-05-09 13:23:08

Adding the Discuss button

To use Sidebar, you must add the **Discuss** button to assets that do not have it automatically installed and to custom workspaces where you must enable Sidebar on an asset. After you add the **Discuss** button, you can create Sidebar discussions.

Before you begin

Role required: admin

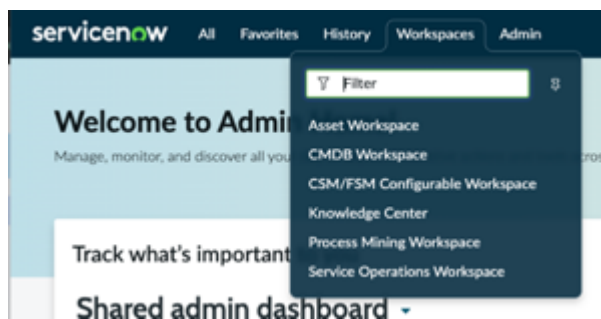
About this task

You don't need to add the **Discuss** button to these workspaces because it's automatically installed for the specified types:

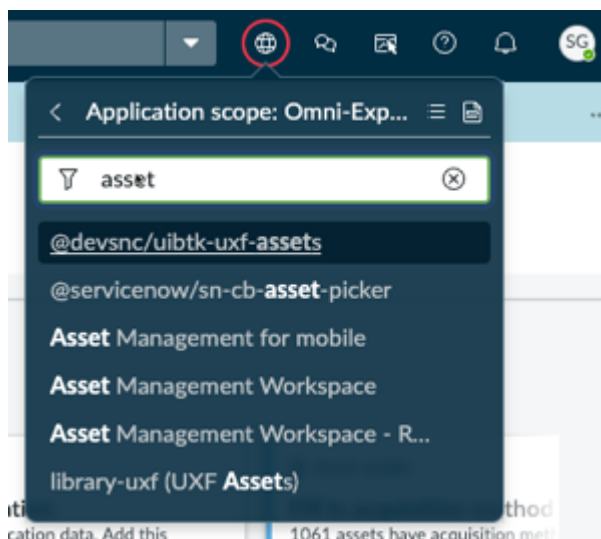
Workspace	Button shipped with base system
CSM Configurable Workspace	Case, interaction
CSM Manager Workspace	Case, interaction
FSM Dispatcher Workspace	Task or work order
HR Agent Workspace (Configurable only)	Case
HR Manager Workspace	Case, catalog task, change request, change task, incident, interaction, problem, request item
ITSM Manager Workspace	Catalog task, change request, incident, interaction, request, request item
Vendor Management Workspace	Change request, CMDB CI outage, core company, service credit

Procedure

1. Identify the table that you want to configure the Discuss button for.
2. Determine whether the table extends the task.
If the table extends the task, then continue. If the table does not extend the task, then see the KB article.
3. From the home screen, select the workspace you want to use.



4. Change the application scope so it matches the workspace.



5. In the navigation filter, enter `sys_ux_form_action_layout_list`. do so the UX Form Actions Layouts screen appears.

Name	Action Config	Active	Description	Order	Specificity	Table	Use layout items only
Standard Change Proposal	SOW Actions	true			30	Standard Change Proposal [std_change_proposal]	false
Publish to Hardware Catalog	Asset management workspace configuration	true	Modal to add Catalog item		10	Product Model [cndb_model]	false
Test	(empty)	true	Test		20	Custom Greetings and Setup [sys_cs_context_profile]	false
Knowledge Feedback Task Record Page Config	(empty)	true	Knowledge Feedback Task Record Page Config		20	Knowledge Feedback Task [kb_feedback_task]	false
Contract Workspace	Asset management workspace configuration	true	To renew and adjust the contracts		10	Contract [ast_contract]	false
Cancel from disposal	Asset management workspace configuration	true	Consumables marked for disposal are put ...		20	Consumable [alm_consumable]	false
Problem	SOW Actions	true	Problem Related Actions		20	Problem [problem]	false
Front-line Case Actions	(empty)	true	Action bar layout for Front-line Case re...		20	Case [sn_customerservice_case]	true
Business process	(empty)	true			30	Business Process [cndb_ci_business_process]	false
Case Actions	CSM/FSM Configurable	true	Default layout for case related actions		30	Case [sn_customerservice_case]	false

6. On the UX Forms Action Layouts screen, select **New**.

UX Form Actions Layout - New Record

Name:

Description:

Application: Asset Management Workspace

Table: Global [global]

Action Config:

Active: ☒

Submit

7. On the UX Forms Actions Layout New record screen, fill out the fields.

- Name
- Description
- Application - this defaults to the workspace you selected.
- Table - from the drop-down list, select **Task**.
- Action Config - select the workspace.
- Active - this checkbox should be selected.

ServiceNow UX Form Actions Layout - New Reco...

Name: Task layout in Asset Workspace

Description:

Application: Asset Management Workspace

Table: Task [task]

Action Config: Asset management workspace

Active: ☒

Submit

8. Select **Submit**.

9. On the UX Form Actions Layouts screen, select the record that you created.

ServiceNow UX Form Actions Layouts

Name	Action Config	Active	Description	Order	Specificity	Table	Use layout items only
CAB Meeting Page	SOW Actions	true		0	30	CAB Meeting [cab_meeting]	false
Schedule span	SOW Actions	true		0	30	Schedule Entry [cmn_schedule_span]	false
Task layout in Asset Workspace	Asset management workspace configuration	true		0	20	Task [task]	true
Knowledge Center Actions	(empty)	true	The action layout for the knowledge cent...	0	10	Knowledge [kb_knowledge]	true
Approval	SOW Actions	true		0	20	Approval [sysapproval_approver]	true
Task layout	(empty)	true		0	10	Task [task]	true

10. On the UX Forms Action Layout screen, from the UX Form Action Layout Items tab, select **Edit**.

ServiceNow UX Form Actions Layout - Task layout in Asset Workspace

Name: Task layout in Asset Workspace

Description: Description

Application: Asset Management Workspace

Table: Task [task]

Action Config: Asset management workspace c

Active: ☒

Update Delete

UX Form Action Layout Items (5)

Label	Table	Item Type	Display type	Variant	Order	Icon	Active
Save		Action	Button	Secondary	-100	(empty)	true
Save		Action	Button	Secondary	100	(empty)	true
Compose Email		Action	Overflow menu	Secondary	100	(empty)	true
Delete		Action	Overflow menu	Primary negative	1,000	(empty)	true
Copy URL		Action	Overflow menu	Secondary	1,000	(empty)	true

1 to 5 of 5

If the Edit button does not appear, check that admin is the same scope as the UX Form Actions layout record.

11. On the Edit Members screen, select **Discuss** from the Collection column.

12. Select the right-pointing arrow () to move **Discuss** to the Task layout column.

13. Select **Save**.

What to do next

If you want to enable Sidebar for non-task tables and add the Discuss button to the layout, see [Adding the Discuss button for non-task tables](#).

After you add the **Discuss** button, you must configure the activity stream. For more information, see [Activity stream in Sidebar](#).

Adding the Discuss button for non-task tables

To use Sidebar in non-task tables, follow this procedure to add the Discuss button to the layout.

Before you begin

Role required: admin

Procedure

1. Enter `sys_declarative_action_assignment.list` in the filter navigator.
2. Filter the Action Label values that contain Open create collab chat modal.
3. Select the record result that you want to edit.
4. From the Open create collab chat modal Action Assignment, scroll down to Related Links and select the UX Add-on Event Mappings tab.
5. Open the UX Add-on Event Mapping record and verify if the Application field uses the Common Page Template.
6. Create a new UX Add-on Event Mapping by copying all field values from the base level Open create collab chat record including Source element ID, Source declarative Action, Target Event and Target Payload Mapping.

7. Search for the custom Parent Macroponent that your organization uses if needed.
8. Select **Save**.
9. If you're unsure of UX Macroponent being used within your Configurable Workspace, you can look up the Definition Record by navigating to UI Builder, selecting Menu > Developer > Open page definition.

Configuring Sidebar member query

Configuring the Sidebar member query pre-populates the participants list on the Start a Sidebar discussion screen.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. From the menu on the CI Admin Experience page, select Sidebar.
The Sidebar settings screen with the heading "Adjust how live agents collaborate to support your users" displays.
3. From the Participants section on the Sidebar settings screen, select **View Settings**.
The Sidebar Member Query screen displays.
4. Do one of the following:
 - To edit an existing query, select the name of the query.
 - To create a new query, select **New**.
5. Fill in the fields:

Field	Description
Name	Name of the member query.
Active	Indicates whether the query is active.
Type	From the drop-down list, select Pre-fill or Search . ○ Pre-fill: Automatically select all members of the assignment group. ○ Search: Add only members of the assignment group.
Order	Order in which the routing condition for this queue is considered, in comparison to other queues.
Application	Type of scoped application.
Condition Mode	Type of condition for routing work items in the query. From the drop-down list, select Advanced or Simple . ○ Simple: Specify a routing condition using the condition builder. ○ Advanced: Specify a JavaScript scripted condition.

Field	Description
Condition table	Displays if you selected Simple for the Condition Mode. From the drop-down list, select the table.
Condition	Displays if you selected Simple for the Condition Mode. Use the Add Filter Condition and Add "OR" Clause buttons to create the condition for the query.
Condition Script	Displays if you selected Advanced for the Condition Mode. Enter a JavaScript script to build the query.
User Query Mode	From the drop-down list, select Advanced or Simple . - Simple: Specify a routing condition using the condition builder. - Advanced: Specify a JavaScript scripted condition.
User Query Condition	Displays if you select Simple for the User Query Mode. Use the Add Filter Condition and Add "OR" Clause buttons to create the condition for the query.
User Query Script	Displays if you select Advanced for the User Query Mode. You can specify a JavaScript script to build the query.

6. Select **Submit**.

Sidebar and Microsoft Teams

Sidebar's integration with Microsoft Teams enables Sidebar users and Microsoft Teams users to communicate with each other from their respective platforms.

Monetization by Microsoft

The Sidebar-Microsoft Teams integration is available as a standard ServiceNow feature, however Microsoft intends to monetize any use of their Microsoft Teams API based on a rate charge per message:

- The rate charge applies each time the Microsoft Teams API is called. Charges apply for messages sent from your ServiceNow instance to Microsoft Teams and vice versa.
- The rate charge doesn't apply to "means to an end" actions such as searching for or adding users to a Microsoft Teams group chat, user presence, or reactions.
- To minimize the number of API calls to Microsoft Teams, the base system Sidebar-Microsoft Teams integration requires at least one participant is an external only user (a user that doesn't have a corresponding sys_user record). If you want to modify this base system behavior, see [Manage Microsoft Teams permissions](#) for information on how to add the internal user or group that the internal user is part of.

Microsoft bills ServiceNow customers directly via their Microsoft Azure account. For more information, see [Licensing and payment requirements for the Microsoft Teams API](#).

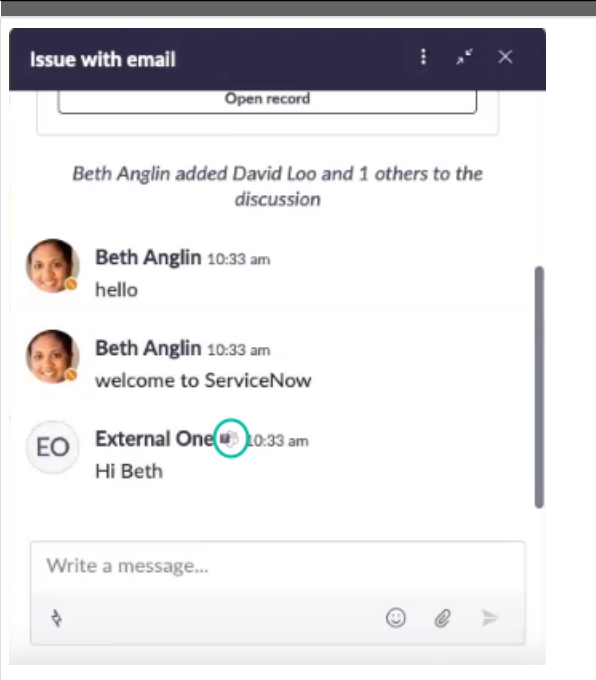
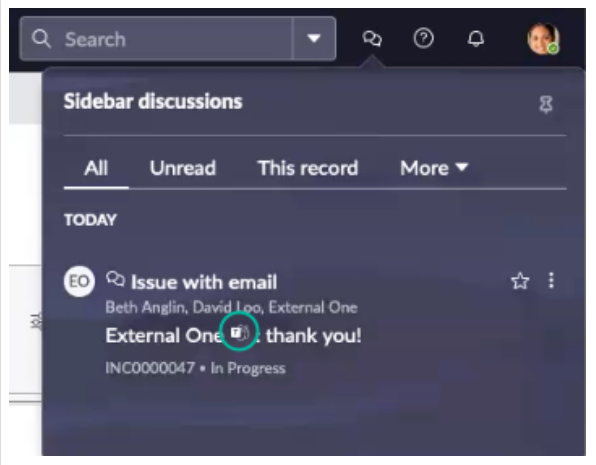
Authenticating Sidebar users in Microsoft Teams

A Sidebar user must already have a Microsoft Teams account to communicate with a Microsoft Teams user. Microsoft Teams authenticates each Sidebar user to confirm that they have a Microsoft Teams account. This authentication ensures that Microsoft Teams can create a group chat that includes the Sidebar user's Microsoft Teams account. If the Sidebar user has a Microsoft Teams account but isn't signed in, they're prompted to sign in.

Differentiating between Sidebar and Microsoft Teams users

To differentiate Sidebar users from Microsoft Teams users, a Microsoft Teams icon  displays next to the Microsoft Teams users' names. This icon is visible in discussion windows and search results, but doesn't appear in the activity stream.

Examples with Microsoft Teams icon

Discussion window with Microsoft Teams icon	
All tab on the Discussion window with Microsoft Teams icon	

Examples with Microsoft Teams icon (continued)

Discussion window with Microsoft Teams icon next to search results

Start a Sidebar discussion

Record number
INC0000047

Subject * ⓘ
Issue with email

Add participants * ⓘ
exter

EO External One 

ET External Two 

Cancel Start discussion

Discussion info window with Microsoft Teams icon

Issue with email

Discussion info

About

Participants 3

+ Add participants

David Loo

EO External One 

Beth Anglin

Leave discussion

Adding users to a discussion

Sidebar users can enter the partial or full name of a user that they want to add to the discussion. If the user exists in the system, the user's name appears and can be selected to be added to the discussion. Users who have access to Microsoft Teams but not ServiceNow can be identified by the Microsoft Teams logo in their avatar image. Microsoft Teams users can add participants to the discussion by adding them to the group chat on Microsoft Teams. Doing this automatically adds those users to the discussion in Sidebar.

Note: A maximum of 250 users can be added to a Microsoft Teams group chat.

Sending messages between Sidebar and Microsoft Teams

After Sidebar and Microsoft Teams are integrated, you can send these types of messages between the two applications:

- Messages with plain text
- Messages with emojis
- Messages with URLs
- Messages with attachments

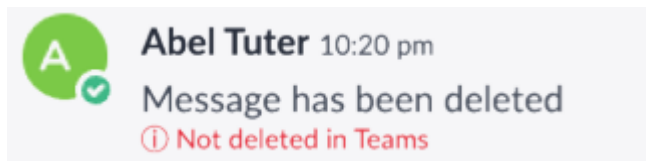
Actions performed in the Sidebar discussion are reflected in Microsoft Teams and actions performed in Microsoft Teams are reflected in Sidebar. If you reply to a message in a Microsoft Teams group chat, the message displays in Sidebar however, it doesn't display as a reply to the original message.

Errors messages appear in these situations:

- If Sidebar is unable to deliver a message to a Microsoft Teams user, the message "Not delivered in Teams" displays. Depending on how error message notifications in Sidebar are configured, the message displays to just the Sidebar user who sent the message or to all Sidebar users in the discussion.



- If you delete a message that you previously sent from Sidebar to Microsoft Teams but Microsoft Teams is unable to delete the message, then the message "Not deleted in Teams" displays.



- If you edit a message that you previously sent from Sidebar to Microsoft Teams but Microsoft Teams is unable to update the message, then the message "Not updated in Teams" displays.



Replies made to messages in Microsoft Teams are displayed as replies to the corresponding message(s) in Sidebar.

Removing users from a discussion

Sidebar users can remove a Microsoft Teams user from a Sidebar discussion. When a Microsoft Teams user is removed from a discussion, Sidebar and Microsoft Teams users see a message that the user has been removed from the discussion. After a Microsoft Teams user is removed from the discussion, that user can still access the group chat on Microsoft Teams and view older messages, but they can no longer participate in the discussion. If a Microsoft Teams user leaves a discussion on their own, both Sidebar and Microsoft Teams users see a message that the Microsoft Teams user has left the discussion.

Message history

If the admin enables Microsoft Teams group chats for a user, the message history of any Sidebar discussions that the user is already participating in aren't preloaded in the Microsoft Teams group chat. In the Microsoft Teams group chat, the user will only receive messages that are sent after the admin enables them to receive Microsoft Teams group chats.

ServiceNow's access to Microsoft Teams messages

ServiceNow's access to Microsoft Teams group chats and messages is restricted to the ones generated as part of the Sidebar and Microsoft Teams integration.

Synchronizing of participants

The discussion participants aren't synchronized if the integration between Sidebar and Microsoft Teams is changed multiple times.

Synchronizing example:

1. A Sidebar group has User A, B, and C, while a Microsoft Teams user has User 1, 2, and 3.
2. When an admin activates the Microsoft Teams integration, users A, B, and C can communicate with users 1, 2, and 3.
3. An admin deactivates the integration, and users are removed or added on both sides (User A is removed from Sidebar, and User 4 is added to Microsoft Teams).
4. When the admin reactivates the Microsoft Teams integration, the discussion groups do not update. Instead, they remain as they were before the integration was deactivated: the Sidebar group has User A, B, and C, while a Microsoft Teams user has User 1, 2, and 3.

Domain separation with Sidebar-Microsoft Teams integration

If Sidebar is integrated with Microsoft Teams, domain separation is not supported on the Microsoft Teams instance. As a result, the **Set up** button for Microsoft Teams is disabled on the Settings page. For example, if you've configured two domains on ServiceNow but use only one Microsoft Teams instance, you can't partition the Microsoft Teams instance to have part of it point to one domain and the other part to another domain.

Integrate Sidebar and Microsoft Teams

Enable conversations between Sidebar and Microsoft Teams users by integrating Sidebar with Microsoft Teams.

Follow these steps to integrate Sidebar and Microsoft Teams.

Note: Some resources below require you to log in to sites like ServiceNow University, Now Create, or the ServiceNow Community. If the expected resource does not load, please log in and try to access the resource again.

1. Install the [store app](#) on the Washington DC instance.
2. Create the Microsoft Teams developer account and Azure app. See [KB article KB1225842](#) for more information.
3. Create the Microsoft Teams app. See [KB article KB1225842](#) for more information.
4. Enable the Microsoft Teams integration using the information in [Enable the Microsoft teams integration](#).

Enable or configure the Microsoft Teams integration

Enable or configure the Microsoft Teams integration as part of integrating Sidebar with Microsoft Teams.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Select Sidebar.
3. On the Integrations card:
 - If Sidebar and Microsoft Teams are not already integrated, select **Set up**.
 - If Sidebar and Microsoft Teams are already integrated, select **View configuration** from the Manage drop-down list.
4. On the Microsoft Teams Integration screen, slide the activate toggle to allow or prevent Microsoft Teams users from participating in Sidebar discussions.
 - When this is switched on, Microsoft Teams users that previously had access to Sidebar will regain access and any Microsoft Teams users that are newly included will gain access to Sidebar.
 - When this is switched off:
 - Microsoft Teams users that previously had access to Sidebar will no longer have access to Sidebar.
 - Any Microsoft Teams users that are newly included will not gain access to Sidebar.
 - Existing discussions will become inactive in Microsoft Teams. Microsoft Teams users will still be able to access older messages in a Microsoft Teams group chat, but any messages sent in those group chats will not be sent to Sidebar.
 - Existing discussions will remain active for Sidebar users.
5. Enter **Client Secret**, **Callback URL**, and **Redirect URL**.

Note: For more information about the Microsoft Azure Portal fields needed, see [Use the portal to create an Azure AD application](#).

Field	Description
Application (client) ID	ID associated with the app created in the portal.
Directory (tenant) ID	ID associated with the Microsoft Teams organization that will be linked to Sidebar discussions.
App ID	ID used to subscribe to Sidebar conversations from Microsoft Teams.
Client Secret	Auto-assigned credentials used to authenticate the Microsoft Azure app with Microsoft. If this field is changed, then a new integration setup will be triggered.

Field	Description
Callback URL	Web location Microsoft Teams uses to send a response to Sidebar. For your own instance, add the value like https://your-instance.service-now.com/api/now/collaboration_chat_event_processor/chats. If this field is changed, then a new integration setup will be triggered.
Redirect URL	Web page that appears after you successfully log in to Microsoft Teams. If this field is changed, then a new integration setup will be triggered.

6. Select **Save**.

Manage Microsoft Teams permissions

Configure which groups or users can access Sidebar discussions in Microsoft Teams.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings**.
2. Select Sidebar.
3. From the **Manage** drop-down list on the Integrations card, select **View permissions**.
The Microsoft Teams permissions page appears.
4. Select the **Groups** tab or the **Users** tab.

Groups tab

Field	Description
Filter by	Use the filter fields to limit which users display in the Available users list.
Apply Filter button	Select Apply Filter to limit the groups in the Available Groups list using the filter fields.
Available groups	Select the groups that can access the Sidebar discussions in Microsoft Teams.
Selected groups	List of the groups that can access Sidebar discussions in Microsoft Teams. To remove access, select X next to the group name. Note: All of the users in the selected group will have access to the discussions.

Users tab

Field	Description
Filter by	Use the filter fields to limit which groups display in the Available groups list.
Apply Filter button	Select Apply Filter to limit the users in the Available users list using the filter fields.
Available users	Select the users that can access the Sidebar discussions in Microsoft Teams.
Selected users	List of the users that can access Sidebar discussions in Microsoft Teams. To remove access, select X next to the user name.

5. Select Save.**Sidebar and Slack**

Sidebar's integration with Slack enables Sidebar users and Slack users to communicate with each other from their respective platforms.

The base system Sidebar-Slack integration requires at least one participant is an external only user (a user that doesn't have a corresponding sys_user record).

Authenticating Sidebar users in Slack

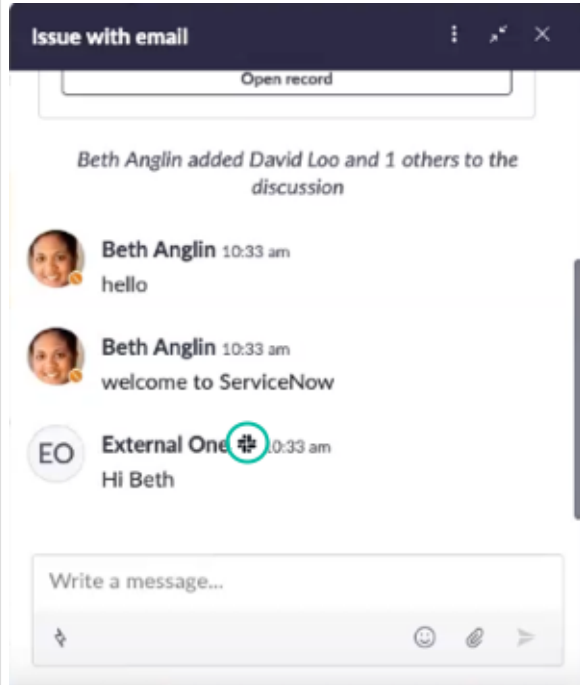
A Sidebar user must already have a Slack account to communicate with a Slack user. Slack authenticates each Sidebar user to confirm that they have a Slack account. This authentication verifies that Slack can create a private channel chat that includes the Sidebar user's Slack account. If the Sidebar user has a Slack account but isn't signed in, they're prompted to sign in.

Differentiating between Sidebar and Slack users

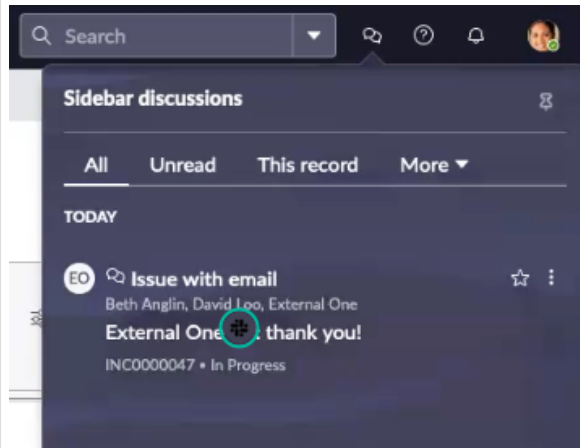
To differentiate Sidebar users from Slack users, a Slack icon () displays next to the Slack users' names. This icon is visible in discussion windows and search results, but does not appear in the activity stream.

Examples with Slack icon

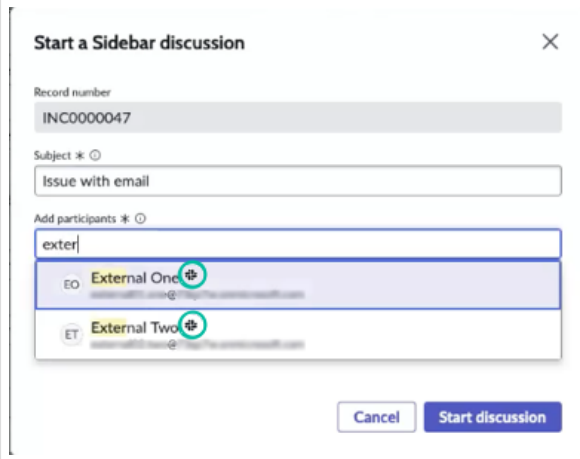
Discussion window with Slack icon



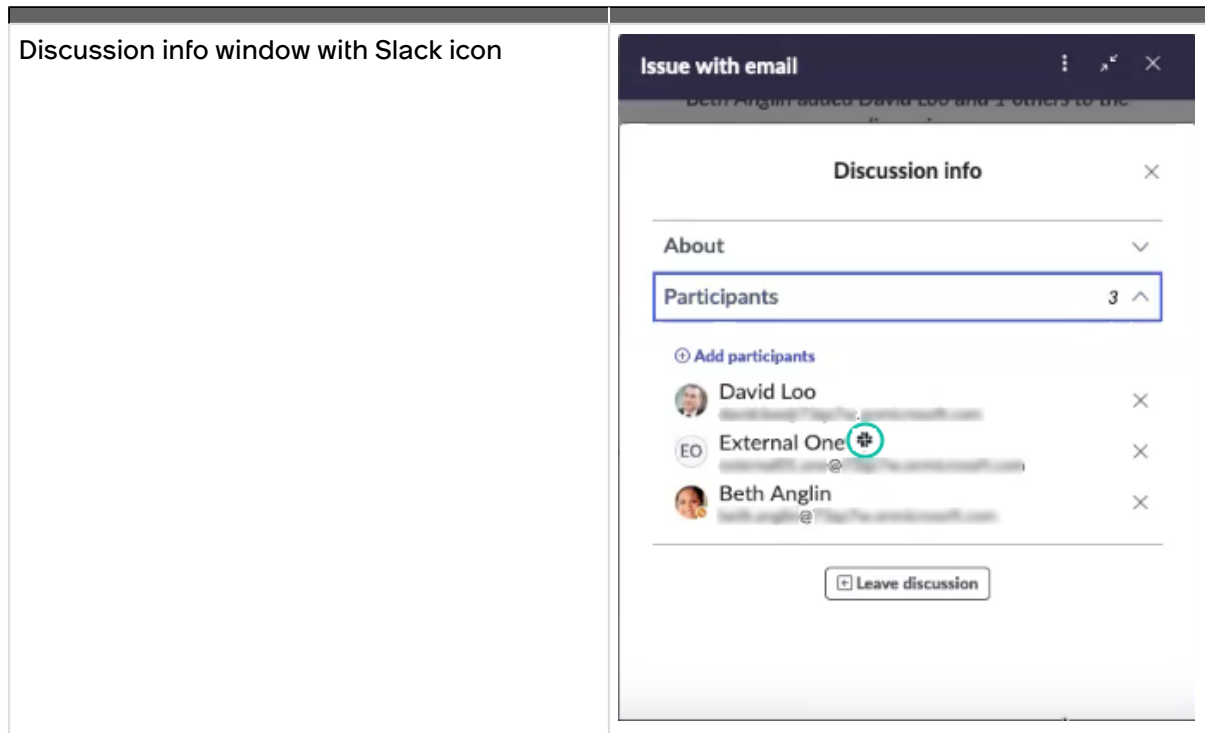
All tab on the Discussion window with Slack icon



Discussion window with Slack icon next to search results



Examples with Slack icon (continued)



Adding users to a discussion

Sidebar users can enter the partial or full name of a user that they want to add to the discussion. If the user exists in the system, the user's name appears and can be selected to be added to the discussion. Users who have access to Slack but not ServiceNow can be identified by the Slack logo in their avatar image. Slack users can add participants to the discussion by adding them to the group chat on Slack. Doing this automatically adds those users to the discussion in Sidebar.

Note: A maximum of 250 users can be added to a Slack private channel.

Synchronizing Sidebar and Slack users

If Sidebar and Slack are integrated, a job runs every 30 minutes to synchronize the Sidebar and Slack users. If a Slack user's email matches a Sidebar user's email, the Slack user is mapped to the Sidebar user.

Validating messages

Messages that are sent from Slack to Sidebar are verified using Slack's signing secret.

Sending messages between Sidebar and Slack

After Sidebar and Slack are integrated, you can send these types of messages between the two applications:

- Messages with plain text
- Messages with images
- Messages with emojis
- Messages with URLs

- Messages with attachments
- Messages with links to ServiceNow records

Replies made to messages in Slack are displayed as replies to the corresponding message(s) in Sidebar.

Removing users from a discussion

Sidebar users can remove a Slack user from a Sidebar discussion. When a Slack user is removed from a discussion, Sidebar and Slack users see a message that the user has been removed from the discussion. After a Slack user is removed from the discussion, they can still access the group chat on Slack and view past messages, but they can no longer participate in the discussion. If a Slack user leaves a discussion on their own, both Sidebar and Slack users see a message that the Slack user has left the discussion.

Message history

If the admin enables Slack group chats for a user, the message history of any Sidebar discussions that the user is already participating in aren't preloaded in the Slack group chat. In the Slack group chat, the user will only receive messages that are sent after the admin enables them to receive Slack group chats.

ServiceNow's access to Slack messages

ServiceNow's access to Slack group chats and messages is restricted to the ones generated as part of the Sidebar and Slack integration.

Synchronizing of participants

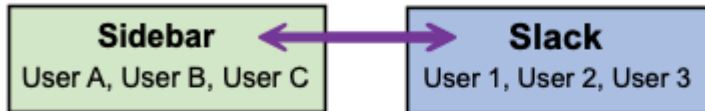
The discussion participants aren't synchronized if the integration between Sidebar and Slack is changed multiple times.

Synchronizing example

Initial configuration



1. Admin activates the Sidebar-Slack integration.



2. Admin deactivates the Sidebar-Slack integration.

3. Sidebar User A is removed from the discussion on Sidebar.

4. Slack User 3 is removed from the Slack private channel and User 4 is added to the Slack private channel.



5. Admin reactivates the Sidebar-Slack integration.

Result

Discussion groups are NOT updated and remain as they were before the Sidebar-Slack integration was deactivated (User A, User B, and User C on Sidebar and User 1, User 2, and User 3 on Slack).



Domain separation with Sidebar and Slack integration

If Sidebar is integrated with Slack, domain separation is not supported on the Slack instance. As a result, the **Set up** button for Slack is inactive on the Settings page. For example, if you've configured two domains on ServiceNow but use only one Microsoft Teams instance, you can't partition the Microsoft Teams instance to have part of it point to one domain and the other part to another domain.

Integrate Sidebar and Slack

Enable conversations between Sidebar and Slack users by integrating Sidebar with Slack.

Follow these steps to integrate Sidebar and Slack.

Note: Some resources below require you to log in to sites like ServiceNow University, Now Create, or the ServiceNow Community. If the expected resource does not load, please log in and try to access the resource again.

1. [Set up the Slack account.](#)

2. [Add Slack users.](#)

3. Enable Slack from ServiceNow.

4. Configure event subscription and Webhook URL.

Set up the Slack account

Set up the Slack account.

Before you begin

Role required: none

Procedure

1. From the Slack [developer program](#), sign in to your Slack developer account.
2. On the Slack dashboard, select **Your apps** from the upper right-hand corner of the screen.
3. From the Your Apps screen, select **Create an App**.
4. On the Create an app dialog, select **From scratch**.
5. On the Name app & choose workspace dialog, fill out the fields:
 - App Name - name for the application you are going to create. Make a note of the app name because you will need it in the remaining procedures.
 - Pick a workspace to develop your app in - from the drop-down list, select the workspace where your app will reside. Make a note of the app name because you will need it in the remaining procedures.
6. Select **Create App**.
7. In a browser window, enter `https://api.slack.com/apps` and select the app you created in step 5.
8. From settings, select **Oauth & Permissions**.
9. In the Redirect URLs dialog, enter `https://{instance_url}/oauth_redirect.do`
10. Select **Add New Direct URL**.
11. Add these OAuth scopes from the User Token Scope section:

OAuth Scope	Description
channels:history	View messages and other content in a user's public channels.
channels:read	View basic information about public channels in a workspace.
channels:write	Manage a user's public channels and create new ones on a user's behalf.
channels:write.invites	Invite members to public channels.
chat:write	Send messages on a user's behalf.
files:write	Upload, edit, and delete files on a user's behalf.
groups:read	View basic information about a user's private channels.
groups:write	Manage a user's private channels and create new ones on a user's behalf.

OAuth Scope	Description
groups:write.invites	Invite members to private channels.
im:read	View basic information about a user's direct messages.
im:write	Start direct messages with people on a user's behalf.
mpin:read	View basic information about a user's group direct messages.
mpin:write	Start group direct messages with people on a user's behalf.
users:read	View people in a workspace.
users:read.email	View email addresses of people in a workspace.

12. Add these OAuth scopes from the Bot Token Scope section:

OAuth Scope	Description
users:read	View people in a workspace.
users:read.email	View email addresses of people in a workspace.

Add Slack users

Invite users to Slack if the Slack users do not already exist.

Before you begin

Role required: admin

Procedure

1. In a browser window, enter `<workspace name>/admin` where `<workspace name>` is the name of the workspace you specified when you created the app in [Set up the Slack account](#).
2. Select **Invite People**.
3. Add the email addresses of the users you want to add.
Emails will be sent to the invited users.
4. Log in to the user email and accept the invitation.
5. Select **Launch** to launch the Slack chat panel.

Enable Slack from ServiceNow

Ensure the email field of system user records that will be mapped to Slack users are properly updated. This must be done before the scheduled job that syncs the users between Slack and ServiceNow runs.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings > Sidebar**.
2. In the Integrations section, select **Set up** for Slack.
3. On the Slack integration setup page, fill in the Slack credential fields:
 - Client ID - ID associated with the app you created.
 - Client Secret - auto-assigned client secret located on the Slack App Credentials screen.
 - Signing secret - auto-assigned signing secret located on the Slack App Credentials screen.
 - Bot User OAuth Token - auto-assigned token located on the Slack OAuth & Permissions screen. This field must begin with xoxb.
4. Select **Save**.
5. In the navigation filter, enter `sys_cs_collab_settings.list`.
6. On the Collab Chat Settings page, check that Enable Slack is set to true and that Preference Channel is set to Slack.

Trouble?

If Enable Slack is not set to true or the Preference Channel is not set to Slack, deactivate and then reactivate Slack.

7. In the navigation filter, enter `oauth_credential.list`.
8. On the OAuth Credentials page, check that a new record named Sidebar Slack OAuth Entity exists.
This is the app level token that is required for the scheduled job to run successfully to sync the users.
9. In the navigation filter, enter `sys_cs_collab_provider_user_profile.list`.
10. On the Collaboration Chat Profiles page, check that Slack users have been imported properly.
11. Select **Discuss** and add at least one external user (a Slack user who does not have a ServiceNow account).

Configure event subscription and Webhook URL

Configure the event subscription and the Webhook URL.

Before you begin

Role required: admin

Procedure

1. Open the Slack app from step one.
2. Select **Event Subscriptions**.
3. In the Request URL field, enter the request URL.
For example, enter `https://{instancename}/api/sn_oe_sfs/collaboration_slack_event_processor/chats`.
4. Select **Subscribe to events on behalf of users**.
5. Add these events:

Event Name	Description	Required Scope
member_joined_channel	A user joined a public channel, private channel, or MPDM.	channels:read or groups:read or mpim:read
member_left_channel	A user left a public or private channel.	channels:read or groups:read
message.channels	A message was posted to a channel.	channels:history
message.groups	A message was posted to a private channel.	groups:history
message.im	A message was posted in a direct message channel.	im:history

Using Sidebar

You can create a Sidebar discussion for a task-based or interaction record or as a standalone conversation. Sidebar discussions for a task-based or interaction record can be created from a configurable workspace or a Next Experience Core UI record page.

To create a Sidebar discussion for a task-based or interaction record, see [Create a Sidebar discussion for a record](#). To create a standalone Sidebar conversation, see [Create a standalone Sidebar discussion](#).

Navigating the chat window resizing options and controls toolbar

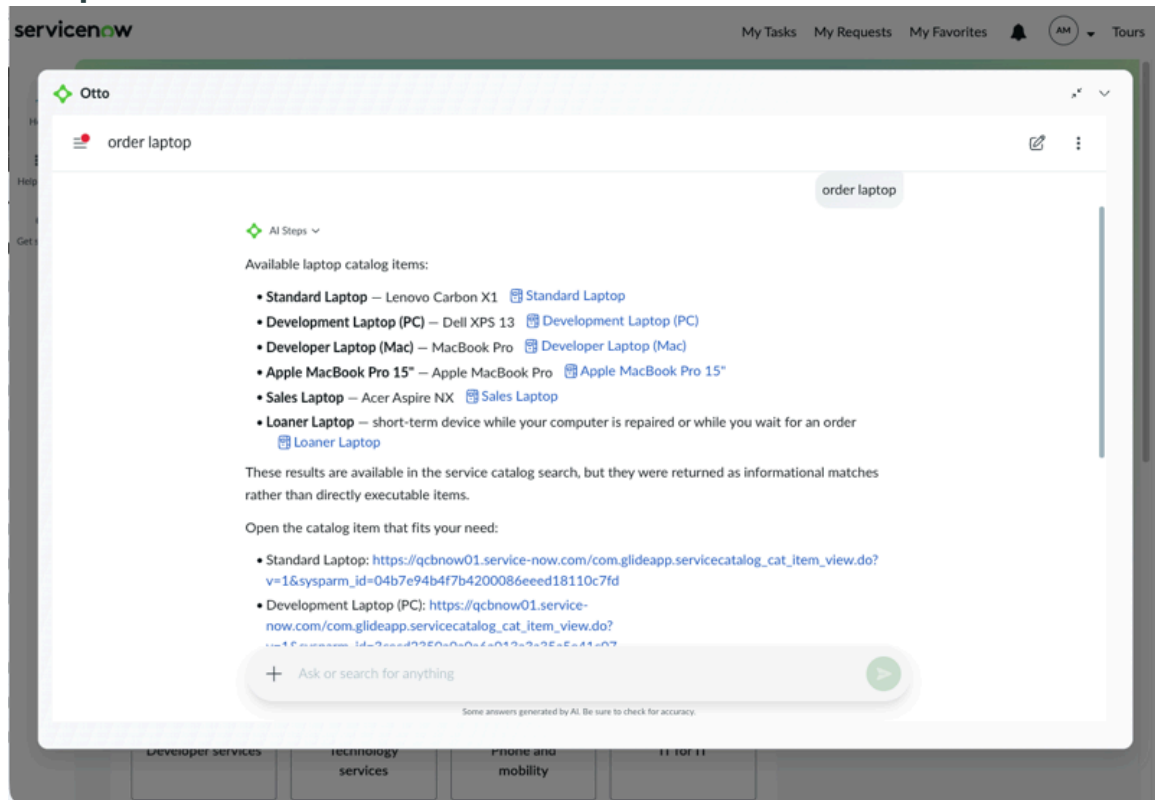
After selecting the chat widget button, the floating chat window opens and replaces the chat button. You can move the chat window by selecting the header and dragging the chat window to the desired location. You can resize the chat window by using the window's edges to resize to your desired size or use the toolbar icons. The following list details the chat window adjustment icons:

-  : Selecting the expand icon  expands the chat into a 90% screen-size window. The 90% screen-size window can't be resized or moved. Selecting outside of the 90% screen-size chat window resizes the chat back into the floating window.
-  : Selecting the pin icon  pins the chat to the side of the browser but you can still resize this window to fill half the browser, if desired. When you duplicate a browser tab, open a new tab, or use the browser back button, the chat window state persists as long as you have not minimized the chat.

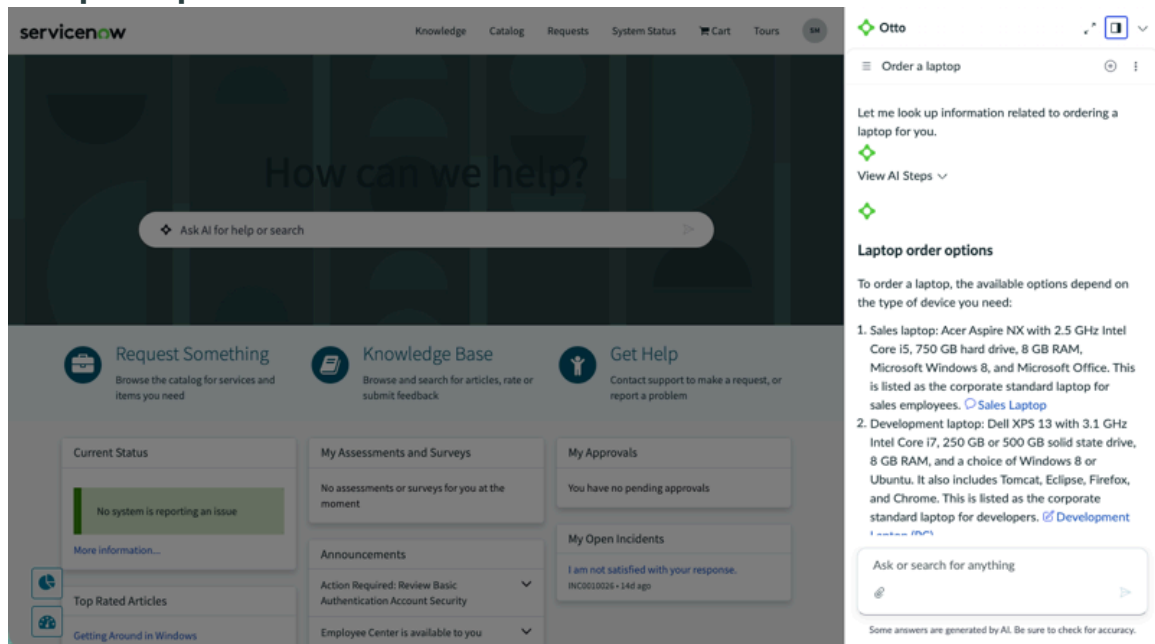
i Important: By default, pinning a chat window is enabled for Service Portal. For all other portals, an admin needs to create a system property to enable pinning a chat window. For more information, see [ServiceNow Otto for Virtual Agent system properties](#).

-  : Selecting the down arrow  minimizes the chat and the chat widget button reappears.

Example of a 90% screen-size window



Example of a pinned chat



Create a Sidebar discussion for a record

Collaborate with others by creating a Sidebar discussion for a task or interaction record. These discussions can be created from a Next Experience page or Core UI record page.

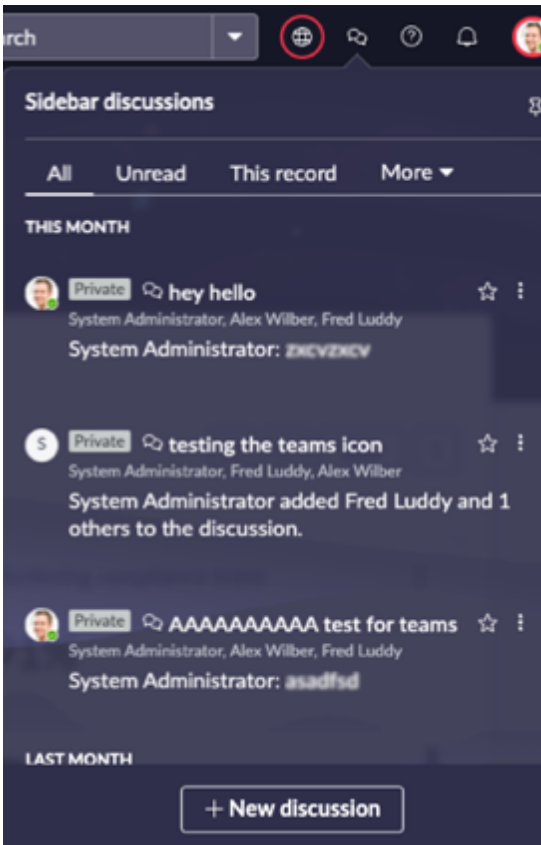
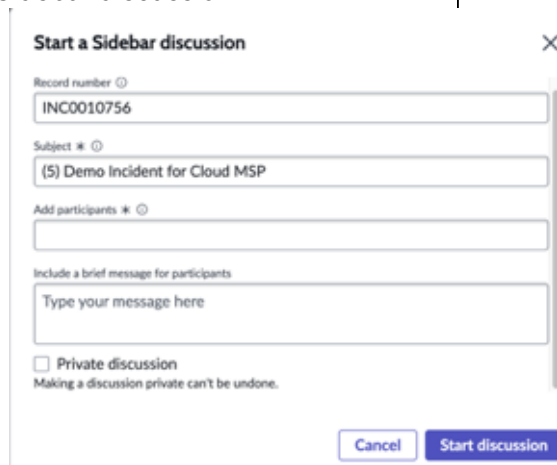
Before you begin

Role required: users with access to the record associated with the Sidebar discussion

- Note:** To avoid incompatibilities with newer features, use Sidebar only on records that have an associated record number.

Procedure

1. Start a Sidebar discussion from a Next Experience page or a Core UI record:

Next Experience page	Core UI record
a. From the top menu, select the Sidebar discussion icon (🗨️) to display the Sidebar discussions window.  b. To display an existing Sidebar discussion, select it on the Sidebar discussion menu. c. Start a new Sidebar discussion by selecting New discussion to display the Start a Sidebar discussion window.	a. In the navigation filter, enter the type of record (interaction or task) for which you want to create a Sidebar discussion. b. Select All to display all records for the type you entered. c. On the Incidents or Tasks screen, select the record you want to create the Sidebar discussion for. d. On the Incident or Task screen, select Discuss to display the Start a Sidebar discussion window. 

Next Experience page	Core UI record
Start a Sidebar discussion Link a record Subject * Add participants * Include a brief message for participants Type your message here Private discussion Discussions without a linked record are automatically made private. Cancel Start private discussion	
d. Select Link a record and enter the task or incident number in the Record number field.	

2. Fill in the fields on the Sidebar discussion window:

Field	Description
Record number	Record number associated with the Sidebar discussion.
Subject	This field is pre-populated with the record's short description. If the Subject starts with a number in parentheses, that number indicates what number this discussion is for the record. For example, if the subject line has "(2) Email issue," the "2" indicates the second discussion for the email issue record. You can edit or add to the Subject field.
Add participants	Select the user or user group to include in the discussion. If an assignment group was entered for this case/interaction/incident, this field is pre-populated with its members. ○ If you select individual users, only those users with access to the record can be added as participants. ○ If you select a user group, only those users within the group who have access to the record are added as participants. For more information, see Configuring Sidebar member query.
Include a brief message for participants	Enter a short message for the participants of the Sidebar discussion.
Private discussion	Select Private discussion to limit Sidebar discussion access to only the agent and other discussion participants. These

Field	Description
	discussions are marked "private" and can't be converted to not private. Participants can invite others to join the private discussion, provided the new participants have access to the record. Private discussions aren't visible to non-participants in search results.

3. Select one of the following:

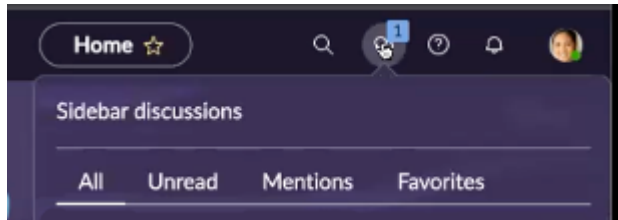
- Start private discussion - start a private Sidebar discussion.
- Start discussion - start a Sidebar discussion.
- Cancel - cancel the discussion.

4. Once you start a discussion, you can edit and delete messages.

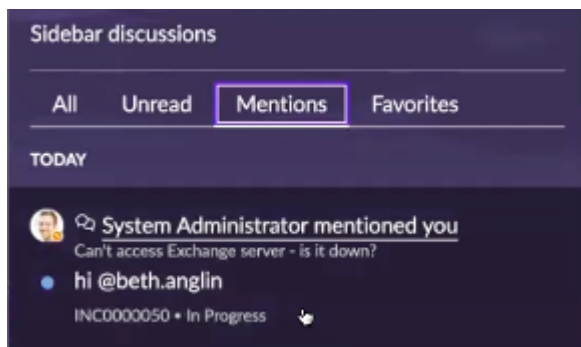
Option	Description
Edit a message	Select the More options icon  next to the message and Edit message. The message appears in an Editing window where you can change the text. ○ You can only edit messages that you sent. ○ You can only edit one message at a time. ○ If you change the attachment of a message that you sent, both the old and new attachments display. ○ If a message you sent contains a URL, you can delete the message but you can't edit it.
Delete a message	Select the More options icon  next to the message and Delete Message. A dialog displays asking if you're sure you want to delete your message. Select Delete to delete the message or select Cancel to leave the message. ○ You can only delete messages that you sent. ○ After you delete a message, a notice with the date and time the message was deleted displays. ○ If you delete a message that mentions someone using @mention, then that @mention is also deleted. ○ You can't undo a deletion, after you delete a message it's gone.

5. To mention a user, enter @user (where user is the name of the user) or @ to display a list of users and select someone from that list.

- Only users who have access to the underlying record display in the list.
- The list is divided into users who are currently participating in the discussion (participants) and users who aren't (non-participants).
- The user is notified that they were mentioned in a Sidebar discussion message. The Sidebar discussions chat icon displays a number indicating unread messages or mentions.



- If the user selects the **Mentions** tab, the messages that mention the user with @user display.



- If the user selects the message preview card, the corresponding message displays with the exact message containing the @mention highlighted.

6. An email notification is sent to the user if:

- the user doesn't read the messages within 24 hours. The email is sent as a reminder to view the messages and resume the discussion. See [Sidebar requester mapping](#) for more information about requester mapping for email notifications.
- if a requester is added to an existing discussion.

7. To close the discussion dialog (but not exit the discussion), select the Close icon .

Create a standalone Sidebar discussion

Create a standalone Sidebar discussion that is not tied to a specific record.

Before you begin

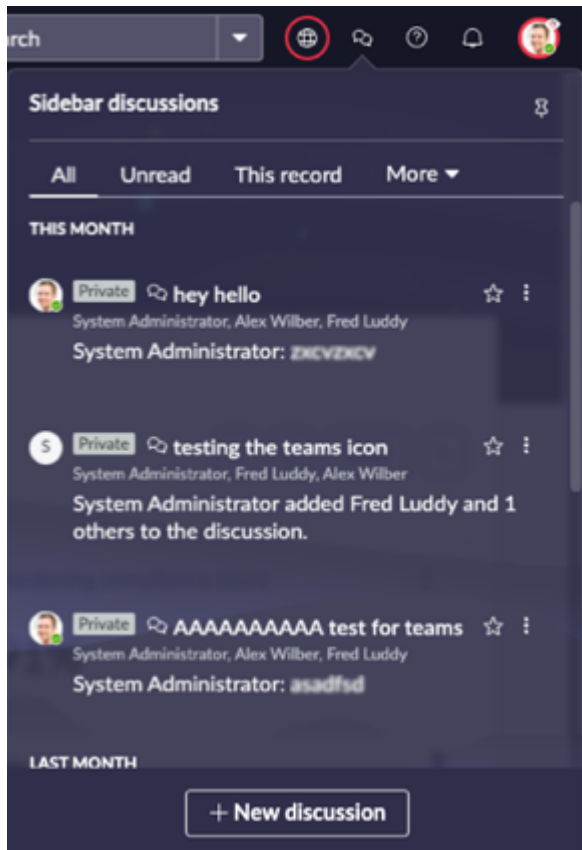
Role required: none.

Starting a Sidebar discussion

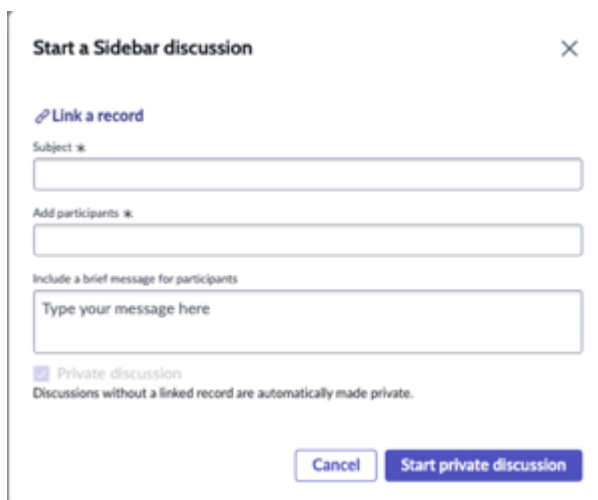
Follow this procedure to start a Sidebar discussion:

Procedure

1. From the top menu, select the Sidebar discussion icon () to display the Sidebar discussions window.



2. To access an existing Sidebar discussion, select it from the Sidebar discussion menu.
3. Start a new Sidebar discussion by selecting **New discussion** to display the Start a Sidebar discussion window.



4. Fill out the fields:

Field	Description
Link a record	Select Link a record if you want to connect this Sidebar discussion to a record. (If you link to a record, the discussion will no longer be a standalone discussion.) A new discussion dialog appears and you can enter the record number of the record you want to link to. Any participants who do not have access to the record are automatically removed from the discussion.
Subject	Enter a brief description for the conversation.
Add participants	Select the user(s) or user group(s) to include in the discussion.
Include a brief message for participants	Enter a short message for the participants of the Sidebar discussion.
Private discussion	Standalone discussions are always private and access is limited to only the user and other discussion participants. These discussions are marked "private" and can't be converted to not private. Private discussions are not visible to non-participants in search results.

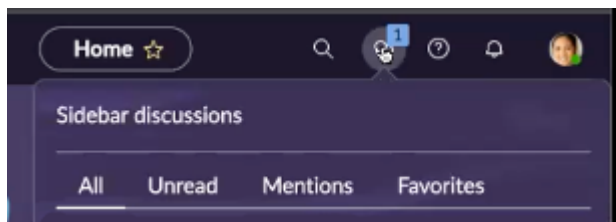
5. Once you start a discussion, you can edit and delete messages.

Option	Description
Edit a message	Select the More options icon  next to the message and Edit message. The message appears in an Editing window where you can change the text. ○ You can only edit messages that you sent. ○ You can only edit one message at a time. ○ If you change the attachment of a message that you sent, both the old and new attachments display. ○ If a message you sent contains a URL, you can delete the message but you can't edit it.
Delete a message	Select the More options icon  next to the message and Delete Message. A dialog displays asking if you're sure you want to delete your message. Select Delete to delete the message or select Cancel to leave the message.

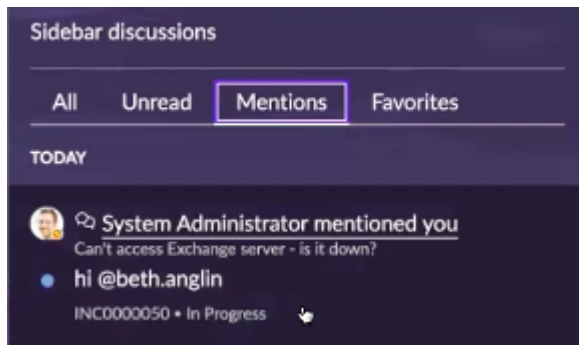
Option	Description
	- You can only delete messages that you sent. - After you delete a message, a notice with the date and time the message was deleted displays. - If you delete a message that mentions someone using @mention, then that @mention is also deleted. - You can't undo a deletion, after you delete a message it's gone.

6. To mention a user, enter @user (where user is the name of the user) or @ to display a list of users and select someone from that list.

- The list is divided into users who are currently participating in the discussion (participants) and users who aren't (non-participants).
- The user is notified that they were mentioned in a Sidebar discussion message. The Sidebar discussions chat icon displays a number indicating unread messages or mentions.



- If the user selects the **Mentions** tab, the messages that mention the user with @user display.



- If the user selects the message preview card, the corresponding message displays with the exact message containing the @mention highlighted.

7. To close the discussion dialog (but not exit the discussion), select the Close icon

Sidebar reference

Read information about how Sidebar works with domain separation.

[Domain separation and Sidebar](#)

Domain separation and Sidebar

Domain separation is supported for Sidebar. Domain separation enables you to separate data, processes, and administrative tasks into logical groupings called domains. You can control several aspects of this separation, including which users can see and access data.

Support level: Standard

- Includes all aspects of **Basic** level support.
- Application properties are domain-aware as needed.
- Business logic: The service provider (SP) creates or modifies processes per customer. The use cases reflect proper use of the application by multiple SP customers in a single instance.
- The instance owner must configure the minimum viable product (MVP) business logic and data parameters per tenant as expected for the specific application.

Sample use case: An admin must be able to make comments required when a record closes for one tenant, but not for another.

For more information on support levels, see [Application support for domain separation](#) .

Overview of Domain separation and Sidebar

To set up domain separation for Sidebar, enable domain separation for your instance. If your instance has multiple domains, you can turn Sidebar on or off for each domain. No special configuration is needed to configure a domain-separated environment with Sidebar. Domain separation for Sidebar is supported only when domains are set up using a parent-child domain hierarchy.

Sidebar discussions are domain separated according to the base record (task or interaction record). You can see and create sidebar discussions only if you have access to the task or interaction record.

For example, say INC00001 belongs to the record created in the ACME domain and the Cisco domain doesn't have access to INC00001. Users that belong to the Cisco domain can't interact with Sidebar discussions based on INC00001.

Sidebar versions for domain separation

To fully utilize domain separation, you must be on both the Vancouver version and August version of the Sidebar store app (Omni Experience Standard Feature Set).

If you are a first time Sidebar user in Vancouver (you did not use Sidebar earlier and are not trued up to the Vancouver store app) and want to leverage domain separation, Sidebar is inactive by default. Navigate to the Conversational Interfaces settings page for each domain and activate Sidebar manually. Alternatively, you can access the sys_cs_collab_settings table and manually insert a new record for each domain.

There is a known issue with emojis not working as expected when used with domain separation. A workaround for this issue is to go to the Enable Emojis ACE Content block and update the record field with the sys_cs_collab_settings record's sys_id for the given domain.

Domain separation with the Sidebar and Microsoft Teams integration

If Sidebar and Microsoft Teams are integrated and configured, activating Sidebar prompts a message stating that the Microsoft Teams integration must be manually turned on and

deactivating Sidebar prompts a message stating that the integration with Microsoft Teams will also be turned off.

Domain separation will not work with Microsoft Teams if multiple domains are configured. Pairing a unique Microsoft Teams with each domain is not supported.

Related topics

[Domain separation for service providers](#) 

Manage people and work

Use these applications to help streamline communications and manage work assignments and interactions.

Advanced Work Assignment  Handle team assignments, route workflow, and provide user assistance.	Omnichannel Callback  Connect users and agents with callback service options.	Zoom extension for Omnichannel Callback  Enables other ServiceNow® applications to display a Zoom callback option.
Proactive Triggers  Provides helpful platform actions, using real-time data.		

Advanced Work Assignment (AWA)

Maintain and improve your business workflow on the ServiceNow AI Platform. Advanced Work Assignment has options to assign tasks to teams and individual personnel based on availability and demand, as well as their skill levels. Give users the best service possible, with service messaging and role management handled on-the-fly for each task or assignment.

Omnichannel Callback

Expand your service contact opportunities with Omnichannel Callback. This module lets agents contact users back when they make calls for help or service requests during high-activity periods. Display or announce callback options in other apps on the ServiceNow AI Platform, configure callback options to route users to live or virtual agents, and more.

Zoom extension for Omnichannel Callback

The Zoom extension for Omnichannel Callback app is a ServiceNow AI Platform capability that enables users to request a callback over Zoom when the agent wait time is long, or agents are unavailable. Agents and users can collaborate over a Zoom meeting at a date and time requested by users.

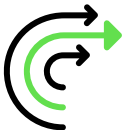
Proactive Triggers

Proactive Triggers supports end users by providing helpful platform actions, using real-time data. Admin users can customize rules and actions to present rich text pop-up messages to specific users.

Advanced Work Assignment

Advanced Work Assignment (AWA) automatically assigns work items to your agents, based on their availability, capacity, and optionally, skills. AWA pushes work to qualified agents using work item queues, routing conditions, and assignment criteria that you define.

Get started

Explore  Learn about Advanced Work Assignment (AWA) concepts and features.	Configure  Install Advanced Work Assignment (AWA) and activate relevant plugins. Set up AWA to automatically assign work items to qualified agents using defined work item queues, routing conditions, and assignment criteria.	Use  Use Advanced Work Assignment (AWA) to compose SMS conversations, check work items and AWA events, and enable logging.
Analytics & Reporting Solutions  Work with dashboards, like Platform Analytics Solutions, to analyze information.	Reference  Get Advanced Work Assignment (AWA) details for domain separation, components, and properties.	

Exploring Advanced Work Assignment

Use Advanced Work Assignment (AWA) to automatically assign work items to your agents, based on their availability, capacity, and optionally, skills. AWA pushes work to qualified agents using work item queues, routing conditions, and assignment criteria that you define. Agents see their assignments in their Agent Workspace inbox.

Overview of how AWA works

Customers use different channels to request service, for example, chats, cases, or incidents. Requests from customers create task or interaction records that store information about these objects, called work items. AWA automatically routes work items to queues that focus on certain types of support using criteria (such as priority or customer status) that you provide.

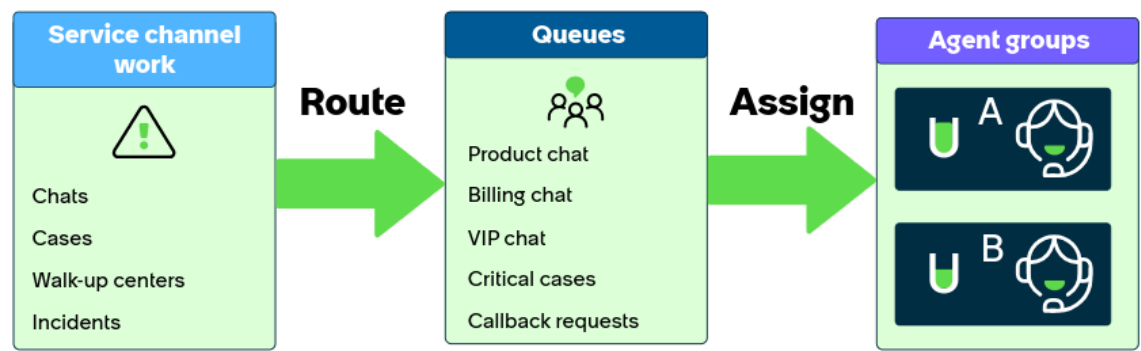
Queues can be defined based on need or type, for example product or critical cases. You also identify the agent groups responsible for work in the queue. AWA then applies assignment rules that you set and uses agent availability, capacity, skills (if defined), and shifts (if defined) to assign work to the most qualified agent.

AWA has enterprise-grade voice resiliency that ensures call delivery to live agents even without existing interaction creation. This critical capability enables contact-center-as-a-service (CCaaS) providers to meet stringent SLAs directly tied to revenue recognition and billing agreements with their customers.

Note: Starting with the Quebec release, legacy Agent Workspace is no longer deployed, enhanced, or supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support Knowledge Base.

Workflow

See the following diagram to learn more about the Advanced Work Assignment process flow.



Navigate to [Advanced Work Assignment > Home](#) to start exploring AWA features.

Benefits

Advanced Work Assignment provides the following benefits.

Benefit	Feature	User
By automating the assignment of work tasks, AWA eliminates manual efforts involved in distributing workloads.	Work assignments	awa_admin or admin

Benefit	Feature	User
Work items are conveniently pushed to the agent's inbox, so that the agent can focus on doing the work, rather than looking for work.		
AWA helps organizations make the best use of available resources by matching the right skills and expertise with specific tasks. This leads to reduced idle time and better allocation of talent across the organization.	Configure agent assignment rules	awa_admin or admin
AWA ensures a fair and balanced distribution of work tasks among resources. It takes into consideration factors like workload, capacity, and availability to avoid overloading certain individuals while underutilizing others.	Agent Inbox controls	awa_admin or admin

Advanced Work Assignment components

Service channels

A means of providing customer service. AWA offers base system channels for chats, cases, incidents, and walk-up centers. For each channel, you can set attributes such as agent capacity and utilization conditions to control the work handled in the channel.

Work items

A single piece of work handled by an agent from start to completion. For example, one chat or one case is an object that is routed and assigned to agents.

Work item queues

A queue stores a specific type of work item for a service channel. AWA admins can create queues that focus on certain types of support within the channel, such as VIP customers or critical cases. AWA routes work items to queues based on specific conditions or requirements that you define, such as customer status, or region. Groups assigned to each queue handle the incoming work items. After work items are placed in a queue, AWA can then assign items to available agents based on assignment rules and agent availability and capacity.

Assignment groups

Agents belong to specific groups organized by the type of work assigned to them. You provide details about an assignment group including the name and description, manager, and group email. You can also set up roles, groups and group members, queues, and agent capacity overrides for agents in an assignment group.

Assignment rule

Criteria that determines how work items are pushed to the appropriate agent within a qualified assignment group.

Agent capacity

The maximum number of work items on a particular service channel that an agent may actively work on at one time. If you want to set a maximum capacity for an agent across all service channels, define the maximum universal capacity for that agent. For information on configuring the maximum universal capacity, see [Configure an agent's maximum universal capacity](#). Messaging Interactions in an On Hold state aren't calculated as part of an agent's capacity.

Agent availability

States that indicate agent presence and whether the agent is available for work or is busy or offline. AWA uses the agent availability state to determine if an agent is able to receive work.

Inbox layout

A configuration tied to a service channel that defines which fields of a record representing a work item are shown in agent inboxes. A layout defines what the agent sees in Agent Workspace.

Reassigning messaging conversations

If you want messaging conversations to be automatically reassigned if the current Assigned To agent on the conversation isn't available, set the *glide.messaging.reassign.enabled* system property to `true`. The system property only affects messaging conversations and the Assigned To agent is considered not available if the AWA Inbox status isn't set to "Available."

Advanced Work Assignment home page

Explore, implement, and maintain ServiceNow® Advanced Work Assignment using a home-page experience. Discover AWA, install relevant plugins, and configure settings for AWA through the Advanced Work Assignment home page available to admins.

Advanced Work Assignment home page advantages

The Advanced Work Assignment home page makes it easy for you to get started and work toward achieving positive outcomes with your implementation. The Advanced Work Assignment home is ideal for first-time users who have never installed or configured Advanced Work Assignment (AWA), to experienced users looking to expand capabilities and maintain existing implementations.

AWA home provides the following features:

- Cards that guide you through the order of essential settings, like creating service channels, configuring queues, and adding assignment rules. Cards that redirect you to additional and advanced settings, such as configuring presence states, setting up reject reasons, determining universal capacity, setting up agent affinity, and establishing shift-based assignments.
- Lists of installed and available plugins.
- Quickly install plugins through the plugin page. The plugin page appears in either a new window or tab after selecting any **Get [plugin]** button. The plugin page opened dialog box appears on the home page, where you can select **Not Now** to continue with your current home page experience or **Done** to refresh the home page after your plugin's installation.
- Access to helpful resources and videos to help you learn more about configuring and managing AWA.

Navigate to **Advanced Work Assignment > Home** to start exploring AWA features.

i Important: The AWA home page appears after you have installed and updated the Omni-Experience Standard Feature Set to the latest version through the ServiceNow Store. Existing customers don't need to install it from the store. However, subsequent updates are available there. Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

Planning, installing, and exploring AWA

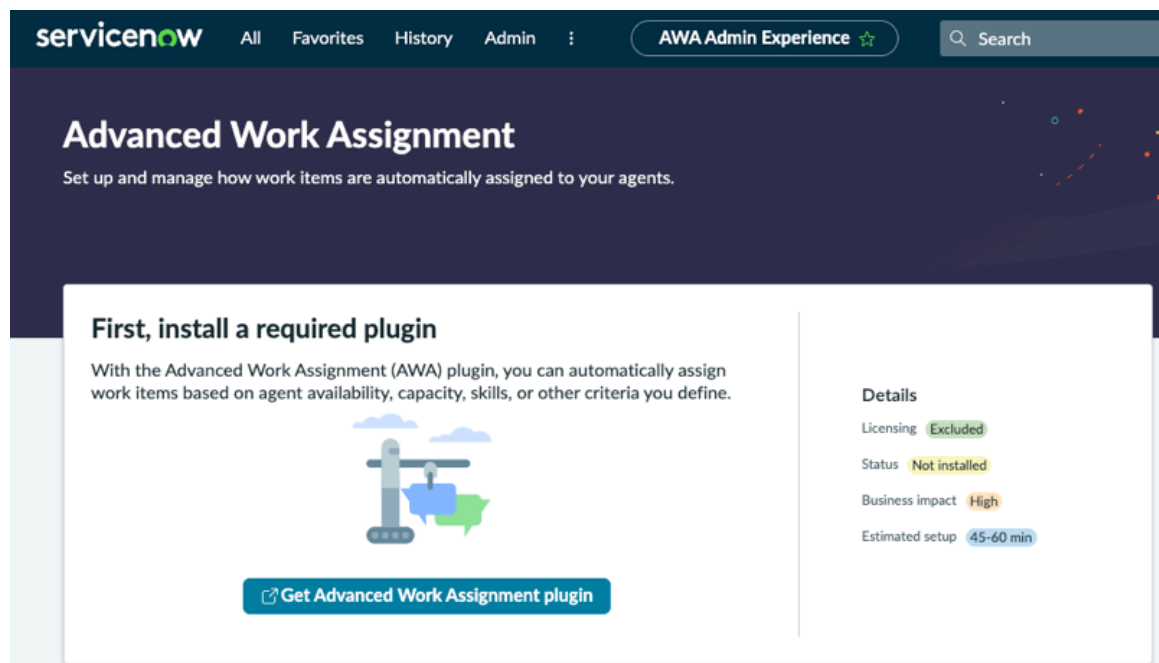
If you've never installed AWA, the Advanced Work Assignment home page prompts you to do so first. Before implementing AWA, take some time to reflect on a few important questions in the Think through these questions with your team Think through these questions with your team list. These questions are meant to help you envision the AWA experience that you need and want for your business. Expand the available questions to explore more thoughtful considerations, such as what queues would work best for your team and what skills does your team have.

The layout of the home page may vary, depending on which features you've installed and configured.

First, install the required plugin

Install the Advanced Work Assignment plugin to begin. Select **Get Advanced Work Assignment plugin** to install it.

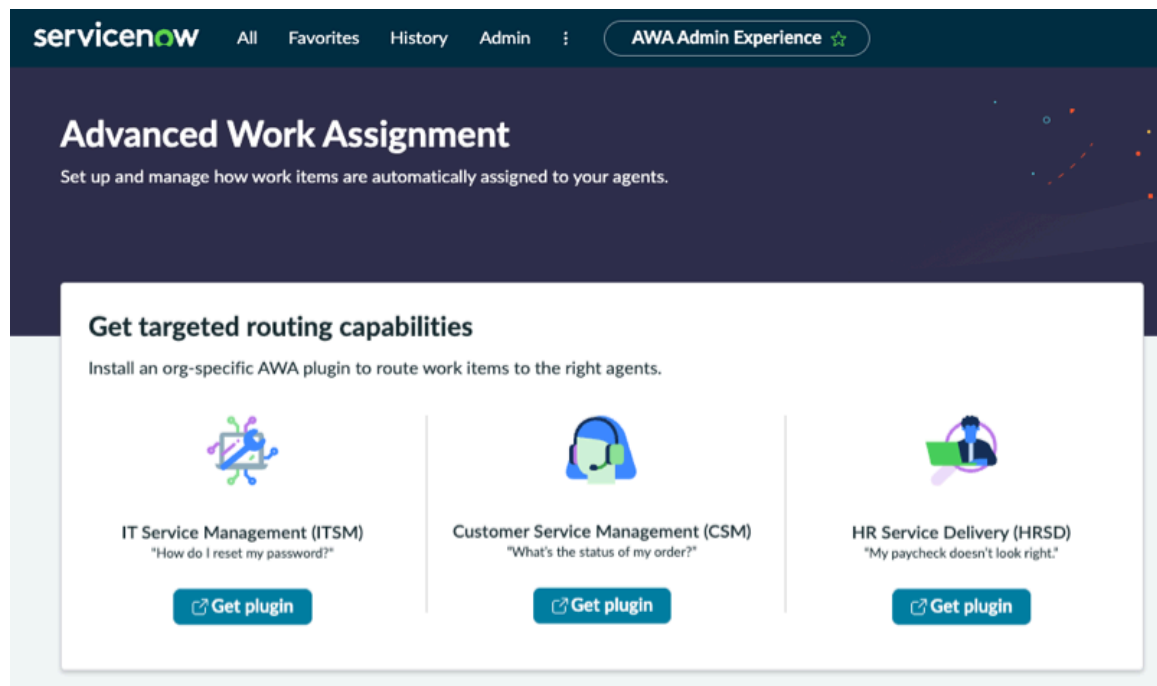
i Note: Only users with the sys_admin role can install a plugin from the Advanced Work Assignment home page. For example, if a user with the awa_admin role tried to install the Advanced Work Assignment plugin, they're prompted to contact their administrator for installation. After the Advanced Work Assignment plugin is installed, all AWA home page options are available in the application navigator for users with the admin and awa_admin roles.



Get targeted routing capabilities

Activate org-specific AWA plugins through the **Get plugin** button to route work items to the right agents for ServiceNow® IT Service Management (ITSM), ServiceNow® Customer Service Management, and ServiceNow® HR Service Delivery (HRSD)

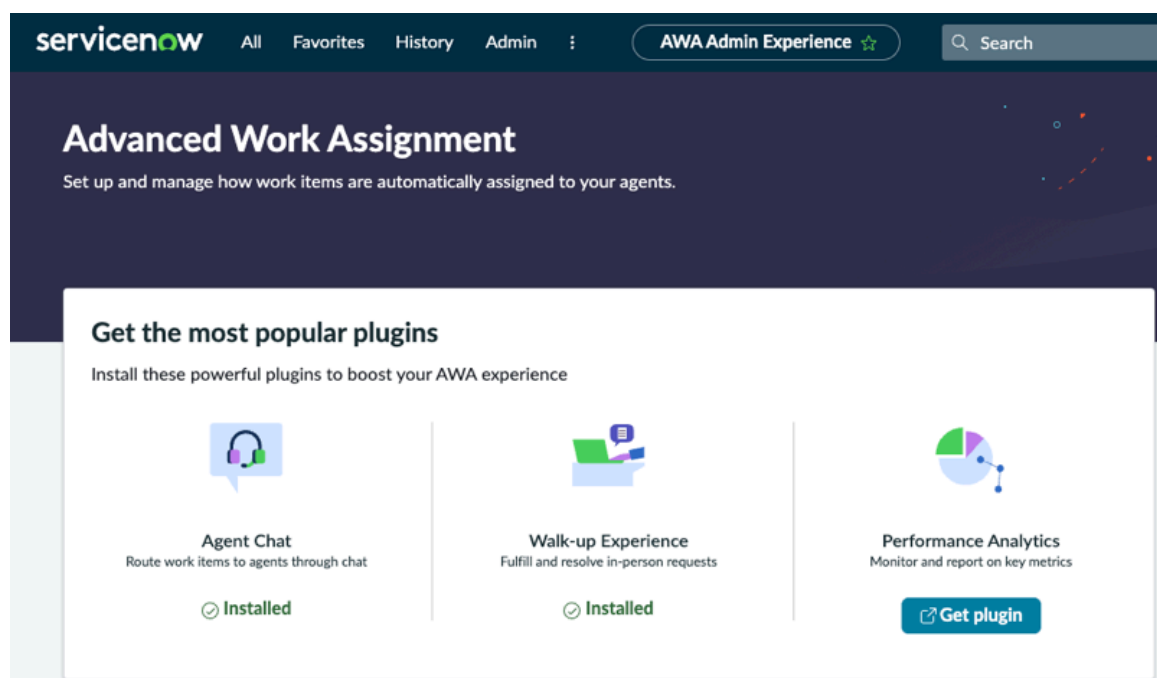
plugins. These plugins enable org-specific service channels in AWA including configured data and demo data.



Get the most popular plugins

After installing any of the targeted routing capabilities plugins, install these popular plugins to boost your AWA experience.

- **Agent Chat:** The Agent Chat plugin enables the Chat service channel in AWA and chat monitoring in Agent Workspace.
- **Walk-up Experience:** The Walk-up Experience plugin activates the walk-up contact service channel for pre-built technology lounges.
- **Performance Analytics:** The Performance Analytics plugin activates the Performance Analytics Content Pack for AWA.



Watch and learn

Watch the embedded AWA implementation guide for more information about installing and implementing AWA directly from the right side of the home page.

Helpful Resources

Explore the helpful AWA resources such as release notes, product documentation, and ServiceNow Community forums and content directly from the right side of the home page. These resources give you information to understand the configuration process and the benefits of setting up AWA features.

Installed Plugins

View a list of installed plugins. Admin role users can select a plugin's link to have that application's plugins page appear in a separate window or tab.

Available Plugins

View a list of available plugins that help save time setting up AWA. Admin role users can select a plugin's link to have that application's plugins page or ServiceNow Store site appear in a separate window or tab. Awa_admin role users can view a store app's plugin page to learn about the plugin, but only admin role users can install plugins.

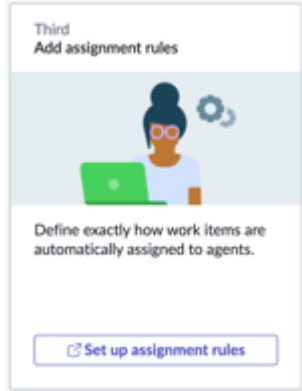
Configuring essential AWA settings

Follow the order of the guided configuration setup to establish your AWA settings in the most logical order.

Essential settings cards

Card	Feature	Description
First Create Service Channels  Assign types and scopes of work to agents through out-of-the-box or custom service channels. Set up service channels	Create Service Channels	Give customer support by automatically routing incoming work to agents through service channels. Service channels assign a specific type and scope of work to agents.
Second Configure work item queues  Determine the routing destination and sort order for your org's work items. Set up queues	Configure work item queues	Determine routing conditions and destinations for queues.

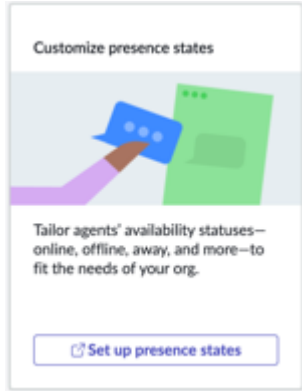
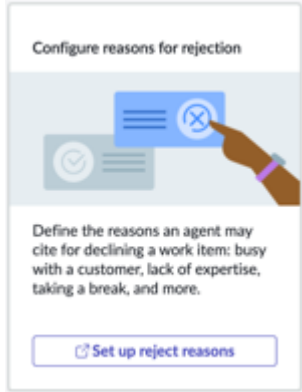
Essential settings cards (continued)

Card	Feature	Description
	Add assignment rules	Establish assignment criteria to agents who either have gone the longest without being assigned a work item, have the most work availability, or have the needed skills.

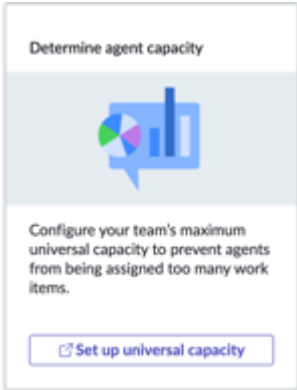
Configuring additional and advanced AWA settings

The additional card settings expand your organization's ability to maximize productivity with AWA.

Additional settings cards

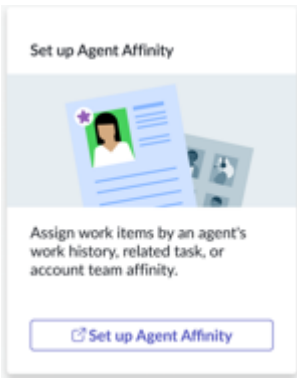
Card	Feature	Description
	Customize presence states	Configure availability states that agents use to indicate whether they can receive work or are offline or away.
	Configure reasons for rejections	Define the reasons that agents can use to decline work assignments that they receive in their Agent Workspace inbox.

Additional settings cards (continued)

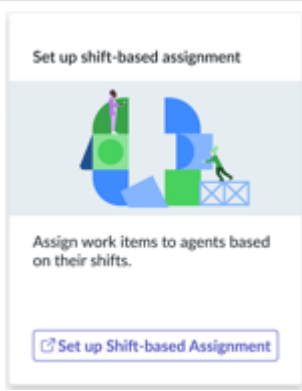
Card	Feature	Description
 Determine agent capacity Configure your team's maximum universal capacity to prevent agents from being assigned too many work items. Set up universal capacity	Determine agent capacity	Configure your team's maximum universal capacity to prevent an agent from being assigned too many work items. If the agent's maximum universal capacity has been reached, additional work items aren't assigned to the agent.
Select See More to view this card.  Define assignment groups Dynamically map agents' skillsets to your org's unique work item queues. Set up groups	Define assignment groups	Create groups of user sets who share a common purpose.

Advanced settings cards appear conditionally after installing their respective plugin.

Advanced settings cards

Card	Feature	Description
 Set up Agent Affinity Assign work items by an agent's work history, related task, or account team affinity. Set up Agent Affinity	Set up Agent Affinity	Install the Agent Affinity plugin for this card to conditionally appear. Create or change the Agent Affinity rules that route work items in Advanced Work Assignment.

Advanced settings cards (continued)

Card	Feature	Description
 Set up shift-based assignment Assign work items to agents based on their shifts. Set up Shift-based Assignment	Set up shift-based assignment	Install either one or both of the following plugins for this card to conditionally appear: • Workforce Optimization for Customer Service • Workforce Optimization for ITSM Assign work items to agents based on shifts.

Service channels

Provide customer support by automatically routing incoming work to agents through service channels.

A service channel is a means of assigning a specific type and scope of work to agents. You can configure base system service channels to set the context and attributes that define work handled in the channel, or create your own custom service channel.

Advanced Work Assignment provides several service channels from which work items originate. These channels are:

Service channel	Description	Plugin
Case	Routes and assigns customer service cases.	Included with Customer Service
Chat	Routes and assigns chat interactions.	Included with the Agent Chat plugin (com.glide.interaction.awa).
Chat - Asynchronous	Routes long-running conversations that use multiple service channels.	Included with the Conversational Messaging plugin (com.glide.messaging.awa).
Incident	Routes and assigns incidents.	Included with the Advanced Work Assignment for incidents plugin (com.snc.incident.awa).
SMS	Routes long-running SMS conversations and conversations that use multiple service channels.	Included with the Install Conversational SMS service channel application.

Service channel	Description	Plugin
Walk-up	Routes requests from walk-up contact channels.	Included with the Walk-up Experience plugin (com.snc.walkup).
WhatsApp	Routes requests from the WhatsApp chat conversations.	Included with the Conversational Integration with WhatsApp (powered by Twilio) store application.

You can also set up a custom service channel to address work that is not supported in the base system channels. For more information, see [Set up a custom service channel](#).

For each service channel, you set attributes such as:

- **Agent capacity:** Amount of work that can be handled by the agents supporting the channel.
- **Filters:** Conditions that filter the type of work handled in the channel.
- **Utilization:** Conditions that determine when work items are generated.

For each service channel, you also:

- Create the agent inbox card layout used in Agent Workspace.
- Set capacity overrides for specific agents.
- Review and modify associated work item queues. For the Chat service channel, you can create queues using the **Queues** related list.

Service channel capacity and utilization

In Advanced Work Assignment, capacity is the number of work items automatically assigned to agents supporting a service channel. Utilization is the condition that identifies the work item states supported in the channel.

Agents have an assigned capacity for each service channel. This capacity is based on the default capacity set for the channel. The agent capacity for one service channel (for example, chat) does not interfere with the capacity on other service channels (for example, case or incident). Admins can set the **Default capacity** for a channel on the Service Channel form. This setting applies to all agents supporting the channel.

Managers can override the default capacity for:

- Individual agents, by using the **Agent Capacity Override** related list on the Service Channel form.
- Groups of agents, by using the **Agent Capacity Override** related list on the Group form.

If an agent already has a capacity override, setting the override again updates the existing capacity for that agent. Override capacity is stored in the Agent Capacity (awa_agent_capacity) table.

Conversational SMS service channel

Using the Conversational SMS service channel app on the ServiceNow Store, workspace agents can provide support for long-running SMS conversations and conversations that use multiple service channels.

Request apps on the Store

Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

Overview

Requesters can initiate support conversations through SMS. Since these support conversations can be long-running, workspace agents need the ability to track ongoing conversations while also addressing requesters on other service channels. With the Conversational SMS service channel store app, workspace agents can initiate or continue SMS conversations and also accept SMS work items from the Workspace Inbox. Requesters in SMS conversations see a limited subset of system messages. This minimizes the number of system messages in case the conversation is long-running.

Messaging profiles

Messaging profiles provide a way to match an incoming phone number to a requester:

If	Then
New SMS is received from a requester who is associated to a phone number on the User [sys_user] table but has no messaging profile match	- A messaging profile record is generated to match the number to the User table. - An interaction record is associated to the matching User table.
New message received from a requester who does not have a phone number match in the User table but does have messaging profile match	- An interaction record is associated to the matching messaging profile user. - The User table record is not associated to the phone number. The agent can manually verify.
New message received from a requester who does not have a phone number match in the User table or messaging profiles	- An interaction record is associated to the guest user (Virtual agent or live agent can manually verify). - A messaging profile record is generated for the phone number but not associated to a user.
New SMS from a requester that conflicts with an existing User table or messaging profile	- An interaction is associated with the messaging profile/user currently associated with the number. - Virtual agent or live agent can verify the user and reassociate the interaction/profile with the correct user.

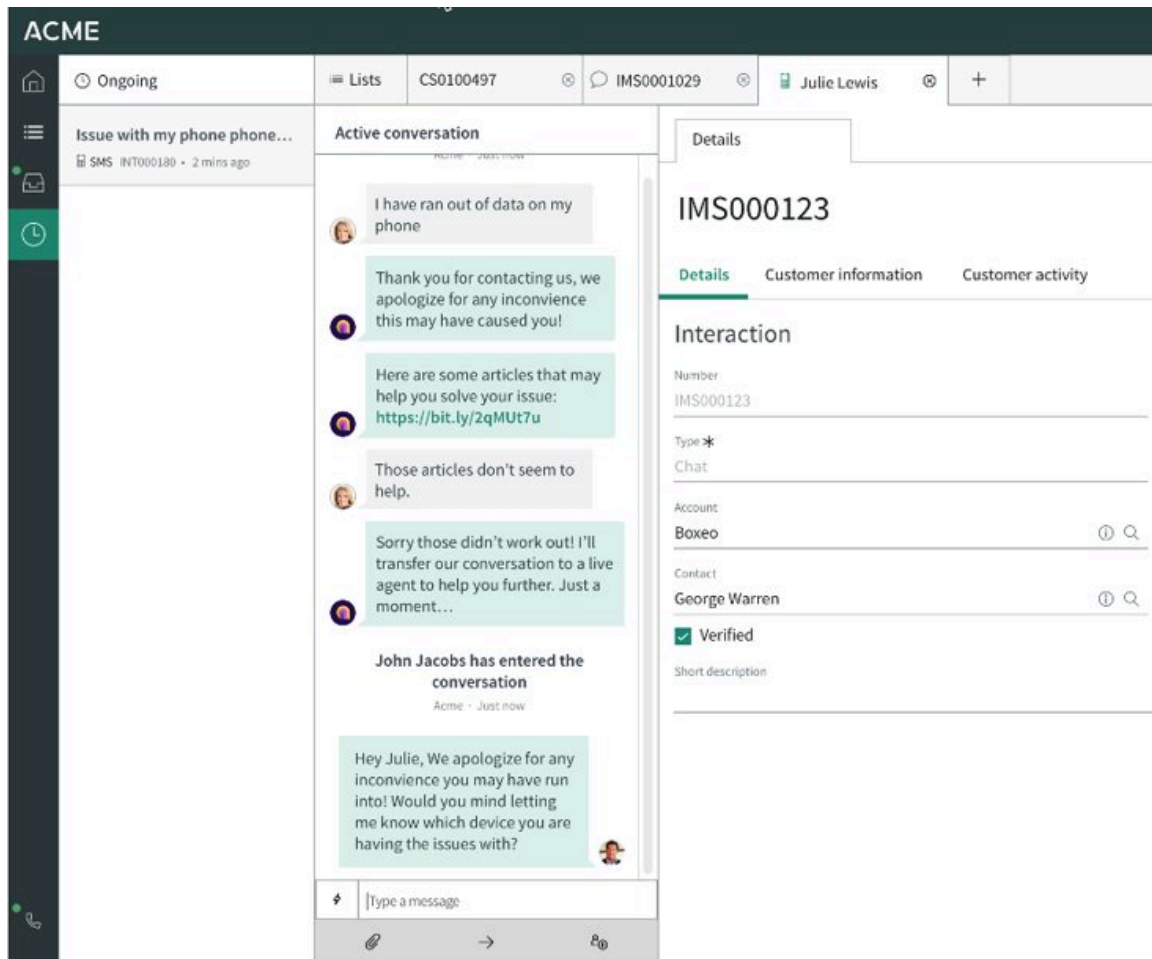
Messaging actions

Messaging actions provide a way to trigger actions based on messaging activity on a conversation.

Messaging action parameters	Description
Event 1. Requester message without agent response 2. Agent message without requester response	Sending of a message from a requester or agent starts a timer that can trigger an action
Duration	Time set to trigger an action based on the Event parameter being set
Filter conditions	Condition needed on the Interaction record for a messaging action to be triggered (for example, State is "On Hold")
Action	Possible actions include: • Prompt agent – Sent Workspace notification to agent • Prompt requester – Sent system message in messaging conversation to requester • Reassign – Remove assigned agent from interaction • Set state – Set Interaction state to desired state

Ongoing conversations

The Agent Inbox displays new SMS messages and agents can locate currently assigned SMS conversations in the **Ongoing** tab. The tab indicator and record highlight indicate when an SMS conversation has a new message. Unlike chat conversations, SMS conversations can be long-running. Completed SMS conversations do not display in the **Ongoing** tab.



Requester initiated SMS conversations

When a requester initiates a support conversation, a virtual agent or a live agent addresses the conversation. Like other service channels, Advanced Work Assignment handles the routing of SMS conversations to live agents. This is how requester-initiated SMS conversations are handled:

If	Then
There is no active SMS interaction	• Create a new SMS interaction • Assign the interaction to a virtual agent or a live agent
There is an active interaction involving a live agent	• Inject the message into an existing conversation • Continue with agent in current conversation • Track using the same interaction record

If	Then
There is an active interaction involving a virtual agent	• Inject the message into existing conversation • Continue with existing virtual agent topic • Track using the same interaction record

An active SMS interaction represents an ongoing conversation between a requester's phone number and a company's phone number.

Agent initiated SMS conversations

To initiate an SMS conversation with a requester, agents can select a provider number for an outbound service or manually enter a provider number. If there is a current ongoing SMS conversation, it automatically appears. When an agent initiates an SMS conversation:

If	Then
There is no active SMS interaction	• Create a new SMS interaction • Assign interaction to agent
There is an active interaction involving an agent	• Inject the message into existing conversation • Add agent to live group profile • No reassignment
There is an active interaction involving VA	• Close existing interaction • Create a new interaction and assign to agent
There is an active interaction involving a different contact/consumer/user	• Close existing interaction • Create a new channel user profile and deactivate the existing channel user profile • Create a new interaction and assign to agent

An active SMS interaction represents an ongoing conversation between a requester's phone number and a company's phone number.

Work items

View Advanced Work Assignment work items using the Work Items menu options.

Work items are a single piece of work handled by an agent from start to finish. For example, one chat or one case is an object that is routed and assigned to agents. Only users with awa_manager privileges can access the Management menu options.

Work item queues

In Advanced Work Assignment, queues store a specific type of work item for a service channel.

AWA administrators can create or modify queues based on customer need. As part of creating or modifying a queue, the awa_admin identifies some information about the queue, including the service channel to which the queue belongs and which agent groups handle the incoming work items.

The awa_admin can select a schedule that defines when the queue is available and identify a time limit within which an agent should accept a work item in the queue. If the selected service channel is **Chat**, the awa_admin creates the chat messages that are displayed to users.

Routing conditions identify the work items that are routed to a queue. Create routing conditions in one of two ways:

- Simple: use a condition builder to select routing conditions. The fields available for selection are based on the selected service channel.
- Advanced: use a JavaScript script to identify routing conditions.

The awa_admin can also create a queue without routing conditions so that work items are not routed to that queue automatically. Customers can manually assign work items to the queue or assign work items using assignment tools such as matching rules or Workflow Studio.

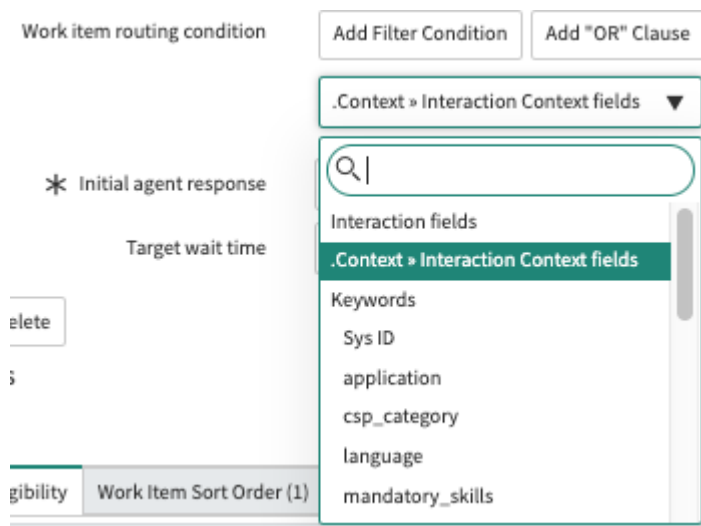
When a case in a queue is assigned manually, the case is removed from the queue. The state of the work item is set to **Canceled** and the cancellation reason is set to **Manually assigned**.

Note: New work items may not be assigned if they are routed to queues containing more than 10,000 work items in the queued state.

Configure routing rules that use chat context variables

You can specify queue routing rules that use chat context variables in the condition builder. For details on creating chat context variables, see [Configure context variables for storing chat-related information](#). These variables can store contextual information that can be used in routing conditions to control where chat work items are routed.

For example, you can define chat context variables to store user responses from [pre-chat surveys](#) that you create. If you store these responses in chat context variables, such as a user's department or a product name, you can specify the context variables in queue routing conditions to direct where the live chat is routed. When you specify a routing condition using the condition builder, you can dot walk to the Context fields. In the fields menu, select **Show Related Fields** and open the fields menu again to select **Context** → **Interaction Context fields**.



You can then select from the available chat context variables in the condition builder. For example, choosing **csp_category** becomes **Context.csp_category**.

Assign pools of agents eligible to work on a queue

Assign one or more agent groups to a queue using the **Eligibility Assignment** related list. These groups are eligible to receive work items from the queue, which allows work to get prioritized to eligible agents.

Select an agent assignment rule and any eligibility time constraints for each group. The eligibility time constraints are used to determine when the next pool of agents is eligible for assignment. For example, you can assign one group to handle work items immediately and a second group to handle the overflow from the first group after work items sit in the queue for a specified amount of time.

Note: If no groups are assigned to a queue, work items can be routed to the queue but Advanced Work Assignment does not assign them.

Create a sort order for a queue

Use the Work Item Sort Order related list to create one or more sort conditions for work items in a queue. For each sort condition, specify a field from the selected service channel table and the direction to sort, either ascending or descending. Items in the queue are sorted and assigned to agents based on these conditions.

Work assignments

After routing work items to the appropriate queues and corresponding agent groups, Advanced Work Assignment (AWA) pushes work to the most qualified agent using the assignment criteria that you specify. Assignment criteria revolve around the type of assignment rule (most capacity or last assigned) and whether skills are defined.

Administrators can choose to push work items to agents based on one of these assignment rules:

- **Most capacity:** This option pushes work to agents that have the most capacity (availability for work) for a given channel. For example, suppose that two available agents, Agent 1 and Agent 2 have different capacities. Agent 1 has capacity for three chats, but Agent 2 has capacity for two chats and is currently working on one chat. AWA assigns the next work item to Agent 1 with the most capacity.
- **Last assigned:** This option pushes work to the agent who has gone the longest without a work assignment in the service channel. If more than one agent has the same spare capacity in a service channel, AWA creates and assigns the next work item to the agent who has gone the longest without work in the service channel.

In addition to selecting the assignment rule, AWA admins can also determine whether:

- Agents can reject work items.
- Agents automatically accept chat interactions.
- A timer is used to set a timeout period (the length of time that an agent has to reject or accept a work item).
- Agent skills are to be considered during assignment.

Assignment process

When an agent is available, AWA:

- Checks the queue priority and gets an item from the queue with the highest priority. AWA also reviews items that have timed out or have been rejected by agents.
- Identifies the eligible assignment pool. The eligibility assignment pool widens the group of agents who are eligible to work on an item.
- Determines the available agents based on their presence state, the assignment rule selected (most capacity or last assigned), and also skills, if defined. Agents have spare capacity when they decline, transfer, or complete a work item. For example, after an agent transfers a chat, the agent has additional capacity.
- Pushes the item to the inbox of the most qualified agent (the timer begins).
- Accepts work items automatically when **Enable auto-assign work items** is selected. Agents are unable to manually **Accept** or **Reject** work items.

Skill-based work assignment

In AWA, you can enable skill-based assignment and if needed, evaluate skill levels and make skill assignment mandatory (required). The basic process for setting up skills involves the following steps:

1. Identify agents that have specific skills (for example, a foreign language or expertise in a certain area such as network routers), and then assign the skills to those agents using the Skills Management feature.
2. Make the agents members of the assignment groups for the work item queues involving those skills.
3. Create an assignment rule in AWA that enables skill handling for the specific skills.

If you chose to select the **Evaluate skill level** option while creating the assignment rule, AWA also reviews agents' skill levels prior to assigning the work item to the most qualified agent. If multiple agents have the same number of matching skills, agents with more skills at the sufficient skill level are prioritized over agents with fewer skills at the sufficient level. For example, a chat comes through listing three skills at a high skill level. Agent A and Agent B both have the three skills. Agent A has three skills with the following skill levels: two high and one low. Agent B has three skills with the following skill levels: one high and two low. In this example, Agent A would be the first assignee of the work item because they have more skills with the sufficient skill level than Agent B. Agent B would only be assigned this work item if Agent A rejected the work.

AWA also prioritizes the number of matching skills over the number of skills with the sufficient skill level. For example, a chat comes through listing two skills and their sufficient skill levels: Both the English skill and the Databases skill are associated with an advanced skill level. Agent 1 has both skills but only at the beginner skill level. Agent 2 has only the English skill at the sufficient advanced skill level but doesn't have the Databases skill. In this example, the chat is routed to Agent 1 because this agent has both skills even though they aren't at the sufficient skill level.

If you also chose to select the **Enforce mandatory skills** option while creating the assignment rule, AWA only assigns the work item to agents that have the mandatory skills at the sufficient skill level. For example, a work item with two high-level associated mandatory skills and one optional skill is ready for assignment. Agent C has all three skills but only one of the mandatory skills at the sufficient high skill level. Agent D has only the two mandatory skills, but both skills are at the sufficient high skill level. In this example, Agent D would be the only applicable work item assignee because they are the only agent with both mandatory skills at a high enough level.

4. Create the work item queue with a routing condition that includes the specific skill, and include the appropriate group in the eligible assignment pool.
5. Create a scripted business rule that includes the skill in the table associated with the relevant service channel (for example, the Case table).

During work assignment, AWA routes and assigns work items to the Agent Workspace inbox of the most qualified agent based on the agents skills and if applicable, skill level and mandatory skill settings.

Inbox layout

The inbox layout determines the information shown on work item cards displayed in an agent's inbox.

The AWA admin (awa_admin) can configure layouts that represent items in an agent inbox. The configuration allows agents to see the most important attributes by service channel work items. The fields specified on the inbox layout determine the information displayed for a work item.

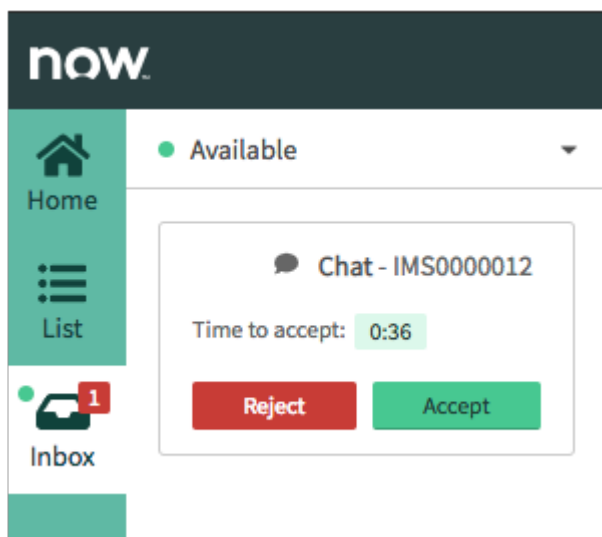
Each base system service channel provides preconfigured inbox layouts for work items. The AWA admin can view and edit these layouts and also create new layouts.

Up to five fields can be shown in the card layout.

- Fields can be added from the table that the service channel points to.
- Fields are dot-walkable.
- The first field added to the layout becomes the title field on the card.

Layout example

For chats that do not have either a contact or consumer, the layout includes only the chat subject. You control the display of the **Time to accept** count (timer) and the **Reject** button through the [agent assignment rules](#).



See [Create or change an inbox layout](#) for more information on accessing and modifying an inbox layout.

External routing overview

External Routing involves routing to external queue based on the service channel and queue conditions, and then the assignment is completed by the third-party system.

Process flow

This is how the work items are processed when using external routing:

1. Work items are routed to the queue in a queued state but are unassigned. Work items expire if the Max timeout is set.
2. External solution looks for work items in queued state by the Work Item Table API.
3. External solution looks for agent availability via the AWA Agent API before assigning to agent.
4. The external solution uses the AWA Assignment API to assign the work items to the agent.
5. The agent sees an inbox card.

When Advanced Work Assignment is configured to use external routing:

- Queues do not allow to have Assignment Eligibility Groups defined.
- Work items remain in the queue with a "queued" status until the external system assigns the work item or the queue maximum wait time elapses.
- Related lists do not display at the bottom of the Queues screen.

These APIs are required for external routing:

- AWA Assignment API to support the external routing system to assign work items. For information on AWA Assignment API, see [AWA Assignment API](#) .
- Work item table API (awa_work_item) to look up the queued work items waiting for assignment. For information on table API, see [Table API](#) .
- AWA Agent API if the external solution requires validation of agent availability within Workspace before assignment. For more information on the AWA Agent API, see [AWA Agent API](#) .

Functionality of AWA components

When external routing is enabled, the AWA components provide these capabilities:

Agent

- Components utilized
 - Agent availability
 - Accept button
 - Agent capacity in use (Service channel capacity) increases but is not utilized against the max capacity of service channel
 - Agent universal capacity in use increases but is not utilized against the max universal capacity
- Components not utilized
 - Reject button with rejection reasons: The Reject button is used when configured in the manual assignment API. If the reject button is enabled (allowed_to_decline=**true** parameter in assignment API request), then the rejection reasons are supported.
 - Max agent capacity
 - Max universal capacity

Service channel

- Components utilized
 - Channel advanced condition
 - Inbox layouts
 - Queue order
- Components not utilized
 - Assign to and assignment group fields

These fields are used to:

- Determine if a document should qualify for routing.
- Determine which field to update once the work item is successfully assigned to an agent.
- Capacity and utilization features
- Agent capacity overrides
- Work item override

Queue

- Components utilized
 - Max wait time will expire work items if set on queue
 - Work item routing conditions
 - Queue order
- Components not utilized
 - Queue agents' presence checks: Agent's presence is checked during the assignment API request processing.
 - Work items remain in the queue with a status of "queued" until the external system routes the work item
 - Queue schedules
 - The following related lists are hidden on the queue since they are not utilized:
 - Assignment eligibility and rules
 - Work item sort order
 - Agent Affinity
 - Agent assignments
 - Group queue priorities
 - Work items

Functionality of External routing in AWA

External routing enables AWA to integrate with third-party contact-center-as-a-service (CCaaS) providers. When the external provider has made an assignment decision, the work item gets assigned utilizing the existing AWA Assignment API.

External Routing can

- Send events to keep providers informed about the work item and agent status.
- Enhance the assignment API to handle provider-initiated work items.
- Track and offer contact center work items, while outsourcing agent selection to the contact center.

When Advanced Work Assignment is configured for external routing:

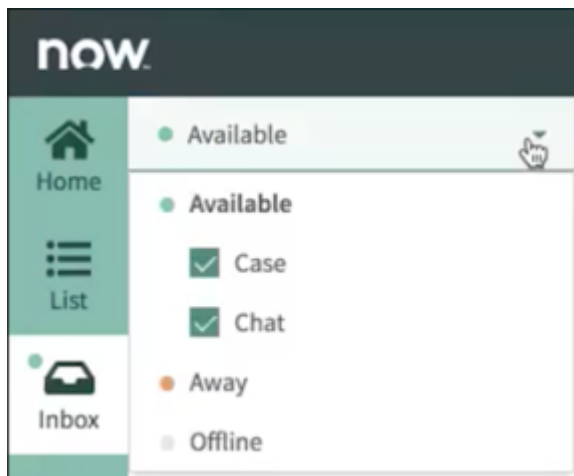
- AWA provides additional parameters for an Inbox experience.
- AWA provides additional logging and performance improvements.
- The Inbox card is presented to the Agent with both the Reject and Accept buttons when Auto-accept is false.
- The Inbox card shows the Time-out value to Agent. If auto-assign is true, this field is ignored, when the Time-out value of the Work Item is greater than 0.
- The presence state of the agent switches to the specified presence state. If auto-assign is true OR no timeout is passed in, this field is ignored.
- The work item is immediately assigned to Accept, when the Auto-assign value is true.
- The auto-assigned work item is either displayed as an Inbox card, or both Inbox card and workspace tab. If the auto-assign value is false, this field is ignored.

Agent Inbox controls

Control certain elements of the agent experience in Agent Workspace. Define the agent presence (availability) states and the work item rejection reasons used by agents to decline work assignments in their Agent Workspace inbox.

Agent presence states

Agent availability in Agent Workspace Inbox



AWA admins can define the presence states that agents choose in their inbox to indicate their availability. The default states are

- Available: Solid green bubble indicates that the agent is available to receive work.
- Away: Solid yellow bubble indicates that the agent is not available to receive work.
- Offline: Solid grey bubble indicates that the agent is not available to receive work.

AWA developers with the `awa_integration_user` role can also use JavaScript or REST APIs to get or set agent presence and agent channel availability. For more information, see

- [Agent Presence API \(REST APIs\)](#)
- [Agent - Global \(JavaScript APIs\)](#)

Agent rejection controls

AWA admins can give agents the option to reject work assignments and specify the reason for rejecting it. The **Reject** button displays on work assignment cards. When an agent rejects an assignment, a pop-up window enables the agent to select a reason for declining the work item.

Advanced Work Assignment Inbox Sentiment display

Surface the sentiment in AWA Inbox for agents to get the visibility of requester sentiment (if available) during live agent handoff or agent transfer for all channels.

With Advanced Work Assignment sentiment, you can:

- Display the sentiment (negative or positive) in Advanced Work Assignment inbox card for interactions during live agent handoff and agent transfer.
- Admin configuration to enable or disable sentiment per service channel.

Wrap up overview

When agents close an interaction, the wrap up feature enables them to enter closing details and wrap up codes for future reference.

To configure the wrap up feature, follow these steps:

- [Wrap up configuration](#)
- [Wrap up codes](#)
- [Wrap up segments](#)

Management

Configure Advanced Work Assignment properties using the Management menu options.

Only users with awa_manager privileges can access the Management menu options.

AWA group queue priorities

Use the group queue priority feature to set a queue or work item preference for a given group of agents. For a given group or agent with limited capacity, this feature controls which queues should be preferred if matching work items are found in both.

For each group defined across the eligibility pools for a given queue, a corresponding group queue priority record will automatically be created for that group and queue combination, with the order set to a default of 100.

Example

The admin has configured two AWA queues: chat queue and P1 chat queue.

- Chat queue has one eligibility pool with two groups: Spanish agent group and English agent group.
- P1 chat queue has one eligibility pool with one group: English agent group.

The admin creates three group queue priority records, each with the default order of 100:

Group	Queue	Order
Spanish agent group	Chat queue	100
English agent group	Chat queue	100

Group	Queue	Order
English agent group	P1 chat queue	100

Since both group queue priority records for the English agent groups have the same order of 100, work items across both queues are equally considered during assignment.

If the admin then changes the order of one of the group queue priority records to 200:

Group	Queue	Order
Spanish agent group	Chat queue	100
English agent group	Chat queue	200
English agent group	P1 chat queue	100

The English agent group now has a group queue priority hierarchy of two levels:

1. Level 1: Work items in the P1 chat queue
2. Level 2: Work items in the chat queue

With the above hierarchy, agents in the English agent group will prefer work items in the P1 chat queue over the chat queue. The assignment engine will try to assign all work items under the P1 chat queue to the English agent group, before trying to assign any work items under chat queue to that same group (assuming some agents still have free capacity).

Group queue priority processing: tiers

AWA uses tiers as a series of assignment rounds. In each round, AWA expands the pool of eligible agents based on group queue priority tiers. Each tier represents a set of groups at the same level and indicates how those groups prioritize a queue relative to other queues they qualify for.

Group	Queue	Order
Spanish agent group	Chat queue	100
English agent group	Chat queue	200
English agent group	P1 chat queue	100

For the above group queue priority configuration, the tiers are organized as follows:

1. Tier 1:
 - a. Consider English agent group for P1 chat queue
 - b. Consider Spanish agent group for chat queue
2. Tier 2: Consider English agent group for chat queue

The ordering within each tier is negligible since all work items across queues in the same tier are equally considered.

The above tier ordering translates into the following rounds of assignment:

1. Assignment run #1

- a.** Assign work items in P1 chat queue, with agents from English agent group
- b.** Assign work items in chat queue, with agents from Spanish agent group

2. Assignment run #2: Assign work items in chat queue, with agents from English agent group**Side effect of tier organization**

A side effect of the tier setup is that the Spanish agent group may receive more work items under the chat queue, since they will be considered earlier during the first run of assignment. Since agents from English agent group may have been assigned work items in the P1 chat queue in the first assignment run, they will have less capacity to handle work items assigned in the second assignment run. Both factors influence the likelihood of groups in later tiers in receiving work items.

These side effects are important as this implies that the group queue priority setup hierarchy across different groups could also affect the distribution of work items within a queue.

Consider a more complex scenario where three groups are all eligible for three different queues, with the following group queue priority setup:

Group	Queue	Order
1	A	10
1	B	20
1	C	30
2	A	300
2	B	100
2	C	200
3	A	2
3	B	3
3	C	1

The assignment process is organized into three tiers, since the maximum hierarchy across all three groups is three levels. There will be three runs of assignment:

1. Assignment Run #1

- a.** Queue A, with agents from group 1
- b.** Queue B, with agents from group 2
- c.** Queue C, with agents from group 3

2. Assignment Run #2

- a.** Queue A, with agents from group 3
- b.** Queue B, with agents from group 1
- c.** Queue C, with agents from group 2

3. Assignment Run #3

- a. Queue A, with agents from group 2
- b. Queue B, with agents from group 3
- c. Queue C, with agents from group 1

If each group has one agent having capacity 2, where agent 1 is in group 1, agent 2 is in group 2, and agent 3 is in group 3, then assignments are made in the following manner:

Scenario	Outcome
2 work items in each queue	• Agent 1 gets two items from Queue A • Agent 2 gets two items from Queue B • Agent 3 gets two items from Queue C
3 items in Queue A and 3 items in Queue B	• Agent 1 gets two items from Queue A • Agent 2 gets two items from Queue B • Agent 3 gets the last item from Queue A • Agent 1 gets the last item from Queue B
6 items only in Queue C	• Agent 3 gets the first two items from Queue C • Agent 2 gets the next two items from Queue C • Agent 1 gets the last two items from Queue C

Configuring Advanced Work Assignment

Quickly install the required and popular plugins through the plugin page after selecting any **Get [plugin]** button on the Advanced Work Assignment home page. Plan and configure Advanced Work Assignment (AWA).

Before you begin

The AWA home page appears after you have installed and updated the Omni-Experience Standard Feature Set to the latest version through the [ServiceNow Store](#).

Role required: admin

About this task

After installing the Advanced Work Assignment plugin and any relevant org-specific plugins, the following list outlines the basic planning and configuration steps that you must determine for AWA:

- Determine what to route – Configure the base service channels to be used.
- Determine where to route – Define the work item queues and the routing rules, execution order, work item sort order, and strategy.

- Determine how to assign work items – Define the assignment rules that determine the work items pushed to agents.
- Determine what the agent sees – Set the inbox card layouts and presence (availability) states that agents use in their Agent Workspace inbox.

Procedure

1. Navigate to **Advanced Work Assignment > Home**, and then select the **Get Advanced Work Assignment plugin** button from the First, install a required plugin section.

Note: Only users with the sys_admin role can install a plugin from the Advanced Work Assignment home page. For example, if a user with the awa_admin role tried to install the Advanced Work Assignment plugin, they're prompted to contact their administrator for installation. After the Advanced Work Assignment plugin is installed, all AWA home page options are available in the application navigator for users with the admin and awa_admin roles.

The All Applications page opens in a new window or tab.

2. In the All Applications page, select **Install** and complete the installation prompts. The AWA home page experience refreshes and the Get targeted routing capabilities section appears.
3. **Optional:** Install org-specific AWA plugins through the **Get plugin** button for ServiceNow® IT Service Management (ITSM), ServiceNow® Customer Service Management, and/or ServiceNow® HR Service Delivery (HRSD) plugins. The AWA home page experience refreshes and the Get the most popular plugins section appears.
4. **Optional:** Install popular plugins, such as Agent Chat, Walk-up Experience, and/or Performance Analytics, to boost your AWA experience.
5. In the Essential settings section, select **Set up service channels** to [configure the service channels](#) that you activated.
 - a. [Create or change an inbox layout](#).
 - b. [Override agent capacity](#), as needed.
6. In the Essential settings section, select **Set up queues** to [create work item queues](#) for your service channels.
 - a. [Set the sort order for work items](#) in the queue.
7. In the Essential settings section, select **Set up assignment rules** to [configure the work assignment rules](#) used to push work to the appropriate agents.
8. **Optional:** In the Additional settings section, consider configuring the following parameters to improve your AWA functionality.
 - a. Select **Set up presence states** to [configure availability states](#) states that agents use to indicate whether they can receive work or are offline or away.
 - b. Select **Set up reject reasons** to [define the reject reasons](#) that agents can use to decline work assignments that they receive in their Agent Workspace inbox.
 - c. Select **Set up universal capacity** to [configure your team's maximum universal capacity](#) to prevent an agent from being assigned too many work items.
 - d. Select **Set up groups** to [create groups of user sets](#) who share a common purpose.
9. **Optional:** In the Advanced settings section, consider configuring the following parameters to improve your AWA functionality.

Note: Advanced settings cards appear conditionally after installing their respective plugin.

- a. Select **Set up Agent Affinity** to [create or change the Agent Affinity rules](#) that route work items in Advanced Work Assignment.
- b. Select **Set up Shift-based Assignment** to [assign work items to agents based on shifts](#).

Get started with Advanced Work Assignment

To implement Advanced Work Assignment, complete these initial configuration and setup steps.

Before you begin

Role required: awa_admin and admin

Procedure

1. Navigate to **All > Advanced Work Assignment > Home**.
2. Select **Get Advanced Work Assignment plugin** to install the Advanced Work Assignment plugin for your instance.
The All Applications page opens in a new window or tab.
3. In the All Applications page, select **Install** and complete the installation prompts.
4. Go back to the Advanced Work Assignment (AWA) home page, and then select **Done** on the Plugin page opened dialog box.
The AWA home page experience refreshes and the Get targeted routing capabilities section appears.
5. Select **Get plugin** to activate org-specific IT Service Management (ITSM), Customer Service Management, and HR Service Delivery (HRSD) plugins.
The All Applications page opens in a new window or tab.
6. In the All Applications page, select **Install** and complete the installation prompts.
7. Go back to the Advanced Work Assignment (AWA) home page, and then select **Done** on the Plugin page opened dialog box.
The AWA home page experience refreshes and the Get the most popular plugins section appears.
8. **Optional:** Install additional plugins through various ways.
 - Select **Get plugin** to install popular plugins.
 - Select the plugin name from the Available Plugins sections.
The All Applications page opens in a new window or tab.
9. **Optional:** In the All Applications page, select **Install** and complete the installation prompts.
10. **Optional:** Go back to the Advanced Work Assignment (AWA) home page, and then select **Done** on the Plugin page opened dialog box.

(Optional) The plugin page opened dialog box only appears when you install plugins from the Get the most popular plugins section.

The AWA home page experience refreshes and either the Get the most popular plugins section refreshes with the installed plugin or the plugin appears under the Installed Plugins section.
11. In the Essential settings section, select **Set up service channels** to configure the service channels that you activated.

- a. Create or change an inbox layout.
- b. Override agent capacity, as needed.
- 12. In the Essential settings section, select **Set up queues** to create work item queues for your service channels.
Set the sort order for work items in the queue.
- 13. In the Essential settings section, select **Set up assignment rules** to configure the work assignment rules used to push work to the appropriate agents.
- 14. **Optional:** In the Additional settings section, consider configuring the following parameters to improve your AWA functionality.
 - a. Select **Set up presence states** to configure availability states that agents use to indicate whether they can receive work or are offline or away.
 - b. Select **Set up reject reasons** to define the reasons that agents can use to decline work assignments that they receive in their Agent Workspace inbox.
 - c. Select **Set up universal capacity** to configure your team's maximum universal capacity to prevent an agent from being assigned too many work items.
 - d. Select **Set up groups** to create groups of user sets who share a common purpose.
- 15. **Optional:** In the Advanced settings section, consider configuring the following parameters to improve your AWA functionality.

Note: Advanced settings cards appear conditionally after installing their respective plugin.

- a. Select **Set up Agent Affinity** to create or change the Agent Affinity rules that route work items in Advanced Work Assignment.
- b. Select **Set up Shift-based Assignment** to assign work items to agents based on shifts.

Activate Advanced Work Assignment

You can activate the Advanced Work Assignment plugin (com.glide.awa) if you have the admin role.

Before you begin

Role required: admin

About this task

Advanced Work Assignment activates the Skills Management plugin (com.snc.skills_management) to implement user and group skills.

Plugins for Skills Management

Plugin	Description
Skills Management [com.snc.skills_management]	Implements user and user group skills. Based on the same principles of roles management, which uses inheritance between user groups.

Procedure

1. Navigate to **All > Advanced Work Assignment > Home**.
2. Select **Get Advanced Work Assignment plugin** to install the Advanced Work Assignment plugin for your instance.

The All Applications page opens in a new window or tab. If you don't see the **Get Advanced Work Assignment plugin** button, you either don't have the permissions to install the plugin, or the plugin has already been installed.

3. In the All Applications page, select **Install** and complete the installation prompts.
4. In the Advanced Work Assignment (AWA) Home experience's Plugin page opened dialog box, select **Done**.
The AWA Home experience refreshes, the Get targeted routing capabilities section appears, and AWA is installed.

What to do next

Activate the targeted routing capabilities plugins and other popular AWA plugins to enable the appropriate service channels and the Platform Analytics Solutions for Advanced Work Assignment.

Activate related plugins for Advanced Work Assignment

After activating the Advanced Work Assignment plugin, activate related AWA plugins to enable other base system service channels and the Performance Analytics Solutions dashboard for AWA.

You must have the admin role to activate these additional plugins for AWA.

Targeted routing capabilities plugins

Install the following plugins from the AWA Home experience's Get targeted routing capabilities section or the Available Plugins section. If you'd rather search for each plugin individually, see [Activate a plugin](#).

Plugin	Description
Advanced Work Assignment for Incidents [com.snc.incident.awa]	Enables the Incident service channel in AWA. Includes a default configuration to support AWA for incidents.
Advanced Work Assignment for CSM [com.sn_csm.awa]	Enables the Case service channel in AWA. Includes configuration data supporting routing, queuing, and assignment of CSM cases.
Advanced Work Assignment for HRSD [com.sn_hr_awa]	Enables base system configuration data supporting routing, queuing, and assignment of HRSM cases, chats, and calls to agents.

Popular plugins

Install the following plugins from the AWA Home experience's Get the most popular plugins section or the Available Plugins section. If you'd rather search for each plugin individually, see [Activate a plugin](#).

Plugin	Description
Agent Chat [com.glide.interaction.awa]	Enables the Chat service channel in AWA and chat messaging in Agent Workspace. Includes default configuration data for chats, including demo data.

Plugin	Description
Walk-up Experience [com.snc.walkup]	Activates the walk-up contact service channel for prebuilt tech lounges. Enables an IT organization to support online and off-site checkin.
Performance Analytics Content Pack – Advanced Work Assignment [com.snc.pa.awa]	Activates the Performance Analytics Content Pack for AWA. Provides base system KPIs.

Move from Connect Support to Advanced Work Assignment and Agent Chat

Move from ServiceNow® Connect Support to Agent Chat (live chat), which is the messaging system that agents use in Agent Workspace to interact with customers. Moving from Connect Support also involves using Advanced Work Assignment (AWA) to create the chat queues for routing chat work items to agents.

Before you begin

Role required: admin

Important:

As of Utah, Connect Support is deprecated. For similar capabilities, please move to Advanced Work Assignment and Agent Chat.

About this task

Moving to modern applications such as Advanced Work Assignment and Agent Chat offers features and benefits that are not available in Connect Support. These new capabilities include:

- [Automatic assignment of chats and work items to agents](#) based on criteria that you define, such as agent availability, capacity, skills, [Agent Affinity](#), and variable [work item sizing](#).
- Automatic [queue overflow handling](#)
- [Chat timeout reassignment](#)
- Native [Chat surveys](#)
- Supervisor features, such as [Agent Whisper](#), that enable managers to join ongoing public customer chats with agents or send private messages to agents.
- Agent features, such as workspace [inbox controls](#) for viewing, accepting, or rejecting incoming chats.

If you are currently using Connect Support APIs, see [AWA Routing API](#)  for information on AWA APIs.

Procedure

1. Navigate to **All > Advanced Work Assignment > Home**.
2. Activate the Advanced Work Assignment and Agent Chat plugins if they are not currently active.
3. If needed, review your existing Connect Support chat queues and determine whether you want to create a similar set of queues for the Chat service channel in AWA.

 **Note:** You cannot use your Connect Support chat queues in AWA. Chat queues for Connect Support are stored in the Chat Queue [chat_queue] table. Chat queues for AWA are stored in the AWA Queue [awa_queue] table.

4. In the AWA Home page, [configure the Chat service channel](#), [create the associated chat queues](#), and establish [agent work assignments](#).
5. In [Agent Chat settings](#), access the Chat Setup form to specify Agent Workspace as the fulfiller interface for live chat and enable other live chat features.
6. Activate the [chat client on your end user Service Portal](#).

Trouble?

Troubleshooting suggestions include these common problems and solutions:

Problem: While using AWA, the chat remains in routing and is not offered to an available agent.

Solution: This problem may happen if AWA attempts to route the chat to a Connect Support queue. In this case, the interaction remains assigned to the Virtual Agent user and no `awa_work_item` record is created. A common cause of this problem is the Chat Setup entry for the chat's application still being set to **Connect**.

Problem: When trying to route to a live agent, the requester is incorrectly told that no live agents are available.

Solution: This problem may be caused by one of these situations:

- Queue conditions that depend on checking interaction fields or context were created on the interaction too late for routing.
- Chat service channel is not associated with the Available presence state. A common cause of this problem is deactivating and reactivating the Chat channel.

Debugging suggestions include these questions to consider:

Here are a few questions to ask and places to look if agents are not receiving chats:

- Does an `awa_work_item` record exist for the interaction? If it does not, is the **Assigned to** field for the interaction empty or is it set to Virtual Agent? If the **Assigned to** field is set to Virtual Agent, it is probably trying to use Connect Support.
- In the Chat setup, are the fulfillers set appropriately for each application?
- In the `interaction_json_blob` referenced by the **interaction.context_document** field, is the *Liveagent_application* variable set to the expected value?

Install Conversational SMS service channel

You can install the Conversational SMS service channel application (`sn_awa_sms_int`) if you have the admin role. The application installs related ServiceNow® Store applications and plugins if they are not already installed.

Before you begin

- Ensure that the application and all of its associated store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#) .
- The Conversational Messaging plugin (`com.glide.messaging.awa`) must be installed.

For more information on activating plugins, see [Activate a plugin](#) .

Role required: admin

About this task

- Note:** The Conversational SMS service channel is automatically installed with an application that implements an SMS provider, such as the Conversational SMS Integration with Twilio (sn_va_sms_twilio) application. For more information, see [Install Conversational SMS Integration with Twilio](#).

Procedure

1. Navigate to **All > Advanced Work Assignment > Home**.
2. In the Available Plugins section, select **Conversational SMS**.

- Note:** If you cannot find the application, you may have to request it from the ServiceNow Store. Visit the [ServiceNow Store](#) to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

3. Select **Install**, and then in the Install dialog box, select **Install**.

What to do next

[Set up the Conversational SMS service channel](#)

Create or configure a service channel

Create or configure a service channel that is used in Advanced Work Assignment (AWA).

Before you begin

Role required: awa_admin or admin

About this task

You can specify additional conditions to filter the work items that are handled in the channel, change the agent capacity (workload) for the channel, set the inbox layouts that your agents use in Workspace, and view associated work item queues.

If you activate the corresponding plugins or install the corresponding store applications, AWA provides base system channels for these services:

- Cases plugin (com.snc_csm.awa)
- Chats plugin (com.glide.interaction.awa)
- Chats - Asynchronous plugin (com.glide.interaction.awa)
- Incidents plugin (com.snc.incident.awa)
- Walk-up interactions plugin (com.snc.walkup)
- Conversational Integration with WhatsApp (powered by Twilio) application (sn_va_whatsapp_twi)

For each channel, you can change certain default settings, such as the default capacity (workload) for agents. You can also use the related lists to review associated queues, define the associated inbox layouts (work item cards) that are displayed in Workspace, and override the agent capacity value.

You can also create a service channel record from the Service Channel module, but you must [create a queue](#), [assignment rule](#), and [eligible assignment pool](#) to route work through the service channel. For more information, see [Set up a custom service channel](#).

Procedure

1. Navigate to the service channel settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up service channels.**

- **All > Advanced Work Assignment > Service Channels.**

2. Choose a situation.

- To create a service channel, select **New.**
- To update a service channel, select the service channel record that you want to update.

3. On the form, fill in the fields.

Service Channel form

Field	Definition
Name	Name of the selected base system service channel to be configured: ○ Chat ○ Chat - Asynchronous ○ Case ○ Facebook Messenger ○ Incident ○ Line ○ Walk-up ○ WhatsApp
Inbox order	Order in which channel items appear in the agent inbox.
Application	Name of the application. ○ Chat: Global ○ Chat - Asynchronous: Global ○ Case: Advanced Work Assignment for CSM ○ Facebook Messenger: Conversational Integration with Facebook Messenger ○ Incident: Advanced Work Assignment for Incidents ○ Line: Conversational Integration with LINE ○ Walk-up: Walk-up Experience ○ WhatsApp: Conversational Integration with WhatsApp (powered by Twilio)
Active	Option for activating the service channel. When you select this option, the associated queues for the service channel can start accepting work items.
Short description	Brief description of the service channel:

Field	Definition
	- Chat: Live Agent Chat Interactions - Chat - Asynchronous: Asynchronous Live Agent Chat Interactions - Case: Cases for Agents - Facebook Messenger: Live Agent Facebook Messenger Interactions - Incident: Incidents for Agents - Line: Live Agent LINE Interactions - Walk-up: Walk-up interactions for agents to work on - WhatsApp: Live Agent WhatsApp Interactions
Table	Table that stores the service channel records.
Advanced condition	If enabled, the advanced conditions that apply to the channel. For example: - Chat: [Type] [is] [Chat] - Chat - Asynchronous: [Subtype] [is] [mweb], [Type] [is] [Messaging] - Facebook Messenger: [Subtype] [is] [Facebook Messenger] - Line: [Subtype] [is] [Line] - Walk-up: [Type] [is] [Walk-up] - WhatsApp: [Subtype] [is] [WhatsApp]
Assign to field	Field that references the user assigned to the item. In both Case and Interaction (and most other tables), this field is the Assigned to (assigned_to) field.
Assignment group field	Field that references the assignment group assigned to the item. In most tables, this field is the Assignment group field.
Type	Indicator of whether a communication service channel is handled as a synchronous or asynchronous conversation channel. This field appears when you select Interaction in the Table field. - Chat - Phone - Messaging - Other
Log level	Amount of information recorded when AWA events are logged.

Field	Definition
	- None: No information is logged. - Basic: Only basic information is logged. - Verbose: Detailed information, including record details and event details, is logged. This field appears if Enable logging is enabled.
Inbox Alert Audio	Audible alert that sounds when a new item arrives in your inbox for this service channel. If you don't specify an audio file, the default audio file sounds.
Message Alert Audio	Audible alert that sounds when a new message arrives in your conversation for this service channel. If you don't specify an audio file, the default audio file sounds.
Capacity and Utilization	
Default work item size	Amount of an agent's capacity that is used when this work item is assigned. The default is 1.
Default capacity	Number of items automatically assigned to agents (pending overrides). - Case: The default is 2. - Chat: The default is 4. - Chat: Asynchronous: The default is 4. - Facebook Messenger: The default is 4. - Incident: The default is 2. - Line: The default is 4. - Walk-up: The default is 1. - WhatsApp: The default is 4.
Utilization condition	Condition that determines what constitutes an active item that counts toward agent workload/capacity. For example, the record state is New, Open, or Awaiting Info. - For chat: The state is not Closed Complete or Closed Abandoned - For Chat - Asynchronous: The state is Closed Complete or Closed Abandoned - For case: The state is New or Open - For Facebook Messenger: The state is New or Work in Progress - For incident: The state is New, In Progress, or On Hold - For Line: The state is New or Work in Progress

Field	Definition
	- For walk-up: The state is not On Hold, Closed Complete, or Closed Abandoned - For WhatsApp: The state is New or Work in Progress
Logging	
Enable logging	Option to record information in the syslog_awa table when AWA events are logged. Specify the level of detail to be recorded in the Log level field on this screen.
Stop logging at	Date and time that logging should stop. This field appears if Enable logging is enabled.

4. Select **Submit** or **Update**.

The channel is added to or updated in the Service Channels [awa_service_channel] table.

What to do next

- [Override the agent capacity](#) for selected agents or groups.
- [Create or modify an inbox layout](#) for the service channel.
- [Configure agent assignment rules](#) for the channel.
- [Define agent pools eligible for assignment](#).
- [Create or modify a work item queue](#) for the channel.
- [Create or modify a work item size override](#) for the channel.

Set up the Conversational SMS service channel

Configure the Conversational SMS service channel store app.

Before you begin

Role required: admin

Procedure

1. Navigate to the service channel settings through one of the following navigation paths.

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up service channels**.

- **All > Advanced Work Assignment > Service Channels.**

2. Select the SMS service channel.

3. On the Service Channel - SMS screen, select the **Active** check box to activate the service channel.

4. Because the SMS group has no users by default, manually add users to the SMS group.

5. Navigate to **All > Advanced Work Assignment > Home**.

6. In the Additional settings section, select **Set up presence states**.

7. In the Name column, click **Available**.

8. On the Presence State - Available screen, select **SMS** in the Available column.

9. Select the right-pointing arrow to move SMS from the Available column to the Selected column.

10. Select **Update**.

Set up a custom service channel

Set up a custom service channel to expand the type and scope of work that is routed automatically to your agents.

Before you begin

- Select the table that you want to use to route work to agents automatically. Only Task [task] and Interaction [interaction] tables are supported.
- Ensure that the form layout for the selected table is configured for the workspace view. Record types without a workspace view appear as read-only in Agent Workspace. .
- If you want to open a record in AWA for a table that extends another table that has a service channel defined, ensure that the workspace view for that table has already been defined.
- Assign the awa_agent and workspace_agent roles to whichever agents are receiving work items in Agent Workspace from your custom service channel.

Role required: awa_admin or admin

About this task

You can create a service channel record from the Service Channel module, but you must create a work item queue, assignment rule, and eligible assignment pool to route work through the service channel. You also must configure the custom service channel to make it available in an agent's inbox in Agent Workspace.

Procedure

1. Navigate to the service channel settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up service channels**.

- **All > Advanced Work Assignment > Service Channels.**

2. Select **New**.

3. Complete the service channel fields, and then select **Submit**.
For more information, see [Create or configure a service channel](#).
4. Create an assignment rule.
For more information, see [Configure agent assignment rules](#).
5. Create a work item queue for your service channel.

For more information, see [Create a work item queue](#).
6. On the form for the work item queue that you created, go to the **Assignment Eligibility** related link and create an eligible assignment pool.

Make sure to associate your assignment rule to the eligible assignment pool.

For more information, see [Define agent pools eligible for assignment](#).
7. Make your service channel available in Agent Workspace.
 - a. Navigate to **All > Advanced Work Assignment > Home**.
 - b. In the Additional settings section, select **Set up presence states**, and then open **Available**.
 - c. On the form, move your custom service channel to the **Selected** list.
 - d. Select **Active** option (if not already selected).
 - e. Select **Update**.
8. **Optional:** Create or change the inbox card layout to show the most important information from a work item.
For more information, see [Create or change an inbox layout](#).

Result

Your custom service channel routes work to agents. In Agent Workspace, the service channel appears as an available service channel in the agent inbox.

Tutorial: Set up a custom service channel for change requests

Learn how to configure Advanced Work Assignment to automatically assign change requests to agents. Use this tutorial as a guideline to help you understand how service channel records, queues, and assignment rules work together to create a custom service channel.

In this tutorial, you learn how to set up a custom channel that:

- Assigns new change requests to whichever Change Management agent has the most capacity
- Populates the assignee's agent inbox in Agent Workspace with change requests from the queue
- Displays the change request number, short description, and type on the inbox card
- Enables the agent to accept or reject change requests

For information on setting up custom service channels, see [Set up a custom service channel](#).

Before you begin:

- Ensure that the form layout for the Change Request table is configured for the workspace view; otherwise, work items from the Change Request service channel appear as read-only in Agent Workspace.
- Assign the `awa_agent` and `workspace_agent` roles to the Change Management group so that members can open work items in Agent Workspace.

Create a service channel to route requests

Create a service channel in Advanced Work Assignment so that you can route change requests to agents.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the service channel settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up service channels.**

- **All > Advanced Work Assignment > Service Channels.**

2. Select **New.**

3. On the form, fill in the fields.

- Name: Change Request
- Inbox Order: 100
- Table: Change Request [change_request]
- Active: Selected
- Utilization condition: [Active] [is] [true]

4. Select **Submit.**

Create an assignment rule for change requests

Create an assignment rule in Advanced Work Assignment that assigns change requests to agents who are available to do the tasks.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the assignment rules settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up assignment rules.**

- **All > Advanced Work Assignment > Assignment Rules.**

2. Select **New.**

3. On the form, fill in the fields.

- Name: Change Request Assignment Rule
- Assign by: Most Capacity
- Allow agents to reject: Selected

4. Select **Submit.**

Create a queue to route new change requests

Create a work item queue in Advanced Work Assignment that routes new change requests through the service channel that handles change requests.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the queue settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up queues**.

- **All > Advanced Work Assignment > Queues.**

2. Select **New**.

3. On the form, fill in the fields.

- Name: Change Management
- Service channel: Change Request
- Condition mode: Simple
- Work item routing condition: [State] [is] [New]

4. From the form context menu, select **Save**.

Create an assignment pool of agents

Create an eligible assignment pool in Advanced Work Assignment that receives overflow work items, just in case you need more help from other agents to handle change requests.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the queue settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up queues**.

- **All > Advanced Work Assignment > Queues.**

2. Open the Change Management queue.

3. On the form, go to the **Assignment Eligibility** related list and select **New**.

4. On the form, fill in the fields.

- Agent assignment rule: Change Request Assignment Rule
- Groups: Change Management

5. Select **Submit**.

Make your service channel available in Agent Workspace

Make your service channel available in Agent Workspace so that agents can receive change requests in their inbox.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the presence states settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Additional settings section, select **Set up presence states.**

- **All > Advanced Work Assignment > Presence States.**

2. Open **Available.**

3. On the form, move **Change Request** to the **Selected** list.

4. Select **Active** (if not already selected).

5. Select **Update.**

Customize how change requests appear in an agent inbox

Customize how change requests appear in an agent inbox so that agents receive enough information to decide whether to accept or reject the work item.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the service channel settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up service channels.**

- **All > Advanced Work Assignment > Service Channels.**

2. Select the **Change Request** service channel record.

3. On the Change Request service channel form, go to the **Inbox Layouts** related list and open **Default Change Request layout.**

4. On the form, fill in the fields.

- Field 1: Number
- Field 2: Short description
- Field 3: Type

5. Click **Update.**

Result

When you create a change request, the item is routed through the Change Request service channel and assigned to the agent in the Change Management assignment group who is available to receive the change request. When the assignee checks their agent inbox, the change request appears with the option for the agent to either reject or accept the work item.

Change request in an agent inbox

The screenshot shows the ServiceNow agent inbox interface. On the left is a teal sidebar with navigation links: Home (house icon), List (three horizontal lines icon), and Inbox (envelope icon). The main area has a header bar with 'Inbox' and a status indicator 'Available' with a green dot and a dropdown arrow. Below the header, a change request card is displayed. The card has a document icon and the title 'Change Request - CHG...'. The request ID is 'CHG0030005'. The description is 'Please reboot AS400 Emergency'. At the bottom of the card are two buttons: 'Reject' (red) and 'Accept' (green).

Create or change a work item size override

Create a work item size override if you want Agent Affinity to calculate an agent's workload using a work item size other than the default.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the service channel settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up service channels**.

- **All > Advanced Work Assignment > Service Channels.**

2. Select the service channel.

3. On the form, select the **Work Item Size Override** list.

- To create an override, select **New**.
- To change an existing override, select the override that you want to update.

4. On the form, fill in the fields.

Change work item size form

Field	Definition
Name	Name of the override.
Service Channel	Service channel that is assigned to the override.
Override Size	Size to use instead of the default.

Field	Definition
Order	Order in which Advanced Work Assignment considers this size override.
Condition mode	Type of condition for routing work items using this size override: - Simple: Specify a routine condition using the condition builder. - Advanced: Specify a JavaScript scripted condition.
Conditions	Condition that applies to the override work item sizes. This field appears when you select Simple in the Condition mode field.
Script	JavaScript condition statement that specifies the override work item size. The condition must evaluate to true. This field appears when you select Advanced in the Condition mode field.

5. Select **Submit** to create the override or **Update** to change the override.

Create a work item queue

Define or change a queue so that you can determine which work items are routed automatically to agents through a given service channel.

Before you begin

Role required: awa_admin or admin

About this task

Depending on the service channel, additional configuration options are available. For example, in the chat channel you define the standard messages displayed during a chat session with a user.

Procedure

1. Navigate to the queue settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up queues**.

- **All > Advanced Work Assignment > Queues.**

2. Choose a situation.

- To create a queue, select **New**.
- To change a queue, select the queue record to be updated.

3. On the form, fill in the fields.

Field	Definition
Name	Name of the queue. A default queue may be available for the service channel you activated through the plugins related to AWA.
Number	Base number for the table. For more information, see Record numbering .
Service channel	Channel to which the queue belongs. For the chat channel, define the standard messages displayed to chat users in the Chat Messages section.
Active	Option indicating whether the queue is enabled.
Application	Type of scoped application.
Schedule	Support schedule that defines when the queue is available.
Order	During routing, the order in which AWA considers the routing condition for this work item queue, in comparison to other queues.
Short description	Brief explanation of the queue.
Routing Condition	
Define condition here	Option that indicates a routing condition is to be applied to the queue. If checked, define the Condition mode and Work item routing condition .
Condition mode	Type of condition for routing work items in the queue. - Simple: Specify a routing condition using the condition builder. - Advanced: Specify a JavaScript scripted condition.
Work item routing condition	Condition that applies to routing work items to this queue. Use the condition builder to select routing conditions. The fields available for selection are based on the selected service channel. For the chat service channel, you can specify chat context variables in the condition builder by dot-walking to related context fields.

Field	Definition
	For example, if you defined chat context variables that store pre-chat routing information, you can dot-walk to those chat context variables in the condition builder. You can use the variables in routing conditions to specify where chats are routed.
Script	JavaScript condition statement that specifies the work items to be routed to the queue. The condition must evaluate to true. This field appears only when Advanced is selected from Condition mode.
Initial agent response	Message that users see when an agent accepts a chat. For example: Thank you for contacting support. I am looking into your question now and will be with you shortly.
Max wait time message	Message that users see when a chat ends because the Max Wait Time has elapsed. This field is required if the Max Wait Time is greater than 0.
Target wait time	Estimated time (Days or Hours, minutes, seconds) allotted for an agent to accept an item in the queue.
Max Wait Time	Maximum amount of time that all available agents have to accept or reject a chat request. After time runs out, the requester receives the value in either the Max wait time message field or the No Agents Available Message field defined in Agent Chat settings. Note: The Max Wait Time field is available after you associate the queue to the chat service channel.

4. Select **Submit** for a new queue or **Update** to change the queue.

The queue is added to or updated in the Queues [awa_queue_list] table.

What to do next

- Define the [Assignment Eligibility](#).
- Optionally, define the [Work Item Sort Order](#).
- Optionally, define the [Queue Triggers](#).
- Optionally, define the [Set Agent Affinity rules](#).

Configure agent assignment rules

Set the Advanced Work Assignment criteria for assigning work items to agents. Choose the assignment rule that considers the agent with the most capacity or the agent who has gone the longest without work. Establish the settings for the auto-assign handling, reject handling, and skill handling related lists.

Before you begin

- A basic understanding of the [Skills Management](#)  feature is recommended.
- If you want agent skills to be considered when work is routed to the appropriate agents, define the skills for your agents or groups. When you enable the skill handling options on the Assignment Rules form, AWA assigns the users in groups with the appropriate skills to corresponding work items.
- You can use rules to identify skills and assign them to work items. For more information on defining and assigning skills for work items, see [Routing work items to agents based on skills](#) .

Role required: awa_admin or admin

Procedure

1. Navigate to the assignment rules settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up assignment rules**.

- **All > Advanced Work Assignment > Assignment Rules.**

2. Choose a situation.

- To create a rule, select **New**.
- To change a rule, select the rule to be updated.

3. On the Assignment Rule form, fill in the fields.

For a description of the field values, see [Assignment Rule form](#).

4. Select **Submit** for a new rule or **Update** if you're changing the rule.

The assignment rule is added to or updated in the Assignment Rules [awa_assignment_rule] table.

Tutorial: Automatically assign work to agents by skill

Learn how you can configure Advanced Work Assignment to automatically route cases to agents who speak German. Use this tutorial as a guideline to help you understand how you can route work items to agents according to their designated skills.

Before you begin:

- Activate the Skills Management (com.snc.skills_management) plugin.
- A basic understanding of the [Skills Management](#)  feature is required.
- To have skills automatically assigned to cases, consider activating the Skill Determination (com.snc.skill_determination) plugin.
- Create a group of users who work in customer support.
- Assign the awa_agent and workspace_agent roles to the customer support group.



[Advanced Work Assignment \(AWA\) Tutorial: Automatically assign work to agents by skill](#) 

Watch this video for a visual representation of the following tutorial example.

Create a skill

Create a "German" skill.

Before you begin

Role required: skill_admin or admin

Procedure

1. Navigate to **All > Skills > All Skills**, and then click **New**.
2. Enter the following information in the fields listed:
 - **Name:** German
 - **Active:** Selected
3. Select **Submit**.

Create an assignment rule that auto assigns agents' work

Create an assignment rule that routes cases according to skills.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the assignment rules settings through one of the following navigation paths:
 - **All > Advanced Work Assignment > Home**.
In the Essential settings section, select **Set up assignment rules**.
 - **All > Advanced Work Assignment > Assignment Rules**.
2. Select **New**.
3. Enter the following information in the fields listed:
 - **Name:** Case Assignment Rule with Skills
 - **Assign by:** Most Capacity
 - **Enable auto-assign work items:** Selected

Note: Selecting this option automatically accepts chat interactions on behalf of agents. The **Display options** field appears and you can select either **Inbox card** or **Inbox card and workspace tab**.

- **Enable skills:** Selected
 - **Evaluate skill level:** Cleared
 - **Enforce mandatory skills:** Selected
4. Select **Submit**.

Create a queue

Create a queue where you can route work to agents who have the German skill.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the queue settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up queues.**

- **All > Advanced Work Assignment > Queues.**

2. Select **New.**

3. Enter the following information in the fields listed:

- **Name:** German Case Queue
- **Service channel:** Case

4. Select **Submit.**

Define assignment eligibility

Define who is eligible to receive cases from the German Cases queue.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the queue settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up queues.**

- **All > Advanced Work Assignment > Queues.**

2. Select the German Cases queue.

3. On the form, go to the Assignment Eligibility related link and select **New.**

4. In the **Agent assignment rule** field, select **Case Assignment Rule with Skills.**

5. In the **Groups** field, select your customer support group.

6. Select **Submit.**

Enable skill determination

Activate the skill determination business rule to tag skills for your work items.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to **All > System Definitions > Business Rules.**

2. Select the **Skill determination for cases** record.

3. On the form, select the **Active** field.

4. Select **Update.**

Define a skill determination rule

Create a skill determination rule to tag the German skill to incoming cases from German speakers.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to **All > Skills > Skill Determination Rules**, and then select **New**.

2. Enter the following information in the fields listed:

- **Name:** Skill determination for German cases
- **Active:** true
- **Source table:** Case [sn_customerservice_case]
- **Condition:** Opened by.language is German

 **Note:** Search for the Show related fields option when defining the conditions to get the Opened by.language option.

- **Skills:** German

3. Select **Submit**.

Result

Cases that need German speakers are routed to users in Customer Service and Support who have the German skill.

Create or change an inbox layout

Create or change the card layout for inbox items for a given service channel. Card layouts are displayed in the agent inbox view of Agent Workspace.

Before you begin

Role required: awa_admin or admin. Users with the awa_manager or agent role can review inbox layouts.

About this task

Cards represent work items in an agent's inbox in Agent Workspace. Each channel has a default layout for these cards, which can display up to five fields from the related table record. Use the Inbox Layout form to change a default layout, such as the name, short description, and the specific fields displayed on the card, for example channel and contact or consumer name. You can also specify certain conditions that determine when the card layout is used.

Procedure

1. Navigate to the service channel settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up service channels**.

- **All > Advanced Work Assignment > Service Channels.**

2. Select the service channel to be updated.

3. In the Service Channel form, select the **Inbox Layouts** related link.

- To create a layout, select **New**.
- To change a layout, select the layout to be updated.

4. On the form, fill in the fields.

Field	Definition
Name	The name of the inbox layout.
Service channel	The name of the selected service channel.
Short description	The description of the inbox layout.
Order	The order in which the layouts appear in the agent inbox.
Condition	A condition that determines when this layout is used. Use the condition builder to specify a condition that must evaluate to true to apply the layout.
Card layout	Example card layout.
Field 1	The field from the table for the channel, for example the Interaction [interaction] table for the chat service channel. Select the field or select None to remove an existing field.
Field 2	The field from the table for the channel, for example the Interaction [interaction] table for the chat service channel. Select the field or select None to remove an existing field.
Field 3	The field from the table for the channel, for example the Interaction [interaction] table for the chat service channel. Select the field or select None to remove it.
Field 4	The field from the table for the channel, for example the Interaction [interaction] table for the chat service channel. Select the field or select None to remove it.
Field 5	The field from the table for the channel. For example, the Interaction [interaction] table for the Chat service channel. Select the field or select None to remove it.

5. Select **Submit** for a new layout or **Update** to modify a layout.

The layout is added to or updated in the Inbox Layout [awa_inbox_layout] table.

What to do next

As needed:

- [Override the agent capacity](#) value for selected agents or groups.
- [Create or change a work item queue](#) for the channel.

Override agent capacity for selected agents

Change the default number of work items that an agent can handle for a service channel.

Before you begin

Role required: awa_admin or admin

About this task

To change the capacity for selected agents, use the **Agent Capacity Override** related list for the service channel. To change the capacity for one or more members of a selected group, use the **Agent Capacity Override** related list for the group (**Advanced Work Assignment > Groups**).

Procedure

1. Navigate to the service channel settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up service channels**.

- **All > Advanced Work Assignment > Service Channels.**

2. Select the service channel.

3. In the **Agent Capacity Override** related list, select **New**.

4. On the form, fill in the fields.

Field	Definition
Service Channel	Name of the selected channel.
Override Capacity	Number of work items that the selected agents can handle.
Users	Agents to which this override applies. Move the agent names from the Available list to the Selected list. You can use the filter to identify conditions that restrict the list of agents. Note: The filter shows only users or groups that have AWA roles (awa_agent, awa_manager, awa_admin, admin).

5. Select **Submit**.

The selected agents and their associated capacity values are listed in the Agent Capacities table.

What to do next

If you're configuring a service channel, you can [create or change an inbox layout](#) for the channel.

Define agent pools eligible for assignment

Specify pools of agents eligible to receive overflow work assignments for a queue. An eligible assignment pool can consist of one or more groups of agents available to work on items in the queue. This feature enables Advanced Work Assignment to find a qualified agent from a wider pool of agents.

Before you begin

Role required: admin

About this task

Use the **Assignment Eligibility** related link to expand the pool of agents eligible to work on items in the queue when other agents are busy or unavailable. For each agent pool, select the assignment rule that determines the assignment eligibility. If you don't define an eligible assignment pool for a queue, work items are routed to the queue but AWA doesn't assign them.

Procedure

1. Navigate to the queue settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up queues**.

- **All > Advanced Work Assignment > Queues.**

2. Select the queue.

3. To create an assignment pool, go to the **Assignment Eligibility** related link.

- To create a new eligible assignment pool, select **New**.
- To change the assignment eligibility for a pool of agents, select the pool to be updated.

4. On the form, fill in the fields.

Field	Definition
Agent assignment rule	The name of the rule that determines how work items are to be assigned. Select an assignment rule from the list.
Eligible at	The length of time in seconds before AWA considers the next set of agents for assignment.
Groups	The set of groups eligible for assignment. ◦ Click the lock icon to unlock it and select the agent groups in the eligible assignment pool. ◦ Click the lock icon to lock it.

5. Select **Submit** to create the eligible or **Update** if modifying an eligible assignment pool.

The Queues [awa_queues] table is updated with the eligible assignment pool.

Set work item sort order

Specify the order in which work items in a queue are sorted.

Before you begin

Role required: awa_admin or admin

About this task

The **Work Item Sort Order** field only determines the order that AWA assigns the work item and doesn't affect the order of work items in the agent's inbox card. Work items in the inbox card are displayed based on the time that they arrive. The **Work Item Sort Order** field assigns a set of pending work items to agents designed by the defined work item sort order. For example, if two

work items are pending when an agent becomes available, the **Work Item Sort Order** decides which work item is assigned first to an agent via AWA.

Procedure

1. Navigate to the queue settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up queues.**

- **All > Advanced Work Assignment > Queues.**

2. Select the queue.

3. Select the **Work Item Sort Order** related list and select **New.**

4. In the Work Item Sort Order form, select:

- **Field:** The field to be used for the sort. The fields are from the table for the associated channel. For example, the fields available for the chat service channel are from the Interaction table.
- **Sort Direction:** The order in which work items are sorted. Select either Ascending (smallest to largest or oldest to newest) or Descending (largest to smallest or newest to oldest).
- **Order:** The value of the **Order** value relative to other items in the queue.

5. Select **Submit.**

Create and manage queue triggers

Create and manage queue triggers to set off multiple actions during customer wait times for a particular queue.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the queue settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up queues.**

- **All > Advanced Work Assignment > Queues.**

2. Select the queue.

3. Select the Queue Triggers related list.

- To create a queue trigger, select **New.**
- To change a queue trigger, select the queue trigger record to be updated.

4. On the form, fill in the fields.

Queue Trigger form

Field	Description
Queue	Work items that belong to a service channel.
Message	Message that users see because the Trigger Time has elapsed.

Field	Description
	If the Trigger Type field value is Max Wait , this field becomes read-only and displays the value entered in the Queue form's Max wait time message field. When the Max wait time message appears to users, they're prompted to select a Virtual Agent topic and if they select a topic, they don't return to the live agent's queue.
Trigger Type	Type of configurable trigger: Wait or Max Wait . The Wait trigger defines the actions that happen when users are waiting in the queue and the Max Wait Time hasn't been met. The Max Wait trigger defines the actions that happen when users are waiting in the queue and the Max Wait Time is met.
Trigger Time	Time (days or hours, minutes, seconds) allotted for the Trigger Type . If the Trigger Type field value is Max Wait , this field becomes read-only and displays the value entered in the Queue form's Max Wait Time field.
Flow	Name of the flow or subflow. Note: Workflow Studio subflows must have a string input parameter named <code>conversation_id</code> for AWA queue triggers to detect the appropriate subflow. Ensure that the subflow you want to use has a string input parameter named <code>conversation_id</code> through the Execution tab in Workflow Studio.
Virtual Agent topic	Name of the existing Virtual Agent topic that appears to the users when the max wait time is met.

5. Select **Submit for a new queue or **Update** to change the queue.**

The queue triggers are added to or updated in the Queue Triggers related list.

Create a connection Alias for third-party provider

Create a connection Alias for your third-party provider to enable external routing on your instance.

Before you begin

Role required: admin

- Plugins to be installed:
 - Advanced Work Assignment plugin (com.glide.awa)
 - External Routing Support plugin (com.glide.awa-external)
- **Note:** Load the demo data while installing the plugin.
- Role required: admin

Procedure

1. On your ServiceNow instance, navigate to **Connection and Credential Aliases** and select the **ServiceNow_Basic** record.
2. Create a connection from the **Connections** tab.
 - Set up Credentials for the Connection record.

Note: For the local setup, select the Basic Auth Credentials.

- In the Credentials record, provide the **Name**, **User name**, and **Password**.
- Select **Submit** and select that credential.
- For the Connection URL, give an active URL (of any third-party provider) for local set up.
- Select **Save**.

Create a custom flow action

Create a custom flow action in Workflow Studio for enabling external routing.

Before you begin

Role required: admin

Procedure

1. On your ServiceNow instance, navigate to **All > Flow Designer > Actions**.
2. From the Actions list, open **AWA Post External Routing Events – Demo**.



3. Select **Copy action** from the More Actions menu, copy the contents of the **AWA Post External Routing Events – Demo** action and provide a name to it.
4. Select **Publish**.

Create a subflow

Create a subflow for the Workflow Studio for enabling external routing.

Before you begin

Role required: admin

Procedure

1. On your ServiceNow instance, navigate to **All > Flow Designer > Subflows**.
2. From the Actions list, select **Template - AWA Send Event**.



3. Select **Copy subflow** from the More Actions menu , copy the contents of the **Template - AWA Send Event** subflow and provide a name to it.
4. Configure the action that you created in [Create a custom flow action](#).
 - a. Select the Add an Action, Flow Logic, or Subflow.
 - b. Select the action that you created and in the Actions form, fill in the fields.

Action form

Field	Description
Action	The custom action that you created. For more information, see Create a custom flow action .
Payload	Input the variables for the action.
Connection Alias [Connection & Credential Aliases]	The HTTP(s) Connection that you created. For more information, see Create a connection Alias for third-party provider .
Resource Path	The endpoint URL of the third-party CAAS provider.

- c. Select **Done**.

5. Select **Publish**.

Create a payload for external third-party providers

Create a payload for external third-party providers to send your work items to the external queue.

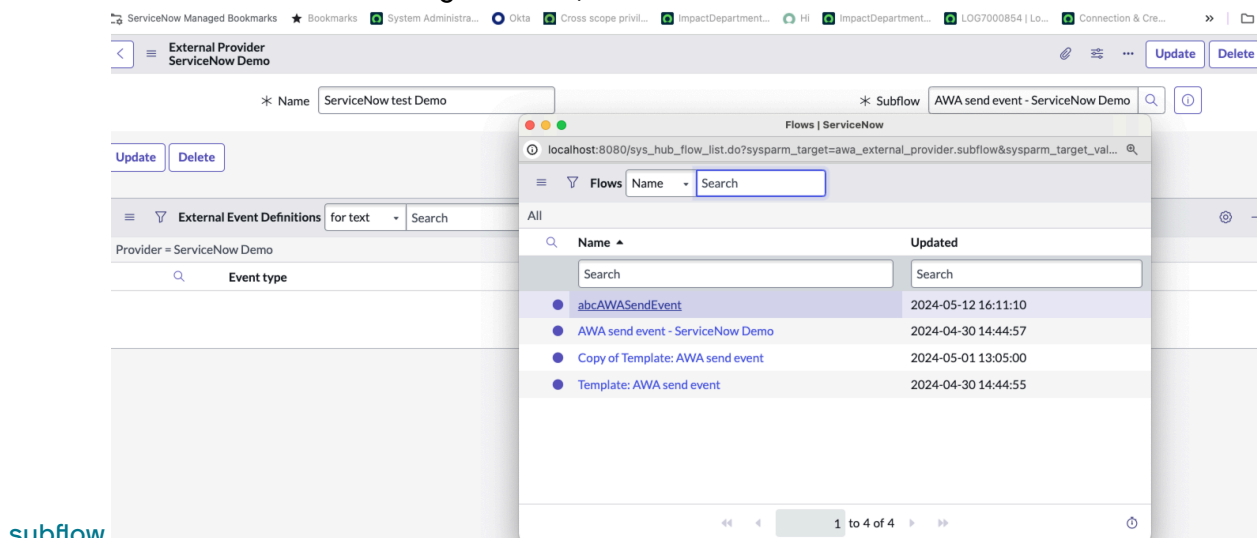
Before you begin

Role required: admin

Procedure

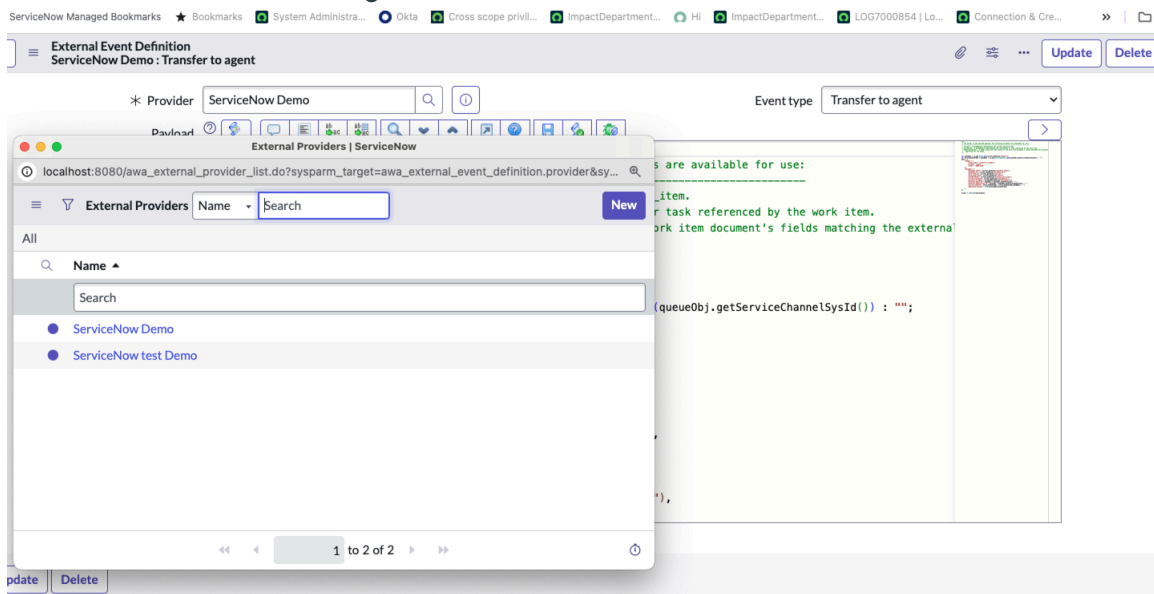
1. On your ServiceNow instance, navigate to **All > Advanced Work Assignment > Queues**.
2. Create a queue enabling External Routing.
For more information about creating a queue with external routing, see [Enable external routing for queues](#).
3. Open the provider record, select the subflow that you created, and select **Save**.

For more information about creating a subflow, see [Create a](#)



4. In the External Event definition section, create a definition form or modify the existing demo data records by changing the provider name you created.

Provider for External Routing



The payload script in the External event definition [awa_external_event_definition] table has the event type and payload information that you send to the third-party providers. Therefore, it is required for you to change all the events' provider to the provider you created.

Payload for External Routing

External Event Definition
ServiceNow Demo : Transfer to agent

* Provider: ServiceNow test Demo

Event type: Transfer to agent

Payload

```

1  /**
2  * Set answer to the desired payload. The following variables are available for use:
3  *
4  * current - A GlideRecord representing the current awa_work_item.
5  * documentGR - A GlideRecord representing the interaction or task referenced by the work item.
6  * additionalParams - A JSON string with the values of the work item document's fields matching the external
7  * specified for the queue.
8  */
9
10 var queueObj = sn_awa.Queue.get(current.getValue("queue"));
11 var serviceChannelObj = queueObj ? sn_awa.ServiceChannel.get(queueObj.getServiceChannelSysId()) : "";
12 data = {
13   "header": {
14     "event_type": "transfer_to_agent",
15     "origin": "queue",
16     "event": "WORK_ITEM"
17   },
18   "message": {
19     "document_table": current.getValue("document_table"),
20     "document_id": current.getValue("document_id"),
21     "work_item_id": current.getValue("sys_id"),
22     "work_item_state": current.getValue("state"),
23     "prevWorkItem": current.getValue("previous_work_item"),
24     "current_assignee": current.getValue("assigned_to"),

```

In the payload script:

- `current` refers to the work item glideRecord associated with the queue. You can access all the workitem records from the glideRecord `current`.
- `queueObj` is the glideRecord for the existing `awa_queue` record.
- `additionalParams` refers to the parameters from the document table.

Note: Before saving the script, verify that you have the required data.

5. Select **Update**.

Link Subflow and Payload to External Queues

Link the subflow and the payload to your external queue to complete external routing.

Before you begin

Role required: admin

Procedure

1. On your ServiceNow instance, navigate to **All > Advanced Work Assignment > Queues** and select your Queue.
2. On your Queue form, check the **External** field checkbox.
3. In the External third-party provider section, select the provider you chose while creating the payload.
For more information, see [Create a payload for external third-party providers](#)

If you need any additional information, add it in the `additionalParams` of the payload script, and select the added params from the **Document Fields to include** slush bucket.

4. From the FDIH Dashboard, select **Test**.
While you want to test your flow action, ensure that you select the HTTP(s) Connection you configured previously, the Resource Path URL for the third-party external provider, and provide the sample payload.
5. In the script to run the FD, provide the necessary Work Item ID and the interaction `sys_id`.

- Verify that you have the third-party external provider URL in the outbound HTTP logs after testing.
Open the third-party external CCaaS provider and verify the transaction logs for the endpoint.

What to do next

You can perform a quick setup test using the demo data by connecting to your external provider. For more information, see [Define external routing test implementation](#).

Enable external routing for queues

Configure Advanced Work Assignment to route work items in the queue using external routing.

Before you begin

Verify that you have reviewed the functionality of external routing and configured the necessary APIs. For more information, see [External routing overview](#).

Role required: awa_external_user

Note: With the installation of the External Routing Support plugin (com.glide.awa-external), the awa_external_user role is available by default.

About this task

From Xanadu release, you can add the **External** field to the AWA queue form view. The **External** field is not available by default, but it is available with the installation of the External Routing Support plugin (com.glide.awa-external) in Xanadu release. The **External** field can be added to the queue UI form only when the plugin is installed in your instance.

External third-party routing form

The screenshot shows the 'External third-party routing form' in ServiceNow. The form is titled 'External third-party routing form' and contains various fields for configuring an external queue. Fields include Name (External Case queue), Number (QUE00001), Service channel (Case), Application (Global), Schedule, Order (100), Active (checked), Short description, Define condition here (checked), Condition mode (Simple), Work item routing condition (Add Filter Condition, Add 'OR' Clause), Target wait time (Days 00, Hours 00, 00, 00), Provider (ServiceNow Demo), Provider queue ID, Document fields to include, and Provider application ID. A red box highlights the 'External' checkbox under the 'Order' field, and another red box highlights the 'External third-party routing' section at the bottom.

The installation of the External Routing Support plugin (com.glide.awa-external), adds demo data for the following:

- An AWA External Provider (awa_external_provider).
- A sys_alias representing an endpoint for the external provider API.
- A set of awa_external_event_definition records demonstration reasonable payloads for each event type.

Note:

- If the customer modifies the default AWA Queue form view, the **External** field is not added to the form even if the external routing plugin is installed as the installation does not override the customer configurations and it must be manually added to the form.
- Installing AWA without this plugin still enables AWA and Agent Chat to function normally, and does not result in any errors or warning logs due to code attempting to access tables or fields that do not exist.

If External (with external partner) and internal AWA queues are mixed up with the respective service channel in an External Partner outbound payload-defined configuration, then a warning message is displayed.

Warning Message

Procedure

1. Navigate to the queue settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up queues.**

- **All > Advanced Work Assignment > Queues.**

2. Select **New** for an External Routing Queue form.

3. Check the **External** check box to use external routing.

Note:

- If the **External** field doesn't appear, select the update personalized list icon (🔧) and add the **External** field to the screen.
- If you don't want to use external routing, clear the **External** check box.

4. On the form, fill in the fields.

External third-party routing

Field	Description
Provider	The third-party provider for external routing.

Field	Description
	Note: By default, ServiceNow provides the ServiceNow Demo provider, but you can select a provider of choice.
Provider Queue ID	Queue ID of the external third-party provider.
Document fields to include	Fields of the document that the service channel is on. The work item fields that can be sent out to the external third-party. You can select the required fields.
Provider application ID	Unique application or integration identifier, which is used by the third-party routing system to make requests if necessary.

5. Select **Submit**.

Configure External Routing events and payload

Configure Advanced Work Assignment with external routing using AWA External Service API for CCaaS and third-party providers to enable them to submit events.

Before you begin

Role required: admin

About this task

When AWA Queue is configured for external routing, it enables for setting up a REST endpoint corresponding to the CCaaS entry point for routing, which:

- Makes the schema changes needed to associate with an AWA External queue with the CCaaS REST endpoint.
- Provides the following fields to provide the payload for the REST call:
 - Case (sn_customerservice_case)
 - Task (sn_customerservice_case)
 - Interaction (interaction)

Configuring AWA with external routing enables you to consolidate the routing of ServiceNow channels (such as Chat, Cases, or Incidents) and the CCaaS channels. The AWA External Service API involved in the configuration plays a key role:

- Detects the Work Item (created or transferred)
- Uses the External AWA Service API pushEvent (EVENT_TYPE) function to pass the Work Item.
- Generates the request payload and constructs the flow object using the The ExternalAWAServiceAPI.
- Pushes the events to the external system using the Subflow.

Procedure

1. Navigate to the queue settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up queues.**

- **All > Advanced Work Assignment > Queues.**

2. Select an existing External Routing Queue item or create one.

3. Select the **External** check box to create an external routing Work Item.

i Note: If you selected an existing AQA Queue item, verify that external routing is enabled with the **External** field checked.

4. In the External third-party routing section of the queue form, select the Preview this record icon



and select **Open record.**

i Note: You are notified to save the Queue record for any changes you made upon navigating. Select **Update** for an existing queue or select **Submit** for a new queue.

5. Select the **Subflow** from the list of flows available to send events to the selected provider.

External Provider
ServiceNow Demo

* Name: ServiceNow Demo

* Subflow: AWA send event - ServiceNow Demo

Update Delete

External Event Definitions for text Search

Provider = ServiceNow Demo

Event type	Payload
Transfer to agent	/** * Set answer to the desired pa...
New	/** * Set answer to the desired pa...
Cancelled	/** * Set answer to the desired pa...
Completed	/** * Set answer to the desired pa...
Transfer to queue	/** * Set answer to the desired pa...

1 to 5 of 5

6. Select the required External Event Definitions for the provider.

The selected External Event Definitions are associated with the provider to define the external events that must be handled by the provider. You can either select from the existing event definitions or create one.

7. Select an external event definition to see the **Event type** and **Payload** that it contains.

External Event Definition

ServiceNow Demo : Transfer to agent

Update

Delete

* Provider

ServiceNow Demo

Event type

Transfer to agent

Payload

Turn on ECMAScript 2021 (ES12) mode

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/**

* Set answer to the desired payload. The following variables are available for use:

*

* current - A *GlideRecord* representing the current awa_work_item.

* documentGR - A *GlideRecord* representing the interaction or task referenced by the work item.

* additionalParams - A JSON string with the values of the work item document's fields matching the

external fields

* specified for the queue.

*

*/

var queueObj = sn_awa.Queue.get(current.getValue("queue"));

var serviceChannelObj = queueObj ? sn_awa.ServiceChannel.get(queueObj.getServiceChannelSysId()) : "";

data = {

"header": {

"event_type": "transfer_to_agent",

"origin": "queue",

"event": "WORK_ITEM"

},

"message": {

"document_table": current.getValue("document_table"),

"document_id": current.getValue("document_id"),

"work_item_id": current.getValue("sys_id"),

"work_item_state": current.getValue("state"),

"prevWorkItem": current.getValue("previous_work_item"),

}

}

Update

Delete

Related Links

[Run Point Scan](#)

Note: Ensure that you do not add any info message or error message after answer block. Answer should be always return string, if answer is in try block, you can add info/error messages in catch block.

Use the following items that are available by default, to construct the payload contents you want on the external system:

- current = Represents the AWA Work item record
- documentGR = Represents the interaction or task referenced by the Work Item.
- additionalParams = Contains objects with the values of the Work Item document's fields.
- payload script = Contains scriptable APIs.

8. Select **Update**.

The Agent chat queue is configured to the external routing queue.

Result

After the configuration, all the incoming chats are routed to the external queue and you can see the list of work items sent to the external queue in the Work Items [awa_work_items] table. You can find the recorded event logs of the subflows associated with the provider in the Flow engine contexts [sys_flow_context] table.

To view the execution details of the event payload, open an event record from the Flow engine contexts [sys_flow_context] table and select **Open in Operations View**. You will see the AWA Post External Routing Events flow with the payload.

AWA Post External Routing Events

Workflow Studio AWA send event - ServiceNow Demo

EXECUTION DETAILS AWA send event - ServiceNow Demo

Hide Action Details

SUBFLOW STATISTICS Run as: System Open Subflow Logs Open Parent Context **Completed** 2024-03-26 10:56:52 1458ms

INPUTS & OUTPUTS

Subflow Inputs & Outputs

ACTIONS

1 **AWA Post External Routing Events** **Completed** 2024-03-26 10:56:52 1457ms

Configuration Details

VARIABLE NAME	RUNTIME VALUE	CONFIGURATION	TYPE
Payload	{"header":{"event_type":"new","origin":"queue","event":"WORK_ITEM"},"message":{"document_table":"int..."}}	Input Payload	JSON
Connection Alias	ServiceNow_Basic	ServiceNow_Basic	Reference
Resource Path	/api/now/external_routing_demo/post_event	/api/now/external_routing_demo/post_event	String

Output Data

VARIABLE NAME	RUNTIME VALUE	CONFIGURATION	TYPE
Action Status	{"Action Status":{"code":0,"message":"Success"}}		Object
Don't Treat as Error	true	true	True/False
ErrorCode	0	error_code	String
ErrorMessage		error_message	String
Response	{"result":{"handled_request":{"header":{"event_type":"new","origin":"queue","event":"WORK_ITEM"},"me..."}}	response_body	JSON
ResponseHeaders	{"Transfer-Encoding":["chunked"],"set-cookie":["SESSIONID=F02F2D1076F0E17295660F56EAF0A9F3; Path=/..."]}	response_headers	String
StatusCode	200	status_code	Integer
StepStatus	{"StepStatus":{"code":0,"message":"Success"}}		Object

Define external routing test implementation

Define the External Routing Test Tools plugin [com.glide.awa.external.test_tools] with a simplified external-routing-provider sample Automated Test Framework (ATF) by using the demo data that is available with the plugin installation.

To run the ExternalRoutingConfigurationTestTool, verify that you have:

- Loaded the demo data for AWA, awa.external, and awa.external.test_tools.
- Filled up the credentials in the **AutomationUser** in the sys_auth_profile_basic table.
- Created the HTTP(s) Connection in sys_alias, ServiceNow_Basic record.

You must open the ExternalRoutingConfigurationTestTool record and click Run Test to complete the actions of the External Routing test.

Functions of the External Routing Test Tools plugin (com.glide.awa.external.test_tools)

When the External Routing Test Tools plugin (com.glide.awa.external.test_tools) is run, it validates if:

- The Connection record is created in the HTTP(S) Connection [http_connection].
- The Credentials are provided in the HTTP(S) Connection [http_connection].
- The AWA_Queue record is updated successfully with the following values:
 - **External = true**
 - **Provider = ServiceNow Demo**
- A record is successfully created in the Interaction [interaction] table with the following values:
 - **Short description = Created from ATF test automation**
 - **State = New**
 - **Type = Chat**
- The record is automatically created in the Work Item.

- The Server-Side Validation Script is run by passing the Work Item ID to the Workflow Studio and calling to the external third-party CCaaS provider.
- The sys_flow_context ID is retrieved from the sys_flow_context execution.
- The retrieved sys_flow_context ID provides the payload response.
- The payload response belongs to the Work Item that you have created.
- The Server-Side Validation Script is run to verify if the response is successful and then the payload is sent to the Manual Assignment REST API.
- The authorization for credentials is configured in the Basic Auth Configuration [sys_auth_profile_basic] table.
- An Agent is available in the User [sys_user] table to ascend the payload.
- The Server-Side Validation Script is run to confirm that the Agent is available in the correct Service Channel.
- The Manual Assignment REST API is called when the Agent is available.
- The response status is successful and the response payload contains Manual Assignment successfully requested.
- The AWA Work Item is successfully assigned to the Agent and is not in the queue state.

Note: If the test fails at any step, the detailed information about where the configuration failed is provided to the user along with the solution to fix it.

Configure Agent Affinity rules

Create or change the Agent Affinity rules that route work items in Advanced Work Assignment.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the agent affinity settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Advanced settings section, select **Set up Agent Affinity**.

- **All > Advanced Work Assignment > Agent Affinity Rules.**

2. Choose a situation.

- To create an affinity rule, select **New**.
- To update an existing affinity rule, select the affinity rule.

3. On the form, fill in the fields.

Field	Definition
Name	Name of the affinity rule.
Service channel	Service channel that the rule applies to.
Application	Name of the application.
Affinity based on	Type of affinity. Only affinity types corresponding to your selection appear.

Field	Definition
	- History - Related Tasks - Account Team Responsibility
Agent's affinity to	Account level or contact level. This field appears when you select History in the Affinity based on field.
Number of days	Past number of days during which the agent has worked with the customer. The maximum number of days is 30. This field appears when you select History in the Affinity based on field.
Responsibility	Agent who is part of the account team. This field appears when you select Account Team Responsibility in the Affinity based on field.

4. Click **Submit** for a new affinity rule or **Update** to modify an existing affinity rule.

Set Agent Affinity rules

Specify the Agent Affinity rules to determine the order in which work items in a queue are sorted.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the queue settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up queues**.

- **All > Advanced Work Assignment > Queues.**

2. Select the queue.

3. Select the Agent Affinity related list.

- To create a Agent Affinity rule mapping, select **New**.
- To change an existing Agent Affinity rule mapping, select the mapping to be updated.

4. On the form, fill in the fields.

Agent Affinity Rule Mapping form

Field	Definition
Agent Affinity Rule	Agent Affinity rule to be used for the sort.
Order	Value of this rule relative to the other rules in the queue. Rules are ordered from lowest to highest so a rule with an order of 100 is considered before a rule with an order of 200.

5. Select **Submit**.

You can specify a maximum of three Agent Affinity rules per queue.

Deactivate Agent Affinity

Deactivate Agent Affinity if you do not want Agent Affinity to assign work assignments to agents.

Before you begin

Role required: awa_admin or admin

Procedure

1. In the navigation filter, enter `sys_properties.list`.
The entire list of properties in the System Properties [sys_properties] table appears.
2. In the **Search** field, enter `glide.awa.agent_affinity.enabled`.
3. Click **glide.awa.agent_affinity.enabled**.
4. On the system property screen, change **Value** from **true** to **false** and click **Update**.
Agent Affinity is now deactivated.

Configure agent presence states

Create or modify the availability states that agents use to indicate whether they can receive work or are offline or away. Agents set these states in their Workspace Inbox.

Before you begin

Role required: awa_admin or admin. Users with the awa_manager and awa_agent roles can review the presence states.

About this task

The default presence states are Available, Away, AI Available, and Offline. For the Available state, be sure to enable it (using the Active check box) so that AWA can route work to agents.

Procedure

1. Navigate to **All > Advanced Work Assignment > Home > Settings > Presence States**.
2. Choose a situation.
 - To create a presence state, select **New**.
 - To update a presence state, select the presence record you want to update.
3. On the form, fill in the fields.

Field	Definition
Name	Name of the presence state, for example: Out of office. The default presence states are Available, Away, AI Available, and Offline.
Active	Enables this presence state for agents.

Field	Definition
	Note: For the default Available state, be sure to enable this Active check box so that work items are routed to available agents. If the Active state is not enabled, AWA does not route work items to agents.
Available to receive work items	Indicates that agents can handle work items in this presence state. If the presence state is Away or Offline, this box is not selected.
Service channels	Service channels that can use this presence state. To select a service channel, move the channel name from the Available list to the Selected list.
Description	Brief description of the state.
Order	Order in which this state is displayed in the agent inbox.
Show channels	Enables you to restrict the service channels in which agents can update their presence using this state. When you select this field, the Restrict agent update field is displayed.
Disable agent inactivity check	If this check box is selected, the agent's presence will not be automatically set to "offline" based on inactivity and it must be manually set by the AWA Agent API . You may need to configure the form to add this field.
Restrict agent updates	Service channels in which agents cannot use this state to update their presence. Select the lock icon and select the appropriate channels. When you complete your selections, select the lock icon to lock the field. You may need to configure the form to add this field.
Apply to all groups	Indicates all groups can use this presence state. To specify only certain groups that can use this presence state, unselect this check box to display the Apply to groups list. You may need to configure the form to add this field.
Apply to groups	Selected groups that can use this presence state. To select a group, move the group name from the Available list to the Selected list. You may need to configure the form to add this field.

4. Select **Submit** for a new presence state or **Update** if modifying an existing presence state.
The presence state is added to or updated in the Presence States [awa_presence_state] table.
The presence state is also listed in the Availability section of the Agent Workspace Inbox for the agents belonging to the groups and channels that use this state.

Configure reasons for rejecting work items

Define the reasons that agents can use to decline work assignments that they receive in their Agent Workspace inbox. A reject reason can apply to all service channels or a single channel that you specify.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the reject reasons settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Additional settings section, select **Set up reject reasons**.

- **All > Advanced Work Assignment > Reject Reasons.**

2. Choose a situation.

- To create a rejection reason, select **New**.
- To update an existing rejection reason, select the reason record.

3. On the form, fill in the fields.

Field	Definition
Reason	Name of the reason for rejecting work items.
Agent selectable	Indicates that the reject reason is selectable by agents in their Agent Workspace Inbox.
Order	Order in which the reject reasons are listed in the agent inbox.
Apply to all service channels	Indicates that the reject reason applies to all service channels. To make the reason available to a single channel, unselect this check box and in the Service channel field, select the appropriate channel.
Service channel	Service channel that the rule applies to. This field is displayed when Apply to all service channels isn't enabled.
Reassignable	Indicates if the work item can be reassigned to the agent who rejected it.

4. Select **Submit** for a new reason, or if changing an existing reason, select **Update**.
The rejection reason is added to or updated in the Reject Reasons [awa_reject_reason] table.

Tutorial: Route interactions by context

Learn how you can configure Advanced Work Assignment to route conversations to agents according to the context of the conversation.

Activate the Customer Service Management Demo Data (com.snc.customerservice.demo) plugin.

A basic understanding of context variables is required. For more information on context variables, see [Virtual Agent scripts](#).

The **What can we help you with?** record producer is available by default with the Customer Service Management Demo Data (com.snc.customerservice.demo) plugin. In the record producer, chat requesters can specify one of three issue categories that they need help with:

- Product
- Billing
- Order

Whichever category they select passes a value through the *liveagent_csp_category* context variable. Learn how to create queues that route conversations to agents according to the values passed through this context variable.

Create a queue for product issues

Create a queue for the Chat service channel that routes product issues.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to the queue settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Essential settings section, select **Set up queues**.

- **All > Advanced Work Assignment > Queues.**

2. Select **New**.

3. Enter the following information in the fields listed:

- Name: Product Support
- Service channel: Chat
- Condition mode: Advanced

4. In the **Script** field, enter this script:

```
(function executeCondition(/* glide record */ current) {
  var contextTable = current.getValue('context_table');
  var interactionBlobRecord = new GlideRecord(contextTable);
  interactionBlobRecord.addQuery('sys_id', current.getValue('context_document'));
  interactionBlobRecord.query();

  if(interactionBlobRecord.next()){
    var jsonBlob =
    JSON.parse(interactionBlobRecord.getValue('value'));
    if(jsonBlob.liveagent_csp_category == 'product')
      return true;
  }
}
```

```
return false;
})(current);
```

5. Click **Submit**.

Create a queue for billing issues

Create a queue for the Chat service channel that routes billing issues.

Before you begin

Role required: awa_admin or admin

Procedure

1. From the Queues list view, click **New**.
2. Enter the following information in the fields listed:
 - Name: Billing Support
 - Service channel: Chat
 - Condition mode: Advanced
3. In the **Script** field, enter this script:

```
(function executeCondition(/* glide record */ current) {
  var contextTable = current.getValue('context_table');
  var interactionBlobRecord = new GlideRecord(contextTable);
  interactionBlobRecord.addQuery('sys_id', current.getValue('context_document'));
  interactionBlobRecord.query();

  if(interactionBlobRecord.next()){
    var jsonBlob =
    JSON.parse(interactionBlobRecord.getValue('value'));
    if(jsonBlob.liveagent_csp_category == 'billing')
      return true;
  }
  return false;
})(current);
```

4. Click **Submit**.

Create a queue for order issues

Create a queue for the Chat service channel that routes order issues.

Before you begin

Role required: awa_admin or admin

Procedure

1. From the Queues list view, click **New**.
2. Enter the following information in the fields listed:
 - Name: Order Support
 - Service channel: Chat
 - Condition mode: Advanced
3. In the **Script** field, enter this script:

```

(function executeCondition(/* glide record */ current) {
  var contextTable = current.getValue('context_table');
  var interactionBlobRecord = new GlideRecord(contextTable);
  interactionBlobRecord.addQuery('sys_id', current.getValue('context_document'));
  interactionBlobRecord.query();

  if(interactionBlobRecord.next()){
    var jsonBlob =
    JSON.parse(interactionBlobRecord.getValue('value'));
    if(jsonBlob.liveagent_csp_category == 'order')
      return true;
  }
  return false;
})(current);

```

4. Click **Submit**.

Configure reassignable settings

Configure whether an agent who rejected a work item is eligible to be offered the same work item.

Before you begin

Role required: admin

Procedure

1. Navigate to the reject reasons settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Additional settings section, select **Set up reject reasons**.

- **All > Advanced Work Assignment > Reject Reasons.**

2. Select the reason record that you want to change.

3. On the form, configure the **Reassignable** field:

- If you want to have an agent who rejected a work item be eligible to be offered the same work item, select the **Reassignable** field.
- If you don't want to have an agent who rejected a work item be eligible to be offered the same work item, unselect the **Reassignable** field.

Wrap up configuration

Set up the wrap up configuration.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Interaction > Wrap Up Configuration**.

The Interaction Wrap Up Configurations screen appears.

2. If this is the first time you are setting up the wrap up configuration

- a. Select **Wrap Up for Chat Interactions**.
 - b. On the Wrap Up for Chat Interactions screen, select **Active**.
 - c. Select **Update** or configure other options on the screen.
3. Do one of the following:
- To edit an existing record, select the name of the record.
 - To create a new record, select **New**.
4. Fill in the fields:

Field	Description
Name	Name of the wrap up configuration.
Application	
Table	
Active	Indicates whether wrap up is enabled.
Order	Value of this configuration relative to the other configurations.
Conditions	Set the conditions that define the class of interactions that use this configuration.

5. In the Duration tab, configure the wrap up duration settings:
- Enforce wrap up duration - if selected, the agent will have a limited length of time (defined in the **Duration in seconds** field) to enter wrap up information.
 - Show duration to agent - this field appears only if you selected **Enforce wrap up duration** and indicates whether the wrap up duration displays on the screen for the agent.
 - Duration in seconds - this field appears only if you selected **Enforce wrap up duration** and defines the length of time (in seconds) that the agent has to wrap up the interaction.
6. In the Codes tab, configure the wrap up codes:
- Enable wrap-up codes - if selected, the agent can enter pre-defined wrap up codes when they close an interaction.
 - Default wrap-up code - this field appears only if you selected **Enforce wrap up codes** and indicates the default wrap up code.
 - Allowed wrap-up codes - this field appears only if you selected **Enforce wrap up codes** and lists all of the wrap up codes that an agent can use.
7. Select **Update** if you are updating an existing configuration or **Submit** if you are creating a new configuration.

Wrap up codes

Define the wrap up codes.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Interaction > Wrap Up Codes**.
The Interaction Wrap Up Codes screen appears.

2. Do one of the following:

- To edit an existing code, select the name of the code.
- To create a new code, select **New**.

3. Fill in the fields:

Field	Description
Code	Name of the wrap up code.
Application	
Active	Indicates whether wrap up code is enabled.
Description	Description of the wrap up code.

4. Select **Update** if you are updating an existing code or **Submit** if you are creating a new code.**Wrap up segments**

Define the wrap up segments.

Before you begin

Role required: admin

Procedure**1.** Navigate to **All > Interaction > Wrap Up segments**.

The Interaction Wrap Up Segments screen appears.

2. Do one of the following:

- To edit an existing segment, select the name of the segment.
- To create a new segment, select **New**.

3. Fill in the fields:

Field	Description
State	
Opened on	
Agent	
Interaction	
Wrap up configuration	
Segmented	
External	
Segment table	
External segment ID	
Segment ID	
Wrap up code	
Notes	

Field	Description
Timed out	
Submitted on	
Awaiting confirmation	
Confirmed on	

4. Select **Update** if you are updating an existing segment or **Submit** if you are creating a new segment.

Configure an agent's maximum universal capacity

Prevent an agent from being assigned too many work items by configuring the agent's maximum universal capacity. If the agent's maximum universal capacity has been reached, additional work items won't be assigned to the agent.

Before you begin

Role required: admin

Procedure

1. Navigate to the universal capacity settings through one of the following navigation paths:

- **All > Advanced Work Assignment > Home.**

In the Additional settings section, select **Set up universal capacity**.

- **All > Advanced Work Assignment > Universal Capacity.**

2. Choose a situation.

- To create a new maximum universal capacity for an agent, select **New**:

Field	Definition
Max Universal Capacity	Maximum capacity for an agent across all service channels. If an agent's current capacity equals the maximum universal capacity, additional work items won't be assigned to the agent.
Users	The max universal capacity is assigned to the users (agents) in the Selected list. Select agents in the Available list and then select the right-pointing arrow to add them to the Selected list. To filter the agents in the Available list, create a filter by selecting Add Filter or run an existing filter by selecting Run Filter .

- To update an existing maximum universal capacity for an agent, select the maximum universal capacity to update:

Field	Definition
Max Universal Capacity	Maximum capacity for an agent across all service channels. If an agent's current capacity equals the maximum universal capacity, additional work items won't be assigned to the agent.
Universal Capacity In Use	Current workload for an agent across all service channels.
Agent	Name of the agent.

3. Select **Submit** for a new universal capacity or **Update** for an existing universal capacity.

Create or change groups for Advanced Work Assignment queues

Create or manage groups that have associated Advanced Work Assignment queues.

Before you begin

Role required: awa_manager or admin

About this task

Groups are sets of users who share a common purpose. By creating these groups, information that is displayed in AWA is limited to only users that are in AWA groups. The assignment group can be configured so that work items are assigned using the group queue priority. Each round of assignment can include multiple passes through the work items, each with an increasingly inclusive set of groups. This process ensures that agents in each group are offered items according to their group's queue priority order.

Procedure

1. Navigate to **All > Advanced Work Assignment > Home > Management > Groups**

2. Choose a situation:

- To create a group, select **New**
- To change a group, select the group you want to update.

3. On the Group screen, fill in the fields.

Field	Description
Name	Name of the group.
Manager	Group manager or lead.
Group email	Group email distribution list or the email address of the point of contact, such as the group manager.
Parent	Other group of which this group is a member. If a group has a parent, the child group inherits the roles of the parent group. The members of the child group aren't members of the parent group. For example, if an incident is assigned to the parent group and you select the Assigned to look up icon, only the members in the parent group are available. The members of the child group aren't available.
Description	Helpful information about the group.

4. Select **Submit.****5. If you want to configure the queue priority order for the group, follow these steps:**

- a.** Select the group name on the list.
- b.** Select the Queues related list at the bottom of the screen.
- c.** Double-click in the order number field that you want to change.
- d.** On the pop-up Order dialog, enter the new order number.
- e.** Select the green check mark to save the change.

AWA post work item subflow

Configure the base system AWA post work item subflow by defining the input in Workflow Studio.

Before you begin

Role required: admin

Procedure

- 1.** Navigate to **All > Process Automation > Workflow Studio**.
- 2.** On the Workflow Studio screen, select **Subflows**.
- 3.** In the Name column, enter **Template: AWA post work item**.

This searches for the Template: AWA post work item.

4. Select **Template: AWA post work item.****5. In the subflow header, select the more actions icon (⋮) and then **Copy subflow**.****6. On the Create a copy of this subflow dialog, enter a unique and descriptive name for the copied subflow in the **New subflow name** field.****7. Select **Copy**.**

The new subflow is created and displays as a tab in the subflow designer editor.

8. You can customize the subflow by doing one of the following:

- Integrate with a third-party system by adding an action with a spoke from the Integration Hub (for more information, see [Spokes](#) )
- Use a REST action step and call the external endpoint (for more information, see [REST step](#) )
- Call a REST message in the subflow itself (for more information, see [Outbound REST Web Service](#) )

Configure messaging actions

Create or modify messaging actions that are performed when an event occurs. These actions apply only to messaging.

Before you begin

Activate the Conversational Messaging plugin (com.glide.messaging.awa). For information on activating this plugin, see [Activate Messaging Actions](#).

Role required: admin

About this task

- For the Requester Message without Agent Response event, the default length of time that elapses before an agent is sent a reminder is 30 minutes.
- For the Agent Message without Requester Response event, the default length of time that elapses before the conversation is set to the Closed Abandoned state is 2 days.

If you're using both Virtual Agent and Live Agent, the system closes an abandoned live conversation based on the lowest timeout value for closing conversations. Be aware that other conversation timeout behavior can affect idle live chat timeouts, regardless of the **Duration** and **Action** that you specify. For details, see [Closing Virtual Agent and Agent Chat conversations](#).

Procedure

1. Navigate to **All > Conversational Interfaces > Messaging > Actions**.

- To create a new messaging action, click **New**.
- To update an existing messaging action, click the messaging action.

2. On the form, fill in the fields.

Messaging Action form

Field	Definition
Name	Name of the messaging action.
Event	Event that starts the timer: ◦ Requester Message without Agent Response - message from a requester that has not been responded to by an agent. ◦ Agent Message without Requester Response - message from an agent that has not been responded to by a requester.
Duration	Length of time that elapses after the event before the action runs.
Active	Option to track the timers and perform actions.
Filter Conditions	Condition the timer is evaluated for.
Action	Action to perform after the duration of time has elapsed: ◦ Prompt Agent - prompt the agent using a Workspace notification. ◦ Prompt Requester - display system message with prompt to requester. ◦ Reassign - clear the Assigned to field of the interaction so that it can be rerouted to another agent. ◦ Set State - set the interaction to the given state.

Field	Definition
Prompt	Message displayed to requester. This field appears when you select Prompt Agent in the Action field.
State	State of the interaction. This field appears when you select State in the Action field.

3. Click **Submit** for a new messaging action or **Update** to modify an existing messaging action.

Enable logging for Advanced Work Assignment

Enable logging to monitor AWA routing and assignment.

Before you begin

Role required: maint

Procedure

1. In the navigation filter, enter `sys_logger_configuration.list`.
2. On the Logger Configurations screen, select **New**.
3. On the New record screen, fill out the fields:

Field	Description
Logger Name	Name of logger that this configuration applies to. This should be set to <code>com.snc.awa</code> .
Application	This field defaults to <code>Global</code> and cannot be changed.
Active	Option to activate logging.
Additive	Option to use the new logging in addition to any existing logging. This should be set to <code>false</code> .
Level	Type of errors that should be logged: ○ FATAL - errors that cause the service to shut down (status 0). ○ ERROR - non-fatal service error messages. ○ WARN - warning messages indicating potential issues. ○ INFO - informational messages representing service actions. ○ DEBUG - detailed service operation messages which help troubleshoot issues. ○ TRACE - very detailed service operation messages which help troubleshoot issues. ○ ALL - all errors should be logged. This should be set to <code>INFO</code> .
Filters	Enter any filters and their values that you want applied to the results.
Destination	Where the format log is sent. This should be set to <code>Database</code> .

Field	Description
Layout	Layout format that should be applied to the logs.

4. Select **Submit**.

Logging for the AWA assignment engine is enabled in the syslog table.

5. To view the system log, navigate to **System Logs > System Log > All**.

Activate Agent Affinity

You can activate the Agent Affinity plugin (com.glide.awa.agent_affinity) if you have the admin role.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Advanced Work Assignment > Home**.

2. In the Available Plugins section, select **Agent Affinity**.

Note: If the plugin doesn't appear in the Available Plugins section, try searching for the plugin using the search bar. You can search for the plugin by its name or ID. If you can't find a plugin, you might have to request it from ServiceNow personnel.

3. Select **Install/Update All**, and then in the Install dialog box, select **Install**.

Note: When domain separation and delegated admin are enabled in an instance, the administrative user must be in the **global** domain. Otherwise, the following error appears: `Application installation is unavailable because another operation is running: Plugin Activation for <plugin name>.`

Activate Conversational Messaging

You can activate the Conversational Messaging plugin (com.glide.messaging.awa) if you have the admin role.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Advanced Work Assignment > Home**.

2. In the Available Plugins section, select **Conversational Messaging**.

Note: If the plugin doesn't appear in the Available Plugins section, try searching for the plugin using the search bar. You can search for the plugin by its name or ID. If you can't find a plugin, you might have to request it from ServiceNow personnel.

3. Select **Install/Update All**, and then in the Install dialog box, select **Install**.

Note: When domain separation and delegated admin are enabled in an instance, the administrative user must be in the **global** domain. Otherwise, the following error appears: `Application installation is unavailable because another operation is running: Plugin Activation for <plugin name>.`

Define post-chat survey configurations

Control the post-chat questionnaire displayed to your requesters to gather feedback on their experience with live agents. You configure the post-chat surveys to be used for chat queues defined in Advanced Work Assignment.

Before you begin

- Activate the Agent Chat plugin (com.glide.interaction.awa) if Advanced Work Assignment is not already installed.
- In AWA, [configure the chat service channel](#) and the [work item queues](#).
- Determine the post-chat survey to be displayed to your requesters.
 - Review the existing chat surveys available in the Assessment Metric Types [asmt_metric_type] table by navigating to **All > Survey View > View Surveys**. You can use a pre-built feedback survey, such as the survey for Virtual Agent feedback (a pre-built Virtual Agent setup topic).
 - If you need different post-chat surveys, create them using Survey Designer. For details, see [\(Legacy\) Create chat surveys](#).

Role required: admin

Procedure

1. Navigate to **All > Advanced Work Assignment > Settings > Queues**.
2. Select the queue (that uses the Chat service channel) to which the post-chat survey configuration applies.
3. Go to the **Post Chat Survey** related list, and then select **New**.
If the Post Chat Survey list doesn't display, you may need to add it to the form.
4. On the form, fill in the fields.

Field	Description
Name	Unique name for this post-chat survey configuration.
Active	Option that enables this post-chat survey configuration.
Show Summary	Survey option that asks requesters if they want to see a summary of the survey responses they entered.
Order	Number that indicates the order in which survey configurations run. If there are multiple chat survey configurations, the system runs the first survey found, from lowest to highest order.
Requester ended	Option that specifies if the post chat survey should always run regardless of who ends the chat. ◦ True: Survey should run when either the requester or the agent ends the chat. ◦ False: Survey should run only when the agent ends the chat.
Condition mode	Type of condition that determines the conversational survey presented to requesters. ◦ Simple: Specify a condition using the condition builder. ◦ Advanced: Specify a JavaScript scripted condition.
Condition	Condition that determines the conversational survey displayed to requesters.

Field	Description
	Use the condition builder to select the conditions to be applied. The fields available for selection are based on the Chat service channel.
Script	JavaScript condition statement that specifies the condition for using this chat survey. The condition must evaluate to true.
Survey	List of the chat surveys available. Choose the post-chat survey to be presented to your requesters.

5. Select **Submit**.

Result

When a live agent ends the chat session, the post-chat survey (configured for the chat queue) is presented to the requester. When the requester submits the post-chat survey, the chat session ends for the requester. The Interaction Related Records list stores the post-survey chat results and creates a related record that links the assessment to the live agent (fulfiller).

Support AI agents

Enable AI agents to automatically accept work items by configuring the Include AI agents flag in AWA assignment rules. This allows eligible AI agents in a group to participate in work distribution alongside live agents, improving coverage and reducing manual assignment overhead.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to **All > Advanced Work Assignment > Home > Settings > Assignment Rules**.
2. Do one of the following:
 - To create an assignment rule, select **New**.
 - To edit an assignment rule, select the assignment rule you want to update.
3. On the Assignment Rules form, fill in the fields.

Field	Definition
Name	Name of the assignment rule.
Application	Name of the application to which this assignment rule belongs. The default application is Global .
Short description	Brief description of the assignment rule.
Assign by	Type of assignment. Select one of the following values: ○ Last Assigned: Routes a work item to the agent who has gone the longest without being assigned work. ○ Most Capacity: Routes a work item to the agent who has the greatest availability for handling the work.

Field	Definition
Auto-assign handling	Work items are automatically accepted without agents having to select Accept or Reject. ○ Enable auto-assign work items: Select this option to have work items automatically accepted on behalf of agents. Agents are unable to manually Accept or Reject work items. ○ Display options: Select one of the following values: ▪ Select Inbox card to accept the chat interactions and add them to the agent inbox. Agents can open the accepted interaction from the inbox. ▪ Select Inbox card and workspace tab to accept chat interactions and open a tab for each accepted interaction.
Rejection handling	Work items are rejected and handled. ○ Allow agents to reject: Enable agents to reject work items in their inbox. ○ Reassign on timeout: Enable reassignment of work items not accepted or rejected by agents within the specified timeout period: ▪ Timeout value (Days and Hours, Minutes, Seconds): Length of time allowed for an agent to accept or reject a work item before the assignment times out (ends) and is reassigned to another agent. ▪ Timeout presence state: Agent availability state after the timeout occurs: Available, Away, or Offline. This tab isn't available when auto-assign handling is activated.
Skill handling	Skill-based work assignments. ○ Enable skills: Route work items to agents with the appropriate skills. When selected, the Evaluate skill level and Enforce mandatory skills check boxes appear cleared. ○ Evaluate skill level: Route work items to the most qualified agents based on their skill level. ○ Enforce mandatory skills: Route work items to agents with required skills.
Shift handling	Work items are assigned to agents based on shifts.

Field	Definition
	- Enable-shift based assignment: Assign work items to agents based on time available in their shifts. - Add time constraints: Add the time required to complete work items in shifts and whether agents should be continuously available for the required time period. This field appears only when the Enable shift-based assignment option is selected. - Agent criteria: Select an agent based on the time left in the agent's shift. This field appears only when the Enable shift-based assignment option is selected. Available options: - Least time left in shift: Assign a work item to an agent from a group of available agents based on the least amount of time available in their shifts. - Most time left in shift: Assign a work item to an agent from a group of available agents based on the maximum time available in their shifts. - Time required: Time required to complete a work item. - Available continuously for the required time: Assign work items to agents who are continuously available for the required time period without any breaks in a shift. Agents who don't have the minimum time required in their shifts aren't considered for work item assignments. Note: The Shift handling field is available only if the Advanced Work Assignment plugin (com.glide.awa) is activated and the Workforce Optimization for Customer Service plugin (com.snc.wfo.csm) or the Workforce Optimization for ITSM plugin (com.snc.wfo_itsm) plugin, or both, is activated. As a manager, you must have planned schedules for agents to assign them shifts. For more information, see Scheduling in Workforce Optimization for Customer Service and Scheduling in Workforce Optimization for ITSM.

Field	Definition
	This field appears only when the Add time constraints option is selected.
Manage AI agents	Work items are assigned to AI agents. Previously, assignment rules could only route work to live agents, leaving AI agents unable to participate in automated work distribution. The Include AI agents flag solves this by extending assignment rule logic to recognize and target AI agents as eligible recipients. When enabled, the flag allows the system to identify AI agents in a group (by their identity_type = 'ai_agent'), recognize their "AI Available" presence state, and automatically route matching work items to them for immediate acceptance. This eliminates the need for manual AI agent assignment and enables seamless hybrid work distribution across both live and AI agents within the same group.

4. Select **Submit** for a new assignment rule or **Update** if modifying an existing assignment rule.

Using Advanced Work Assignment

The following sections detail how awa_manager or awa_agent roles can use Advanced Work Assignment (AWA) to complete various tasks such as checking an agent's presence and capacity, checking unassigned work items, and creating SMS conversations.

Check for an agent's presence and capacity

View a list of agents in Advanced Work Assignment, their presence status, and capacity for each of the agent's service channels to see which agent can handle a case. This list is filtered across different teams, channels in teams, and channels dashboards.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to **All > Advanced Work Assignment > Management > Agent Presence & Capacity**.
2. In the list, check which agent is available to handle a case:

AWA Agent Presence and Capacities form

Field	Definition
Agent	Name of the agent.
Current presence state	Presence state that is currently assigned to the agent.
Updated	Date and time that this agent was last updated.

Field	Definition
Channel	Service channel that is assigned to the agent.
Capacity in use	Current workload of agent.
Capacity	Maximum capacity that the agent can handle.

Check unassigned interactions

View a list of unassigned interactions in Advanced Work Assignment from chat and phone that are currently waiting in the queue and are not assigned to any agents. You can use this list to debug, implement advanced work assignments, or determine why certain work items are not being assigned.

Before you begin

Role required: awa_manager or admin

Procedure

1. Navigate to **All > Advanced Work Assignment > Management > Unassigned interactions**.
2. In the list, check the unassigned interactions:

Field	Description
Number	Interaction number.
Type	How the interaction began (for example, chat, phone, or walk-up).
Created	Date that the interaction was created.
Opened for	Name of the user starting the interaction.
Account	Name of the company that is associated with the interaction.
Assigned to	User that is assigned to the interaction.
State	Status of the interaction.
Queue	Queue that is assigned to the interaction.
Offered on	Date that the interaction was first offered to an agent.
Rejected	Interaction that was rejected by the agent.
Timed Out	Interaction that has exceeded the timeout specified in assignment rule.
Exceeded Queue Target Wait Time	Interaction that has waited longer than the target wait time of the queue.

Check unassigned task work items

View a list of unassigned task work items in Advanced Work Assignment, such as cases and incidents, that are currently waiting in the queue and are not assigned to any agents. You can use this list to debug, implement advanced work assignments, or determine why certain work items are unassigned.

Before you begin

Role required: awa_manager or admin

Procedure

1. Navigate to **All > Advanced Work Assignment > Management > Unassigned Task Work Items**.

- To create a task, click **New**.
- To modify an existing task, select the task to be updated.

2. On the form, fill in the fields.

Work Item form

Field	Description
Active	Whether the task is still being worked on or is complete.
Display Name	Task name.
Offered on	Date that the task was first offered to an agent.
State	List that shows the status of the task: ○ Accepted ○ Cancelled ○ Pending Accept ○ Queued
Assignment rule	Rule that assigns cases that meet the matching rule criteria to a customer service agent.
Exceeded Queue Target Wait Time	Task that has waited longer than the target wait time of the queue.
Rejected	Task that was rejected by the agent.
Timed Out	Task that has exceeded the timeout specified in the assignment rule.
Assigned to	User that is assigned to the task.
Document ID	Document ID that is assigned to the task.
Previous Work Item	Reference to a previous work item for the same Document ID.
State changed on	Date that the task state was most recently changed.
Cancelled reason	Reason that the task was canceled: ○ Disqualified from service channel ○ Manually assigned ○ Time out ○ Transfer was cancelled or rejected
Is Dismissed	Whether the task has been dismissed.
Work Item Size	Amount of an agent's capacity that is used if this task is assigned.
Wait time	Length of time the task has waited in the queue before being assigned.
Assignment group	Group that is assigned to the task.

Field	Description
Document table	Document table that is assigned to the task.
Queue	Queue that is assigned to the task.

3. Click **Submit** to create the task or **Update** to modify the task.

Check work items and AWA events

View a list of work items and AWA events.

Before you begin

Role required: awa_admin or admin

Procedure

1. Navigate to **Advanced Work Assignment > Work Item > All**.

A list of the work items appears.

2. Select the preview button () for the work item you want to view.

3. On the Work Item dialog box, select **Open Record**.

Work Item form

Field	Definition
Exceeded Queue Target Wait Time	Indicator that the interaction has waited longer than the target wait time of the queue.
Queue	Queue assigned to the task.
Assigned to	User assigned to the task.
Document ID	Document ID assigned to the task.
State	Status of the task: ○ Accepted ○ Canceled ○ Pending Accept ○ Queued
Active	Indicator of whether the task is still being worked on (active) or is complete.
Canceled reason	Reason the task was canceled: ○ Disqualified from service channel ○ Manually assigned ○ Time out ○ Transfer was canceled or rejected Note: Work items may be canceled if all agents remain at full capacity for the entire interaction.

Field	Definition
Is Dismissed	Indicator of whether the task was dismissed.
Rejected	Task that was rejected by the agent.
Timed Out	Task that has exceeded the timeout specified in the assignment rule.
Assignment group	Group assigned to the task.
Document table	Document table assigned to the task.
Previous Work Item	Reference to a previous work item for the same Document ID.
State changed on	Date that the task state was most recently changed.
Allocated by	User who assigned the work item.
Display Name	Task name.
Offered on	Date the task was first offered to an agent.
Work Item Size	Amount of an agent's capacity used when this task is assigned to the agent.
Wait time	Length of time the task waited in the queue before being assigned.
Assignment rule	Rule that assigns cases that meet the matching rule criteria to a customer service agent.
Offer Count	Number of times the work item was offered to agents.

4. Scroll to the bottom of the Work Item form to view the list of the AWA Events.

5. Select the preview button  for the AWA event you want to view.

6. On the AWA Event dialog box, select **Open Record**.

AWA Event form

Field	Definition
Caused By	User who triggered the AWA event.
Record ID	Interaction record ID.
Type	Type of AWA event: ○ Assignment ○ Manual Assignment ○ Routing ○ Acceptance ○ Rejection ○ Cancellation

Field	Definition
Name	Name of the corresponding interaction.
Channel	Service channel used for the AWA event.
Record table	Table name of document being logged.
Record Details	Details of the work item record.
Timestamp	Date and time the AWA event occurred.
Event Details	Details about the AWA event: ○ Routing event - details of the queue that was selected. ○ Assignment event - details about which agent was selected and which eligibility pools were considered. These details include a listing of all candidate agents that were considered from each pool and a summary of which agents were filtered from consideration. ○ Rejection events - details about the user who rejected the item and the reason. ○ Manual assignments - details about the manager making the assignment, the previous and new agents, and the previous work item (if there is one). ○ Cancellation events - no additional details.
Summary	Event summary.

The AWA Event form appears.

Using Agent Affinity

Agent Affinity is an Advanced Work Assignment feature that lets you assign work items by an agent's work history, related task, or account team affinity.

Advanced Work Assignment assigns work items to agents by their availability, capacity, and skills. You can use Agent Affinity to customize this AWA assignment process and identify the agent best suited for the work item. Agent Affinity ensures that the same agent is assigned to a similar work item instead of orienting a new agent every time.

Note: Agent Affinity rules do not override assignment eligibility or constraints that are specified on AWA assignment rules.

The types of affinities are:

Historical

Identifies the best agent based on the agent's history of serving the same customer.

Related task

Identifies the best agent based on the agent's past assignments of related tasks.

Account team

Identifies the best agent based on the agent's responsibility or role in the account team.

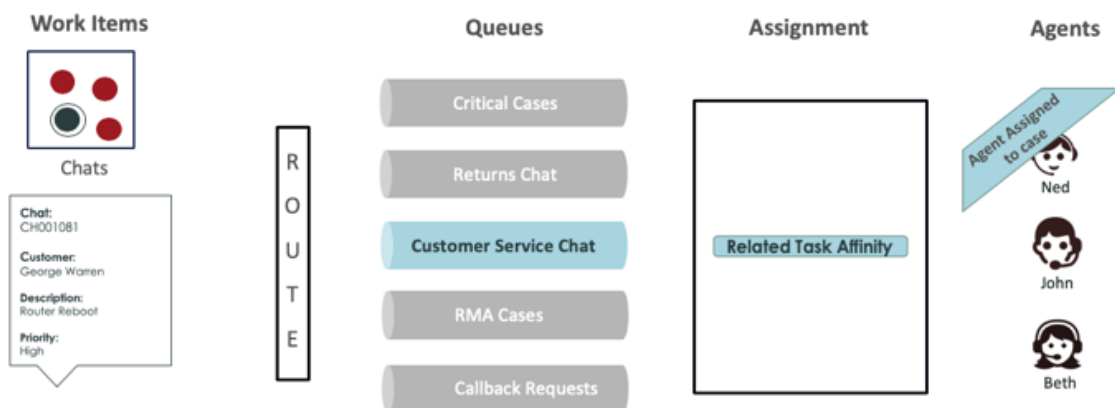
Note: Account team affinity is available only to Customer Service Management customers.

Affinity rules are associated with AWA queues. Up to three rules can be associated with each queue. The affinity order determines how the assignment engine ranks the agents. The agent with the higher order affinity rule is considered as the best agent first.

The following example shows how AWA uses Agent Affinity to determine the best agent for a work item. In this example, AWA is configured to use all three affinities in this order: related task affinity, account team affinity, and historical affinity. George Warren, who is a customer at the Boxeo company, has a router problem. George previously contacted support to report an issue. That case was assigned to agent Ned. The primary support agent for Boxeo is agent John. Within the past seven days, another agent, agent Beth, addressed a chat with Boxeo.

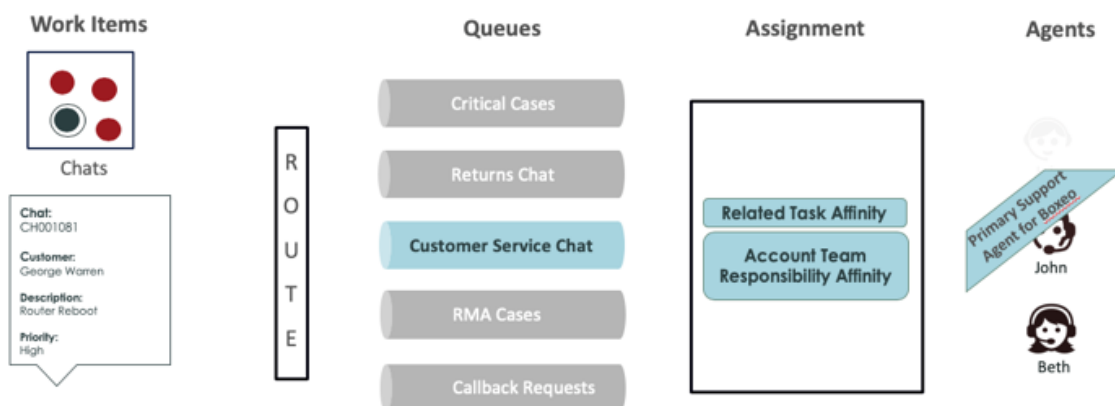
The next time George initiates a customer service chat from the case page, the case is automatically added as a related task to the chat interaction. Agent Affinity uses the related task affinity to look for an agent who has fulfilled past assignments for a related task. Because agent Ned was assigned to a related task on the record, AWA assigns the work item to agent Ned if available with capacity.

Example of related task affinity



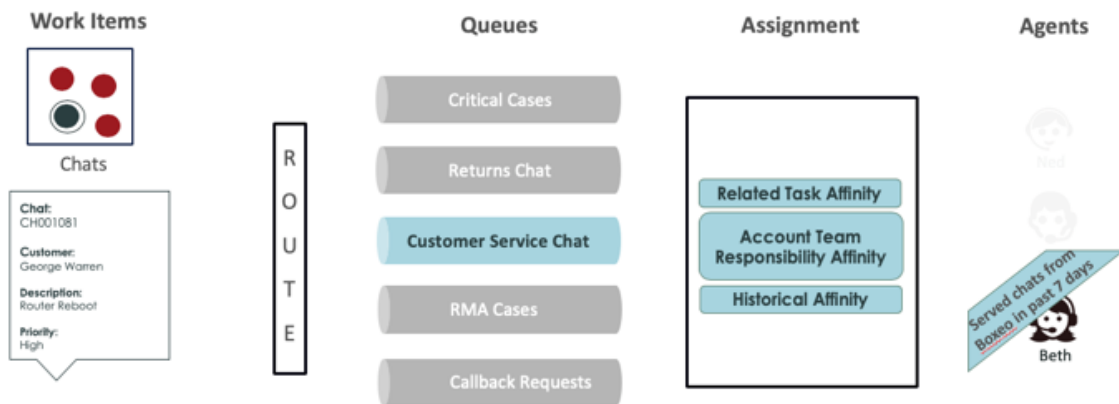
If agent Ned is unavailable or doesn't have the capacity, AWA uses the account team affinity. AWA looks for another agent based on an agent's responsibility or role in the account team. Because agent John is the primary support agent for the Boxeo company, AWA assigns the work item to Agent John if available with capacity.

Example of account team affinity



If agent John is not available, AWA uses the historical affinity and looks for an agent that has recently interacted with the company. This information is stored on the Agent Affinity screen. Because agent Beth addressed a chat with Boxeo within the past seven days, AWA assigns the work item to agent Beth if available with capacity.

Example of historical affinity



Agent initiated SMS conversation

Customer Service Management supports additional messaging channel such as SMS which tracks interactions between the agent and customer.

Requirements

At least one provider configuration for messaging type channel must be available to view the **Compose SMS** option in the agent interaction screen. For more information about provider sys_cs_provider_application.list, see [Create a channel identifier](#).

Phone number validation

REST endpoint `/api/now/initiate_message/validate_phone_number` is used to validate if the phone number is in the E.164 format. If the number of a known consumer is not in the E.164 format, the system converts it to the E.164 format based on for example, the location of the consumer. If the location is not found, it will by default convert the number to an E.164 format. For more information about E.164 formats and validation, see [Phone number field type](#).

Customer profile validation

REST endpoint `/api/now/initiate_message/validate_profile` is used to validate the channel user profile. When you send an SMS in reply to an interaction of type phone, the message is sent to a consumer originally associated with the interaction. If the same phone number is associated to a different consumer, and you send an SMS, you will get a message that the phone number is currently associated to another consumer and sending the new message will associate the phone number to the current user.

A phone number is associated to consumer A and an interaction has occurred after which the phone number was disconnected for consumer A. There is a new interaction with consumer B and you select the same phone number that was associated with consumer A. A message appears that the phone number is currently associated to consumer A, and sending a new message will associate consumer A's phone number to consumer B who is the current user.

Agent initiated SMS conversations

To initiate an SMS conversation with a requester, agents can select a provider number for an outbound service or manually enter a provider number. If there is a current ongoing SMS conversation, it automatically appears. When an agent initiates an SMS conversation:

If	Then
There is no active SMS interaction	• Create a new SMS interaction • Assign interaction to agent
There is an active interaction involving an agent	• Inject the message into existing conversation • Add agent to live group profile • No reassignment
There is an active interaction involving VA	• Close existing interaction • Create a new interaction and assign to agent
There is an active interaction involving a different contact/consumer/user	• Close existing interaction • Create a new channel user profile and deactivate the existing channel user profile • Create a new interaction and assign to agent

Customize the behaviour of send from and to numbers

The AgentInitiatedConversationUtil extension point is added to implement a customers' logic to change the default behaviour of the **Send from** and **Send to** fields. For more information, see [Associating user profiles on messaging interactions](#). For this store application, AgentInitiatedMessagingUtilExtPointImpl extension point is configured for fetching the from and to numbers.

Compose an SMS conversation

An agent can compose an SMS to interact with a customer for resolving various issues. If the interaction is not messaging type, you see the **Compose SMS** option.

Before you begin

Role required: agent_workspace_user

A provider is configured for SMS messaging type channel.

About this task

As an agent, you can compose and send an SMS to an ongoing interaction which is not messaging type.

Procedure

1. Click **Compose SMS**.

The Send via SMS screen is displayed.

2. Select a phone number from the **Send from: drop-down list.**

- If there is only one provider phone number this field is pre-populated with the number.
- If there are multiple provider profiles available for SMS channels, you can choose from the drop-down list.

3. Select a phone number from the **Send to: drop-down list.**

- The phone numbers are pre-populated from the consumer or contact records.
- If both are not populated, the system looks for the number from the opened record in the sys_user table.
- If there is already a channel user profile associated with a consumer or contact, the phone number is pre-populated.

a. Choose **Other and select a phone number in the drop-down list.**

i Note: All phone numbers must be in the E.164 format. For more information, about phone number and channel user profile validation, see [Phone number validation](#).

If there is already an ongoing SMS type of interaction with the same or different consumer, you can view the interaction card in the same screen. The interaction card for the consumer number you have selected contains interaction number, message type, last updated time, consumer, and assigned to information.

4. Enter your message in the **Message field.**

5. Click **Attach file, browse, select the file and attach.**

i Note: You can attach only image files to the message. For more information about the REST API for uploading attachments, see [Attachment - POST /now/attachment/upload](#) .

6. Click **Send.**

For more information, see [Agent initiated SMS conversations](#).

Advanced Work Assignment reference

The following sections detail the installed components and properties for Advanced Work Assignment (AWA), along with domain separation and performance statistics information.

Analytics & Reporting Solutions

The following sections review advanced analytics and Platform Analytics Solutions. Advanced analytics equips you to view cards that represent the Advanced Work Assignment dashboards that you can access.

Using Advanced analytics to access AWA dashboards

Advanced analytics enable you to view cards that represent the Advanced Work Assignment dashboards that you have access to. You can also see a dashboard picker, which lets you view the cards for all the dashboards in a group. You can then search and choose a dashboard from a list.

Navigate to **Advanced Work Assignment > Management > Advanced Analytics**.

The advanced analytics for the dashboards lets you see the dashboards in one of these categories: by default, the Recent category is selected when you visit the advanced analytics for the dashboards.

- **Recent** shows up to nine dashboards that you have visited recently. The most recent are shown first.
- **Owned by me** shows the dashboards that you have created and those dashboards to which you have been assigned ownership.
- **Shared with me** shows the dashboards which have been shared with you as a user, or member of a group or role.
- **All** shows all the dashboards that you have access to.

Note: The category that you choose limits the dashboard groups and individual dashboards that you see when you choose from the Groups list and the **Dashboard Picker** field. If no dashboards in the incident group have been shared with you, and you select Incident from the Groups list, then the overview displays a note that no dashboards match your search.

All tabs except for the Recent tab are sorted in ascending order by:

1. Dashboard group — Order

The owner of the dashboard can specify an order number in the dashboard group's form. This field is optional.

2. Dashboard group — Name

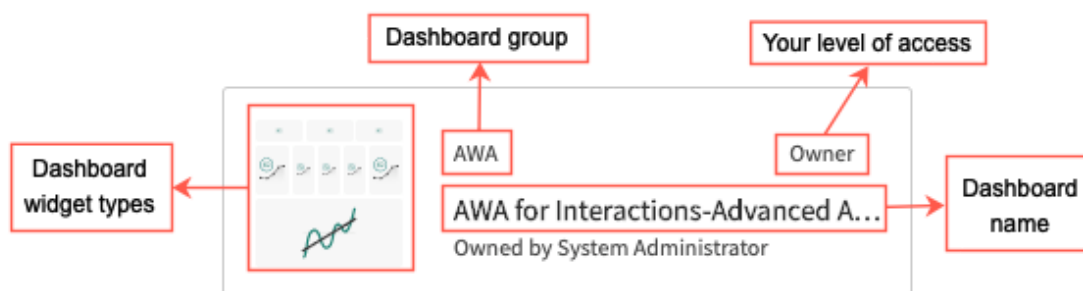
3. Dashboard — Order

The owner of the dashboard can specify an order number in the dashboard's form. This field is optional.

4. Dashboard — Name

Using Advanced Analytics tiles

Tiles on Advanced Analytics show thumbnails of the widgets on the dashboard, the dashboard group, your level of access on the dashboard, the name of the dashboard, and the owner of the dashboard. Dashboard access levels are Owner, Editor, and Viewer. For more information, see [Share a responsive dashboard](#).

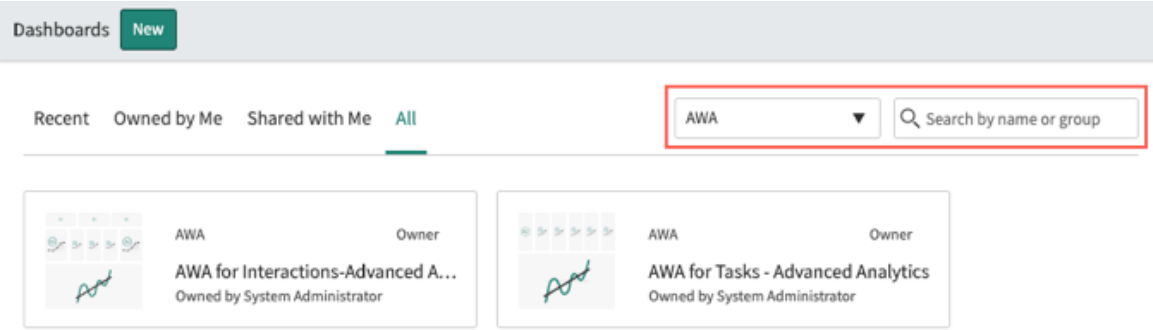


Note: If you can't view a dashboard widget, you will see a message that prompts you to contact the administrator. You may not be able to view a dashboard widget because of wrong configuration settings, access restrictions, or because there is no data to display.

Using the Advanced Analytics Groups list

The advanced analytics screen defaults to showing only the dashboards related to AWA. You can see other dashboards by changing the

Groups list to show only those dashboards in another single group.



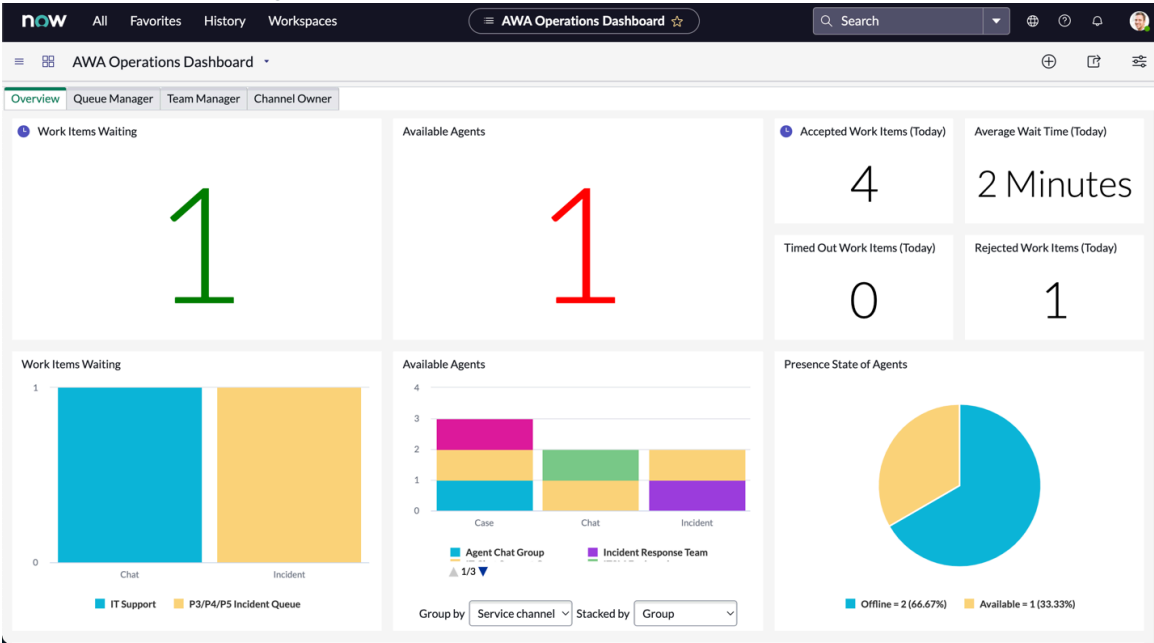
Click **New** to [Create or configure a responsive dashboard](#).

Operations dashboard

Enable managers to monitor work items across all service channels so that their agents can better support customer needs.

This dashboard is available in the Advanced Work Assignment content pack. For information on activating the content pack, see [Platform Analytics Solutions for Advanced Work Assignment](#).

Advanced Work Assignment dashboard for Operations



End users and roles

End user and goal	Required role
AWA administrator: Configures Advanced Work Assignment to best fit the business needs of customer service.	awa_admin
AWA manager: Identifies the areas of concern for routing and assignment of work items across service channels.	awa_manager
Agent manager: Manages agents or agent groups. The agent manager wants to know	sn_customerservice_manager

End user and goal	Required role
what agents are working on to make sure that customer needs are being met.	
Performance Analytics administrator: Ensures that business managers are making the best use of Performance Analytics solutions.	pa_admin or pa_viewer

Use case

This dashboard provides support managers with an overview of incoming work items and the availability of agents to handle them. Managers can monitor these daily trends to determine if adjustments should be made to the routing criteria, agent capacity values, and other settings that determine how work is pushed to agents.

Indicators

Indicator	Description
New Work Items	Total number of interaction work items that were created today. The goal for this indicator is to minimize the number of interaction work items that agents receive.
Accepted Work Items	Percentage of interaction work items that agents have accepted.
Exceeding Target Work Items	Percentage of interaction work items that have exceeded the target wait time.
Rejected Work Items	Percentage of interaction work items that agents have rejected.
Timed Out Work Items	Percentage of interaction work items that timed out.
Weekly Trends	Number of work items in each of the following states for the past week: • New • Exceeding Target • Abandoned • Rejected • Timed Out

Breakdowns

To analyze data according to different categories, select a breakdown from the dashboard menu:

- Service Channel
- Queue
- Assignment Group

For more information on analyzing data with breakdowns, see [Using breakdowns on dashboards](#) .

Reports

Title	Type	Description
Accepted Work Items - Last Hour	Single  Score	Number of interaction work items that agents have accepted in the past hour.
Abandoned Work Items - Last Hour	Single  Score	Number of interaction work items that agents have abandoned in the past hour.
Average Wait Time - Last Hour	Single  Score	Average amount of time that customers have spent waiting for an agent response in the past hour.

Platform Analytics Solutions for Advanced Work Assignment

This Platform Analytics Solution contains preconfigured dashboards. These dashboards contain actionable data visualizations that help you improve your business processes and practices.

Enabling Platform Analytics Solutions

Use the Performance Analytics widgets on the dashboard to visualize data over time, analyze your business processes, and identify areas of improvement. With solutions, you can get value from Performance Analytics for your application with minimal setup.

Note: Solutions include some dashboards that are inactive by default. You can activate these dashboards to make them visible to end users according to your business needs.

For unlimited access to all features of this Platform Analytics Solution, purchase a Performance Analytics subscription. For more information, see [Activating your Performance Analytics subscription](#).

To enable a solution for Advanced Work Assignment, an admin navigates to **System Definitions > Plugins** and activates the Performance Analytics - Content Pack - Advanced Work Assignment plugin.

 [Virtual Agent Academy: Using analytics to optimize Advanced Work Assignment](#) Watch this video for more information about the Platform Analytics Solution for Advanced Work Assignment.

Related topics

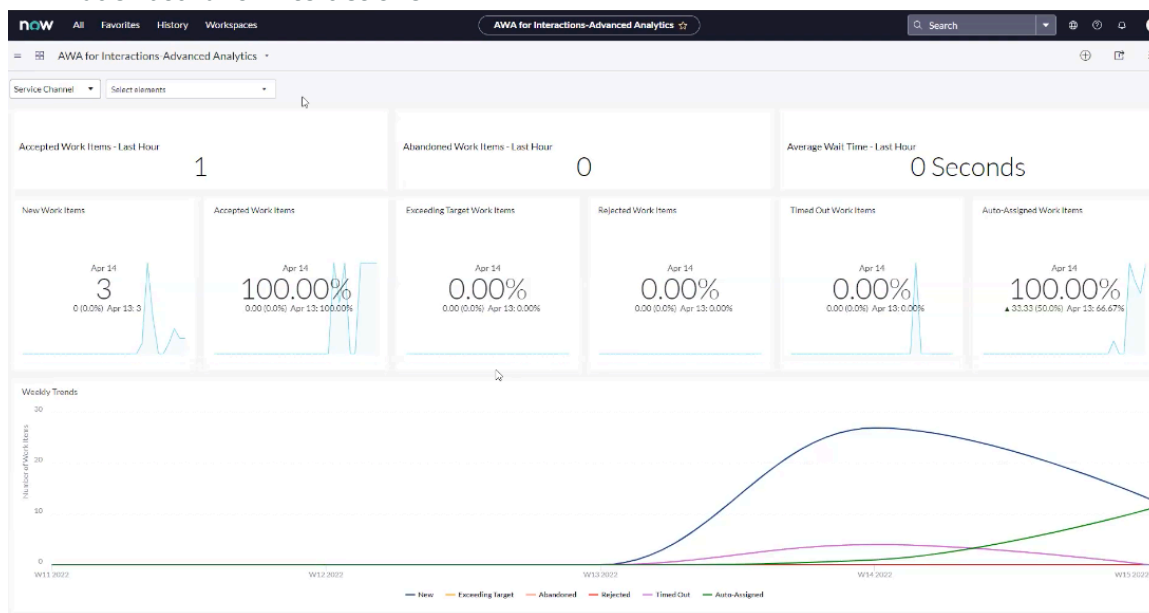
[Activate your Performance Analytics subscription](#)

Advanced Work Assignment dashboard for interactions

Enable managers to monitor Interaction [interaction] work items so that their agents can better support customer needs.

This dashboard is available in the Performance Analytics - Content Pack - Advanced Work Assignment plugin. For information on activating the content pack, see [Platform Analytics Solutions for Advanced Work Assignment](#).

AWA dashboard for Interactions



End users and roles

End user and goal	Required role
AWA administrator: Configures Advanced Work Assignment to best fit the business needs of customer service.	awa_admin
AWA manager: Identifies the areas of concern for routing and assignment of work items across service channels.	awa_manager
Agent manager: Manages agents or agent groups. The agent manager needs to know what agents are working on to make sure customer needs are being met.	sn_customerservice_manager
Performance Analytics administrator: Ensures that business managers are making the best use of Performance Analytics solutions.	pa_admin or pa_viewer

Use case

This dashboard provides support managers with an overview of incoming work items and the availability of agents to handle them. Managers can monitor these daily trends to determine if adjustments should be made to the routing criteria, agent capacity values, and other settings that determine how work is pushed to agents.

Indicators

Indicators define a performance measurement taken at regular intervals of a business service, an activity, or organizational behavior.

Indicator	Description
New Work Items	Total number of work items that were created today. The goal for this indicator is to minimize the number of interaction work items that agents receive.
Accepted Work Items	Percentage of all interaction work items that agents have accepted in the past hour.
Exceeding Target Work Items	Percentage of all interaction work items that have exceeded the target wait time.
Rejected Work Items	Percentage of all interaction work items that agents have rejected.
Timed Out Work Items	Percentage of all interaction work items that timed out.
Auto-Assigned Work Items	Percentage of all interaction work items that were automatically assigned.
Weekly Trends	Number of work items in each of the following states for the past week: • New • Exceeding Target • Abandoned • Rejected • Timed Out • Auto-Assigned

Breakdowns

To analyze data according to different categories, select a breakdown from the dashboard menu:

- Service Channel
- Queue

For more information on analyzing data with breakdowns, see [Using breakdowns on dashboards](#) .

Data visualizations

Title	Type	Description
Accepted Work Items - Last Hour	 Single Score	Number of interaction work items that agents have accepted in the past hour.
Abandoned Work Items - Last Hour	 Single Score	Number of interaction work items that agents have abandoned in the past hour.
Average Wait Time - Last Hour	 Single Score	Average amount of time that customers have spent waiting for an agent response in the past hour.

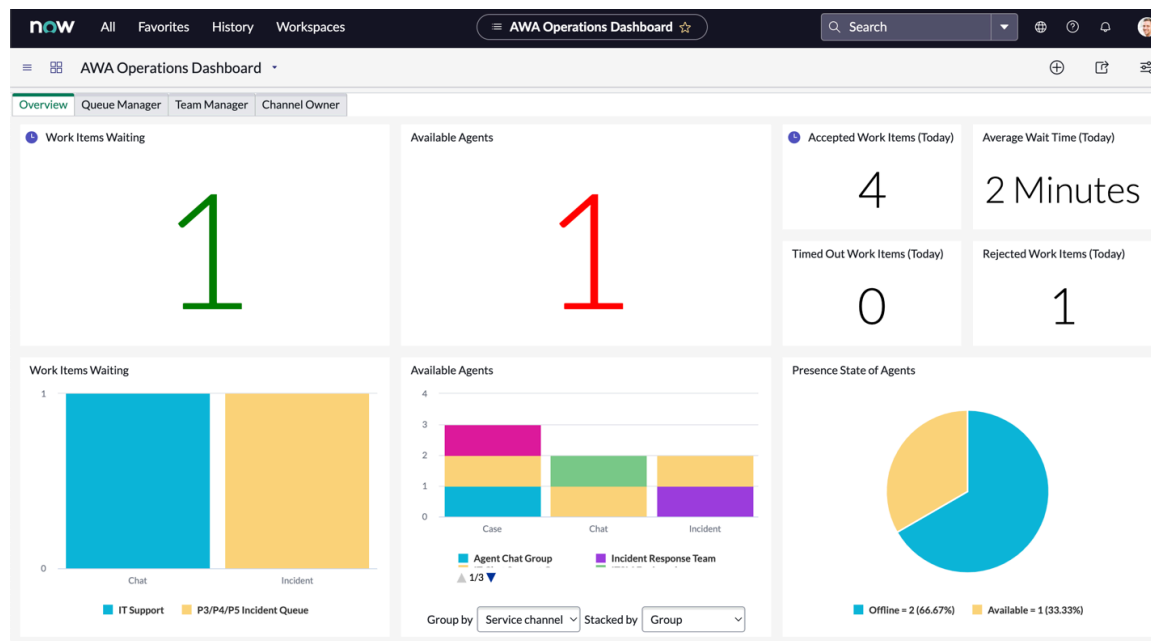
Advanced Work Assignment dashboard for operations

Enable managers to monitor work items across all service channels so that their agents can better support customer needs.

This dashboard is available in the Performance Analytics - Content Pack - Advanced Work Assignment plugin. For information on activating the content pack, see [Platform Analytics Solutions for Advanced Work Assignment](#).

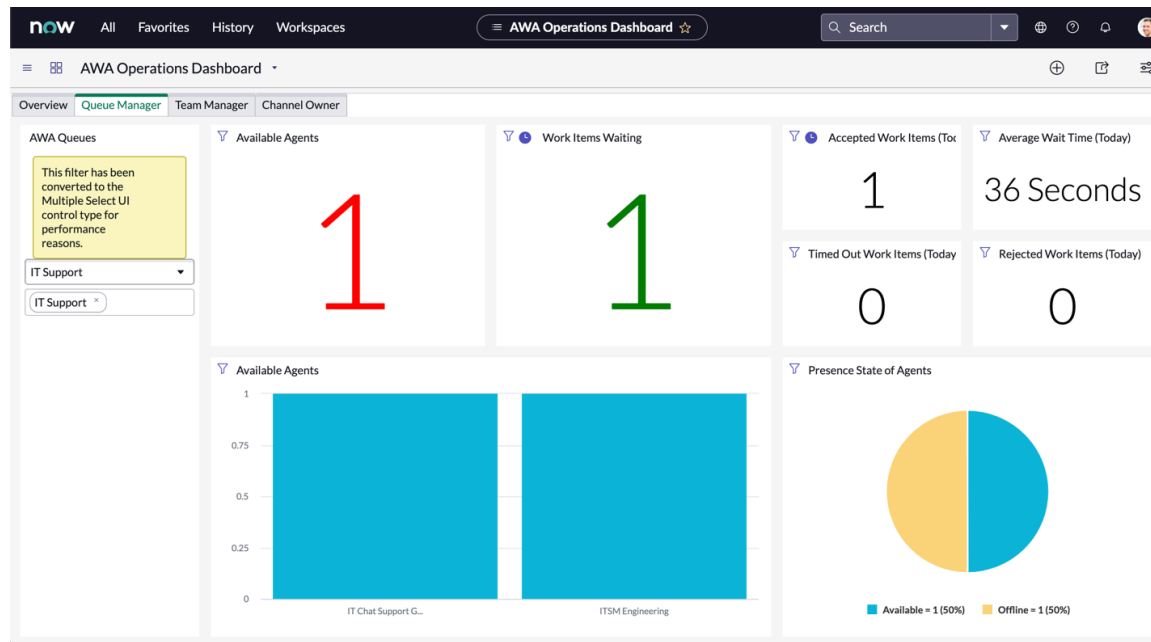
AWA dashboard for Operations - Overview

The Overview tab of the Operations dashboard displays information across all queues, teams, and channels.



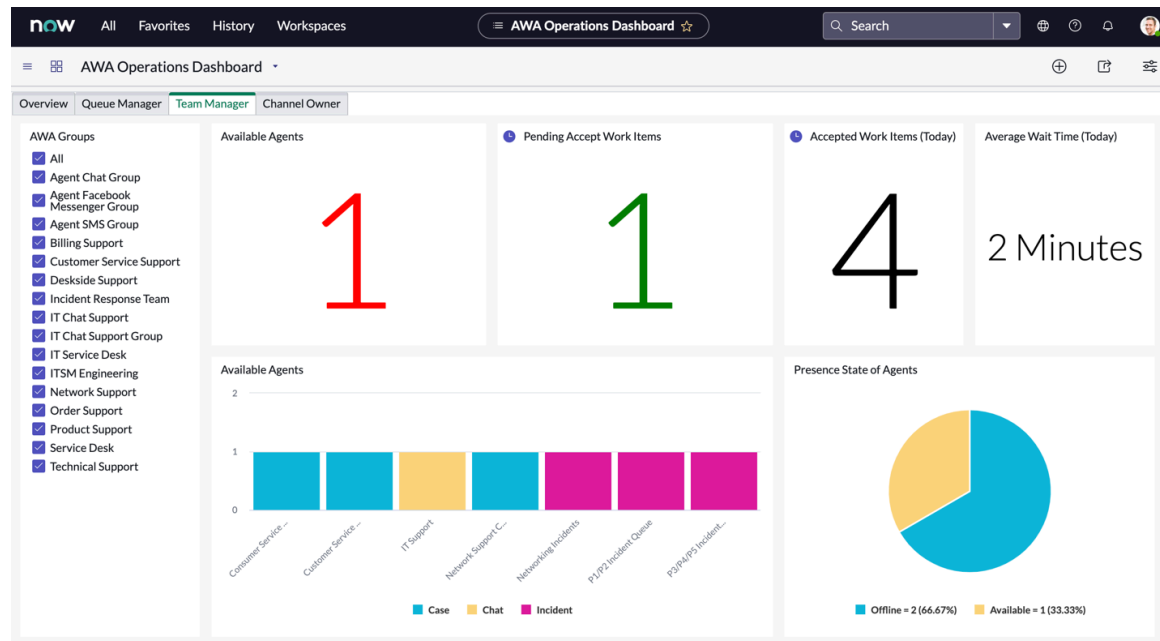
AWA dashboard for Operations - Queue Manager

The Queue Manager tab of the Operations dashboard displays overall queue information. You can select the queue you want to look at from the left-hand panel.



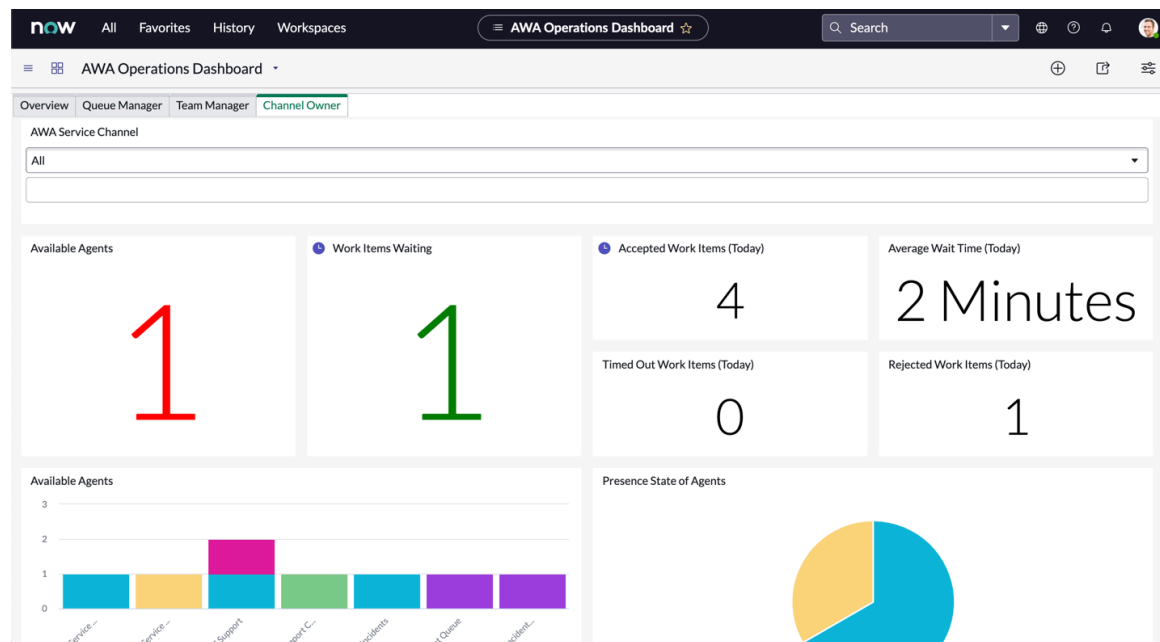
AWA dashboard for Operations - Team Manager

The Team Manager tab of the Operations dashboard displays information at a group level. You can select the group you want to look at from the left-hand panel.



AWA dashboard for Operations - Channel Owner

The Channel Owner tab of the Operations dashboard displays overall channel data, depending on the service channel you select from the drop-down list.



End users and roles

End user and goal	Required role
AWA administrator: Configures AWA to best fit the business needs of customer service.	awa_admin

End user and goal	Required role
AWA manager: Identifies the areas of concern for routing and assignment of work items across service channels.	awa_manager
Agent manager: Manages agents or agent groups. The agent manager wants to know what agents are working on to make sure that customer needs are being met.	sn_customerservice_manager
Performance Analytics administrator: Ensures that business managers are making the best use of Performance Analytics solutions.	pa_admin or pa_viewer

Use case

This dashboard provides support managers with an overview of incoming work items and the availability of agents to handle them. Managers can monitor these daily trends to determine if adjustments should be made to the routing criteria, agent capacity values, and other settings that determine how work is pushed to agents.

Breakdowns

Breakdowns divide information into different categories. To analyze data according to different categories, select a breakdown from the dashboard menu:

- Service Channel
- Queue

For more information on analyzing data with breakdowns, see [Using breakdowns on dashboards](#) .

Data visualizations

Title	Type	Description
Work Items Waiting	Single  Score	Work items that are pending accept or queued.
Available Agents	Single  Score	Number of agents that are available.

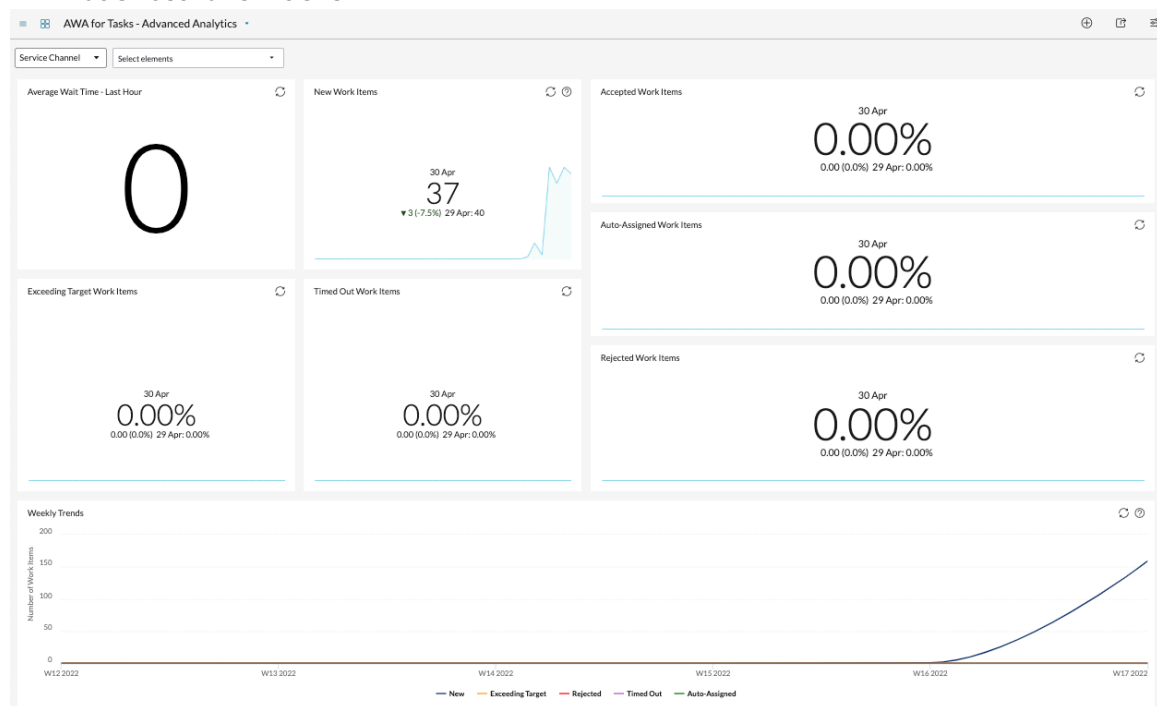
Title	Type	Description
Accepted Work Items (Today)	Single  Score	Number of operation work items that agents accepted today. This includes auto-assigned work items that are accepted.
Average Wait Time (Today)	Single  Score	Average time it takes for an agent to accept a chat in the queue today.
Timed out Work Items (Today)	Single  Score	Work items that have timed out today.
Rejected Work Items (Today)	Single  Score	Work items that were rejected but not timed out.
Presence State of Agents		Distribution of agents across different presence states.
Agent Presence & Capacity		Count and list of agents in an assignment group with their current presence state, time since the user entered in the current presence state, and capacity in use for each channel. • Agent • Current presence state • Updated • Channel • Capacity in use • Applied Max Capacity • Universal Capacity In Use • Max Universal Capacity

Advanced Work Assignment dashboard for tasks

Enable managers to monitor Task [task] work items so that their agents can better support customer needs.

This dashboard is available in the Performance Analytics - Content Pack - Advanced Work Assignment plugin. For information on activating the content pack, see [Platform Analytics Solutions for Advanced Work Assignment](#).

AWA dashboard for Tasks



End users and roles

End user and goal	Required role
AWA administrator: Configures Advanced Work Assignment to best fit the business needs of customer service.	awa_admin
AWA manager: Identifies the areas of concern for routing and assignment of work items across service channels.	awa_manager
Agent manager: Manages agents or agent groups. The agent manager needs to know what agents are working on in order to make sure customer needs are being met.	sn_customerservice_manager
Performance Analytics administrator: Ensures that business managers are making the best use of Performance Analytics solutions.	pa_admin or pa_viewer

Use case

This dashboard provides support managers with an overview of incoming work items and the availability of agents to handle them. Managers can monitor these daily trends to determine if

adjustments should be made to the routing criteria, agent capacity values, and other settings that determine how work is pushed to agents.

Indicators

Indicators define a performance measurement taken at regular intervals of a business service, an activity, or organizational behavior.

Indicator	Description
New Work Items	Total number of task work items that were created today. The goal for this indicator is to minimize the amount of task work items that agents receive.
Accepted Work Items	Percentage of all task work items that agents have accepted.
Auto-Assigned Work Items	Percentage of all task work items that were automatically assigned.
Exceeding Target Work Items	Percentage of all interaction work items that have exceeded the target wait time.
Timed Out Work Items	Percentage of all interaction work items that timed out.
Rejected Work Items	Percentage of all interaction work items that agents have rejected.
Weekly Trends	Number of work items in each of the following states for the past week: • New • Exceeding Target • Abandoned • Rejected • Timed Out • Auto-Assigned

Breakdowns

To analyze data according to different categories, select a breakdown from the dashboard menu:

- Service Channel
- Queue

For more information on analyzing data with breakdowns, see [Using breakdowns on dashboards](#).

Data visualizations

Title	Type	Description
Average Task Wait Time - Last Hour	Single	Average amount of time in the past hour that customers have spent waiting for an agent response.
	Score	

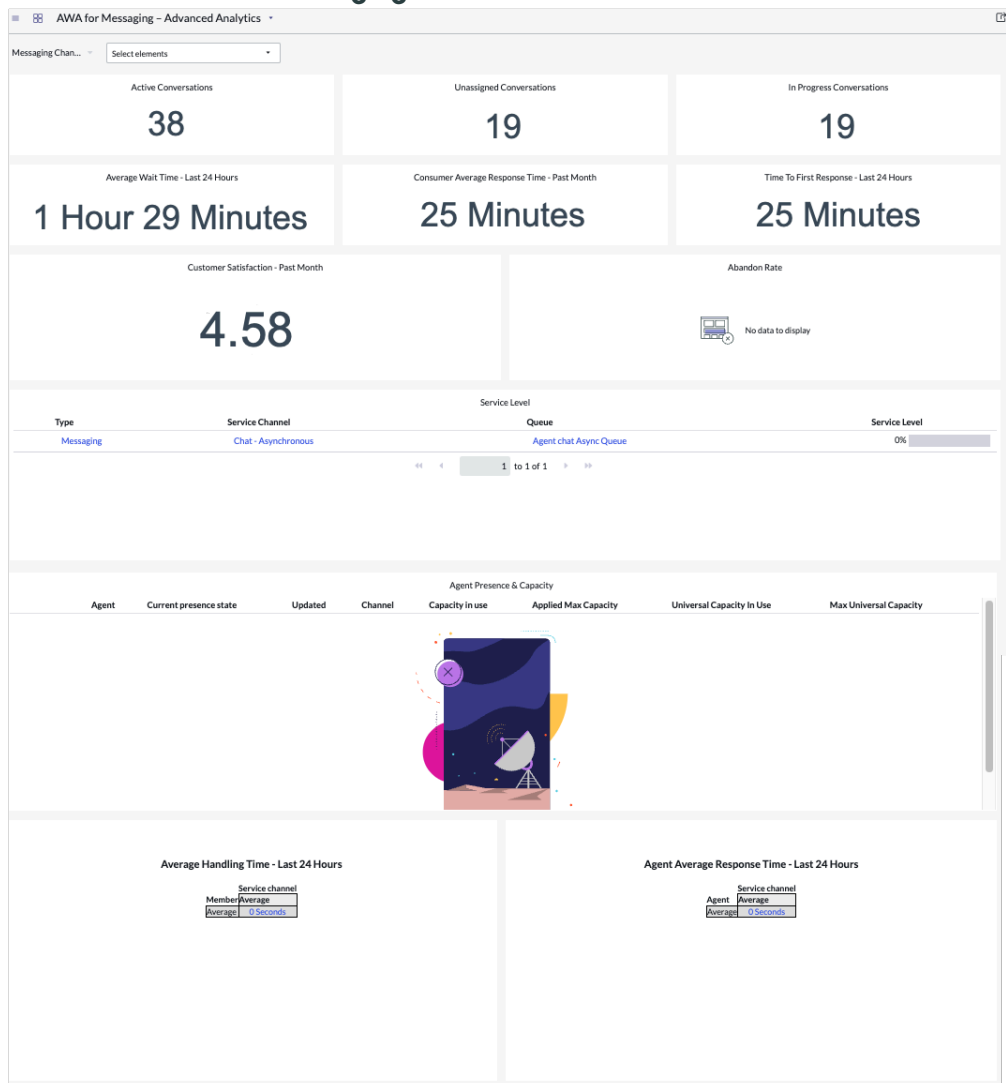
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Advanced Work Assignment dashboard for messaging

Enable managers to monitor Conversation [interaction] work items so that their agents can better support customer needs.

This dashboard is available in the Performance Analytics - Content Pack - Advanced Work Assignment plugin. For information on activating the content pack, see [Platform Analytics Solutions for Advanced Work Assignment](#).

AWA dashboard for Messaging



End users and roles

End user and goal	Required role
AWA administrator: Configures Advanced Work Assignment to best fit the business needs of customer service.	awa_admin
AWA manager: Identifies the areas of concern for routing and assignment of work items across service channels.	awa_manager
Agent manager: Manages agents or agent groups. The agent manager needs to know what agents are working on to make sure customer needs are being met.	sn_customerservice_manager
Performance Analytics administrator: Ensures that business managers are making the best use of Performance Analytics solutions.	pa_admin or pa_viewer

Use case

This dashboard provides support managers with an overview of incoming work items and the availability of agents to handle them. Managers can monitor these daily trends to determine if adjustments should be made to the routing criteria, agent capacity values, and other settings that determine how work is pushed to agents.

Indicators

Indicators define a performance measurement taken at regular intervals of a business service, an activity, or organizational behavior.

Indicator	Description
Abandon Rate	Percentage of conversations that have been abandoned by the requestor.

Data visualizations

Title	Type	Description
Active Conversations	Single	Agent Chat messaging conversations that are not Closed Complete or Closed Abandoned and are not cancelled.
	Score	



Title	Type	Description
Unassigned Conversations	Single  Score	Agent Chat messaging conversation that is in a pending accept or queued state.
In Progress Conversations	Single  Score	Agent Chat messaging conversation that is on hold, new, or work in progress.
Average Wait Time - Last 24 Hours	Single  Score	Average time it takes for an agent to accept a chat in the queue today.
Consumer Average Response Time - Past Month	Single  Score	Messaging conversation that is Closed Complete or Closed Abandoned and is assigned and the requester average response time is not empty and it was created after one month.
Time To First Response - Last 24 Hours	Single  Score	Inbound messaging conversation where the first response wait time is not empty and it was created after 24 hours.
Customer Satisfaction - Past Month	Single  Score	Customer satisfaction score over the past month
Service Level	Single  Score	• Type • Service Channel • Queue • Service Level

Title	Type	Description
Agent Presence & Capacity		• Agent • Current presence state • Updated • Channel • Capacity in use • Applied Max Capacity • Universal Capacity In Use • Max Universal Capacity
Average Handling Time - Last 24 Hours	Single  Score	Average time of the interactions handling duration in the last 24 hours.
Agent Average Response Time - Last 24 Hours	Single  Score	Average agent response time in the last 24 hours.

Migrating Advanced Work Assignment Dashboards

Migrating the Advanced Work Assignment CoreUI dashboards to Next Experience increases the product adoption of key platform capabilities to drive customer benefit.

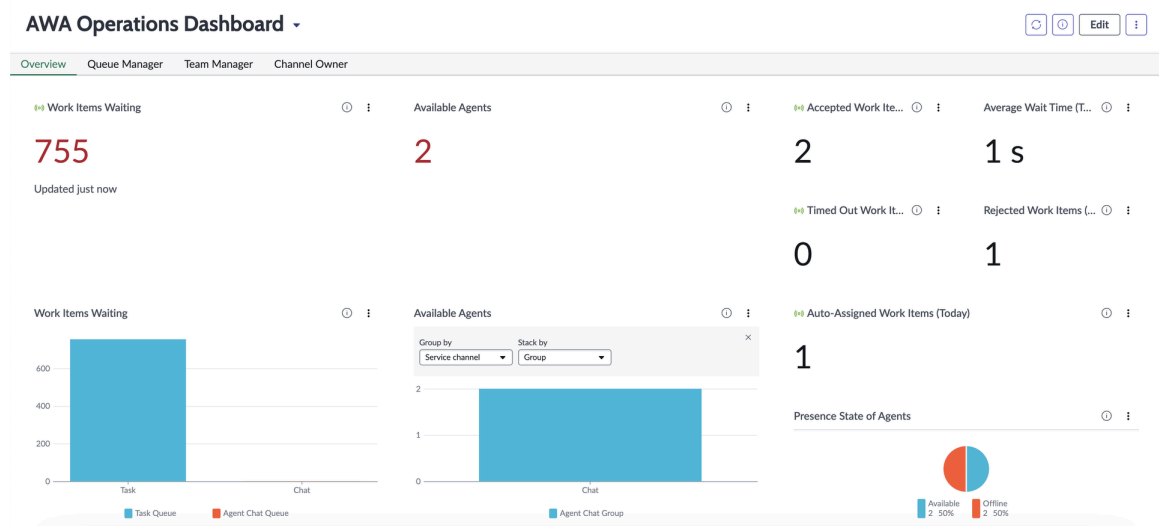
The new Advanced Work Assignment users see the Next Experience dashboards by default.

The existing users will not see their custom changes on the new dashboards by default when they upgrade. The CoreUI dashboards of the existing users will not be deleted or deprecated. To see the custom changes on the CoreUI dashboard in the new Next Experience dashboard, they must migrate their CoreUI customized dashboards to Next Experience while upgrading from the Washington DC release to the Xanadu release.

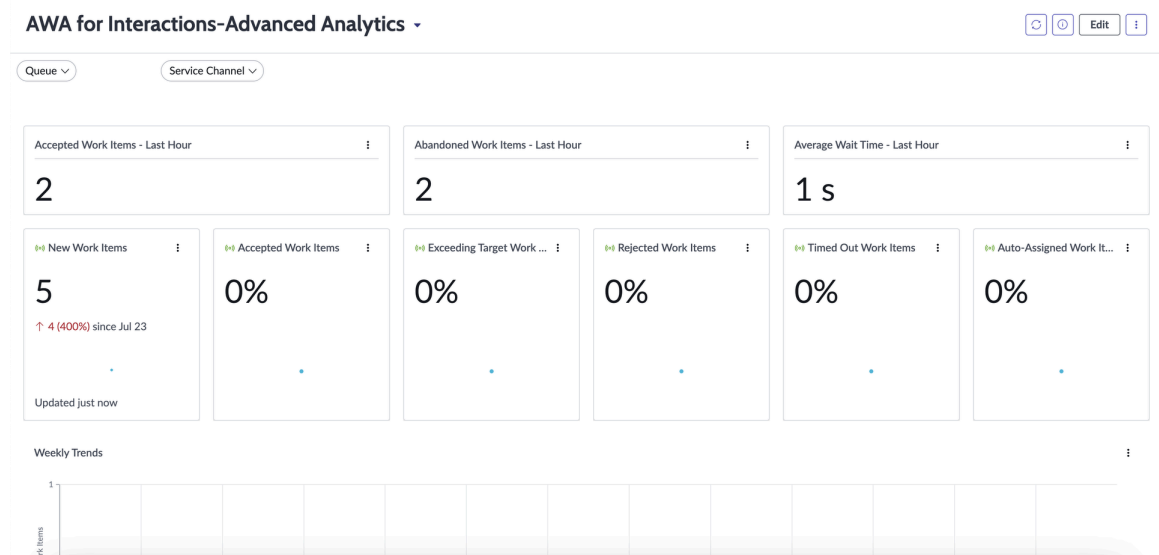
AWA Next Experience dashboards

All the AWA Core UI dashboards have been migrated to Next Experience.

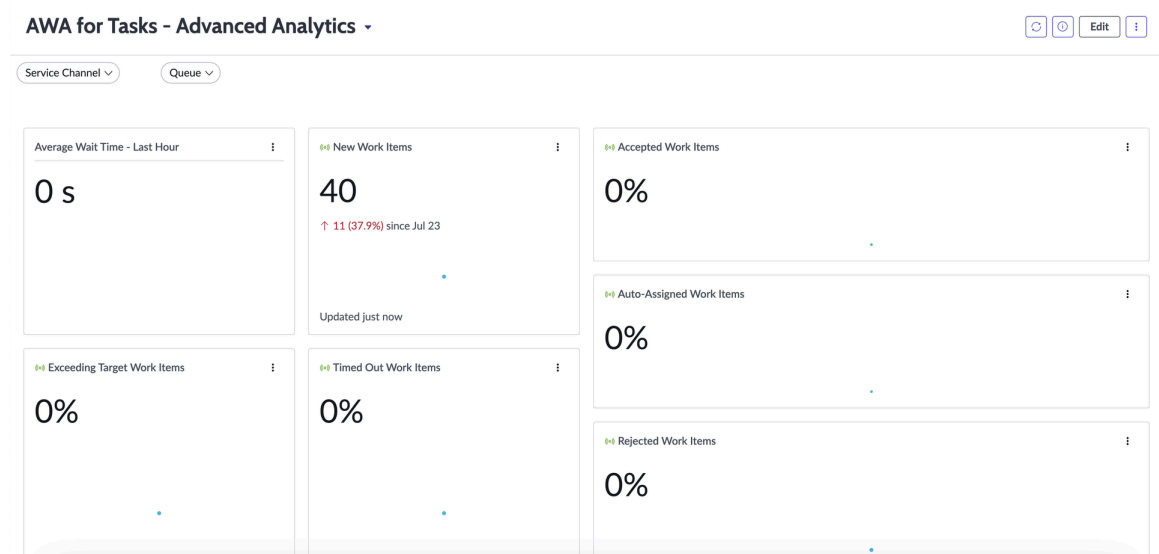
AWA Operations Dashboard



AWA Interactions Dashboard



AWA Tasks Dashboard



AWA Messaging Dashboard

AWA for Messaging – Advanced Analytics ▾

Refresh Settings Edit Help

Messaging Channels ▾

Active Conversations

1

Unassigned Conversations

0

In Progress Conversations

1

Average Wait Time - Last 24 Hours

23 s

Consumer Average Response Time - Past Month

0 s

Time To First Response - Last 24 Hours

3 s

Customer Satisfaction - Past Month

0.00

Abandon Rate

0%

Agent Presence & Capacity

Last refreshed just now

Agent Current presence state Updated Channel Capacity in use Applied Max Capacity Universal Capacity In Use Max Universal Capacity

Assignment Rule form

When creating or changing an Advanced Work Assignment assignment rule, the Assignment Rule form contains the following fields.

Assignment Rule form

Field	Definition
Name	Name of the assignment rule.
Application	Name of the application to which this assignment rule belongs. The default application is Global .
Short description	Brief description of the assignment rule.
Assign by	Type of assignment. Select one of the following values: • Last Assigned: Routes a work item to the agent who has gone the longest without being assigned work. • Most Capacity: Routes a work item to the agent who has the greatest availability for handling the work.
Auto-assign handling	Work items are automatically accepted without agents having to select Accept or Reject . • Enable auto-assign work items: Select this option to have work items automatically accepted on behalf of agents. Agents are unable to manually Accept or Reject work items. • Display options: Select one of the following values:

Assignment Rule form (continued)

Field	Definition
	○ Select Inbox card to accept the chat interactions and add them to the agent inbox. Agents can open the accepted interaction from the inbox. ○ Select Inbox card and workspace tab to accept chat interactions and open a tab for each accepted interaction.
Rejection handling	Work items are rejected and handled. • Allow agents to reject: Enable agents to reject work items in their inbox. • Reassign on timeout: Enable reassignment of work items not accepted or rejected by agents within the specified timeout period: ○ Timeout value (Days and Hours, Minutes, Seconds): Length of time allowed for an agent to accept or reject a work item before the assignment times out (ends) and is reassigned to another agent. ○ Timeout presence state: Agent availability state after the timeout occurs: Available, Away, or Offline. This tab isn't available when auto-assign handling is activated.
Skill handling	Skill-based work assignments. • Enable skills: Route work items to agents with the appropriate skills. When selected, the Evaluate skill level and Enforce mandatory skills check boxes appear cleared. • Evaluate skill level: Route work items to the most qualified agents based on their skill level. • Enforce mandatory skills: Route work items to agents with required skills.
Shift handling	Work items are assigned to agents based on shifts. • Enable-shift based assignment: Assign work items to agents based on time available in their shifts. • Add time constraints: Add the time required to complete work items in shifts and whether

Assignment Rule form (continued)

Field	Definition
	agents should be continuously available for the required time period. This field appears only when the Enable shift-based assignment option is selected. • Agent criteria: Select an agent based on the time left in the agent's shift. This field appears only when the Enable shift-based assignment option is selected. Available options: ○ Least time left in shift: Assign a work item to an agent from a group of available agents based on the least amount of time available in their shifts. ○ Most time left in shift: Assign a work item to an agent from a group of available agents based on the maximum time available in their shifts. • Time required: Time required to complete a work item. • Available continuously for the required time: Assign work items to agents who are continuously available for the required time period without any breaks in a shift. Agents who don't have the minimum time required in their shifts aren't considered for work item assignments. Note: The Shift handling field is available only if the Advanced Work Assignment plugin (com.glide.awa) is activated and the Workforce Optimization for Customer Service plugin (com.snc.wfo.csm) or the Workforce Optimization for ITSM plugin (com.snc.wfo_itsm) plugin, or both, is activated. As a manager, you must have planned schedules for agents to assign them shifts. For more information, see Scheduling in Workforce Optimization for Customer Service and Scheduling in Workforce Optimization for ITSM. This field appears only when the Add time constraints option is selected.

Advanced Work Assignment monitoring page

Administrators (admin or awa_admin) can monitor Advanced Work Assignment activity by reviewing information on the Advanced Work Assignment Stats page.

The Advanced Work Assignment Stats page displays AWA performance statistics. Administrators can access the Advanced Work Assignment Stats page by entering `<instance_url>/awa_stats.do` where `instance_url` is the base of the ServiceNow URL.

Note: The mean, median, max, and min statistics are representative of the particular node you are viewing.

Total Agent Summary

Field	Description
Agent Status	Overview of agent status for all assigned agents

Channel Summaries

Work Items

Field	Description
Number Queued	Number of work items currently queued
Number Pending Acceptance	Number of work items currently pending acceptance
Number of Duplicates	Number of duplicate work items (meaning same document id, usually from transfers)
Number Rejected	Number of work items rejected
Current Number Meeting Channel Condition	Number of work items with the channel condition met
Current Number Meeting Utilization Condition	Number of work items with the current utilization condition met
Current Number Meeting Channel & Utilization Condition	Number of work items meeting both channel and utilization condition
Total Work Item Count	Total number of work items for the given channel

Query Performance

Field	Description
Max Query Response Time	Maximum amount of time for the response of querying all the active and unassigned work items of a given channel
Min Query Response Time	Minimum amount of time for the response of querying all the active and unassigned work items of a given channel

Query Performance (continued)

Field	Description
Mean Query Response Time	Mean amount of time for the response of querying all the active and unassigned work items of a given channel
Median Query Response Time	Median amount of time for the response of querying all the active and unassigned work items of a given channel
Total Query Count	Total number of times the query for inactive/unassigned work items has been made for the given channel

Record Watchers

Field	Description
Record Watcher Entries Present	True if the required record watchers for the channel exist (channel eligibility responder, work item responder, workload responder).
Number of Entries Triggered	Number of times onEntry has been called on this node for the given record watcher
Number of Exits Triggered	Number of times onExit has been called on this node for the given record watcher
Number of Changes Triggered	Number of times onChange has been called on this node for the given record watcher

Queues

Field	Description
Total Number of Queues	Total number of active queues for a given channel
Number of Queues in Schedule	Number of queues for a given channel that are currently in schedule
Number of Queues Out of Schedule	Number of queues for a given service channel that are currently out of schedule
Number of Inactive Queues	Number of queues that are not marked as active

Agents

Field	Description
Agent status overview for the given channel	Number of agents with this status

Channel Breakdown

Queues

Field	Description
In Schedule	True if the queue is in schedule, false otherwise
Agents Available	True if the given queue has agents available, false otherwise
Number of Agents Available	Number of agents marked as available for the given queue
Number of Work Items Queued	Number of work items queued for the given queue
Number of Work Items Pending Acceptance	Number of work items pending acceptance for the given queue
Max Routing Time for Work Items	Maximum routing time of creating a work item for a given record and assigning it to the queue
Min Routing Time for Work Items	Minimum routing time of creating a work item for a given record and assigning it to the queue
Mean Routing Time for Work Items	Mean routing time of creating a work item for a given record and assigning it to the queue
Median Routing Time for Work Items	Median routing time of creating a work item for a given record and assigning it to the queue
Total Routing Count of Work Items	Total number of work items routed to the queue from created records

Advanced Work Assignment roles

Advanced Work Assignment (AWA) is installed with these roles.

To learn more about managing subscriptions, see [Managing per-user subscriptions in Subscription Management](#) and contact your account representative.

AWA administrator [awa_admin]

The AWA administrator configures and manages AWA.

Contains Roles

List of roles contained within the role.

- chat_survey_admin
- interaction_agent
- quickactions_user
- sn_ace.ace_user
- sn_ci_gs_content.ci_guided_setup_admin

Groups

List of groups this role is assigned to by default.

None.

Special considerations

Note: Avoid granting an admin role when more specialized roles are available.

AWA agent [awa_agent]

The AWA agent handles customer interactions and manages workload across multiple service channels.

Contains Roles

List of roles contained within the role.

- quickactions_user
- sn_templated_snip.template_snippet_reader

Groups

List of groups this role is assigned to by default.

None.

Special considerations

None.

AWA integration user [awa_integration_user]

The AWA integration user uses the AWA integration APIs.

Contains Roles

List of roles contained within the role.

None.

Groups

List of groups this role is assigned to by default.

None.

Special considerations

None.

AWA manager [awa_manager]

The AWA manager monitors the performance of agents across all service channels.

Contains Roles

List of roles contained within the role.

- *interaction_agent*
- *quickactions_user*

Groups

List of groups this role is assigned to by default.

None.

Special considerations

None.

Components installed with Advanced Work Assignment

Several types of components are installed with activation of the Advanced Work Assignment plugin, including tables, user roles, and scheduled jobs.

Note: The Application Files table lists the components that are installed with this application. For instructions on how to access this table, see [Find components installed with an application](#).

Demo data is available for this feature.

Roles installed

AWA adds the following roles for users who configure, manage, and receive work assignments.

Role title [name]	Description	Contains roles
Advanced Work Assignment administrator [awa_admin]	Admin role for the AWA feature. Configures and manages AWA.	awa_manager
Advanced Work Assignment developer [awa_integration_user]	Developer role for the AWA feature. Uses the AWA integration APIs.	None
Advanced Work Assignment agent [awa_agent]	Agent role for the AWA feature. Handles customer interactions and manages workload across multiple service channels.	None
Advanced Work Assignment manager [awa_manager]	Manager role for the AWA feature. Monitors performance of agents across all service channels.	None

Scheduled jobs installed

Scheduled job	Description
<i>AWA WorkItem TimeOut Job</i>	

Scheduled job	Description
AWA Cleanup Job	

Tables installed

Table	Description
AWA Agent Capacity [awa_agent_capacity]	Stores capacity override records for agents on individual channels.
AWA Agent Channel Availability [awa_agent_channel_availability]	Store the records that determine the agents available in the channel.
AWA Agent Presence [awa_agent_presence]	Stores the records that define the agent availability state.
AWA Agent Presence History [awa_agent_presence_history]	Stores records on agent presence state changes.
AWA Assignment Rule [awa_assignment_rule]	Stores the assignment rule records used to determine the work items pushed to agents.
AWA Eligibility Pool [awa_eligibility_pool]	Stores the records that define grouping of agents eligible to receive work items in the queue when the items have been rejected by agents or agents are unavailable.
AWA Group Queue Priority [awa_group_queue_priority]	Stores the priority values for queues assigned to groups.
AWA Inbox Layout [awa_inbox_layout]	Defines the fields that appear on a work item card in the Agent Workspace inbox.
AWA Offer Details [awa_offer_details]	Stores whether a work item was assigned using Agent Affinity and how the assignment was completed.
AWA Presence State [awa_presence_state]	Defines presence states.
AWA Queue [awa_queue]	Stores the work item queue records.
AWA Queue Item Sorting [awa_queue_item_sorting]	Defines which fields in a work item for a queue you can sort on.
AWA Reject Reason	Stores the records that define the reasons that agents use to decline work items assigned to them.

Table	Description
[awa_reject_reason]	
AWA Service Channel [awa_service_channel]	Defines the communication channel for which work items may be queued.
AWA Work Item [awa_work_item]	Stores items of work, for example, chats, cases, or incidents, that are routed from service channels to queues and then to agents.
AWA Work Item Rejection [awa_work_item_rejection]	Stores the rejection history records for each work item.

Properties installed

Property	Description
glide.awa.enabled	Enables the auto assignment of work items for Advanced Work Assignment. • Type: true false • Default value: true • Location: System Property [sys_properties] table
com.snc.awa.cache.enabled	Enables the Advanced Work Assignment cache. • Type: true false • Default value: true • Location: System Property [sys_properties] table

Domain separation and Advanced Work Assignment

Domain separation is supported in the Advanced Work Assignment feature. Domain separation enables you to separate data, processes, and administrative tasks into logical groupings called domains. You can control several aspects of this separation, including which users can see and access data.

Support level: Standard

- Includes all aspects of **Basic** level support.
- Application properties are domain-aware as needed.
- Business logic: The service provider (SP) creates or modifies processes per customer. The use cases reflect proper use of the application by multiple SP customers in a single instance.
- The instance owner must configure the minimum viable product (MVP) business logic and data parameters per tenant as expected for the specific application.

Sample use case: An admin must be able to make comments required when a record closes for one tenant, but not for another.

For more information on support levels, see [Application support for domain separation](#) .

Overview

Advanced Work Assignment enables the automatic assignment of work items to qualified agents using work item queues defined for specific service channels. Managed Service Providers can create domain-specific queues by specifying a particular domain as a queue routing condition.

How domain separation works in Advanced Work Assignment

When an instance has a domain hierarchy where users and groups belong to different domains, you may need to restrict the visibility of work items to certain agents in a domain. You may also need to ensure that work items are routed to agents in the proper domain. AWA admins can configure service channels and associated work item queues to:

Route work by domains

To push work items to agents in domains where only certain tasks or interactions are visible to them, use a routing condition that routes those items to the appropriate queues. For example:

- To restrict a queue to only items that match exactly to a particular domain X, specify this condition: **[Domain] [is] [X]**
- To route all work items in domain X and its child domains to a queue, use the **Domain Path** field and specify a condition such as: **[Domain Path] [starts with] [!!!/!!#/]**

Assign work to agents in the appropriate domain

To assign work items to agents in the appropriate domain, ensure that the assignment groups specified in the queue [Eligibility Assignment pools](#) have agents that belong to the domains where they can see the work items routed to the queue.

If a mismatch occurs, and agents in an eligible assignment group cannot see a work item in a queue, AWA may temporarily assign an item to an agent. However, before the item is moved to the agent's inbox, AWA automatically rejects the assignment with the reason **No access**. AWA reassigns the work item to a different agent who might have access. If none of the available agents can see the work item, the item could be rejected multiple times.

Warning: The item can get stuck in the queue until the AWA admin corrects the eligible assignment configuration.

Related topics

[Domain separation for service providers](#) 

Properties for Advanced Work Assignment

The Advanced Work Assignment Properties page provides configuration options for AWA.

If you have the admin role, you can create or change these properties by navigating to **System Properties > All Properties**.

Properties for AWA

Property	Description
<i>AWA Routing Look-Back Time</i>	AWA defaults to routing work items created within the last 10 minutes. If a work item is

Properties for AWA (continued)

Property	Description
<i>com.glide.awa.routinglookback</i>	created after 10 minutes has passed, it isn't considered for AWA routing. For work items that are created outside of the default 10-minute window, create this system property to expand the AWA routing look-back time: • Name: com.glide.awa.routinglookback • Type: Integer • Value: Number of seconds For example, set the property Value to 86400 (24 hours) to cover a full shift for any missed work items. • Description: Number of seconds AWA looks back for routing once the work items are eligible for AWA. Note: This property affects all service channels in the system.
Disable Query business rules <i>glide.awa.query_br_disable</i>	If the property is enabled, AWA disables before query business rules during its execution. For example, if enabled, an instance can have a custom before-query business rule on the interaction table without affecting how AWA routes or assigns interactions. • Type: true false • Default value: true • Location: System Properties > All Properties
Bypass AWA Queue Max Wait Time <i>glide.awa.bypass_max_wait_time.enabled</i>	This property overrides the queue's max wait time value with the assignment rule's timeout value to help prevent work items from disappearing prematurely in an agent's inbox.
Enable/disable execution of subflows <i>glide.awa.enable_routing_subflow</i>	Enables/disables the execution of subflows defined on the AWA queues when work items are routed. • Type: true false • Default value: false

For information on adding a system property, see [Add a system property](#) .

Conversational Interfaces Diagnostic Tool

Use the Conversational Interfaces Diagnostic Tool to identify, troubleshoot, and find solutions for issues with conversational interfaces, before reaching out to Now Support.

Get started

Explore  Learn about the features of the diagnostic tool.	Use  Use the tool to resolve errors and solve configuration issues with Microsoft Teams and Advanced Work Assignment.
--	--

Troubleshoot and get help

- [Virtual Agent and Natural Language Understanding \(NLU\) community forum](#) 
- [Search the Known Error Portal for known error articles](#) 
- [Contact Customer Service and Support](#) 

Exploring Conversational Interfaces Diagnostic Tool

The Conversational Interfaces Diagnostic Tool lets admins search for, identify, and resolve issues with conversational interfaces.

The Conversational Interfaces Diagnostic Tool lets admins search for, identify, and resolve issues with conversational interfaces.

Technical support engineers set up the Conversational Interfaces Diagnostic Tool on the server. Technical support engineers create and manage the Conversational Interfaces diagnostic category records and content that the Conversational Interfaces Diagnostic Tool uses.

After the technical support engineers create the diagnostic categories and content, admins can start using the Conversational Interfaces Diagnostic Tool on the chat widget. Admins must have the admin or virtual_agent_admin role.

The Conversational Interfaces Diagnostic Tool is available for both Virtual Agent and Virtual Agent Lite.

Note: Before using the Conversational Interfaces Diagnostic Tool, admins must activate the Conversational Interfaces - Diagnostics plugin (sn_ci_diagnostics) available on the ServiceNow® Store store.

Request apps on the Store

Visit the [ServiceNow Store](#)  to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#) .

Conversational Interfaces Diagnostic Tool workflow

After you've described the issue you want to solve, the Conversational Interfaces Diagnostic Tool workflow begins using the relevant diagnostic topics and topic blocks. These topics and topic blocks are used for identifying, diagnosing, solving, and collecting data for the issue described.

For example, the diagnostic workflow does the following:

- Prompts you for the required data, based on the issue you want to solve.
- Includes a list of Knowledge Base (KB) articles where you can find more information, as applicable. If you aren't finding the information you need, you can also search for additional KB articles.
- Gives you the option of downloading diagnostic support information.
- Lets you select another issue to solve.

The diagnostic workflow and the options and prompts you see correspond to the issue you are trying to diagnose and solve. The diagnostic workflow uses an AI Search filter as part of the diagnosis. For more information about AI Search and how to configure it, see [Configuring AI Search](#).

The diagnostic topic block workflow also includes solutions for messaging integrations, such as Microsoft Teams. It also helps with Advanced Work Assignment configuration issues.

Conversational Interfaces Diagnostic Tool workflow



In the workflow, the admin describes the issue. The tool runs a health check and returns available troubleshooting information, as well as contact information for Now Support if the problem was not solved.

Conversational Interfaces Diagnostic Tool benefits

Benefit	Feature	Users
Diagnose general errors, such as error messages and system property issues.	Diagnose Conversational Interfaces errors	Admins
Identify and solve Microsoft Teams configuration issues.	Diagnose Microsoft Teams configuration issues	Admins
Identify and resolve common Advanced Work Assignment (AWA) configuration issues.	Diagnose Advanced Work Assignment configuration issues	Admins

Using the Conversational Interfaces Diagnostic Tool

Use the tool to diagnose general Conversational Interfaces errors and system property settings, as well as issues with Microsoft Teams and Advanced Work Assignment configuration.

Diagnose Conversational Interfaces errors

Use the Conversational Interfaces Diagnostic Tool to resolve issues related to conversational interfaces such as error messages and system property issues before reaching out to Now Support.

Before you begin

Role required: virtual_agent_admin or admin

Starting with the Brazil release, Virtual Agent NLU functionality in the Diagnostic Tool is being prepared for future deprecation. It will be hidden and no longer installed on new instances but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#)  article in the Now Support Knowledge Base.

About this task

Use this task to resolve errors and find and change system property values.

Procedure

1. Start a conversation with the Virtual Agent chatbot.
2. At the greeting message, type `diagnostic pre chat`.
3. Describe the issue that you want to solve.

If it is an error message issue, you can copy-and-paste or type the error message into the chatbot conversation.

For system properties, you don't need to know the exact name of the system property. Type a feature name related to the property to see a list of matching system properties.

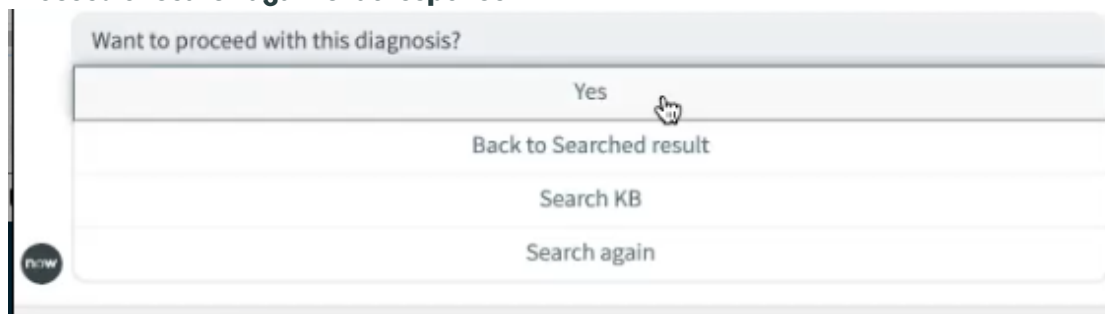
When your input matches an existing system property, but that property isn't in your instance, you see the system property name followed by two dash lines. For example:
some.property.name - -

Find or create the system property on your instance and make changes, as applicable.

The tool displays a list of solutions.

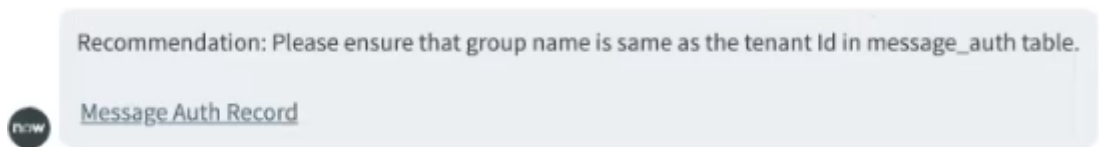
4. Select the solution that you want to use.
The Diagnostic Tool asks if you want to proceed with the diagnosis.

Proceed or search again chat response

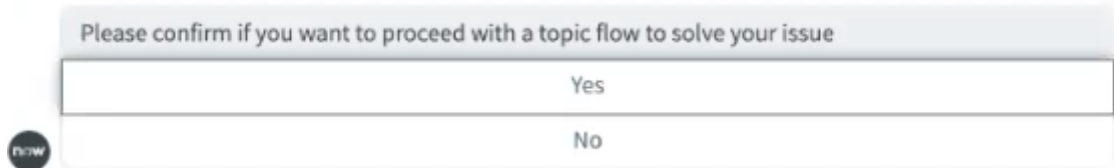


5. Select **Yes** to continue.
The tool initiates the workflow and leads you through the relevant prompts. The prompts you see depend on the issue you want to diagnose and solve.
6. Answer the prompts.
When the diagnosis is complete, the Diagnostic Tool displays a recommended solution.

Issue recommendation



Issue confirmation



7. Select **Yes** to confirm, or select **No** to end the workflow.

The Diagnostic Tool guides you through the relevant workflow. The options and prompts you see depend on the issue you want to solve. Reply to the prompts, as applicable. You may also see a link to the relevant Knowledge Base (KB) article where you can find more information.

8. Provide feedback.

When asked whether the solution was helpful, select one of the following:

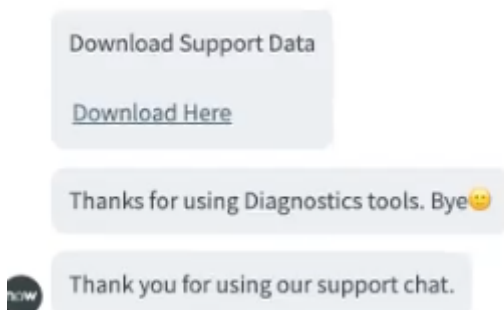
- Select **Yes**, if the solution wasn't helpful.

You are asked to provide additional information that helps fine-tune the solution.

The prompts you see vary by the issue that you want to solve.

- Select **No** to confirm that the solution was helpful and to exit the workflow.
- You may see a link that you can use to download support data.

Prompt to download support data



9. Optional: Click the link to download support data.

Diagnose Microsoft Teams configuration issues

Use the Conversational Interfaces Diagnostic Tool to identify and help solve Microsoft Teams configuration issues before reaching out to Now Support.

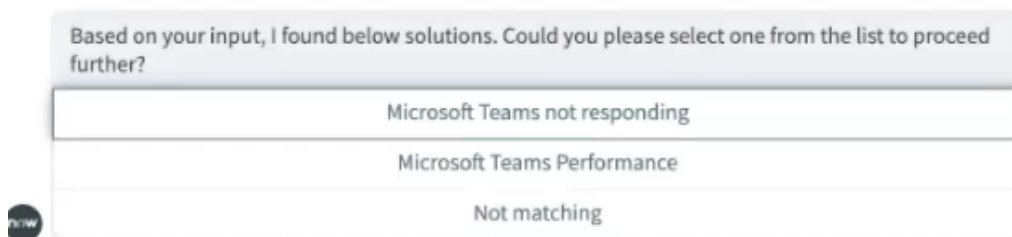
Before you begin

Role required: virtual_agent_admin or admin

Procedure

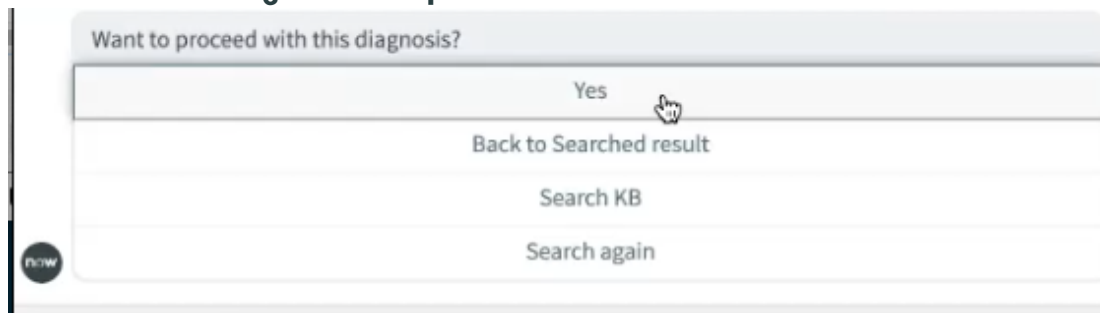
1. Start a conversation with the Virtual Agent chatbot.
2. At the greeting message, type `diagnostic pre chat`.
3. Describe the issue that you want to solve.
For example, if the Microsoft Teams application isn't responding, you can type `no response`.
The tool displays a list of solutions.

Example solutions for "no response"



4. Select the solution that you want to use.
The Diagnostic Tool asks if you want to proceed with the diagnosis.

Proceed or search again chat response



5. Select **Yes** to continue.
Lists of Health Check Parameters and MS Teams Tenant Configurations display.

Health check parameters and tenant configuration status

Health Check Parameter	Value
Are all Nodes Online?	true
Does user have the admin role?	true
Is the Conversational Integration with Microsoft Teams plugin installed?	true
Are the dependent plugins installed?	true
Are the dependent store apps installed?	true
Are notifications enabled?	false

MS Teams Tenant Configurations	Value
Tenant ID	aadda82c-7cd1-4d94-a60a-1b1578428a0b
Has a record been created in the sys_cs_provider_application table?	true
Is a valid message_auth linked to the Provider Application?	true
Is the message_auth group name same as tenant_id?	false

- Review the values for any parameters that are set incorrectly.
For example, if a value is set to **False** when it should be set to **True**.
When the diagnosis is complete, the Diagnostic Tool displays a recommended solution.

Issue recommendation

Recommendation: Please ensure that group name is same as the tenant Id in message_auth table.

[Message Auth Record](#)

Issue confirmation

Please confirm if you want to proceed with a topic flow to solve your issue

Yes

No

- Select **Yes** to confirm, or select **No** to end the workflow.
The Diagnostic Tool guides you through the relevant workflow. The options and prompts you see depend on the issue you want to solve. Reply to the prompts, as applicable. You may also see a link to the relevant Knowledge Base (KB) article where you can find more information.
For example, you may see a link to the [Master KB article](#) for common and known issues with Microsoft Teams.
- Provide feedback.
When asked whether the solution was helpful, select one of the following:

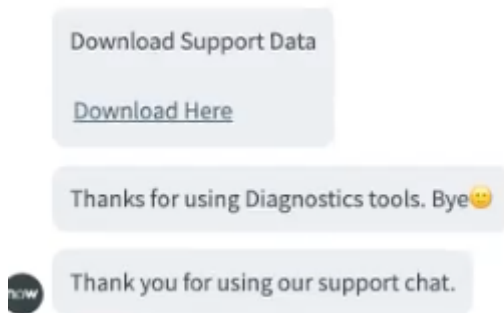
- Select **Yes**, if the solution wasn't helpful.

You are asked to provide additional information that helps fine-tune the solution. For example, you may be asked to provide the MS Teams Bot tenant ID, or asked if the instance has been cloned from another instance.

The prompts you see vary by the issue that you want to solve.

- Select **No** to confirm that the solution was helpful and to exit the workflow.
- You may see a link that you can use to download support data.

Prompt to download support data



9. **Optional:** Click the link to download support data.

Diagnose Advanced Work Assignment configuration issues

Use the Conversational Interfaces Diagnostic Tool to identify and resolve common Advanced Work Assignment (AWA) configuration issues before reaching out to Now Support.

Before you begin

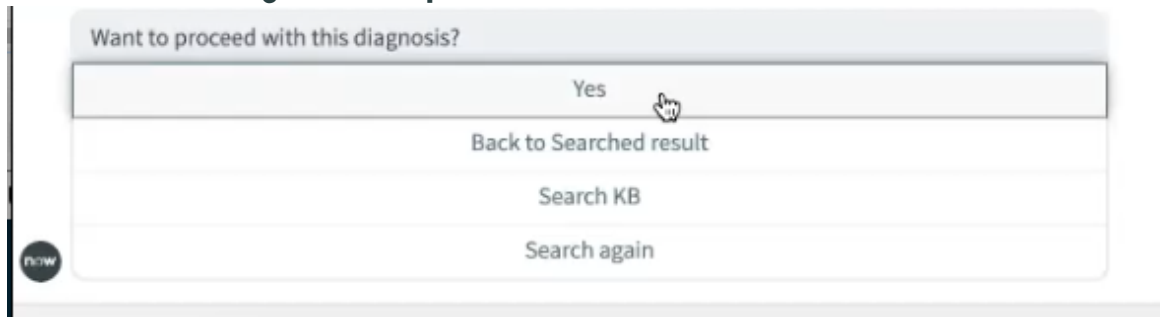
Role required: virtual_agent_admin or admin

About this task

Solve issues with your AWA configuration. For example, you can solve issues such as **No Agents Available** messages.

Procedure

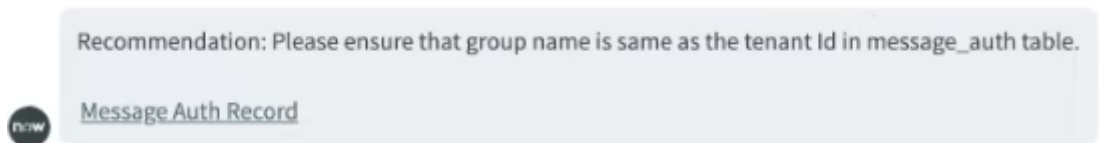
1. Start a conversation with the Virtual Agent chatbot.
2. At the greeting message, type `diagnostic pre chat`.
3. Describe the issue that you want to solve.
You can type or paste the error message into the chatbot conversation. For example, you can type `No Agents Available`.
The tool displays a list of solutions.
4. Select the solution that you want to use.
The solutions correspond to the issue that you want to solve.
The Diagnostic Tool asks if you want to proceed with the diagnosis.

Proceed or search again chat response

5. Select **Yes to continue.**

The tool initiates the workflow and leads you through the relevant prompts. The prompts you see depend on the issue you want to diagnose and solve.

6. Answer the prompts.

When the diagnosis is complete, the Diagnostic Tool displays a recommended solution.

Issue recommendation

Issue confirmation

7. Select **Yes to confirm, or select **No** to end the workflow.**

The Diagnostic Tool guides you through the relevant workflow. The options and prompts you see depend on the issue you want to solve. Reply to the prompts, as applicable. You may also see a link to the relevant Knowledge Base (KB) article where you can find more information.

8. Provide feedback.

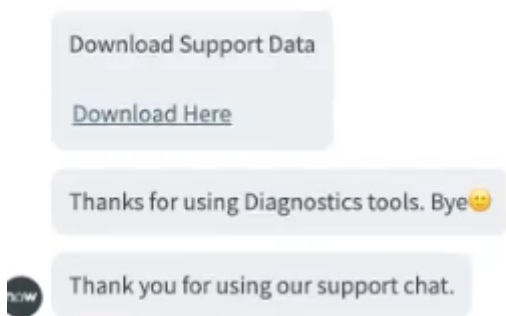
When asked whether the solution was helpful, select one of the following:

- Select **Yes**, if the solution wasn't helpful.

You are asked to provide additional information that helps fine-tune the solution.

The prompts you see vary by the issue that you want to solve.

- Select **No** to confirm that the solution was helpful and to exit the workflow.
- You may see a link that you can use to download support data.

Prompt to download support data

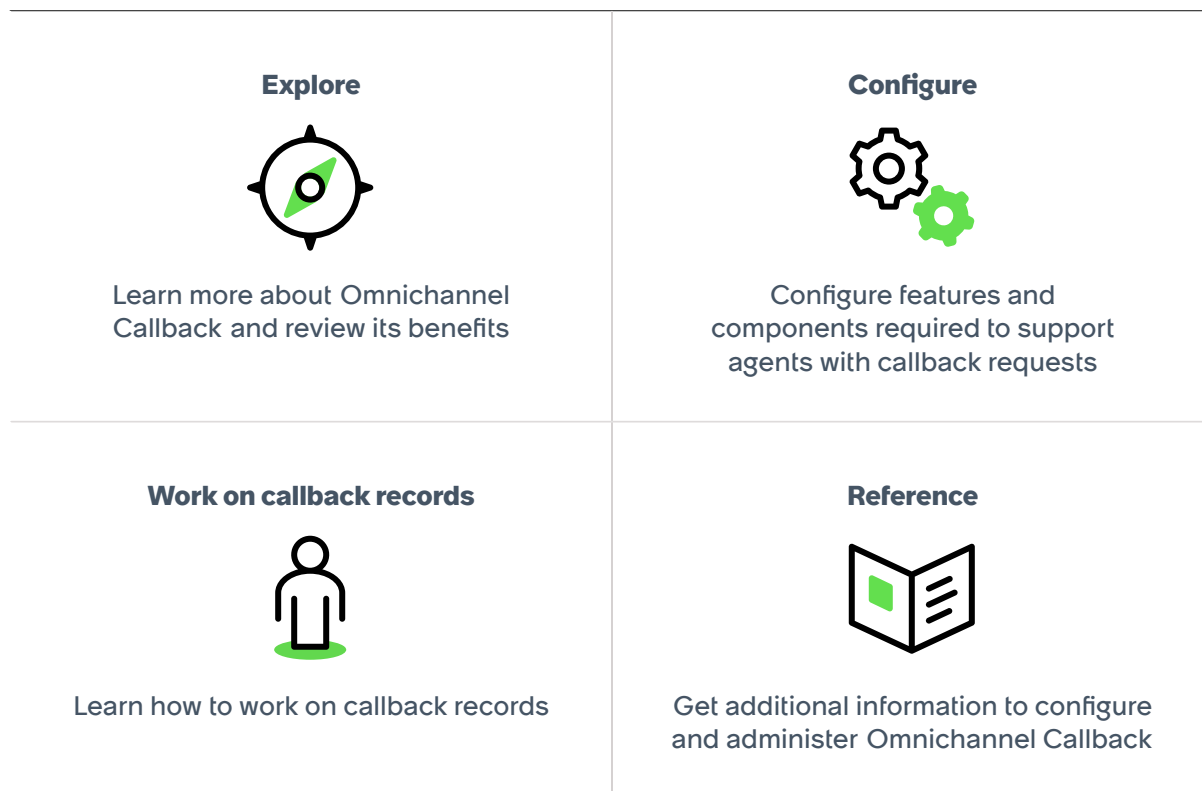
9. Optional: Click the link to download support data.

Omnichannel Callback

ServiceNow® Omnichannel Callback app enables other ServiceNow® apps to display or announce callback options to users. The Omnichannel Callback app is available through the ServiceNow® Store.

Get started with Omnichannel Callback

Select a tile to get started with Omnichannel Callback.



Troubleshoot and get help

- [Search the Known Error Portal for known error articles](#) 
- [Contact Customer Service and Support](#) 

Exploring Omnichannel Callback

Learn more about Omnichannel Callback and review its benefits.

Omnichannel Callback overview

The Omnichannel Callback app is a ServiceNow AI Platform[®] capability that offers enhanced user experience by providing an option for agents to call users back rather than waiting in the queue for an available agent. For example, you can use the callback functionality to call users back when the agent wait time is long or when there are no agents available.

Callbacks are a well-received addition to any interactive voice response (IVR). You can invoke callbacks on any supported conversational integration channels.

Omnichannel Callback workflow

In this workflow:

1. Users seeking help from a live agent request for a callback when the live agent is either unavailable or the wait time to get to a live agent is long.
2. Omnichannel Callback determines the availability of agents via ServiceNow[®] Advanced Work Assignment (AWA) and places a callback work item for an available agent.
3. AWA picks up the callback task and places it in the callback queue.
4. The agent receives a **Callback** accept card. If the agent decides to close the interaction or re-queue the callback manually, the agent can do so from the workspace.

Omnichannel Callback benefits

Benefit	Feature	Users
Omnichannel Callback creates callback work items for available agents via AWA. Callback requests are placed in the AWA queue immediately upon submission. If the customer does not answer the initial callback, the agent has the option to manually initiate a retry. In such cases, the callback is re-queued according to the retry mechanism defined in the system.	ASAP Callback	Agents
Users requesting a callback can schedule by date and time based on the available time slots. Omnichannel Callback provides the framework for the scheduled callback. Consumer use cases for scheduled callback are currently supported via Customer Service Management (CSM) application only.	Scheduled callback	Customers
The user can request for a video callback at an appointed time. Currently, video callback is supported only via the Zoom service and requires the Zoom extension for Omnichannel Callback Store app. For more information, see Zoom extension for Omnichannel Callback .	Video callback	Customers

Omnichannel Callback APIs

Omnichannel Callback APIs help you create and manage the callback requests. By using the Omnichannel Callback APIs, you can:

- Store the callback metadata passed by the supported third-party chat applications that provide agents with contextual information.
- Route the callback requests received on the supported third-party chat applications to the ServiceNow AI Platform[®], allowing agents to handle them on a single interface.
- Reduce the wait time for the caller to get the callback that improves your customer experience.

Configuring Omnichannel Callback

Configure the Omnichannel Callback features and components that you need to support agents with callback requests.

Configuration overview

Admins can enable the callback feature and configure one or more callback channels by navigating to **Conversational Interfaces > Settings > General > Omnichannel Callback** and clicking **Manage**. The callback behavior per channel can be set by configuring the following callback parameters: Topic, Maximum callback attempts, and the callback timeout threshold. For more information on how to configure the callback behavior, see [Configure callback behavior for a channel](#).

The Omnichannel Callback app includes the default Callback-Phone and Callback-General topics. The Callback-Phone and Callback-General topics are triggered when agents are not available or the agent wait time is longer than the callback threshold time, which is the average of the most recent AWA queue time. You can customize the default callback topics as per your requirements. For more information on how to customize the callback topics, see [Customize a default callback topic](#).

1. [Get started with Omnichannel Callback](#)

Review this information before you start setting up Omnichannel Callback.

2. [Install Omnichannel Callback](#)

You can install Omnichannel Callback if you have the admin role.

3. [Configure callback behavior for a channel](#)

Configure callback behavior for a channel using the callback parameters.

4. [Customize a default callback topic](#)

Customize the default callback topic as per your requirements.

Get started with Omnichannel Callback

Review the following information before you start setting up Omnichannel Callback.

Checklist

Setup task	Description
Verify that the ServiceNow core applications or plugins that are required to support	Verify that the following applications or plugins are installed and activated from the ServiceNow Store. When you activate

Checklist (continued)

Setup task	Description
Omnichannel Callback are installed and activated.	the first plugin, its dependant plugins are activated automatically. If not installed, install and activate one application at a time in the following order to ensure a smooth implementation. • com.glide.cs • com.glide.interaction.awa • com.glide.cs.custom.adapter • com.snc.appointment_booking For more information, see Install Omnichannel Callback.
Verify that you have assigned the required ServiceNow AI Platform roles.	The following roles are used across the Omnichannel Callback features: • The administrator (admin) installs the application from the ServiceNow Store and assigns the roles. • sn_omni_callback.callback_api

Install Omnichannel Callback

You can install the Omnichannel Callback application (sn_omni_callback) if you have the admin role. The application includes demo data and installs related ServiceNow® Store applications and plugins if they are not already installed.

Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#) .
- Review the [Omnichannel Callback](#)  application listing in the ServiceNow Store for information on dependencies, licensing or subscription requirements, and release compatibility.

Role required: admin

About this task

The following items are installed with Omnichannel Callback:

- Roles
- Scheduled jobs
- Tables

For more information, see [Components installed with Omnichannel Callback](#).

Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.
2. Find the Omnichannel Callback application (sn_omni_callback) using the filter criteria and search bar.

You can search for the application by its name or ID. If you cannot find the application, you might have to request it from the ServiceNow Store.

In the list next to the **Install** button, the versions that are available to you are displayed.

3. Select a version from the list and select **Install**.

In the Review Installation Details dialog box, any dependencies installed with your application are listed.

4. **Optional:** If demo data is available and you want to install it, select the **Load demo data** check box.
Demo data are the sample records that describe application features for common use cases. Load the demo data when you first install the application on a development or test instance.
5. If you're prompted, follow the links to the ServiceNow Store to get any additional entitlements for dependencies.
6. Select **Install**.

Configure callback behavior for a channel

Configure callback behavior for a channel using the callback parameters. You can create a separate callback configuration for each supported conversational integration channel.

Before you begin

Role required: admin

Procedure

1. Navigate to **All > Conversational Interfaces > Settings > General**.
2. On the Callback configuration form, swipe the **Activate** toggle switch to the right, enter the wait time threshold, and select **Save**.

Note: Ensure that the application scope of your ServiceNow instance is set to global before editing the Callback configuration form.

3. Select a channel that you want to configure callback for from the Channel drop-down list.
4. Select a callback topic from the Callback Topic drop-down list.
Select **Callback-Phone** for voice channels and **Callback-General** for messaging or chat channels. These default callback topics are triggered when there are no agents available to take the call or when the average wait time in the queue is over the predefined threshold. You can also use a custom callback topic based on your requirements. For more information on how to customize a callback topic, see [Customize a default callback topic](#).
5. Provide the **Max callback attempts**.
After the maximum number of callback attempts is reached, the callback task is closed and no further callback attempts are made.
6. Provide the **Callback timeout (threshold (in hours))**.
When the callback timeout is reached, no further callback attempts are made and the callback task is closed.

Customize a default callback topic

Customize the default callback topics as per your requirements.

Before you begin

Role required: admin

About this task

You can customize one of the following default callback topics: Callback-Phone for voice channels and Callback-General for messaging or chat channels. The following procedure explains how to customize the Callback-Phone topic.

Procedure

1. Duplicate the Callback-Phone topic in the Asset library in Assistant Designer.
For more information on how to duplicate a topic, see [Duplicate a Virtual Agent topic](#).
2. In the Advanced properties section of the **Properties** tab, select the voice channel that you want to associate with the custom callback topic.
3. On the **Flow** tab, modify the default callback flow and set the following properties in the Script action utility, if required.
 - a. Set Global Callback Executed (vaVars.global_callback_executed) to **true**.
 - b. Set No Agent Available (vaVars.global_show_no_agent_available_msg) to **false**.
 - c. Set the following properties in the Create Callback Task node.
 - Set Global Callback Executed (vaVars.global_callback_executed) to **true**.
 - Set No Agent Available (vaVars.global_show_no_agent_available_msg) to **false**.
 - Callback Number (callback_number): Required field to be populated with the number on which the user requested a callback. This number may be the number that the user is calling from or the dialed number.
 - Short description (short_description): User issue description.
 - Initial Interaction (initial_interaction): Interaction detail from which the callback task has been initiated.
 - Max Retry Attempts (max_retry_Attempts): Maximum retry attempts after which the callback task is closed.
 - Expire Time (expire_time): Callback timeout after which the callback task is closed.
 - Messaging Channel (messaging_channel): Messaging channels configured for use. If not provided, the default callback channel is used.
 - Scheduled (scheduled): Set to **true** to make the callback task eligible for auto callback.
4. Save and publish your custom callback topic by clicking **Save** and **Publish**.
5. Map the custom callback topic to the voice service provider.
 - a. Fetch the sys_id of your custom callback topic from the Topics [sys_cs_topic] table.
 - b. Select your voice service provider from the Provider Channel Identities [sys_cs_provider_application] table.
 - c. On the **Provider Identity Properties** tab, update the value of the **callback_topic_id** property with the sys_id of your custom callback topic and click **Update**.

Working on callback records

Use Workspace to work on callback records originating from Omnichannel Callback.

Agents can work on the records for the following callback scenarios.

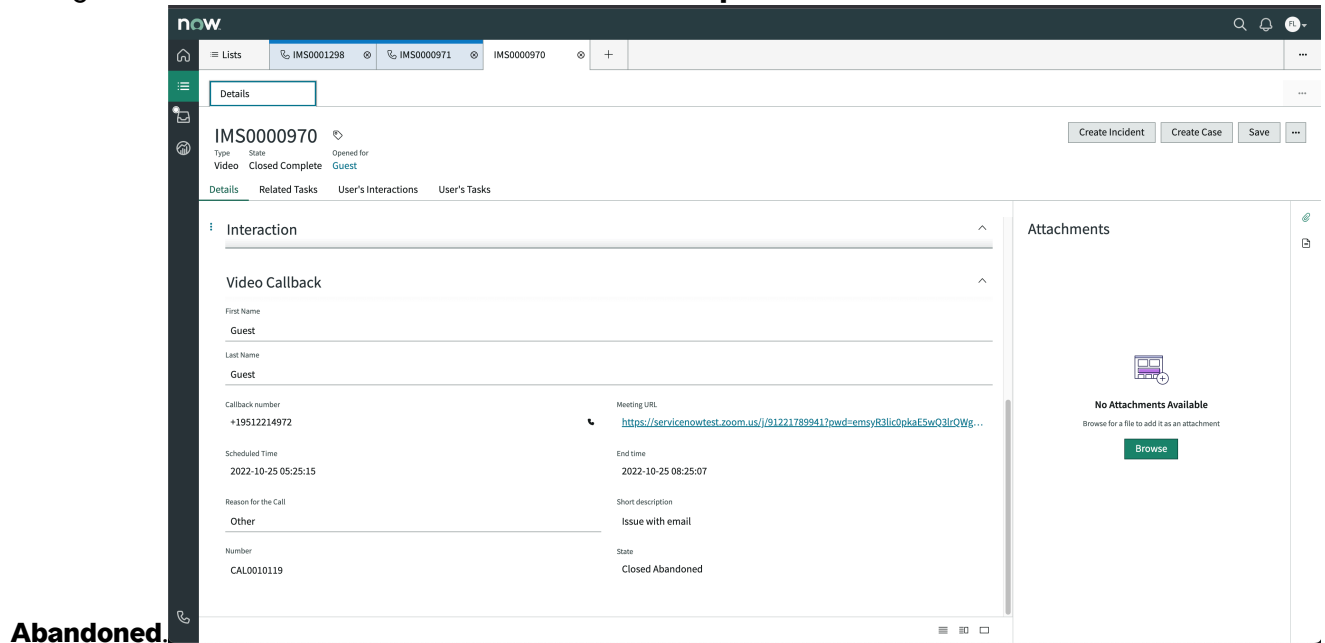
- **ASAP callback:** When a user requests ASAP callback, the callback request is added to the AWA queue. AWA routes the callback work item to an available agent based on the predefined callback attempt interval. The agent then receives a **Callback** work item. When the agent accepts the callback work item, auto-dial initiates a call to the user. Based on the resolution, the agent can either close the interaction or re-queue the callback.
- **Scheduled voice callback:** When a user requests a voice callback at their preferred date and time, an interaction record with callback details is created a minute before the scheduled call time and an agent receives the callback work item. When the agent accepts the callback work item, auto-dial initiates a call to the user. Based on the outcome, the agent can either close the interaction as **Closed Complete** or **Closed**

The screenshot displays the ServiceNow interface for a callback record. The top navigation bar shows the 'now' logo and search, filter, and user icons. The main header includes 'Lists', 'IMS0001298', and a '+' icon. The left sidebar contains navigation icons for 'Conversation', 'Details', and 'Attachments'. The main content area is divided into sections: 'Details' (showing record type, state, and owner), 'Interaction' (showing callback details), and 'Attachments' (showing no attachments available). The 'Details' section includes buttons for 'Create Incident', 'Create Case', 'Save', and a menu icon. The 'Interaction' section shows fields for First Name, Last Name, Callback number, Scheduled Time, End time, Reason for the Call, Short description, Number, and State. The 'Attachments' section shows a 'No Attachments Available' message and a 'Browse' button.

Abandoned.

- **Scheduled video callback:** When a user requests a video callback at their preferred date and time, an interaction record with callback details is created

which includes a URL to initiate the video call. Based on the outcome, the agent can either close the interaction as **Closed Complete** or **Closed**



Abandoned.

Omnichannel Callback reference

Reference topics provide additional information that you can use to configure and administer Omnichannel Callback.

Components installed with Omnichannel Callback

Several types of components are installed with activation of the Omnichannel Callback plugin, including user roles, scheduled jobs, and tables.

Scheduled jobs installed

Scheduled job	Description
Callback Scheduler - Scheduled	Executes the callback task of type Scheduled a minute before the scheduled start time.
Callback Scheduler - ASAP	Executes the callback task of type ASAP after creation of the callback task or at the next retry attempt.
Omnichannel Callback Close expired tasks	Marks the callback tasks as Closed Abandoned in the following scenarios. - ASAP callback: If the current time is past the expiry time or the number of callback attempts exceeds the maximum retry attempts. - Scheduled callback: When the callback task is not closed one hour after the scheduled end time.

Tables installed

Table	Description
Callback Properties [sn_omni_callback_st_callback_properties]	Lists the callback properties that determine the callback behavior.
Callback [sys_cs_callback]	Lists the callback tasks of type Scheduled and ASAP.

Roles installed

To learn more about managing subscriptions, see [Managing per-user subscriptions in Subscription Management](#) and contact your account representative.

Callback API role [sn_omni_callback.callback_api]

Read/write from the [sys_cs_callback] table.

Contains Roles

List of roles contained within the role.

None.

Groups

List of groups this role is assigned to by default.

None.

Special considerations

None.

Domain separation and Omnichannel Callback

Domain separation is supported for Omnichannel Callback. Domain separation enables you to separate data, processes, and administrative tasks into logical groupings called domains. You can control several aspects of this separation, including which users can see and access data.

Support level: Standard

- Includes all aspects of **Basic** level support.
- Application properties are domain-aware as needed.
- Business logic: The service provider (SP) creates or modifies processes per customer. The use cases reflect proper use of the application by multiple SP customers in a single instance.
- The instance owner must configure the minimum viable product (MVP) business logic and data parameters per tenant as expected for the specific application.

Sample use case: An admin must be able to make comments required when a record closes for one tenant, but not for another.

For more information on support levels, see [Application support for domain separation](#) .

Overview

Domain separation enables you to partition your organization's data and administrative control into separate domains. This lets you isolate data and control access to it, which is particularly important in environments where multiple tenants share a common platform.

How domain separation works in Omnichannel Callback

Domain separation in Omnichannel Callback works by routing callback requests to domain-specific available agents.

When using domain separation for Omnichannel Callback, keep the following points in mind.

- Domain separation applies to both the agent and the customer requesting for a callback. This means that agents will only be able to access interactions records that are created under the domain of the user requesting the callback.
- The agent should be in the same domain as the user to receive a callback request in the workspace.
- No configuration is required for domain separation for Omnichannel Callback.

Domain separated tables

The sys_cs_callback table is domain separated.

Use cases

When domain separation is used, a callback request from guest users is routed to the agent with the same domain as the guest user. For custom chat channels, the domain of the provider application is used as a reference to route the callback to the domain-specific agent.

Related topics

[Domain separation for service providers](#) 

Proactive Triggers

Proactive Triggers supports end users by providing helpful platform actions, using real-time data. Admin users can customize rules and actions to present rich text pop-up messages to specific users.

For an introduction to Proactive Triggers and to get familiar with the product, watch this video.

Request apps on the Store

Visit the [ServiceNow Store](#)  to view all the available apps, and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#) .

Get started

Explore  Learn about Proactive Triggers concepts and process flows.	Install  Activate the Proactive Triggers feature.
Configure  Manage and set up rules and actions for Proactive Triggers to determine when the triggered messages display to end users on the ServiceNow® portal.	Reference  Get component details for Proactive Triggers.

Exploring Proactive Triggers

Proactive Triggers is a ServiceNow® Store application that is available to all Virtual Agent chat widget and Agent Chat customers by default. Proactive Triggers can increase adoption of Virtual Agent by proactively sending context-specific messages to end users.

Proactive Triggers overview

The Proactive Triggers rich text pop-up messages provide users with actions according to real-time Proactive Triggers data. When end users engage with the Proactive Triggers message, the Virtual Agent opens. If there's a Virtual Agent topic, associated with the action, the topic runs. If buttons are presented to end users (a maximum of three), they can select the most relevant button to run the associated Virtual Agent topic. Proactive Triggers can be used with LLM topics if Now Assist in Virtual Agent is set up. Proactive Triggers can also be used with Agent Chat to connect customers to a live agent in configurations without Virtual Agent. For more information about the Proactive Triggers process, see [How Proactive Triggers work](#).

Proactive Triggers admins use Proactive Triggers rules to define when, where, and how to engage with customers. Proactive Triggers actions define what the rule does, using several key fields. Admins customize these rules and actions based on when and how their customers are most likely in need of help. For example, customers may need help when ordering equipment, opening an incident/case, or viewing information in a Knowledge Base article. Proactive Triggers rules can be applied to any defined URL, including any portal URL, catalog item, or external site. Proactive Triggers rules can be applied to the Proactive Triggers API after the **Proactive Trigger on Search** business rule and related trigger type, rule, and action are enabled. For additional information and an example of the Proactive Triggers API script, see [ProactiveTriggerAPI - Scoped](#) .

Proactive Triggers examples

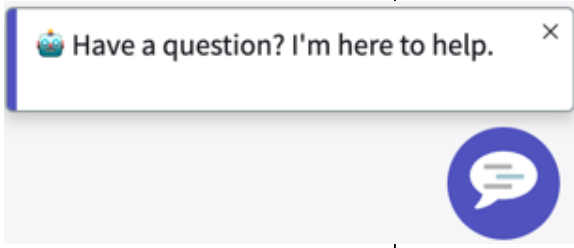
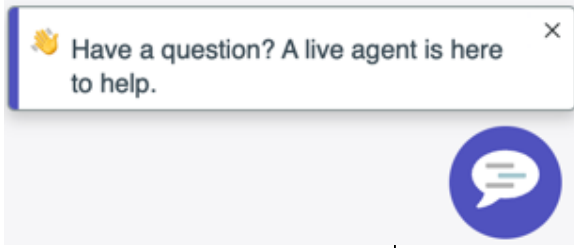
The Proactive Triggers feature uses rules and related actions based on those rules to present messages to end users. These rules and actions are context-specific and are based on real-time data gathered as end users navigate across portal pages or through the Proactive Triggers API call.

By default, the Proactive Triggers feature includes these sample rules: Virtual Agent greeting and Chat welcome message when a live agent is available.

See the following table for information about action type examples. The images in the Example column are all of standard chat, but this feature works the same in enhanced chat.

Note: Depending on the plugins installed, you may only see one of these rules or you may see other rules as well.

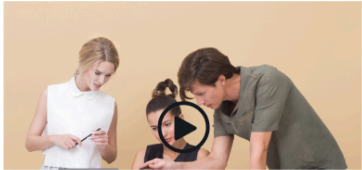
Default sample rules

Default sample rules	Description	Example
Virtual Agent greeting	This rule gives a sample welcome message to end users on a portal page. This message introduces the Virtual Agent to both internal and external end users.	
Chat welcome message when a live agent is available	This rule gives a sample welcome message to end users when the chat widget is configured for Live Agent only. This message introduces Agent Chat to end users. Note: This message appears only if you have the Advanced Work Assignment (AWA) plugin (agent chat) installed.	

After a rule is created, the admin creates one or more actions that are triggered by the rule. Actions define the messages that end users see based on the rule and the next steps available for the end users to take. These messages are displayed differently depending on the selected action type.

See the following table for information about action type examples. The images in the Example column are all of standard chat, but this feature works the same in enhanced chat.

Action types

Action type	Description	Example
Message only	End users see an HTML pop-up message.	× Hello! How are you doing today? I can help with your computer issues.  See more 
Message that launches a virtual agent topic	End users see an HTML pop-up message that directs them to an available Virtual Agent topic.	× Hello! Looks like you may be experiencing some VPN issues. I can help automatically fix that VPN connection issue. 
Message that launches a selection of virtual agent topics	End users see an HTML pop-up message with up to three suggested action buttons that direct them to a relevant Virtual Agent topic.	× Hello! How are you doing today? I hope you are doing well. I can help with your computer issues. We can ch... See more Suggested for you Laptop repair Request a new computer 

You can customize the appearance of the Proactive Triggers message. For example, you can change the side bar color of the message. For more information about customization, see [Configure Agent Chat in a portal](#).

How Proactive Triggers work

Explore example use cases and how information flows through the Proactive Triggers process.

Proactive Triggers use cases

Proactive Triggers are useful in various scenarios. Explore the following example use cases to determine how to use Proactive Triggers effectively for your organization.

- An admin creates a Proactive Triggers rule that runs when a user views a Knowledge article containing the keyword “VPN” (or any other keyword that has a matching Virtual Agent topic). The admin configures the rule to run the VPN Connectivity Virtual Agent conversation, which proactively helps the user resolve the VPN issues.
- An admin creates a Proactive Triggers rule that runs when a user views any catalog item with a short description that includes a specific keyword, such as “laptop.” The admin configures the rule to connect the user to a live agent, using the Live Agent Support topic, which proactively helps the user get assistance in ordering a laptop.

You can also use Proactive Triggers to engage with customers in more complex scenarios. Admin users can create multiple rules using different delay times and different user criteria to create a customized user experience. For more information about configuring more complex scenarios, see [Multiple Proactive Triggers rules and actions](#).

Proactive Triggers process

1. Whenever an end user navigates to a Proactive Triggers enabled page, Proactive Triggers reads the page URL or called API to determine if any Proactive Triggers rules should run.
2. During this analysis, Proactive Triggers determines the Trigger Type source.

Web browsing (client side)	Trigger type
Knowledge Base pages	Knowledge
Service Catalog pages	Catalog Item
Portal home pages	Portal Home
All other portal pages	URL

System API (server side)	Trigger type
Search event on portal pages	Search Event

3. Next, Proactive Triggers evaluates all the Proactive Triggers rules for that Trigger Type one by one until a matching rule is found.

Note: Rules are created with the required fields **Delay Time** and **Order**. During the rule matching process, rules are analyzed in ascending Order, according to the order number assigned. If the Delay Time is reached before the order number, the Delay Time takes precedent.

4. After a Proactive rule has been matched, the rule's actions are evaluated one by one. This evaluation proceeds in ascending order, according to the **Order** field in the associated Proactive actions. As part of this process, the **Applies To** field is compared with the user visiting the page to determine if the action applies to this user.
5. After Proactive Triggers identifies at least one rule and action that apply to the visiting user and the Delay Time has been met, a pop-up message appears directly on the web page. The contents of this message are configured by the admin for the matched action.
6. If the user selects the pop-up message, the chat widget opens. If the matched action is of the type *Virtual Agent Topic*, the chat widget also runs the topic configured in that action.

Installing Proactive Triggers

Enable Proactive Triggers so that you can begin working with the feature.

Before you begin

The Proactive Triggers feature [sn_pt] is available as an app and must be installed from the [ServiceNow Store](#). This feature is only available after you've installed and updated the Omni-Experience Standard Feature Set to the latest version through the [ServiceNow Store](#).

Role required: admin

About this task

The following steps provide a high-level overview of how to enable Proactive Triggers.

Procedure

1. Navigate to **All > Conversational Interfaces > Settings > General**.
2. Under Proactive triggers, select the [Enable Proactive Triggers](#) field toggle switch to enable the feature.
3. Set the com.glide.cs.advanced-chat-popover system property to **true** in the System Properties [sys_properties] table.

This system property is only applicable to the requester persona.

Enable Proactive Triggers

Use Proactive Triggers to create and view context-specific messages and use relevant actions on the chat widget.

Before you begin

- Note:** The Proactive Triggers feature [sn_pt] is available as an app and must be installed from the ServiceNow Store. This feature is only available after you've installed and updated the Omni-Experience Standard Feature Set to the latest version through the ServiceNow Store. Subsequent updates are also available there. Visit the ServiceNow Store website to view all the available apps and for information about submitting requests to the store. For cumulative release notes information for all released apps, see the [ServiceNow Store version history release notes](#).

For conceptual information about Proactive Triggers, see [Exploring Proactive Triggers](#).

The Proactive Triggers feature can be used with Domain Separation. For more information about Domain Separation, see [Domain separation explained](#).

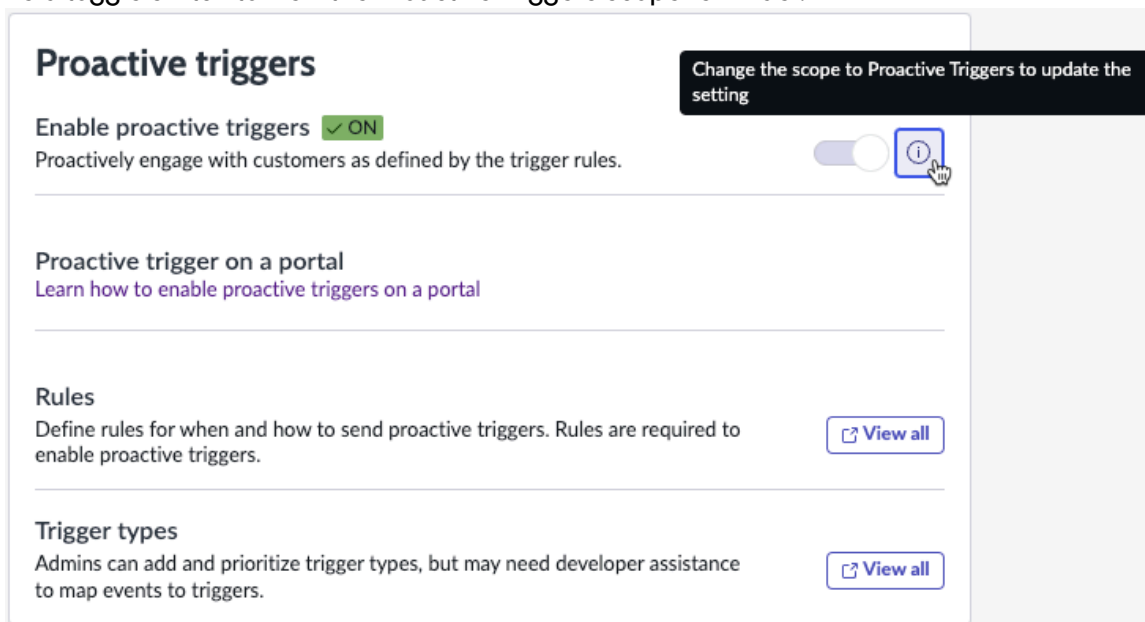
Role required: admin

About this task

An admin first enables and then creates rules and actions as separate tasks.

Procedure

1. In the navigation filter, enter `sys_properties.list`.
The entire list of properties in the System Properties [sys_properties] table appears.
2. Search for the `com.glide.cs.advanced-chat-popover` system property, and then change the value from **false** (default) to **true**.
This system property enables the smart chat component on the Service Portal. This system property is only applicable to the requester persona.
3. Navigate to **Conversational Interfaces > Settings**.
You must be in the Proactive Triggers scope to enable this feature.
4. Under Proactive triggers, select the more info icon () next to the **Enable proactive triggers** field toggle switch to view the Proactive Triggers scope reminder.



Proactive triggers

Enable proactive triggers ON

Proactively engage with customers as defined by the trigger rules.

Change the scope to Proactive Triggers to update the setting

Proactive trigger on a portal
[Learn how to enable proactive triggers on a portal](#)

Rules
 Define rules for when and how to send proactive triggers. Rules are required to enable proactive triggers. [View all](#)

Trigger types
 Admins can add and prioritize trigger types, but may need developer assistance to map events to triggers. [View all](#)

For more information about scopes and how to change them, see [Application scopes](#).

5. Under **Proactive triggers**, select the **Enable proactive triggers** field toggle switch to enable the feature.

By default, the Proactive Triggers feature is inactive.

6. Next to **Rules**, select **View all**.

The default sample rules included with Proactive Triggers appear.

	Name	Type	Trigger type	Delay time	Frequency	Order	Active
☐	Search - No Search Result	Virtual Agent	Search Event	None	Every time	10	false
☐	Chat welcome message when agent is avail...	Live Agent Only	Portal Home	20 seconds	Once Per Visit	10	false
☐	Virtual agent greeting	Virtual Agent	Portal Home	20 seconds	Once Per Visit	10	false

7. Navigate back to the **Conversational Interfaces > Settings** page and next to **Trigger types**, select **View all**.

The default trigger types appear. All trigger types default to **Active is true** except the Search Event trigger type. To turn on the Search Event trigger type, proceed to the next

Proactive Trigger Types

for text

Search

Actions on selected rows...

New

All

☐		Name	ID	Source	Description	Trigger table	Active
		Search Event	sn_pt.search_event	System API	Search Events will use this trigger type...	Search Event [sys_search_event]	false
		Knowledge	sn_pt.knowledge	Web browsing	Knowledge trigger type. URL with a knowl...	Knowledge [kb_knowledge]	true
		Portal Home	sn_pt.portal_home	Web browsing	URL for portal home will use this trigge...	Service Portal [sp_portal]	true
		URL	sn_pt.url	Web browsing	The default trigger type. This trigger t...	Proactive URL Trigger [sys_cs_ptrigger_url_trigger]	true
		Catalog Item	sn_pt.catalog_item	Web browsing	Catalog item trigger type. URL with a ca...	Catalog Item [sc_cat_item]	true

step.

8. Optional: Turn on the Search Event trigger.

(Optional) The Search Event triggers a pop-up message on the Service Portal Default Search Profile whenever a search result yields no result. The Search Event trigger is an inactive default trigger type that uses the System API source rather than the web browsing source. Because this trigger type defaults to inactive, an admin must turn on the related business rule, trigger type, Proactive Triggers rule, and action prior to using this trigger.

a. Navigate to **System Definition > Business rules**.

b. Search for **Proactive Trigger on Search** in the **Business Rules** field, and then select the business rule.

c. Select the **Active** option to turn on the business rule.

d. **Optional:** Adjust any settings, as needed.

Note: Your organization may want to update the **Filter Conditions** on the **When to Run** related tab. For example, if your organization doesn't use the Service Portal, update the default values in the Filter Conditions section to reflect your organization's preferred portal or site. Your organization may also want to adjust the Proactive Triggers API script in the **Advanced** related tab. For additional information on the Proactive Triggers API script, see [ProactiveTriggerAPI - Scoped](#).

e. Select **Update**.

f. Navigate to **Conversational Interfaces > Settings** and under **Proactive Triggers**, select **View All** next to **Trigger Types**.

g. Select **Search Event**.

h. In the Proactive Trigger Type form for Search Event, select the **Active** option to turn on the trigger type and adjust any settings, as needed.

i. Select **Update**.

j. Select **Search - No Search Result** from the Proactive Rules related list.

k. In the Proactive Rule form for Search - No Search Result, select the **Active** option to turn on the rule and adjust any settings, as needed.

l. Select **Update**.

m. Select **No Search Result Message** from the Proactive Actions related list.

n. In the Proactive Action form for No Search Result Message, select the **Active** option to turn on the action and adjust any settings, as needed.

o. Select **Submit**.

The Search Event trigger type is turned on.

Result

The Proactive Triggers feature is enabled and you know where to create rules, actions, and custom trigger types.

What to do next

Create rules and actions for Proactive Triggers. For more information, see [Create rules and actions for Proactive Triggers](#).

Create custom trigger types. For more information, see [Create custom trigger types](#).

Related topics

[Enable message preview on the chat widget](#)

Application scopes

To upload and distribute custom applications on the ServiceNow Store, you need to create a private scope for your applications.

All applications have an application scope that determines which of its resources are available to other parts of the system. Application scoping ensures that one application does not impact another application. You specify what parts of an application other applications can access by setting application access controls.

For example, if you create a conference room booking application in its own application scope, by default, the application can access and change its own tables and business logic, but other applications such as Incident Management cannot make changes to it without explicit permission.

An application scope ensures that:

- The conference room booking application does not interrupt core business services.
- Other applications do not interfere with its normal functioning.

Application scope is available for new and upgraded instances starting with the Fuji release.

Configuring Proactive Triggers

Plan, configure, and review your Proactive Triggers.

Before you begin

[Activate](#) the Proactive Triggers feature.

Note: For new customers onboarding from Vancouver onward, the chat widget is only accessible to authenticated users by default. To allow unauthenticated users to access the chat widget, you must enable the \$sn-vb-web-client-app and sn_vb_web_client_app_embed pages for public access. For more information, see [Make UI pages public or private](#).

Role required: admin

About this task

The following steps provide a high-level overview of the Proactive Triggers configuration process.

Procedure

1. Navigate to **Conversational Interfaces > Settings > General**, and then select the **View All** button next to Proactive Triggers's **Rules**.
2. Select **New** to [create rules and define actions](#) that are triggered by those rules.
3. **Optional:** Navigate to **Conversational Interfaces > Settings > General**, and then select the **View All** button next to Proactive Triggers's **Trigger types**.
4. **Optional:** Select **New** to [create custom trigger types](#).
5. **Optional:** Create [multiple rules](#) related to the same trigger type, if needed.

What to do next

[Review execution logging tables and explore common issues and their resolutions](#) to ensure that your Proactive Triggers feature is working as expected.

Create rules and actions for Proactive Triggers

Create rules and related actions for Proactive Triggers. These rules and their related actions determine the messages that end users see on the ServiceNow portal.

Before you begin

[Enable the Proactive Triggers feature](#), and review the list of default rules included with Proactive Triggers.

Role required: sn_pt.proactive_admin or admin

About this task

Select a default rule in the Proactive Triggers rules list to see how the default rule is defined. Admins or proactive admins can use these rules, change them, or create rules. After a rule is created, the admin creates one or more actions that are triggered by the rule. Actions define the messages that end users see based on the rule and the next steps available for the end users to take. For examples of default rules and action types, see [Exploring Proactive Triggers](#).

Procedure

1. Navigate to **Conversational Interfaces > Settings > General**, and then select **View All** next to Proactive Triggers **Rules**.
The list of default rules included with Proactive Triggers is displayed.
2. Select **New** to display the Proactive Rule form.
3. On the Proactive Rule form, fill in the fields.
For a description of the field values, see [Proactive Rule form](#).
4. Select **Submit**.
The rule is created and is displayed in the list of available rules.
5. Select the newly created rule, and then go to the Proactive Actions related list.

6. Select **New** and, when prompted, choose the action type for the rule.

Action types

Action type	Description
Message only	End users see an HTML pop-up message.
Message that launches a virtual agent topic	End users see an HTML pop-up message that directs them to an available Virtual Agent topic.
Message that launches a selection of virtual agent topics	End users see an HTML pop-up message with up to three suggested action buttons that direct them to a relevant Virtual Agent topic.

Note: If you've created [Live Agent rules](#), you can only select Message action types for those rules.

7. On the Proactive Action form, fill in the fields.
For a description of the field values, see [Proactive Action form](#).
8. **Optional:** If you select the **Message that launches a selection of virtual agent topics** action type, work with the following default list columns on the Proactive Action Virtual Agent Topic Controls related list to determine the button display order:

Proactive Action Virtual Agent Topic Controls related list

Column	Description
Label	The button label that appears to end users. Double-click (or use the keyboard shortcut) the value to enter a button label up to a maximum of 40 characters. Leave this value empty if you want to have the label auto-populate with the topic title.
Topic	The Virtual Agent topic that end users interact with after they've selected the button. Double-click (or use the keyboard shortcut) the value to enter or search for a Virtual Agent topic.
Active	The active status of the rule action. A rule needs at least one active action for the rule to be triggered. Double-click (or use the keyboard shortcut) to select either true or false . Leave this value empty to auto-populate this value to true .
Order	The button order that is displayed on end users' screens. Double-click (or use the keyboard shortcut) to enter the button preference order. Leave this value empty if you want to auto-populate with the next available order number that increments by one.

Note: Up to three buttons can appear in the proactive message.

9. Select **Submit**.

The Proactive action is created.

You can create additional rules and actions as needed. For information about using multiple rules and actions, see [Multiple Proactive Triggers rules and actions](#).

You can localize the language for end users by making entries to the Translated Text table. For more information about making entries to the Translated Text table, see [Translating text fields](#).

Result

The triggering rules and actions are ready for you to validate and test.

Create custom trigger types

Create your own trigger type during the rule creation process that is specific to your organization for improved Proactive Triggers usage.

Before you begin

Role required: sn_pt.proactive_admin or admin

About this task

For a more advanced configuration, create your own custom trigger types. You can create custom trigger types through two different paths.

1. Through the **View All** button next to the **Trigger types** field in **Conversational Interfaces > Settings > General > Proactive triggers**.
2. Through the rule creation process.

Procedure

1. Navigate to **Conversational Interfaces > Settings > General**, and then select **View All** next to the **Rules** field in Proactive Triggers.
2. Select **New** to display the Proactive Rule form.
3. Next to the **Trigger type** field, select the create new trigger type icon (.
4. On the form, fill in the fields.

Proactive Triggers Create Trigger Type form

Field	Description
Name	Name of the custom trigger type.
ID	System-generated, read-only ID required for API calls. This ID is only displayed after you've submitted the new trigger type and you view the trigger record.
Description	Trigger type description.
Order	Trigger run order whenever two rules conflict in the same time frame. The lowest number is evaluated first when multiple triggers are running at the same time.

Field	Description
Active	Option to activate the trigger type so that it's available as a trigger type when creating a rule.
Trigger table	The table referenced in the rule condition builder. Only one trigger type can exist for the same referenced table. For example, if you try to create a trigger type referencing the Knowledge [kb_knowledge] table with a Web browsing source, an error appears when saving the trigger type. This error appears because the default Knowledge trigger already uses this same table and source.
Source	The trigger initiation is either System API or Web browsing. System API: Calls the Proactive Triggers API. For example, a business rule on the trigger table calls the API that initiates the trigger. Note: Trigger types with the System API source only work for internal ServiceNow sites and not external sites. Web browsing: Calls to a URL. The default active trigger types are associated with the web browsing source.
Applicable portal	The trigger type is only applicable to select pages on a particular portal.

Example of a custom trigger type

Create Trigger Type ×

* Name

Item in cart

ID

Description

Trigger for whenever an item is left in the user's cart.

* Order

100

Active

☒

* Trigger table

Proactive URL Trigger [sys_cs_ptrig...

* Source

Web browsing

Applicable portal

Service Portal

🔍

📄

Submit

📄

5. Select **Submit**.

The new, custom trigger type appears as the **Trigger Type** field value.

What to do next

After creating the custom trigger type, the **Create new trigger type** button updates to the

Preview this record button (📄). Select **Preview this record** to preview the new trigger type that you created and view the system-generated ID. To make edits to this trigger type, select **Open Record** to manage the parameters of the custom trigger type.

Also, you can make edits to this new trigger type by selecting **View All** next to the **Trigger types** field in **Conversational Interfaces > Settings > General > Proactive triggers**.

Multiple Proactive Triggers rules and actions

The Proactive Triggers feature uses rules and actions to trigger context-specific Virtual Agent conversations with end users on the web client.

An admin enables the [Proactive Triggers](#) feature.

An admin then creates rules and defines actions that are triggered by those rules. Admins can create multiple rules and actions. They also specify the end user that the rules and actions apply to.

Multiple rules can be defined with the same trigger type references (for example, catalog item, knowledge, portal home, URL) as long as the **Order** and **Delay time** settings are different. Multiple rules defined on the same trigger type references let you layer messages based on how long the end user is on the page.

A rule can include more than one action, but ensure that you apply the action to different users in the **Applies to** fields.

If you have errors when you create a rule, check the following fields to see if there's a conflict:

Tip: The error message that appears includes a link that you can select to help you identify the conflicts.

Error message example

⊗ The rule with the same trigger type, usage type, delay-time, and order already exists. The conflicting record can be found [here](#).

- **Trigger type**
- **Delay time**
- **Order**

It may be necessary to clear the rule's history for the rule to function as anticipated. When you set your rule's **Frequency** field to **Once per user** and you want to run the rule again, you must clear the history. Clearing the history lets you apply the rule again for that user. To clear the rule's history, select **Clear History** on the rule's Proactive Rule form. After the history clears, an admin must reactivate the rule.

Clear History example

The screenshot shows the 'Proactive Rule' form for a rule named 'Test'. The form includes fields for Name, Description, Order (set to 100), Type (Virtual Agent), and Active status. Below these are sections for 'When to run the trigger' (Frequency: Once Per User, Delay time: None) and 'What initiates the trigger' (Trigger type: Knowledge). The 'Clear History' button is highlighted with a red box in the top right corner of the form.

Related topics

[Manage Proactive Triggers](#)

Manage Proactive Triggers

After admins have installed Proactive Triggers and created related actions and rules, admins can check that the Proactive Triggers feature is performing as expected. For example, admins can view the Proactive Execution History table and the Proactive Daily Report table.

This topic includes information admins can use to see if the Proactive Triggers feature is performing as expected. For example, admins can review the Proactive Triggers history tables to make sure that the rules and actions are working as intended.

This topic also includes common issues that admins may encounter when they're creating rules and actions, along with the proposed solutions.

View Proactive Triggers history and report tables

To see if the Proactive Triggers feature is running as intended, admins can review these two tables' data:

- Proactive Execution History (sys_cs_pttrigger_execution) table
 - Real-time execution history of Proactive Triggers events.

 **Tip:** The Notes column provides a brief rule execution status. For additional information about why Proactive Triggers didn't run successfully, select the execution event from the Created column, and then view the **Details** field under the **Others** section.

- The data from this table is removed every seven days.
- Proactive Daily Report (sys_cs_pttrigger_report_daily) table
 - Aggregated execution data by user, rule, and action per day.
 - Execution data is processed every hour and updates this table.
 - The data from this table is removed every 35 days.

Common issues and resolutions

The following table lists issues that you may encounter when you're creating rules and actions, and the suggested resolutions.

Issue	Resolution
If a trigger type is defined as a URL in the rule, when the page is actually a catalog item, knowledge, or portal, the rule won't run.	Admin must fix the rule to match the page type.
The Frequency is set to run once per user but the rules don't run.	Clear the rule history at the rule level. For details on clearing the rule history, see Multiple Proactive Triggers rules and actions .
Rule doesn't run for some end users, and the action type selected is virtual agent topic .	End users may not have access to the Virtual Agent topic defined on the action. Check the access to the topic in Assistant Designer.
The Proactive Triggers rule doesn't run.	Close any active conversations in the Virtual Agent chat widget.

Proactive Triggers reference

The following section details the installed components for Proactive Triggers.

Components installed with the Proactive Triggers feature

When the Proactive Triggers feature is installed, the feature includes required components, such as specific roles and tables. Admins can review these roles and tables to make sure that the feature has been installed correctly.

Note: The Application Files table lists the components that are installed with this application. For instructions on how to access this table, see [Find components installed with an application](#).

Roles installed with the Proactive Triggers feature

Role title [name]	Description	Contains roles
Proactive_admin [sn_pt.proactive_admin]	Allows users to create proactive rules and have access to related tables and related records	- user_criteria_admin - sp_admin

Tables installed with the Proactive Triggers feature

Table	Description
Proactive Custom Trigger Types [sys_cs_pttrigger_trigger_type_list]	Create and view custom trigger types
Proactive Rules [sys_cs_pttrigger_rule]	Stores all Proactive Triggers rules
Proactive Actions [sys_cs_pttrigger_action]	Parent action table
Proactive Virtual Agent Topic Action [sys_cs_pttrigger_va_topic_action]	Extended table from action for Virtual Agent action
Proactive Execution History [sys_cs_pttrigger_execution]	Execution history for the last 7 days
Proactive Daily Report [sys_cs_pttrigger_report_daily]	Aggregated execution data by user, rule, or action per day

Proactive Triggers roles

Proactive Triggers adds the Proactive Triggers admin role.

To learn more about managing subscriptions, see [Managing per-user subscriptions in Subscription Management](#) and contact your account representative.

Installed roles

Role title [name]	Description	Contains Roles	Groups	Elevated	Considerations
Proactive Triggers admin [sn-pt.proactive_admin]	Users who create proactive rules and have access to related tables and related records.	- User Criteria Administrator [user_criteria_admin] - Service Portal administrator [sp_admin]	None.	No	Users assigned this role can access any related tables and records including potentially protected information, as well as proactive rules.

Note:

Simplify user administration by creating groups that contain all the roles necessary for specific personas rather than to individual users. You can then assign individual users to those groups. When users transition to new roles, you can then re-assign their group memberships, and avoid scenarios where users retain unexpected roles.

For details on the administration of users, groups, and roles, see [User Administration](#) .

Proactive Triggers admin [sn-pt.proactive_admin]

Users who create proactive rules and have access to related tables and related records.

Contains Roles

List of roles contained within the role.

- User Criteria Administrator [user_criteria_admin]
- Service Portal administrator [sp_admin]

Groups

List of groups this role is assigned to by default.

None.

Special considerations

 **Important:** Avoid granting an admin role when more specialized roles are available.

Domain separation and Proactive Triggers

Domain separation is supported for Proactive Triggers. Domain separation enables you to separate data, processes, and administrative tasks into logical groupings called domains. You can control several aspects of this separation, including which users can see and access data. Domain separation enables you to separate data, processes, and administrative tasks into logical groupings called domains. You can control several aspects of this separation, including which users can see and access data.

Support level: Basic

- Business logic: Ensure that data goes into the proper domain for the application's service provider use cases.
- The application supports domain separation at run time. The domain separation includes separation from the user interface, cache keys, reporting, rollups, and aggregations.
- The owner of the instance must set up the application to function across multiple tenants.

Sample use case: When a service provider (SP) uses chat to respond to a tenant-customer's message, the customer must be able to see the SP's response.

For more information on support levels, see [Application support for domain separation](#) .

Overview

The Proactive Triggers rich text pop-up messages provide users with actions according to real-time Proactive Triggers data. Domain separation is enabled and supported at the basic level.

How domain separation works in Proactive Triggers

Each domain has its own set of rules and trigger types that are evaluated independently of other domains.

Related topics

[Domain separation explained](#) 

[Domain separation for service providers](#) 

Proactive Rule form

When creating a Proactive Triggers rule, the Proactive Rule form includes the following fields.

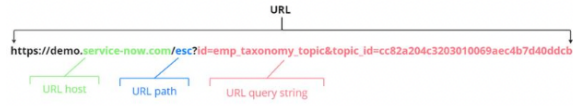
Proactive Rule form

Field	Description
Name	Name of the new rule that you want to create.
Type	Proactive Triggers conversation type for end users. Choices are: • Virtual Agent Rules are triggered when the Virtual Agent is available. • Live Agent only Rules are triggered when the web client is configured to live agent only. You can configure the web client to live agent only from the Service Portal. For instructions, see Configure Agent Chat in a portal .
Description	Rule description.

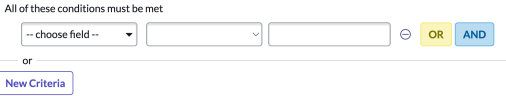
Proactive Rule form (continued)

Field	Description
Order	Order of when a Proactive Triggers rule is to be applied. If there's more than one rule, the rules with lower numbers for a particular delay time are applied first.
Active	Option to activate the rule.
When to run the trigger	
Frequency	How often the rule should be applied. Choices are: • Every time: Every time an end user visits the page. • Once per visit: Every time an end user visits a page per user log in. • Once per user: Applies the rule only the first time that an end user visits the page. With this frequency setting, you must clear the rule's history if you want to run this rule again for a user. For more information about clearing the rule history, see Multiple Proactive Triggers rules and actions.
Delay time	Time to wait before the rule is applied. Choices are: • None • 10 seconds • 20 seconds • 30 seconds • 1 minute • 3 minutes
What initiates the trigger	
Trigger type	System API or web browsing URL for the type of trigger. Select the lookup list icon () to view your default choices. If enabled, your default system API choice is Search Event. This trigger type triggers an action when no search results are found on the Service Portal or Employee Service Center.

Proactive Rule form (continued)

Field	Description
	 Tip: Ensure that your Proactive Trigger business rule (Proactive Trigger on Search), trigger type (Search Event), rule (Search - No Search Result), and action (No Search Result Message) have the Active option turned on so that this rule runs effectively. These parameters default to inactive. Your default web browsing URL choices are: • Catalog item: Triggers an action based on the catalog item's reference fields. • Knowledge: Triggers an action based on the knowledge article's reference fields. • Portal home: Triggers an action based on the portal home page's reference fields. • URL: Triggers an action based on the defined URL. Define the URL components as shown in this example.  The diagram shows a URL: <code>https://demo.servicenow.com/fesc?id=emp_taxonomy_topic&topic_id=cc82a204c3203010069aec4b7d40ddcb</code>. Brackets below the URL identify its parts: <code>https://demo.servicenow.com</code> is the URL host (green bracket), <code>/fesc?</code> is the URL path (blue bracket), and <code>id=emp_taxonomy_topic&topic_id=cc82a204c3203010069aec4b7d40ddcb</code> is the URL query string (red bracket).  Important: ○ If you're using the Virtual Agent web client outside of the ServiceNow instance (for example, as part of a third-party website), use the URL trigger type. Don't use any of the other trigger types. ○ The URL trigger type applies only if no other available trigger types match the URL. If you don't see the trigger type that you need using the lookup list icon (), you can create your own custom trigger type. For more information about custom trigger types, see Create custom trigger types.
Conditions	Conditions that must be met for the trigger type to run as defined by the admin. Conditions vary by trigger type. Specify the Proactive Triggers conditions that you want to use.

Proactive Rule form (continued)

Field	Description
	For more information about using conditions, see Condition builder. Note: Rule conditions are case-sensitive and must match. For example, if you want to use the name of a catalog item, such as the iPhone condition, entering "iphone" doesn't give you the results that you want.  Note: When specifying the conditions that must be met for a trigger type, be careful not to specify conflicting trigger types and conditions. Conflicting URL trigger types and conditions can cause errors. For more information, see Manage Proactive Triggers.
Advanced conditions	Option for using scripts to define the condition. 
Find available agent	Option to check for any available live agents.

Proactive Action form

When creating a Proactive Triggers rule, the Proactive Action form includes the following fields.

Proactive Action form

Field	Description
Name	Name of the action that you want to associate with a rule.
Description	Description of the action to be applied.
Applies to	The set of end users to which this action applies. For example, you can apply an action to any Any Users or Guest Users user criteria. Use the lookup using list icon () to select the user. The Applies to settings must be unique for the actions for each rule. To create a user criteria record, see Create a user criteria record for Service Portal .

Proactive Action form (continued)

Field	Description
	Note: If you don't specify a user, this rule is applied to all users.
Model Type	Topic type, either an LLM or NLU/Keyword value, that is associated with the Proactive Triggers action. This field is only applicable if Now Assist is installed and enabled.
Topic	List of Virtual Agent topics available. The selected topic runs when end users open the Proactive Triggers message. Note: Only the topics that are active and published appear in the list. System topics aren't included in the topics list. (For Message that launches a virtual agent topic actions only.)
Active	Option to activate the action.
Order	Order of when a Proactive Triggers action is to be applied. If there's more than one action, the actions with lower numbers are applied first.
Rule	Rule to which this action applies.
Select variables from	Option for choosing from a list of variables to use in the message. Choices are: • Trigger Type: References the trigger type table selected for the rule. • User: References the user table. Uses the attributes in the user table for the Proactive Triggers message.
Message	Text that the end users see when the action is applied. To enter the text, you can: • Use the tools and options of the HTML editor. Note: Support for using the link button may be included in future releases. • Use variables (Trigger Type or User).
Tagline	Text that the end users see above the buttons that you've created. The default tagline text is Suggested for you.

Proactive Action form (continued)

Field	Description
	(For Message that launches a selection of virtual agent topics actions only.)

Zoom extension for Omnichannel Callback

The ServiceNow® Zoom extension for Omnichannel Callback application enables other ServiceNow® applications to display a Zoom callback option to users. The Zoom extension for Omnichannel Callback application is available through the ServiceNow® Store.

The Zoom extension for Omnichannel Callback app is a ServiceNow AI Platform® capability that enables users to request a callback over Zoom when the agent wait time is long, or agents are unavailable. Agents and users can collaborate over a Zoom meeting at a date and time requested by users.

Features

Zoom extension for Omnichannel Callback offers the following capabilities:

- Allows users to request a video callback from omnichannels such as Virtual Agent, Engagement Messenger, portals, and chats.
- Enables agents and users to collaborate to resolve an issue.
- Enables agents to join a Zoom meeting from an interaction record.
- Imports the Zoom meeting transcript to the interaction record. The inserted transcripts are not sentiment analyzed.
- Imports the Zoom meeting recording URL to the interaction record.
- Displays the names of participants who attended the meeting.
- Marks the interaction Close complete when the following conditions are met:
 - Both the participants joined the meeting.
 - The Zoom meeting has ended.

Install Zoom extension for Omnichannel Callback

You can install the Zoom extension for Omnichannel Callback application (com.sn.zoom.callback) if you have the admin role.

Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#) .
- Review the [Zoom Extension for Omnichannel Callback](#)  application listing in the ServiceNow Store for information on dependencies, licensing or subscription requirements, and release compatibility.

Role required: admin

About this task

The following items are installed with Zoom extension for Omnichannel Callback:

- Script includes
- Business rules

For more information, see [Components installed with Zoom extension for Omnichannel Callback](#).

Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.
2. Find the Zoom extension for Omnichannel Callback application (com.sn.zoom.callback) using the filter criteria and search bar.

You can search for the application by its name or ID. If you cannot find the application, you might have to request it from the ServiceNow Store.

In the list next to the **Install** button, the versions that are available to you are displayed.

3. Select a version from the list and select **Install**.

In the Review Installation Details dialog box, any dependencies installed with your application are listed.

4. If you're prompted, follow the links to the ServiceNow Store to get any additional entitlements for dependencies.
5. **Optional:** If demo data is available and you want to install it, select the **Load demo data** check box.

Demo data are the sample records that describe application features for common use cases. Load the demo data when you first install the application on a development or test instance.

6. Select **Install**.

Components installed with Zoom extension for Omnichannel Callback

Several types of components are installed with the Zoom extension for Omnichannel Callback application.

Script includes

Zoom extension for Omnichannel Callback script includes

Script include	Description
ZoomCallDatabase	Contains database-related functions.
ZoomCallDriver	Implements extension point for sn_omni_callback.VideoCallDriver.
ZoomCallEventHandler	Overrides the functions of ZoomCallEventHandlerSNC.
ZoomCallEventHandlerSNC	Contains utility functions for handling the transcript completed events.
ZoomCallTranscriptProcessor	Contains utility functions to process the Zoom transcript.
ZoomCallUtils	Overrides the functions of ZoomCallUtilsSNC.
ZoomCallUtilsSNC	Contains the utility functions for Zoom callback.

Business rules

Zoom extension for Omnichannel Callback business rules

Close interaction (Zoom Callback)	Notify Conference Call [notify_conference_call]	Closes the interaction after the Zoom meetings ends. Both the agent and the requester must join the call to close the interaction.
Create Notify Conference call record	Callback [sys_cs_callback]	Creates a notify conference call record when the Zoom callback is created.
Recording Completed (Zoom Callback)	Notify Recording [notify_recording]	Stores the recording URL in the interaction when the recording is completed.
Update Zoom Host when agent is assigned	Interaction [interaction]	Makes the agent the host when the interaction is accepted by the agent.

Setting up Zoom extension for Omnichannel Callback

Enable your users to request a callback over Zoom by integrating your Zoom account with the ServiceNow instance. You can also enable the account to authenticate requests from your instance by creating a custom OAuth application in the account.

The configuration process consists of the tasks listed in the following table.

Task	Description
Setting up the Zoom spoke for Zoom extension for Omnichannel Callback	Integrate your organization's Zoom account with your ServiceNow instance using the Zoom spoke to create Zoom meetings.
Setting up Notify Zoom connector for Zoom extension for Omnichannel Callback	Set up the Notify Zoom connector in Zoom to receive the event information from Zoom.
Configure a Zoom webhook for Zoom extension for Omnichannel Callback	Configure a Zoom webhook in ServiceNow to notify the Zoom Extension app when certain events occur in Zoom.
Configure the Zoom channel for callbacks over Zoom	Enable the Zoom callback channel and specify the host email address for a callback over Zoom.

Setting up the Zoom spoke for Zoom extension for Omnichannel Callback

Enable the Zoom spoke to perform various actions such as creating meetings, rescheduling meetings, deleting a meeting, or fetching the participant details from your Zoom account by integrating your Zoom account with your ServiceNow instance.

Create a connected app in Zoom

Create a connected app in your Zoom account to enable OAuth 2.0 authentication with the Zoom spoke.

Before you begin

- Ensure that you have an Integration Hub subscription.
- Ensure that Omnichannel Callback is installed on your instance.
- Ensure that the Zoom spoke is activated. For more information, see [Zoom spoke](#) .

Role required: Zoom admin

Procedure

1. Log in to [Zoom marketplace](#) .
2. In the **Develop** drop-down list, select **Build App**.
3. Choose the **OAuth** card from the available cards.
4. Disable the **Would you like to publish this app on Zoom App Marketplace?** option.
5. Select **Create**.
6. Provide a name for the app in the **Name** field.
7. Set the app type to **Account-level app**.

 **Note:** Account-level apps must be installed by a Zoom admin, who manage the app for all account users in the account.

8. Configure the redirect URLs for authentication.
 - a. In the App credentials section, enter the ServiceNow instance redirect URL in the **Redirect URL for OAuth** field in the following format:
`https://<instance name>.com/oauth_redirect.do`
 - b. In the OAuth allow list section, add the ServiceNow instance redirect URL in the following format:
`https://<instance name>.com/oauth_redirect.do`
 - c. Record the values of the **Client ID** and **Client Secret** fields to use them for the application registry.
9. In the left panel, select **Scopes**.
10. In the Add Scopes section, select **Add Scopes**.
11. On the **Add Scopes** dialog box, select the scope type.
12. Select the **Meeting** scope type.
13. Select the following scopes:
 - View all user meetings
 - View and manage all user meetings
14. Select the **Recording** scope type.
15. Select the following scopes:
 - View all user recordings
 - View and manage all user recordings
16. Select the **User** scope type.

17. Select the **View all user information** scope.

18. Select **Done**.

Result

The actions under the selected scopes become available to the Zoom spoke.

Configure a Zoom connection in ServiceNow instance

Use the information generated during Zoom account configuration to register the Zoom spoke as an OAuth provider and allow the instance to request OAuth 2.0 tokens.

Before you begin

Role required: admin

Procedure

1. From your ServiceNow instance, navigate to **Process Automation > Flow Designer**.
2. In the Flow Designer, select the **Connections** tab.
3. Search for the Zoom connection and select **View Details**.
4. On the Zoom connection card, select **Edit**.
5. On the form, fill in the fields.

Field	Description
Connection Name	Name to identify the connection record.
Connection URL	Base URL to connect to your Zoom instance: <code>https://api.zoom.us</code> .
OAuth Entity Name	Name to identify the application registry record.
OAuth Client ID	Client ID created during application registration.
OAuth Client Secret	Client secret created during application registration.
OAuth Redirect URL	OAuth callback endpoint: <code>https://instance_name.service-now.com/oauth_redirect.do</code> .

6. Select **Edit and Get OAuth Token**.

A confirmation message is displayed that the token is available.

Setting up Notify Zoom connector for Zoom extension for Omnichannel Callback

Setting up the Notify Zoom connector in Zoom and then in your ServiceNow instance enables your instance to receive the event information from Zoom. An event is usually any action that is related to a meeting.

Note: Currently, only the Zoom recording URL without passcode is stored in the interaction. You can configure the Zoom account to disable the passcode option.

Configure the Notify Zoom connector in Zoom

Configure the Notify Zoom connector in Zoom to receive event information in your ServiceNow instance from Zoom.

Before you begin

- Ensure that Notify Zoom Connector and Omnichannel Callback are installed on your instance.
- Ensure that you have the Zoom spoke installed on your instance.
- Make sure you have the required credentials for and connections to Zoom on your instance.
- The Notify Zoom connector must have been configured with the same Zoom account with which you created the OAuth app for the Zoom spoke.

Role required: admin, Zoom admin

Procedure

1. On your Zoom OAuth app, navigate to **Feature > Add Feature > Event Subscription**.
2. Enable the event subscription feature.
3. Select **Add Event Subscription** to add the first event subscription.
4. Enter the URL to be used to post information about events in Zoom to your instance:
`https://<instance name>.com/api/sn_notify_zoom/notify_zoom/ZoomEvent`
5. Select the **Add Events** button.
6. Select **Meeting** and then select the following meetings from the list:
 - Start Meeting
 - End Meeting
 - Participant/Host joined meeting
 - Participant/Host left meeting
7. Select **Recording** and then select **All Recordings have completed** from the list.
8. Select **Done**.
9. On the Add feature screen, select **Save** to save the event subscription configuration.
10. Select **Add Event Subscription** to add a second event subscription.
11. In the form, enter the URL used to post information about events in Zoom to your instance:
`https://<instance name>.com/api/sn_zoom_spoke/zoom_webhook_endpoint/webhook`
12. Select the **Add Events** button.
13. Select **Recording** and then select **Recording Transcript files have completed** from the list.
14. Select **Done**.
15. In the Add feature section, select **Save** to save the event subscription configuration.
16. In the Token section, select **Copy** to record the verification token to be used during configuration of the Notify Zoom connector.

Configure the Notify Zoom connector in ServiceNow

Configure Notify in your ServiceNow instance to receive event information from Zoom.

Before you begin

You must have copied the verification token displayed during the configuration of the Notify Zoom connector in Zoom.

Role required: admin

Procedure

1. Navigate to **All > Notify > Zoom > Configuration**.
2. Paste the verification token in the **Webhook validation token** field.
3. Select **Update**.

What to do next

[Configure a Zoom webhook for Zoom extension for Omnichannel Callback](#)

Configure a Zoom webhook for Zoom extension for Omnichannel Callback

Configure a Zoom webhook in ServiceNow to notify the Zoom extension for Omnichannel Callback app when certain events occur in Zoom.

Before you begin

You must have copied the verification token displayed during the configuration of the Notify Zoom connector in Zoom.

Role required: admin

Procedure

1. Navigate to **All > Zoom Spoke > Zoom Webhook Registries**.
2. Select **Zoom Callback Transcript completed** from the list.
3. Paste the verification token for validating event notifications in the **Token** field.
4. Select **Update**.

Configure the Zoom channel for callbacks over Zoom

Allow agents to call users back over Zoom by enabling the Zoom callback channel and specifying the host email address.

Before you begin

Role required: admin

Procedure

1. Navigate to **All**, and then enter `sys_cs_channel.list` in the navigation filter.
2. On the Messaging Channels form, select the **Zoom** channel.
3. If you are prompted in a message at the top of the form to switch applications to be able to edit the record, select the word **here**.
4. In the Channel Properties section, configure the channel properties.
 - Set the *enabled* property to true.
 - In the *host_email* property, enter the email with which the meetings should be created.
5. Select **Update**.

Additional resources for Conversational Interfaces

If you're looking for Conversational Interfaces (CI) best practices, troubleshooting, or other implementation guidelines, select a feature or resource type to discover ServiceNow® resources on other relevant websites.

Resource links

CI features	Resource type	Resources
Agent Chat	Getting Started	Agent Chat quick start guide (ServiceNow Community) ↗
Agent Chat	FAQs	Agent Chat FAQ ↗
ServiceNow Otto for Virtual Agent	Release notes	https://www.servicenow.com/docs/access?context=virtual-agent-rn&version=brazil&pubname=brazil-release-notes&ft:locale=en-US ↗
Now Assist in Virtual Agent	Tips and examples	When to consider Now Assist in Virtual Agent ↗ How to request catalog items in Now Assist in Virtual Agent ↗ Now Assist in Virtual Agent conversational catalog ordering ↗ Migrating NLU topics to LLM ↗
Sidebar	Tips and examples	Enable Sidebar users to collaborate with Microsoft Teams users ↗
Sidebar	FAQs	Sidebar FAQ ↗
Virtual Agent	Release notes	https://www.servicenow.com/docs/access?context=virtual-agent-rn&version=brazil&pubname=brazil-release-notes&ft:locale=en-US ↗
Virtual Agent	Getting Started	Virtual Agent and NLU Quick Start Guide ↗
Virtual Agent	Best practices	The 7 habits for a highly effective chatbot ↗
Virtual Agent	Tips and examples	Virtual Agent - Tips for Implementation Success ↗ Virtual Agent implementation checklist - a deeper dive ↗
Virtual Agent	FAQs	Virtual Agent FAQs ↗ Virtual Agent NLU FAQs ↗