



Tokyo Release Notes

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Tokyo release notes

The ServiceNow® Tokyo release includes new products and applications, as well as additional features and fixes for existing products. Read the release notes to learn about the release, prepare for your upgrade, and upgrade your instance.

Tokyo release highlights

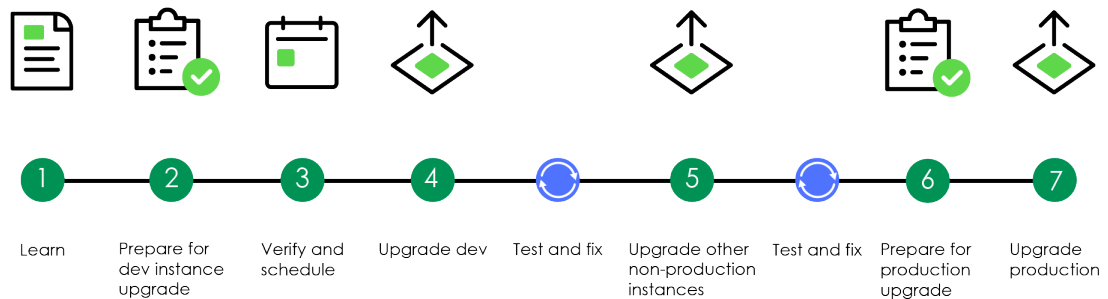


- Boost engagement and productivity with Next Experience
- Increase intelligence and trust in operations and security
- Accelerate value with purpose-built solutions

Learn more about the [Tokyo General Availability release highlights](#).

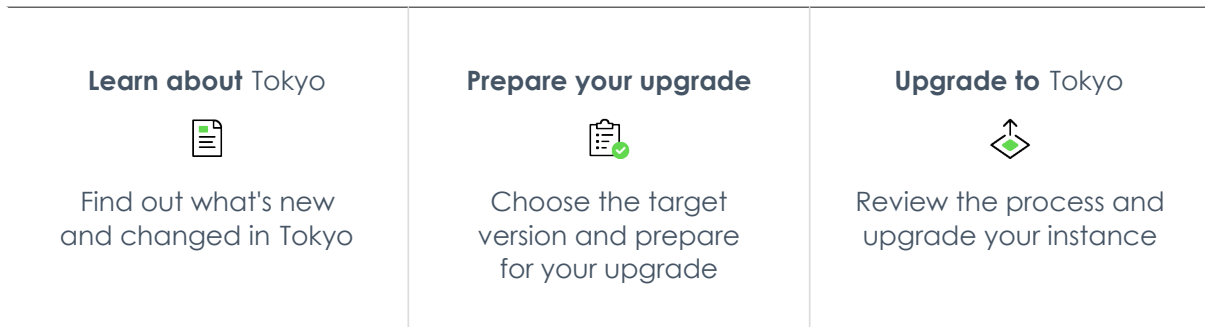
Path to successful upgrades

Upgrading your instance involves planning, testing, and validation. The release notes guide you through completing all of the phases and tasks for a successful upgrade.



Start your upgrade journey

To use the release notes in your upgrade process, choose the upgrade phase that you're ready to start with. It's recommended you complete the phases in the order listed. For a guide to the redesigned release notes experience, see [Using the release notes](#).



Release timeline

New Tokyo release versions are released throughout the year. Here are the current dates for Tokyo patch and security patch releases. To view a full list of Tokyo release versions, refer to [Available patches and hotfixes](#). Future release dates are subject to change.



Maximize your release notes value

Learn how to navigate the redesigned release notes and find the information you're looking for. Use new release notes tools to improve your upgrade experience.

How to use release notes

Release notes tools

We've created some tools to help you review the release notes and upgrade more quickly and efficiently. For more information, see [Build your own release notes](#).

Release notes summaries

If you're interested in a specific set of release notes information, we've displayed release notes for all products by category. For example, you can read about the browser requirements for all Tokyo products, all on one page.

Personalized PRB release notes

Generate a cumulative list of all the problems that are fixed in an upgrade from your current release version to any available target version.

Combined product release notes for cross-family upgrades

View all release notes information for any product, from any family release version to another, on one page.

To check out the release notes tools available for your upgrade scenario, choose your upgrade path to Tokyo.

- [Release notes for upgrading from San Diego](#)
- [Release notes for upgrading from Rome](#)
- [Release notes for upgrading from Quebec](#)
- [Tokyo patch and hotfix release notes](#)

Choose your upgrade path to Tokyo

- [Release notes for upgrading from San Diego](#)
- [Release notes for upgrading from Rome](#)
- [Release notes for upgrading from Quebec](#)
- [Tokyo patch and hotfix release notes](#)

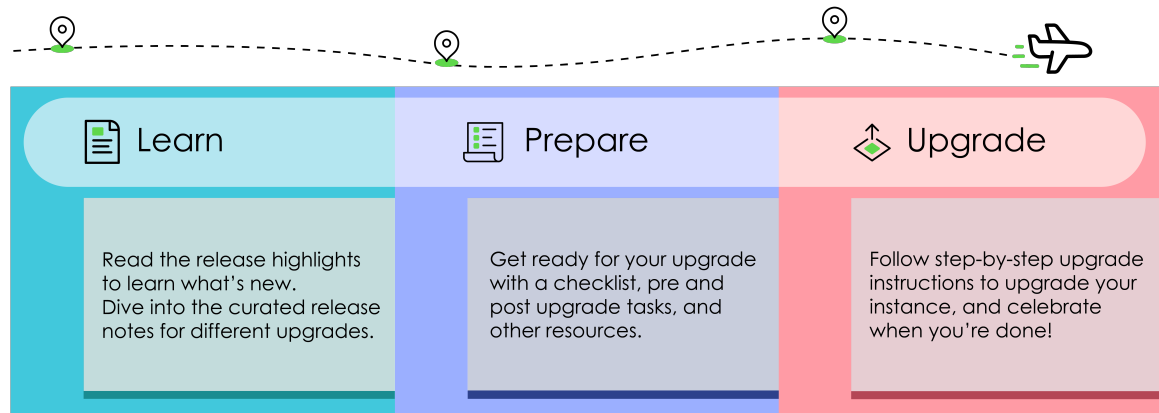
Using the release notes

Learn how to navigate the redesigned release notes and find the information you're looking for.

Navigating the release notes

We've redesigned the ServiceNow release notes experience to provide phased content that more closely matches the upgrade process.

Using the release notes



Release notes directory

Learn where you can find different release notes content throughout your upgrade journey.

Section	Content
Learn about the Tokyo release	Review the release highlights to learn about new features and enhancements, and use curated release notes that correspond to your upgrade path.

Section	Content
	<ul style="list-style-type: none"> • Release notes for upgrading from San Diego • Release notes for upgrading from Rome • Release notes for upgrading from Quebec <p>Each curated release notes package includes tools to help inform the next steps in your upgrade, including:</p> <ul style="list-style-type: none"> • Tokyo highlights • Features and changes by product, which are pre-combined for cross-family upgrades • Changes to plugins • Personalized PRB release notes • Available patches and hotfixes • Browser support • Accessibility and compliance
<p>Prepare your upgrade</p>	<p>Start preparing for your upgrade with our upgrade planning checklist and series of tasks to complete before and after your upgrade. Improve your upgrade experience with ServiceNow upgrade products, tools, and best practices.</p> <ul style="list-style-type: none"> • ServiceNow upgrades • Pre- and post-upgrade tasks for various products • Upgrade planning checklist • Upgrade tools and resources • Upgrades and the ServiceNow Store
<p>ServiceNow upgrades</p>	<p>Our upgrade guide includes testing guidance, information on how to schedule your upgrades, and more.</p> <ul style="list-style-type: none"> • Phase 1 - Read the release notes and plan your upgrade • Phase 2 - Prepare for the development instance upgrade • Phase 3 - Verify your upgrade configurations and schedule the development instance upgrade in Now Support • Phase 4 - Upgrade and validate the development instance • Phase 5 - If applicable: Upgrade and validate your other non-production instances, such as your test instance • Phase 6 - Prepare to upgrade the production instance • Phase 7 - Upgrade the production instance

Release notes tour

Learn how to navigate the redesigned release notes and find the information you're looking for. Use new release notes tools to improve your upgrade experience.

Using the release notes video

Build your own release notes

Enhance your upgrade experience with configurable release notes that fit your unique upgrade scenario. Assemble product information, fixes included in your targeted release version, and upgrade tasks to streamline your upgrade preparation, even when you skip a family release.



Release notes summaries

Get a glimpse of release notes based on what products you have and what information you need. Release notes summaries enable you to select the information category you're looking for and specify which products you have. Then, your release notes are compiled into a single, easy-to-read summary. Browse product highlights, new and changed features, important upgrade information, and more for N-1 to N upgrades.

Browser requirements for all Vancouver features and products

Release version: | Updated Apr 9, 2018 | ⌚ 3 minutes to read |

Cumulative release notes summary on browser requirements for Vancouver features and products.

Several products have specific browser requirements. Review this information to ensure you are using the correct browsers and browser versions.

Filter by

Application or feature	Details
AI Search	AI Search does not support Internet Explorer.
Advanced Work Assignment	AWA doesn't support mobile devices, Internet Explorer, or Microsoft Edge. Instead, use Microsoft Edge-Chromium or one of the other supported browsers that are listed in Browser support .



Personalized PRB release notes

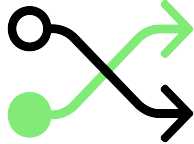
With personalized PRB release notes, collect a list of fixes to fit your specific upgrade scenario. Choosing your current release version and your targeted release version generates a list of all the fixes included in your upgrade. View this list in a table, or download a spreadsheet to sort and review PRBs as needed.

Personalized PRB release notes for upgrades to Vancouver

Updated Nov 26, 2023 | 35 minutes to read | Vancouver Release Notes and Upgrades

Filter by:

Current version	Target version	View	Download
Vancouver Patch 2	Vancouver Patch 2 Hot Fix 2	html	csv
Vancouver Patch 2	Vancouver Patch 3	html	csv
Vancouver Patch 2	Vancouver Patch 3 Hot Fix 1	html	csv



Combined product release notes

If your upgrade involves skipping one or more family releases, combined product release notes ensure you have all the information you need to prepare for your upgrade. From a list of available products, you can filter changes and features for your specific applications across the relevant releases, and view the information all on one page.

- [Combined product release notes for upgrades from San Diego to Tokyo](#)
- [Combined product release notes for upgrades from Rome to Tokyo](#)
- [Combined product release notes for upgrades from Quebec to Tokyo](#)

New features

Between your current release family and Vancouver, new features were introduced for Goal Framework.

Release	Release notes
Tokyo	<p>Import goals and targets data from a spreadsheet</p> <p>Import your existing goals and targets data (that are defined outside Goal Framework) from a spreadsheet to the Goal Framework tables. When you import data from a spreadsheet, the goals and targets data is imported to the Goal [sn_gf_goal] and Target [sn_gf_goal_target] tables, respectively.</p>
Utah	<p>Goal Relationship with SAFe Feature</p> <p>Create a goal relationship with a SAFe feature to identify and associate current or future work through the work item type SAFe Feature.</p>
Vancouver	<p>Qualitative targets</p> <p>Set qualitative targets for your goals by defining a unit of measure. Qualitative targets are interpretation-based, descriptive, and typically of a Yes or No type. The available unit of measure for qualitative targets is Yes/No. You can also define a custom unit of measure for qualitative targets according to your need and set qualitative targets for your goals.</p> <p>Add remarks for a target actual update</p> <p>Add a remark in the Remark field to capture the highlights for business justification when updating the actual value of a target or target breakdown.</p> <p>Set status for a goal</p>



Upgrade and migration tasks

Once you're equipped with the product and PRB information you need, compile a list of upgrade and migration tasks required to complete your journey. View the necessary pre- and post-upgrade and migration tasks for your products and build a to-do list to help guide your upgrade process.

Upgrade and migration tasks

Important: For any changes in the upgrade procedure for self-hosted customers, see [KB0563844](#) for details.

Product	Release notes	Family
AI Search	When you upgrade to San Diego from Quebec or Rome, AI Search automatically reindexes all your Indexed Japanese content. This one-time reindexing process is required to enable the Japanese search experience improvements in this release. If you enabled Q&A Genius Results in Quebec or Rome, you must reindex your Knowledge content after upgrading to San Diego. This one-time reindexing process is necessary to enable the Q&A improvements in this release.	San Diego
Application Usage Overview dashboard	After upgrading to the San Diego release, you cannot edit the Application Usage Overview homepage.	San Diego

Get started

To begin building your release notes, choose an option above or select which family you're upgrading from:

- [Release notes for upgrading from San Diego](#)
- [Release notes for upgrading from Rome](#)
- [Release notes for upgrading from Quebec](#)

Learn about the Tokyo release

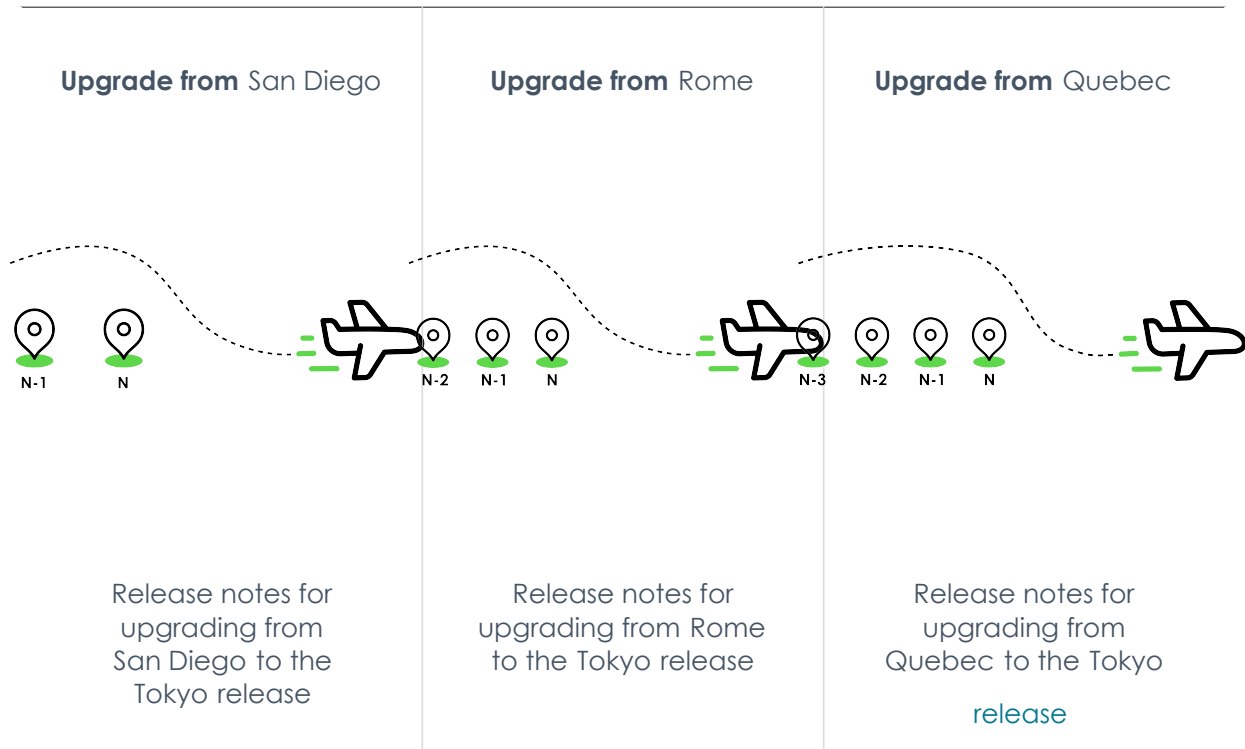
The Tokyo release includes new features and improvements built on the Now Platform[®].

Release dates

- Early availability: August 4, 2022
- General availability: September 21, 2022

Release notes for upgrades

Before you upgrade, review release notes from your current version to the Tokyo release. The release notes offer valuable information about new functionality, notable changes, and available fixes. They help you determine whether the upgrade contains functionality you need and fixes that resolve any issues affecting your instance. The release notes can also help you determine whether items you previously customized are being upgraded.



Tokyo General Availability release highlights

High-level overview of products and features in the Now Platform Tokyo General Availability (GA) release.

Overview

Accelerate business innovation and improve experiences for your organization with the Now Platform[®] Tokyo release. The Tokyo release helps customers:

Boost engagement and productivity with customer and employee experiences

Drive the retention and productivity of employees and customers in Next Experience with Service Operations Workspace, Manager Hub, Order Management, Schedule Optimization, and Admin Center, part of ServiceNow Impact.

Supercharge intelligence and trust for operations and security

- Leverage enhanced operations around intelligence and automation with Issue Auto Resolution, Task Intelligence, Automation Center, DevOps Config, and Operational Resilience.
- Experience increased platform security and privacy with ServiceNow Vault, a new security offering.

Accelerate value with purpose-built solutions

Navigate the future with purpose-built solutions and provide the agility to pivot amidst macro-economic challenges with Enterprise Asset Management, Supplier Lifecycle Management, ESG Management, Telecommunications Network Inventory, and Legal Investigations.

[View and download PDF](#)  

Customer experience

Customer Service Management

- **Order Management:** Define and apply multiple price lists with different effective dates, fixed bundles, and products with various attributes in a visually rich single page view. Enable customers to submit orders 24/7 without waiting for an available agent.
- **Task Intelligence for CSM:** Resolve customer cases faster with automation and AI. Auto-populate fields, detect customer sentiment, and extract attachment data for more complete case files.
- **Industry data models:** Unify business operations across internal and external business locations. Define and register external business locations (such as franchise and dealership) and staff.
- **Sidebar:** Collaborate with other agents and SMEs in a single panel to resolve cases more efficiently. Use AI Search to look for previous discussions, and favorite messages of importance to save them for future reference.

Field Service Management

- **Territory planning:** Optimize service territories. Minimize coverage overlaps, improve scheduling, and visualize people, tasks, and assets with an interactive territory map.
- **Schedule optimization:** Maximize scheduling efficiencies by prioritizing business objectives and scenario KPIs. Enhance real-time, in-day schedules and automatically balance multiple priorities.
- **Capacity and reservations management enhancements:** Schedule resources efficiently by managing employee workload capacities. Optimize capacity usage by leveraging internal and external resources to meet appointment booking needs.
- **Inventory management enhancements:** Streamline part sourcing and maintain inventories. Field resources can search for, transfer with peers, select, and request multiple parts.
- **Planned work management:** Address maintenance needs with greater flexibility by automating recurring visit schedules, creating plans that support inspecting multiple assets at a single location, and defining exceptions that occur from the early completion of work and cancellations.

Technology excellence

IT Service Management

Automate and optimize technology service operations

- **Admin Center:** Part of ServiceNow Impact, a value acceleration solution built on the Now Platform designed to help customers achieve faster time to value. Admin Center streamlines the customer journey with a centralized admin experience, working as a single destination for platform owners and administrators to better understand ITSM and other platform capabilities.
- **Service Operations Workspace:** Unified experience for IT service and operations management. Deliver fast and consistent resolutions for further remediation with incident playbooks for ITSM and ITOM.

- ITSM Pro+: Deliver immediate and ongoing value from Virtual Agent with white-glove implementation and update services. Simplify purchasing and increase ROI with the ITSM Pro+ bundled SaaS and services package.
- DevOps Config: Centralize the management of DevOps configuration items across applications, releases, environments, and infrastructure.
- DevOps Change Velocity enhancements: Support for GitHub Actions and Azure DevOps Artifacts.

IT Asset Management [↗](#)

Reduce hardware, software, and cloud costs

- IT Asset Management
 - Asset Management Executive Dashboard: Enable executives to view the health and lifecycle of all software, hardware, and cloud technology. Manage KPIs to help save costs, reduce risk, and identify which assets are in various lifecycle stages.
 - License and cloud cost simulator: Estimate the cost of moving licenses from on-premises to cloud, and build a business case for moving resources based on utilization and software/hardware end-of-life. Simulate and compare the cost differences between on-premises virtual machines and VMs on both AWS and Azure.
 - Contract and renewal management: Simplify renewals with a guided experience and highlighted recommendations for renewing software and hardware contracts. Leverage a streamlined workflow for automating hardware warranty and maintenance contract renewals.
 - Technology standards and onboarding workflows: Enable enterprise architects to govern and advise the organization on approved standard software technologies. Simplify onboarding a new technology using SAM, APM, and Service Catalog to manage and rationalize technologies and define and track the lifecycle stages relevant to each asset type.
- Enterprise Asset Management - new!
 - Enterprise asset lifecycle management: Enable strategic asset planning and reduce Capital Expenditures (CapEx) with visibility into the entire enterprise asset estate. Automate the full lifecycle of physical business assets from planning to retirement, and make business decisions based on asset financial data such as costs, values, depreciation, and spending reports.
 - Enterprise asset inventory management: Operate stockrooms efficiently by deploying assets in inventory and easily executing transfers across warehouses. Automate request, replace, and refresh workflows to enforce policies that bolster loss prevention efforts.
- Software Asset Management
 - Software asset management success tracking: Increase efficiency in measuring the success of asset management teams by creating and tracking self-defined success goals and activities. Identify related potential and actual savings that can be reported up to the executive dashboard.
- Hardware Asset Management
 - Asset workspace - procurement - sourcing: Enhance inventory sourcing with the consumption of local stock, storeroom transfers, and purchase orders all from one sourcing workflow.

- Cloud Insights
 - Google Cloud cost management: Integrate with the Google Cloud platform to leverage cloud usage, billing data, and multi-cloud resource spend for Google, AWS, and Azure. Create spending showbacks and optimization recommendations for financial operations teams and other cloud-responsible parties.

IT Operations Management [↗](#) and Configuration Management Database (CMDB) [↗](#)

Automate and optimize technology service operations

- ITOM
 - Real-time search visibility in Health Log Analytics: Ingest, index, and visualize Elasticsearch data in real time.
 - Accelerated root cause analysis: Review how DevOps configuration item (CI) changes modify configuration data values and assess them against policies to resolve, reverse, and modify noncompliant changes to related incidents.
 - Cloud management enhancements: Optimize a multicloud strategy by simulating cloud migration costs for Azure and AWS. Control the growth of cloud inventory and compare providers over time.
- CMDB
 - CMDB attestation with smart detection: Confirm critical CIs are present with the attestation widget, and attest discovery items automatically with the smart detection feature.
 - Intelligent CMDB Search: Search multiple queries in the CMDB using natural language, and receive AI guidance to select the best search terms.
 - Multisource CMDB enhancements: Access all data points, including discrepancies, from multiple systems. Leverage user roles to allow select users access to complex multisource data and settings.

Security Operations [↗](#)

- Security Incident Response
 - Data Loss Prevention Incident Response (DLP) Incident Response: Integrate with DLP products such as Symantec, Netskope, and Proofpoint to import incidents from multiple sources such as endpoint, network, email, and cloud. Allow remediation workflows involving end users, managers, and DLP operations teams with automated incident assignment and escalations.
- Vulnerability Response
 - Patch Orchestration: Integrate Vulnerability Response with Microsoft SCCM and HCL BigFix to automate patch orchestration. Enable security and IT teams to quickly identify patches for critical vulnerabilities and schedule patch updates from Vulnerability Response.
 - Cloud security integrations: Gain visibility into deployed cloud container image vulnerabilities and drive prioritization. Enable remediation workflows for security and application development teams to quickly address critical vulnerabilities in container images.

- Cloud security integrations for configuration compliance: Prioritize and remediate cloud configuration issues. Identify configuration violations in your cloud environments against benchmark standards such as AWS and Azure CIS.

Employee experience

HR Service Delivery [↗](#)

Boost employee productivity and engagement

- **Manager Hub:** Enhance the manager experience with a comprehensive single place for viewing teams' journeys, daily stats, pending learnings, important dates, and even receive notifications to act on employee tasks and requests.
- **Journey designer:** Automate workflows and empower managers to personalize journeys or tasks with AI-powered learning recommendations. Gain insight into employee satisfaction within journeys and quickly act on feedback.
- **Issue Auto Resolution for HR:** Resolve routine employee requests quickly with AI-powered automation. Leverage Natural Language Understanding (NLU) to analyze unstructured requests and deliver self-service content across Microsoft Teams, SMS, and email. Identify critical or sensitive cases and route them directly to a higher-level agent when needed.

Workplace Service Delivery [↗](#)

Enable a hybrid workplace

- **Workplace Indoor Mapping:** Import floor plans and manage directions and points of interest with native indoor mapping that allows for reservations and available workspace views.
- **Workplace Reservation Management enhancements:** Simplify the reservation experience by adding visitors and attendees, virtual meeting invite links, and marking spaces as favorites.
- **Workplace Service Delivery for mobile enhancements:** Capitalize on native mapping and reservation capabilities by allowing users to navigate to colleagues, pre-fill reservation values, and send push notification reminders.
- **Workplace Calendar Synchronization enhancements:** Optimize calendar scheduling by syncing multiple calendar providers and environments in the reservation system and indicating how reservations will appear for attendees - free or busy.
- **Workplace Space Management enhancements:** Manage the space lifecycle by tracking activation and retirement dates and allowing spaces to be used flexibly or permanently.

Legal Service Delivery [↗](#)

Drive efficiencies through global business services

- **Legal Investigations:** Formalize all steps in the internal complaints process with a legal matter template that includes interviews, evidence collection, and recommended actions. Register complaints from Employee Center, an anonymous reporting center, or email and track the progression of an investigation with reports, dashboards, and a detailed audit history.

- External storage enhancements: Configure out-of-the-box cloud document storage integrations including Box, Microsoft OneDrive, and Google Drive. Simplify legal request submission through automatic attachment and document upload to a cloud storage provider for easy reference, access, and editing.
- Universal Request support: Provide a single point of reference for employees to make requests to any department, including legal. Route requests to appropriate legal teams for follow-up and easily transfer requests for additional action from legal to other departments while keeping employees informed throughout.

Operating excellence

Supplier Lifecycle Management [↗](#) - new!

Transform procurement operations

- Supplier Management Workspace: Leverage a single workspace to actively create, manage, and complete supplier-assigned cases and tasks. Manage supplier information and intelligence and gather up-to-date data through third-party data source integrations.
- Supplier onboarding: Orchestrate all teams needed to onboard suppliers such as legal, GRC, procurement, finance, and more in a unified and flexible playbook. Coordinate both supplier-side and company-side tasks to help ensure timely and accurate information.
- Supplier collaboration portal: Enable suppliers to collaborate directly on cases and view, monitor, and update their own data. Allow multiple supplier contacts to work on and subdivide tasks to legal, finance, and procurement SMEs as needed.
- Supplier intelligence: Access all the information known about a supplier aggregated from ERPs, internal data sets, and third-party data sets in one cohesive view. Pull third-party supplier information that includes supplier intelligence, news, finance, and more from a wide set of data sources.

Governance, Risk, and Compliance [↗](#) (Integrated Risk Management)

Manage risk and resilience in real time.

- Scenario Analysis for Operational Resilience: Resolve service disruptions before they become a business risk by monitoring and predicting impacts and disruption scenarios.
- DevOps Accelerator: Embed policy exception handling in the development process to help ensure compliance issues are addressed without stopping development. Continuously monitor controls for compliance and provide evidence for audit.
- Metrics and risk heatmap: Identify and track risk on new data types and gain insight into the criticality of each risk along with its trajectory.

Environmental, Social, and Governance Management [↗](#)

Activate ESG across the enterprise

- **Calculated metrics:** Calculate metrics that provide actionable insight into ESG performance, such as carbon emissions, within the ESG management tool. Report data using multiple normalization metrics, like the average philanthropic giving per employee or carbon emissions per unit of revenue.
- **Carbon accounting using emission factors and calculated metrics:** Calculate greenhouse gas (GHG) emissions granularly using emission factors and calculated metrics.
- **Spreadsheet-style data entry UI:** Simplify data entry by organizing data in a spreadsheet-style format and showing metric-related information, such as dates and documentation, in a pane alongside the data table.

Strategic Portfolio Management [↗](#)

Drive strategic outcomes.

- **Alignment Planner Workspace (APW) enhancements:** Strategically deliver outcomes by setting goals and targets across the organization. Visualize relationships between planning items across portfolios to prioritize work items and resolve conflicts quickly.
- **Export to PowerPoint:** Quickly generate custom status reports for ease of communication and alignment.
- **Financial metrics:** Enable process managers to confidently re-forecast project costs when changes occur.

Automation and low-code

App Engine [↗](#)

Accelerate innovation with low-code app development.

- **App Engine Management Center:** Track all app development lifecycle events and developer activities from a single dashboard. View app status and identify bottlenecks at any point between development and deployment/production.
- **Table Builder:** Lower the barrier to citizen development with a streamlined app development experience that feels similar to popular spreadsheet platforms. Build new apps such as a table, forms, or flows quickly and with low code.
- **App Engine Studio Formula Builder:** Expand low code to more citizen developers with an easy and familiar spreadsheet platform experience. Simplify formula building by allowing formulas to be built within table fields, enabling users to create more complex apps.
- **App Engine Studio inline dashboard editing:** Configure visual business dashboards in workspaces easily without leaving the low-code environment. Edit visualization types, configure data sources, and change labels completely inline without any code.
- **App Engine Studio AI Search integration:** Enhance workspaces with AI Search built into the UX for a better, faster search experience in portal and mobile. Get customized search results and take actions directly from the results page.
- **App Engine Studio app template sharing:** Improve low-code governance with custom and out-of-the-box app-template access control and visibility for admins. Reuse proven app templates for faster development and reduced error risk.

- App Engine Studio custom app templates with richer features: Create app templates with additional platform features and powerful capabilities, such as SLAs, email notifications, dictionary overrides, REST messages, and basic authentication.
- Flow Designer enhancements: Enhance workflow reviews and reduce change risks with read-only views for users and stakeholders.
- Process Automation Designer enhancements: Create complex process variants efficiently by building new processes from an existing process definition and duplicating tested processes.
- Pro development enhancements: Convert ServiceNow Store apps to in-development apps and submit deployments in parallel without causing collision using continuous integration and continuous deployment (CI/CD).

Automation Engine [↗](#)

Automate and connect to ServiceNow

- Automation Center: Discover, prioritize, and manage automation through the full lifecycle and leverage the full business value of vendor-agnostic automation in a central workspace.
- Document Intelligence: Automate document data extraction from lists and tables and integrate into ServiceNow workflows. Leverage the Document Intelligence spoke and flow templates to simplify workflow integration.
- Cloud Deployment Automation: Automate the AWS CloudFormation request process fast with out-of-the-box catalog items and flows that offer built-in spoke actions. Accelerate the fulfillment of cloud deployment requests and simplify approvals with pre-built, configurable decision tables.
- Out-of-the-box Process Automation Designer (PAD) activities: Accelerate time to value and enable process owners to build cross-enterprise workflows faster. Improve citizen developer productivity with reusable, out-of-the-box activities for common DocuSign, Adobe Sign, Microsoft Teams, Slack, and Now Platform use cases.

Now Platform

Next Experience UI [↗](#)

- Admin Center: Part of ServiceNow Impact, a value acceleration solution built on the Now Platform designed to help customers achieve faster time to value. Follow a guided experience to install and configure ServiceNow solutions, including personalized application recommendations based on instance maturity.
- Platform Analytics Workspace: Leverage cross-platform user experience and log analytics data in a dedicated workspace. Design, build, and configure complex dashboard visualizations with in-line editing and advanced UI builder components.
- AI Search: Powerful intelligent search in configurable workspaces. AI Search offers a robust, intelligent search capability that makes it easy for service delivery workers to find the information they need to resolve issues fast.
- Sidebar: Offers a real-time messaging application for Next Experience that connects coworkers so they can easily and privately collaborate with individuals or groups while they work.

Now Intelligence [↗](#)

- **Task Intelligence:** Deliver faster resolutions with AI-powered task creation and triage. Understand sentiment to prioritize efforts, categorize cases to route them correctly, and auto-populate fields with Document Intelligence.
- **Process Optimization enhancements:** Discover and analyze processes to maximize performance with multi-dimensional process mining.
- **AI Search enhancements:** Leverage search-based autocomplete suggestions to get users to the correct destination. Expand language support to traditional and simplified Chinese-character tokenization.
- **Virtual Agent enhancements:** Enhance customer conversation experiences by detecting and translating to the end-user's language, routing conversations with topics in Slack and Microsoft Teams, and sending interactive voice responses (IVRs).
- **NLU Workbench enhancements:** Enhance usability to make the model management process more intuitive and easier to use.

ServiceNow mobile [↗](#)

Mobile Agent enhancements: Drive agent productivity with offline record creation, updating, and viewing. Allow agents to upload multiple media files simultaneously, and toggle between map and list views for all points of interest.

Platform Security [↗](#)

- **ServiceNow Vault:** Protect business-critical applications with premium platform security and privacy controls. Help increase data compliance, anonymize specified data fields, and manage digital credentials across the organization.
- **ServiceNow Platform Encryption:** Increase privacy policy compliance with cost-effective encryption that works for both ServiceNow and customer managed key (BYOK).
- **Adaptive authentication for mobile devices:** Make a fast start with secure authentication for ServiceNow instances on registered and trusted mobile devices regardless of physical location. Increase mobile user productivity, and authenticate them with context-based authentication to remove vulnerabilities.

Platform foundation

Upgrade plans: Accelerate upgrades by packaging applications into an Upgrade Plan. Reduce upgrade errors by configuring them on a nonproduction environment to help ensure desired behavior.

Industries

Financial Services Operations [↗](#)

Banking: Optimize banking processes and integrations with secure and intuitive automation

- **Financial Services Card Operations:** Digitize card dispute management and provide transparent status visibility to cardholders and employees. Improve resolution time and costs by categorizing dispute submissions with thresholds and meet regulatory requirements when resolving disputes using SLAs.

- **Socure integration:** Quickly deploy and create new automated onboarding processes with out-of-the-box Socure connectivity. Provide seamless client experiences with automated verification and approval.
- **Adobe Sign and DocuSign integration:** Secure client information with authentication, encryption, and tamper-evident seals. Speed up the agreement process by enabling multiple clients and employees to collaborate on a single document and sign from anywhere with convenient mobile and portal access.
- **Document Processor:** Automate and integrate core document information into existing processes for a cohesive, uninterrupted flow of content. AI-powered DocIntel auto-extracts information and helps reduce processing time, mistakes, and repetitive requests.

Insurance

- **Commercial Lines Claims:** Automate the commercial claims process end-to-end and increase straight-through processing with intelligent assignment. Improve customer satisfaction with real-time visibility into commercial claims status for carriers, distribution partners, and policyholders.
- **Group Life Servicing and Individual Life Servicing:** Improve the policy servicing process for customers by empowering employee access to contextual customer information that supports empathetic servicing. Enable group life, individual life, disability policyholders, and distribution partners to self-serve, engage, and initiate requests through any channel.
- **Document Processor:** Automate and integrate core document information into existing processes for a cohesive, uninterrupted flow of content. AI-powered DocIntel auto-extracts information and helps reduce processing time, mistakes, and repetitive requests.

Healthcare and Life Sciences

Activate more personalized care by automating operations across health systems

- **Patient Portal:** Enable patients and their families to securely access a robust suite of healthcare services such as immunizations, requests, to-dos, reminders, and more in a single place. Allow hospitals and health systems to leverage their EMRs or any other system of record to build a customizable, branded portal to deliver a frictionless patient experience.
- **Redox integration:** Deliver seamless interoperability and sync medical record system data by connecting EMRs with ServiceNow. Unify technology environments that use multiple EMR systems and transmit real-time data across a network of provider, payer, and product organizations.

Telecommunications

Optimize network investment and launch services

- **Telecommunications Network Inventory (TNI) - new!**
 - **Network Inventory Workspace:** Leverage personalized configurable workspaces for enhanced visibility to track and manage network build and operation metrics. Advanced visualization provides a zoomed-out graphical view of any complex network topologies and enables quick drill down into equipment to see details such as available slots and ports.

- Network modeling and templates: Quickly model equipment and easily design complex templates in one platform. Accurately capture and maintain the entire lifecycle for all network inventory with the Resource Inventory Management API.
- Network design and assign: Design complex equipment configurations to deliver end-to-end services and minimize service disruption. Automate network service creation by setting design criteria to automatically assign a particular network path and initiate change.
- Telecommunications Service Management
 - Catalog versioning: Increase flexibility by allowing product managers to make changes to published catalogs, and seamlessly implement catalog updates without disrupting the order fulfillment process.
 - Horizontal catalog dependencies: Implement compatibility rules for products and services that include or exclude dependencies with another product or service to help ensure the customer receives what they ordered.
- Order Management for Telecommunications
 - Order orchestration visualization: Easily keep track of order fulfillment status with a single graphical view. Leverage granular details of all orders in a hierarchy visualization that enables agents to quickly report a customer's status on any specific order.
 - Enhanced order capture: Effortlessly disconnect and make changes to existing orders from a single workspace. Agents can easily select the required inventory to modify and capture the required changes to the order by leveraging a list of existing inventories for a product or service.
- TMI Forum Open APIs
 - TMI Open API Conformance Certification: Simplify integration efforts with out-of-the-box Open APIs. Create, track, and manage incidents with the Trouble Ticket Open API (TMF621) and accelerate time to monitor with the Alarm Management Open API (TMF642).

Manufacturing

Manage and protect Operational Technology (OT) assets

- Operational Technology Service Management
 - Vulnerability Response V3: Enable plant managers to isolate and prioritize security remediation on an enterprise-wide level quickly by identifying the most at-risk lines and locations. Determine how the vulnerability of an asset impacts the aggregate risk of production cells, lines, and whole sites where the asset exists.
 - Pre-import OT Worksheet Entry Review tool: Accelerate digital transformation and reduce manual logs by automatically ingesting data from various spreadsheets without having to fit a predefined template. Input data site-by-site while the tool handles data reconciliation and aggregation, and can even import additional context.
 - Automated Mapping Associating Zone-based IP Network Groups: Automate the assignment of OT assets to an ISA entity using IP addresses. Upload subnets to ServiceNow from authoritative sources like NetDB and Firewalls, and easily map those subnets to equipment model entities.

Public Sector Digital Services

Serve individuals, organizations, and agencies on one platform

- Business services support: Empower businesses and other entities with the ability to initiate requests via self-service while providing increased transparency on statuses. Leverage a consolidated record of the business and its history of interactions across all channels, request types, and employees.
- Agency services support: Digitize and automate by creating workflows for agency-to-agency services. Enable inter-agency requests by allowing agencies to make a request from another via self-service.

Technology [↗](#)

- Technology Provider Service Management
 - Remote task in Service Bridge: Collaborate effortlessly and task teams across the ServiceNow ecosystem without building costly integrations, and transform enterprise customer support and managed services delivery.
 - Authorized user in Service Bridge: Help ensure security by controlling user access for service requests at the catalog level across the ServiceNow ecosystem. Enable customers and partners to authorize users as needed and provide user identification for requests made.
- Order Management for Technology Providers
 - Order orchestration visualization: Monitor order completion with an intuitive view that shows dependencies and progress for each order component. Work proactively with other teams to quickly resolve order issues, minimize delays, and keep customers informed throughout.
 - Order capture for customer changes: Leverage a single workspace for customer's product and service inventory data to process change and cancellation orders efficiently. Support more complex use cases with configurable line items to capture the to-be characteristics and values of orders.
 - Product catalog versioning: Update existing products and services quickly with versioning support, and keep order fulfillment operations simple with the reuse of existing order fulfillment processes.
 - Horizontal product catalog relationships: Reduce common ordering errors by setting inclusive or exclusive compatibility rules for products and services. Trigger workflows automatically when orders require other products or services.

Upgrades

Upgrade to the Now Platform Tokyo release today. Take advantage of these ServiceNow resources to help you stay current.

Upgrade Plans [↗](#)

Accelerate upgrades by packaging applications into an Upgrade Plan and reduce upgrade errors by configuring them on a nonproduction environment to help ensure desired behavior.

ServiceNow Upgrades and Patching community [↗](#)

Leverage the ServiceNow community to ask questions, get tips, and share knowledge with other community members. Join the latest community events and virtual webinars hosted by ServiceNow experts to stay up to date.

Tokyo release upgrade kit [↗](#)

Check out the new Tokyo release upgrade kit.

ServiceNow Impact

Reduce time to value through a unified, personalized experience.

Instance performance tools

- Admin Center: In-instance application providing self-service guidance for faster adoption. Accelerate results by easily discovering, installing, and configuring ServiceNow solutions.
- Instance health monitoring: Realize value faster with AI-driven value acceleration and proactive insights based on instance health. New key takeaways provide recommendations and next steps to act upon if the HealthScan scorecard is low.

Accelerators [↗](#)

Fixed-scope offerings with ServiceNow experts to accelerate results

- Jumpstart Your Automated Test Framework: ATF allows system admins to complete updates faster, reduce risk, and quickly remediate customization issues by automating the manual testing process. Leverage ServiceNow expert help to validate testing and configuration needs and set up ATF to gain confidence and assurance that the instance is working properly so changes can be promoted to production fast.
- Jumpstart Your App Engine Studio: Give system admins a head-start by empowering their users to develop applications using low-code tools with guided setup, pre-defined templates, and workflows. ServiceNow experts will provide App Engine Studio users a deep dive on capabilities, walk them through leading practices, and provide time to ask detailed questions specific to their organization.

Build your own release notes

To streamline your upgrade preparation, use ServiceNow release notes tools to configure release notes, bug fixes, and upgrade tasks for your specific products and upgrade path. See [Build your own release notes](#) for more information.







Release notes for upgrading from San Diego




When you upgrade from the San Diego release, understand the fixes in each release version, notable changes for the user interface, browser support, plugin updates, and each feature's upgrade and migration tasks if applicable.

Upgrading from San Diego to Tokyo

When upgrading from San Diego...



<p>Tokyo highlights</p>  <p>High-level overview of products and features in Tokyo</p>	<p>Combined product release notes</p>  <p>Combined information on new products and features from San Diego to Tokyo</p>	<p>Features and changes by product</p>  <p>Detailed information on new products and features from San Diego to Tokyo</p>
<p>Release notes summaries</p>  <p>Consolidated release notes information for all products from San Diego to Tokyo</p>	<p>Personalized PRB release notes</p>  <p>Generate a list of issues that were fixed between your current version and available target versions</p>	<p>Changes to plugins in the Tokyo release</p>  <p>List of new, changed, renamed, and deprecated plugins</p>










<p>Available patches and hotfixes</p>  <p>Release notes for fixed issues</p>	<p>Browser support</p>  <p>Supported browser versions and additional requirements for specific products</p>	<p>Accessibility and conformance</p>  <p>Accessibility conformance reports based on the voluntary product accessibility template (VPAT)</p>
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Combined product release notes for upgrades from San Diego to Tokyo

To help you upgrade from San Diego to Tokyo, we have combined the cross-family release notes for each product onto one page. Select the products you have to customize the release notes results.




















Select your products to view release notes from San Diego to Tokyo




















The table below has a list of all products available between San Diego and Tokyo. Use the **Filter by** feature to select the products you are interested in. The table will filter to show you the combined release notes for your selected products. Click on the links to read the combined release notes for each product.

Product	Combined release notes
Accounts Payable Operations	Link 
Admin Center	Link 
Adoption Services	Link 
Advanced Goal Framework	Link 
Advanced Risk	Link 
Advanced Work Assignment	Link 
Agent Chat	Link 
Agent Chat and Sidebar	Link 
Agent Client Collector	Link 




















Product	Combined release notes
Agent experience for CSM	Link 
Agent Workspace for HR Case Management	Link 
Agile Development 2.0	Link 
AI Search	Link 
Alignment Planner Workspace	Link 
API	Link 
App Engine Studio	Link 
Application Management	Link 
Application Manager	Link 
Application Portfolio Management	Link 
Application Usage Overview dashboard	Link 
Application Vulnerability Response	Link 
Assessments and Surveys	Link 
Audit Management	Link 
Authentication	Link 
Automated Test Framework	Link 
Benchmarks	Link 
Business Continuity Management	Link 
Career Assessment	Link 




















Product	Combined release notes
Case and Knowledge Management	Link
Change Management	Link
Clinical Device Management	Link
Clone Admin Console	Link
Cloud Cost Management	Link
Cloud Insights	Link
Cloud Provisioning and Governance	Link
Coaching	Link
Commercial Lines Claims	Link
Common Governance, Risk, and Compliance feature	Link
Common GRC feature	Link
Compliance Case Management	Link
Configuration Compliance	Link
Configuration Management Database (CMDB)	Link
Container Vulnerability Response	Link
Continuous Authorization and Monitoring	Link
Continuous Authorization and Monitoring (CAM)	Link
Conversational Interfaces	Link
Conversational Interfaces Home	Link




















Product	Combined release notes
Core Now Platform	Link 
Customer Contracts and Entitlements	Link 
Customer Service Management	Link 
Customer Service Management (CSM)	Link 
Dashboards	Link 
Data Discovery	Link 
Data management for CSM	Link 
Data Privacy	Link 
Data Separation	Link 
Decision Builder	Link 
Default admin landing page	Link 
Delegated Development	Link 
DevOps	Link 
DevOps Change Velocity	Link 
DevOps Config	Link 
Digital Portfolio Management	Link 
Document Intelligence	Link 
Document Services	Link 
Document Templates	Link 

Product	Combined release notes
Dynamic Translation	Link 
Employee Center	Link 
Employee Document Management	Link 
Employee Growth and Development	Link 
Employee Growth and Development Activities	Link 
Employee Growth and Development Core	Link 
Employee Journey Management	Link 
Employee Relations	Link 
EMR Help	Link 
Encryption and Key Management	Link 
Encryption Key Management	Link 
Enterprise Asset Management	Link 
Environmental, Social, and Governance Management	Link 
Equifax spoke	Link 
ERP Canvas	Link 
ERP Customization Mining	Link 
ESG Management	Link 
Event Management	Link 
Export to PowerPoint for Strategic Portfolio Management	Link 




















Product	Combined release notes
Field Service Management	Link
Financial Management	Link
Financial Services Business Deposit Operations	Link
Financial Services Business Lifecycle	Link
Financial Services Business Loan Operations	Link
Financial Services Card Operations	Link
Financial Services Client Lifecycle	Link
Financial Services Complaint Management	Link
Financial Services Credit Operations	Link
Financial Services Customer Lifecycle Operations	Link
Financial Services Deposit Operations	Link
Financial Services Insurance Policy Operations	Link
Financial Services integration with Jack Henry Associates jXchange	Link
Financial Services integration with Socure	Link
Financial Services Loan Operations	Link
Financial Services Operations Core	Link
Financial Services Operations Integration with FRISS	Link
Financial Services Operations Integration with Guidewire	Link
Financial Services Operations Integration with Jack Henry jXchange	Link




















Product	Combined release notes
Financial Services Operations Integration with Visa	Link 
Financial Services Payment Operations	Link 
Financial Services Personal Deposit Operations	Link 
Financial Services Personal Loan Operations	Link 
Financial Services Treasury Operations	Link 
Flow Designer	Link 
Generative AI Controller	Link 
Goal Framework	Link 
Goal Framework for SPM	Link 
Governance, Risk, and Compliance	Link 
Granular Delegation	Link 
GRC: integrations with third-party content	Link 
Group Life Servicing	Link 
Hardware Asset Management 10.0.0	Link 
Hardware Asset Management 4.0	Link 
Hardware Asset Management 5.0	Link 
Hardware Asset Management 7.0.0	Link 
Hardware Asset Management 8.0.0	Link 
Healthcare and Life Sciences Service Management Core	Link 




















Product	Combined release notes
Health Log Analytics	Link 
Help Center	Link 
Hermes Messaging Service	Link 
HR Service Delivery	Link 
HR Service Delivery Case and Knowledge Management	Link 
HR Service Delivery Enterprise Onboarding and Transitions	Link 
HR Service Delivery Integration with Magnit	Link 
HR Service Delivery Integration with Workday Learning	Link 
Identity and Authentication	Link 
Import and Export	Link 
Incident Management	Link 
Individual Life Servicing	Link 
Industrial Process Manager	Link 
Industry products	Link 
Instance Data Replication	Link 
Instance Scan	Link 
Integration Hub	Link 
Intelligence for CSM	Link 
Intelligent Service Delivery	Link 




















Product	Combined release notes
Intelligent Servicing for Fraud	Link 
Investment Funding	Link 
ITOM Cloud Accelerate	Link 
ITOM Health	Link 
ITOM Optimization	Link 
ITOM Optimization ITOM Optimization	Link 
ITOM Visibility	Link 
ITSM Agent Workspace	Link 
ITSM Mobile	Link 
ITSM Mobile Agent	Link 
ITSM Predictive Intelligence Workbench	Link 
ITSM Success Dashboard	Link 
ITSM Virtual Agent	Link 
Journey designer	Link 
Journey designer 2.0	Link 
Knowledge Management	Link 
Learning	Link 
Legal Service Delivery	Link 
Localization Framework	Link 




















Product	Combined release notes
Manager Hub	Link
Manufacturing Process Manager	Link
Mentoring	Link
MetricBase	Link
MID Server	Link
Mobile	Link
Mobile Platform	Link
Natural Language Query	Link
Natural Language Understanding	Link
Next Experience	Link
Next Experience Components	Link
Next Experience Developer Tools	Link
Next Experience UI	Link
Next Experience user interface	Link
Notifications	Link
Notify	Link
Now Assist	Link
Now Assist for Creator	Link
Now Assist for Customer Service Management (CSM)	Link




















Product	Combined release notes
Now Assist for HR Service Delivery (HRSD)	Link 
Now Assist for IT Operations Management (ITOM)	Link 
Now Mobile app	Link 
Omnichannel Callback	Link 
Onboarding Experience	Link 
On-Call Scheduling	Link 
Operational Resilience	Link 
Operational Technology Change Management	Link 
Operational Technology Incident Management v2	Link 
Operational Technology Knowledge Management	Link 
Operational Technology Manager	Link 
Operational Technology Service Management	Link 
Operational Technology Vulnerability Response	Link 
Opportunity Management	Link 
Order Management	Link 
Order Management for CSM	Link 
Order Management for Customer Service Management	Link 
Order Management for Telecommunications, Media, and Technology	Link 
Password Reset	Link 

Product	Combined release notes
Patient Support Services	Link 
Performance Analytics	Link 
Personal Lines Claims	Link 
Platform Analytics Experience	Link 
Platform Analytics Workspace	Link 
Platform Security	Link 
Playbooks in Workflow Studio	Link 
Policy and Compliance integrator	Link 
Policy and Compliance Management	Link 
Portfolio Planning	Link 
Predictive Intelligence	Link 
Pre-Visit Management	Link 
Privacy Management	Link 
Proactive Prompts	Link 
Proactive Service Experience Workflows	Link 
Proactive Service Experience Workflows (Technology)	Link 
Proactive Service Experience Workflows (Telecommunications)	Link 
Proactive Triggers	Link 
Problem Management	Link 

Product	Combined release notes
Process Automation Designer	Link 
Process Mining	Link 
Process Optimization	Link 
Procurement Service Management	Link 
Product Catalog Management and Pricing Management	Link 
Project Portfolio Management	Link 
Project Workspace	Link 
Public Sector Digital Services	Link 
Quote Management	Link 
Recommendation Framework	Link 
Redox Inbound Integration	Link 
Regulatory Change Management	Link 
Reporting	Link 
Resource Management Workspace	Link 
Responsive dashboards	Link 
Robotic Process Automation (RPA) Hub	Link 
Scaled Agile Framework (SAFe)	Link 
Scripting	Link 
Search administration	Link 

Product	Combined release notes
Security Center	Link 
Security Incident Response	Link 
Security Posture Control	Link 
Self-Service and Omnichannel engagement for CSM	Link 
Service Bridge	Link 
Service Bridge (Technology)	Link 
Service Bridge (Telecommunications)	Link 
Service Builder	Link 
Service Catalog	Link 
Service Desk	Link 
Service Graph Connector for Microsoft Defender for IoT (Azure)	Link 
Service Graph Connector for Microsoft Defender for IoT (On-premises Management Console)	Link 
Service Graph Connector Integration for Claroty CTD	Link 
Service Level Management	Link 
ServiceNow Performance dashboard	Link 
ServiceNow Studio	Link 
ServiceNow Voice	Link 
Service Operations Workspace for ITOM	Link 
Service Operations Workspace for IT Service Management	Link 

Product	Combined release notes
Service Operations Workspace for ITSM	Link 
Service Portal	Link 
Service Portfolio Management	Link 
Sidebar	Link 
Sitemap Generator	Link 
Skills Intelligence	Link 
Skills Management	Link 
Software Asset Management	Link 
Sourcing and Procurement Operations	Link 
SPM Benchmarks	Link 
Store Usage Overview dashboard	Link 
Strategic Planning	Link 
Studio	Link 
Subscription Management	Link 
Supplier Lifecycle Management	Link 
Supplier Lifecycle Operations	Link 
System Administration dashboard	Link 
System Clone	Link 
System Diagnostics homepage	Link 

Product	Combined release notes
Table Builder	Link 
Table Builder for App Engine	Link 
Task Intelligence for ITSM	Link 
Technology Provider Service Management	Link 
Telecommunications Network Inventory	Link 
Telecommunications Service Management	Link 
Telecommunications Service Operations Management	Link 
Theme Builder	Link 
Third-party Risk Management	Link 
UI Builder	Link 
Universal Request	Link 
Upgrade Center	Link 
User Experience Analytics	Link 
Vaccine Administration Management	Link 
Vendor Management Workspace	Link 
Vendor Risk Management	Link 
Virtual Agent	Link 
Visa Spoke	Link 
Visual Task Boards	Link 

Product	Combined release notes
Vulnerability Response	Link
Vulnerability Response for Microsoft Defender for IoT (On-premises Management Console)	Link
Vulnerability Response integrations	Link
Vulnerability Response Integration with Claroty CTD	Link
Vulnerability Response Integration with Microsoft Defender for IoT	Link
Walk-up Experience	Link
Workflow Studio	Link
Workforce Optimization for Customer Service	Link
Workforce Optimization for HR	Link
Workforce Optimization for ITSM	Link
Workspace	Link
Zing text indexing and search engine	Link

Features and changes by product

Review the new features and changes in this release by product.

New features and products in Tokyo

The Tokyo release includes new features and products.

Environmental, Social, and Governance Management

[Environmental, Social, and Governance Management release notes](#)

Financial Services Operations

- [Commercial Lines Claims release notes](#)
- [Financial Services Card Operations release notes](#)
- [Group Life Servicing release notes](#)
- [Individual Life Servicing release notes](#)

Healthcare and Life Sciences

[Redox Inbound Integration release notes](#)

IT Asset Management

[Enterprise Asset Management release notes](#)

IT Operations Management

[ITOM Cloud Accelerate release notes](#)

Manufacturing

[Vulnerability Response Integration with Microsoft Defender for IoT release notes](#)

Now Intelligence

- [Document Intelligence release notes](#)
- [Platform Analytics Workspace release notes](#)

Now Platform App Engine

[Table Builder for App Engine release notes](#)

Now Platform capabilities

- [Admin Center release notes](#)
- [Sitemap Generator release notes](#)

Telecommunications

[Telecommunications Network Inventory release notes](#)

Updated features and products

Other products were changed and updated in the Tokyo release. For more information, refer to the release notes topics, which are organized by product area.

Build and automate release notes

The Now Platform[®] has new and updated build and automate features in the Tokyo release.

API release notes

ServiceNow[®] APIs let you build custom applications and experiences. APIs were enhanced and updated in the Tokyo release.

API highlights for the Tokyo release

- Use server-side JavaScript APIs in scripts to change application functionality.
- Run client APIs whenever a client-based event occurs, such as when a form loads, a form is submitted, or a field value changes.
- Use inbound REST APIs to interact with various ServiceNow functionalities within your application.

See [APIs and scripts](#)  for more information.

New in the Tokyo release

New scoped classes and additional methods to existing scoped classes

Class	Methods
ChangeSuccess	<ul style="list-style-type: none"> • getEntryLevelTeamScore() • getMaximumPermittedTeamScore() • getMinimumPermittedTeamScore () • getModelScoreForChange() • getModelScoreForModelId() • getScoresForChange() • getTeamScoreForChange() • getTeamScoreForGroupId() • getTypeScoreForChange() • getTypeScoreForType() • withIndicatorScores() • withModelScore() • withSecurity() • withTeamScore() • withTeamScoreRatings() • withTypeScore()
FlowAPI - Scoped, Global	getErrorMessage()
GeniusResultContext	getMatchingDocuments()
GlideAggregate	setAggregateWindow()
IPAddress	<p>The global version of this API is also available, only the scoped version was added in this release.</p> <ul style="list-style-type: none"> • canonicalize() • getExpanded() • executeGetById() • IPAddress() • isLinkLocal() • isLocalHost() • isMulticast() • isPublic() • isReserved() • isRoutable() • isSameVersionAs() • isUnicast()

New scoped classes and additional methods to existing scoped classes (continued)

Class	Methods
	<ul style="list-style-type: none"> • isV4() • isV6() • isValid() • toExpanded()
RFETransformer	<ul style="list-style-type: none"> • RFETransformer() • transform()
SCIM2Client	<ul style="list-style-type: none"> • executeDelete() • executeGet() • executeGetById() • provision() • provisionNew()
SCIM2ClientUtil	<ul style="list-style-type: none"> • getProviderIdByFilter() • getProviderIdByResourceid ()
ScopedCacheManager	<ul style="list-style-type: none"> • flushScopedCache() • get() • put() • putRow()

New global classes and additional methods to existing global classes

Class	Methods
GlideAggregate	setAggregateWindow()

New REST APIs and additional endpoints to existing REST APIs

Class	Methods
Alarm Management Open API	<ul style="list-style-type: none"> • GET /sn_ind_tmf642/alarm_mgmt/alarm • GET /sn_ind_tmf642/alarm_mgmt/alarm/{id}

New REST APIs and additional endpoints to existing REST APIs (continued)

Class	Methods
Auto API	<ul style="list-style-type: none"> • POST /sn_coe/auto/rpa/job • POST /sn_coe/auto/rpa/process • POST/sn_coe/auto/rpa/robot
AWA Inbox Actions API	<ul style="list-style-type: none"> • GET /awa/inbox/actions/accept • POST /awa/inbox/actions/accept • POST /awa/inbox/actions/reject
Change Management API	GET /sn_chg_rest/change/{change_sys_id}/nextstates
MetricBase Time Series API	POST /now/clotho/transform/stream
Product Inventory Open API	<ul style="list-style-type: none"> • GET /sn_prd_invt/product • GET /sn_prd_invt/product/{id} • POST /sn_prd_invt/product
Product Order Open API	<ul style="list-style-type: none"> • GET /sn_ind_tmt_orm/order/productOrder • GET /sn_ind_tmt_orm/order/productOrder/{id} • PATCH /sn_ind_tmt_orm/order/productOrder/{id} • POST /sn_ind_tmt_orm/order/productOrder
Trouble Ticket Open API	<ul style="list-style-type: none"> • GET /sn_ind_tsm_sdwan/ticket/troubleTicket • GET /sn_ind_tsm_sdwan/ticket/troubleTicket/{id} • PATCH /sn_ind_tsm_sdwan/ticket/troubleTicket/{id} • POST /sn_ind_tsm_sdwan/ticket/troubleTicket

[Export to OpenAPI specification](#) 

Export a REST API as an OpenAPI specification to import it into another web services tool.

Changed in this release

Changed scoped classes

Class	Methods
GlideAggregate	<p>Added new aggregate functions: GROUP_CONCAT and GROUP_CONCAT_DISTINCT.</p> <p>Affected methods:</p>

Changed scoped classes (continued)

Class	Methods
	<ul style="list-style-type: none"> • addAggregate() • getAggregate() • orderByAggregate()

Changed global classes

Class	Methods
GlideAggregate	<p>Added new aggregate functions: GROUP_CONCAT and GROUP_CONCAT_DISTINCT.</p> <p>Affected methods:</p> <ul style="list-style-type: none"> • addAggregate() • getAggregate() • orderByAggregate()

Changed REST APIs

Class	Methods
AWA Agent API	<p>Added new endpoints:</p> <ul style="list-style-type: none"> • GET /awa/agents/<user_id>/capacities • GET /awa/agents/{user_id}/presence_states • PUT /awa/agents/{user_id}/capacities <p>Added 403 (forbidden) error code. Possible reasons:</p> <ul style="list-style-type: none"> • The user does not have the awa_integration_user role. • The value of the glide.awa.enabled property is not true.
Product Catalog Open API	<p>Added version support for product specifications and product offerings.</p> <p>Affected endpoints:</p> <ul style="list-style-type: none"> • GET /productoffering • GET /productoffering/{offeringId} • GET /productspecification • GET /productspecification/{specificationId} • POST /productoffering • POST /productspecification
Product Inventory Open API	<p>Added version support for product specifications and product offerings.</p>

Changed REST APIs (continued)

Class	Methods
	<p>Affected endpoints:</p> <ul style="list-style-type: none"> • GET /sn_prd_invt/product • GET /sn_prd_invt/product/{id} • POST /sn_prd_invt/product
<p>Product Order Open API</p>	<p>Added version support for product specifications and product offerings.</p> <p>Affected endpoints:</p> <ul style="list-style-type: none"> • GET /sn_ind_tmt_orm/order/productOrder • GET /sn_ind_tmt_orm/order/productOrder/{id} • PATCH /sn_ind_tmt_orm/order/productOrder/{id} • POST /sn_ind_tmt_orm/order/productOrder
<p>System for Cross-domain Identity Management (SCIM) API</p>	<p>Added support for Group ServiceNow extension schema.</p> <ul style="list-style-type: none"> • GET /scim/Groups • GET /scim/Groups/{group_id} • PATCH /scim/Groups/{group_id} • POST /scim/Groups • PUT /scim/Groups/{group_id}
<p>Service Catalog Open API</p>	<p>Added version support for service specifications.</p> <p>Affected endpoints:</p> <ul style="list-style-type: none"> • GET /servicespecification • GET /servicespecification/{specificationId} • POST /servicespecification
<p>Service Order Open API</p>	<p>Added version support for service specifications.</p> <p>Affected endpoints:</p> <ul style="list-style-type: none"> • GET /sn_ind_tmt_orm/serviceorder • GET /sn_ind_tmt_orm/serviceorder/{id} • POST /sn_ind_tmt_orm/serviceorder

Deprecations

- *Product Inventory Open API*. All `/sn_prd_invt/productinventory` endpoints are deprecated. They are replaced by `/sn_prd_invt/product`.
- *Product Order Open API*. All `/sn_ind_tmt_orm/productorder` endpoints are deprecated. They are replaced by `/sn_ind_tmt_orm/order/productOrder`.
- *Trouble Ticket Open API*. All `/sn_ind_tsm_sdwan/troubleticket` endpoints are deprecated. They are replaced by `/sn_ind_tsm_sdwan/ticket/troubleTicket`.

Activation information

The following APIs are available by default:

- *Change Management*
- *GlideAggregate* (Scoped and Global)
- *IPAddress* (Scoped and Global)
- *RTETransformer*

The following APIs require plugin activation:

- *Auto* API: This API requires the Automation Center plugin to be activated.
- *AWA Agent* and *AWA Inbox Actions* APIs: These APIs require the Advanced Work Assignment (com.glide.awa) plugin to be activated.
- *ChangeSuccess* API: This API requires the ChangeManagement - ChangeSuccess Score (com.snc.change_management.change_success_score) plugin to be activated.
- *MetricBase Time Series* API: This API requires the MetricBase (com.snc.clotho) plugin to be activated.
- *Product Catalog Open API*, *Product Inventory Open API*, and *Service Catalog Open API*. These APIs require the Order Management for Telecommunications plugin (sn_ind_tmt_orm) to be activated.
- *SCIM* API: This API requires the SCIM v2 - ServiceNow[®] Cross-domain Identity Management (com.snc.intefration.scim2) plugin to be activated.
- *SCIM2Client* and *SCIM2ClientUtil* APIs: These APIs require the SCIM v2 - ServiceNow[®] Cross-domain Identity Management Client (com.snc.integration.scim2) plugin to be activated.
- The *ScopedCacheManager* API requires the Scoped Cache (com.glide.scopedcache) plugin to be activated.

App Engine Studio release notes

The ServiceNow[®] App Engine Studio application is a development tool for creators of varying skill levels to build applications that meet the immediate needs of your organization. App Engine Studio was enhanced and updated in the Tokyo release.

App Engine Studio highlights for the Tokyo release

- Build low-code apps quickly, with more creators collaborating and less complexity.
- Design with guidance and templates within a holistic low-code development experience.
- Unite business aims and IT implementations with collaboration, reuse, and guardrails for enterprise-class support.

See [App Engine Studio](#) for more information.

Important: App Engine Studio is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[App Template Admin role](#)

Control who has access to create new applications from templates, to share all templates, and to activate or deactivate templates through the `app_template_admin` role.

[Control template access](#)

Control who can see and use templates you create. Share templates with users or groups for collaboration purposes.

[Create custom workspaces quickly with Workspace Builder](#)

As of November 2022, you can empower users of all skill sets to customize workspaces in a no-code environment with Workspace Builder. With this builder, you can quickly configure a workspace layout, lists, and record pages, and enable analytics.

[Load more apps faster](#)

As of November 2022, a new **Load more apps** button on the home page and **My apps** tab lets you selectively view more apps, enabling faster load time.

[Manage Applications in AEMC](#)

View charts and graphs illustrating the status of your active applications in the App Engine Management Center (AEMC). A list of all custom apps in development or production in an active deployment are included. You can view deployment history and collaborator details for individual apps. As of November 2022, you can also see usage data for all apps in production instances.

[Manage Developers in AEMC](#)

View charts and graphs illustrating total and active developers in the App Engine Management Center (AEMC). You can view details for individual developers, including the apps for which they are collaborators and request history.

UI changes

[More actions icon on templates](#)

The More actions icon (•••) list on each template includes **Deactivate**, **Activate**, and **Share** only for the app template author and users with the `app_template_admin` role.

Changed in this release

[Preserve data tables and custom templates when cloning an instance](#)

As of November 2022, when you use the System Clone tool to copy production instances, the following tables are no longer preserved:

- Pipeline
- Environment

- Pipeline Environment Order
- Pipeline Types

Template management [↗](#)

In the San Diego release, templates could be shared with and used by everyone or no one. In the Tokyo release, only users with the `app_template_admin` role can review, activate and deactivate, and assign sharing permissions for all templates. Users with the `app_template_author` role can only assign sharing permissions for templates they create. Template admins can deactivate any custom template that is not necessary.

Activation information

Install App Engine Studio by requesting it from the ServiceNow Store. 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](#) [↗](#).

Related ServiceNow applications and features

Access Control [↗](#)

Work with access control and roles for the application in App Engine Studio.

Catalog Builder [↗](#)

Edit catalog items that you create in App Engine Studio.

Decision Builder [↗](#)

Add decision rules to decouple decision logic from code using decision tables.

Email notifications [↗](#)

Create and edit email notifications that are automatically sent when a record is created or updated. Email notifications are also used as a reference in flows or can be triggered by an event.

Flow Designer [↗](#)

Edit flows that you create in App Engine Studio.

Integration Hub - Import [↗](#)

Import data into existing tables in App Engine Studio.

Mobile App Builder [↗](#)

Add mobile experiences in App Engine Studio.

Mobile Studio [↗](#)

Edit mobile experiences that you create in App Engine Studio.

Process Automation Designer [↗](#)

Edit cross-functional processes and consolidate them into automated task-oriented views.

Table Builder [↗](#)

Work with data models in a tabular format. Table Builder is exclusive to App Engine Studio.

UI Builder [↗](#)

Edit experiences that you create in App Engine Studio.

[Workspace Builder](#)

Edit and customize workspaces that you build in App Engine Studio.

Flow Designer release notes

The ServiceNow® Flow Designer application enables process owners to automate work without having to code. Build multi-step flows from reusable components. Flow Designer was enhanced and updated in the Tokyo release.

Flow Designer highlights for the Tokyo release

- Add Flow Designer content when building a table from App Engine Studio.
- Limit access to Flow Designer content with read only roles.
- Use the ScriptableFlowRunner API to run flows with specific roles or as a user when running with the `quick()` method.

See [Flow Designer](#) for more information.

Important information for upgrading Flow Designer to Tokyo

Flow Designer `report_view` access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

You can allow instances upgraded from San Diego and earlier releases to generate restricted caller access privilege requests for flows and actions. For more information about enabling access privileges for flows and actions, see [Upgrade restricted caller access privileges for flows and actions](#).

Warning: Upgrading restricted caller access privileges to track flows and actions can cause service disruptions on instances that previously tracked cross-scope access from script includes or business rules. After upgrade, all flows and actions that attempt to access restricted resources will be blocked from running and instead generate their own restricted caller access privilege requests for approval. Someone must approve the access privilege requests before cross-scope flows and actions can run. Customers who already allowed indirect tracking of flows and actions using script calls may want to skip this task and continue calling flows and actions from scripts. Customers who want to replace their existing access privileges with the new Flow and Flow Action source types may want to schedule an outage to generate and approve the new access privilege requests.

New in the Tokyo release

[Add flows from Table Builder in App Engine Studio](#)

Create flows for a table directly from the App Engine Studio version of Table Builder.

[Perform archive operations with Zip steps](#)

Perform archive operations to manage the attachments in a record by using Zip steps. Reduce the file size of attachments and also unzip specific attachments in a zipped file. View the attachments in a zipped file before unzipping.

[Limit Flow Designer access with read only roles](#)

Allow Flow Designer users to view configuration details but prevent them from creating or changing content. Grant users a general read-only role when you want to limit access to all Flow Designer content. Grant users a specific read-

only role when you only want to limit access to specific features such as flows, actions, or execution details.

Use the ScriptableFlowRunner API to run a flow with roles

Use the `withRoles()` method with the `quick()` method to run a flow or subflow using the roles specified in its properties.

Use the ScriptableFlowRunner API to run a flow as a user

Use the `asUser()` method with the `quick()` method to run a flow or subflow as the user who triggered the flow.

UI changes

Search for steps [↗](#)

Enable action designers to easily discover and add steps to a custom action.

Changed in this release

Flow diagramming view improvements [↗](#)

The Flow Diagramming view supports more triggers and flow logic.

Flow execution detail retention improvements [↗](#)

Changed the tables used to store and retain context records, execution details, input values, output values, process plans, and snapshots.

Activation information

Flow Designer is a Now Platform feature that is active by default.

Related ServiceNow applications and features

App Engine Studio [↗](#)

ServiceNow[®] App Engine Studio (AES) is a development tool for creators of varying skill levels to build applications that meet the immediate needs of your organization.

Integration Hub [↗](#)

Automate integration tasks using ServiceNow components for Flow Designer, or develop custom integrations. A separate subscription is required.

Integration Hub available spokes [↗](#)

Activate spokes to enhance your Flow Designer experience with integration-specific content. Use pre-built flows and actions to automate your integrations or create your own integration automation.

MID Server [↗](#)

The Management, Instrumentation, and Discovery (MID) Server is a Java application that runs as a Windows service or UNIX daemon on a server in your local network. The ServiceNow[®] MID Server enables communication and the movement of data between a ServiceNow instance and external applications, data sources, and services.

Process Automation Designer [↗](#)

ServiceNow[®] Process Automation Designer enables process owners to author cross-enterprise workflows and create a single, unified process. You can also use Process Automation Designer to build the underlying processes for playbooks that Playbook Experience agents and fulfillers use.

[Robotic Process Automation \(RPA\) Hub](#)

Use ServiceNow® Robotic Process Automation (RPA) Hub to emulate user actions and eliminate mundane and repetitive human activities. Automate processes across systems with a combination of UI interactions, element-based automations, and APIs.

Integration Hub release notes

The ServiceNow® Integration Hub application extends the ServiceNow® Flow Designer workflow automation capabilities by enabling you to integrate your instance data with data in external systems. Integration Hub was enhanced and updated in the Tokyo release.

Integration Hub highlights for the Tokyo release

- Send REST requests with an updated REST step that supports dynamic base URLs, duplicate headers, and enhanced configuration options for multipart requests.
- Use the logging utility module to add log levels to your PowerShell scripts for improved logging and debugging.
- Import data with an updated Integration Hub - Import that supports connection override, Data Stream actions with dynamic outputs, and reference field specification in the target table.
- Specify a MID cluster in integration steps. View details about the selected MID cluster in the operations view in Flow Designer.

See [Integration Hub](#) for more information.

Important information for upgrading Integration Hub to Tokyo

Integration Hub report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

New in the Tokyo release

[REST step enhancements](#)

- Dynamically set the base URL for a connection when using a connection alias.
- Configure the file name and content type for each part of a multipart request. Use the file name and content type from an attachment or enter your own.
- Send REST requests that contain duplicate request headers. If you create a REST request with duplicate headers, the headers are sent in the same order that you define them.

[Configure logging for the PowerShell step](#)

Add log messages to your PowerShell scripts. Use log levels for improved logging and debugging.

[Integration Hub - Import enhancements](#)

- Override the connection for an integration. For Data Stream actions that use a connection alias, you can use the default connection alias, or replace it with a child alias.
- Use Data Stream actions with dynamic outputs as data sources.
- For choice and reference fields in the target table, specify the column to map data to in the target table. Use the default display column or select your own.

[Pre-populate custom fields in a configuration template](#)

Pre-populate the custom fields in a connection configuration template by using a pre-edited script. Map the custom fields to records in tables that are outside the connection. Use this capability to view the current values associated to the custom fields while editing a connection.

[Test a credential for the PowerShell step](#)

Test a configured credential directly from the PowerShell step. Confirm that the credential works before you use it.

[Use a MID Cluster in Integration Hub steps and connections](#)

Specify a MID Cluster in integration steps or when configuring a connection. View the MID Server that the step ran on in the Flow execution details.

[Run a flow with a personal OAuth token](#)

Enable a personal (non-admin) user to create an OAuth token and use that token to run an action or flow.

Activation information

Integration Hub is included in Automation Engine and is available with activation of an Automation Engine subscription package. For details, see [Request Integration Hub](#).

Related ServiceNow applications and features

[Flow Designer](#)

ServiceNow® Flow Designer enables process owners to automate approvals, tasks, notifications, and record operations without having to code. You can use the Flow Designer design environment to author flows and actions and to view the results they produce.

[MID Server](#)

The Management, Instrumentation, and Discovery (MID) Server is a Java application that runs as a Windows service or UNIX daemon on a server in your local network. The ServiceNow® MID Server enables communication and the movement of data between a ServiceNow instance and external applications, data sources, and services.

[Connections and Credentials](#)

Credentials and connection information are required to gain access to a computer or network device for ServiceNow® Discovery, ServiceNow® Service Mapping, and ServiceNow® Cloud Management, or to perform work using ServiceNow® Orchestration. When adding content to Share on the ServiceNow® Developer Site or the ServiceNow Store, you can configure connections and credentials relevant to your environment without modifying built content.

Next Experience Components release notes

ServiceNow® Next Experience Components provide the base components used to build custom user interfaces. New components were added and existing components were enhanced in the Tokyo release.

Next Experience Components highlights for the Tokyo release

- Build rich UI experiences with pre-built base system or custom components. To view the full Next Experience Components API reference, usage guidance, and UI Builder setup documentation, visit the [Developer site](#).
- Use common web component patterns and principles, such as a JavaScript framework, immutable data, and simple action handlers.
- Reuse components across multiple user interfaces to create a cohesive experience for your end users.
- Use preset property values to configure properties and event handlers automatically for a component, making the component ready to work when you add it to a page. Presets connect to a controller that acts as a data resource for the component. For more information, see [Component presets in UI Builder](#) and [Controllers](#).

New in the Tokyo release

Components

Component	Description
Condition builder	Added to the toolbox in UI Builder for the first time as a selectable component. The previous functionality hasn't changed.
DocIntel	A container that enables users to perform tasks related to documents such as verification and new document creation.
Email Composer (mini)	Renders the email composer in smaller spaces and within another component, such as in a side panel on a record page.
Form record presence	<p>Adds an avatar when another user is viewing the record at the same time. If two other users are viewing the record, their avatars are both displayed. If more than two users are present, the first two user avatars are displayed with a third overflow trigger "avatar."</p> <p>This component offers the Record presence preset, which displays other users who are viewing the record concurrently. Record presence is used with the Form component.</p>
Gantt	A planning tool that enables users to track project tasks and objectives.
Image	<p>Displays a static image.</p> <p>This component offers the Record header image preset, which defines the title of a record dynamically from the</p>

Components (continued)

Component	Description
	<p>header image field for the table configured in the form header record.</p> <p>Note: The Image component requires the <code>com.servicenow_now_image</code> plugin.</p>
Link set group	A group of link sets that enables users to navigate to different resources.
Mini calendar	A calendar component used on a page that enables a user to select a date from a calendar. Users can also select a specific time in the calendar if the optional time field is configured.
Modal	Overlay window that requires the user to complete an action or provide information to return to the main application. The different types display critical information, enable users to confirm an action, or provide user input.
Stackable Side by Side Panel	<p>Container used to display two components side-by-side (50%/50%) or stacked (100%/100%).</p> <p>This component offers the Record stackable side by side panel for activity stream combo preset when the component is used as a container for the Activity Stream and Activity Stream Compose components. This preset is inherited from the UI Controller Record Page controller.</p>
Stylized Text	<p>Text that can be styled with CSS.</p> <p>This component offers the Record subheading preset, which defines the title of a record dynamically from the subheading field for the table configured in the form header record.</p> <p>Note: The Stylized Text component requires the <code>com.servicenow_now_stylized_text</code> plugin.</p>

Data visualization charts

Chart	Description
Dial	Speedometer chart that displays a single data measure against a semi-circular dial used to represent linear, preferably progressive, values. The semi-circular dial represents the "whole" against which the data measure, as a portion of the whole, is represented by a filled color.
Pivot table	Presents aggregate data broken down by multiple dimensions in a single table. A pivot table can automatically sort, count, and sum up data stored in tables and display the summarized data.

Data visualization charts (continued)

Chart	Description
	Users can use keyboard interactions to access data by moving focus through the UI elements, and trigger actions on interactive elements.
Saved data	Invisible container that holds any saved data visualizations and enables users to reuse these visualizations.

Modals

Modal	Description
Custom Modal Container	Use to create a custom overlay window that display a variety of information that requires the user to complete an action or provide information to return to the main application. Usage guidelines are now provided for this modal.

Changed in this release

Components

Component	Enhancement
Action bar	Offers the Record actions preset, which provides actions for a user to manage the record (e.g. Save). Buttons in the component are defined by the default UI actions for the selected table.
Activity Stream	Offers the Record activity stream preset, which displays the activity for the record, including communications and record updates or changes. Activity stream is often used with the Compose component and can be contained in the Stackable Side by Side Panel component.
Activity Stream Compose	Offers the Record compose preset, which composes messages, such as emails, work notes, and customer-facing comments, related to the record. Messages are tracked in the Activity Stream component.
Agent assist	Offers the Record agent assist preset, which provides information to help agents resolve issues.
Appointment calendar	Enables users to book an appointment slot that is available but has a conflict.
Attachments	Offers the Record attachments preset, which enables the upload and management of attachments to a record.
Avatar	Provides an extra-small size avatar for you to use with a small pill.
Calendar	The following functionality was added:

Components (continued)

Component	Enhancement
	<ul style="list-style-type: none"> • Extended time line view with new column definitions. You can build calendars that have flexibility to show multi-week view, multi-month, multi-quarter view, and more. • A new column header design for various states that scales the calendar views to extended time line views to allow for longer text. • Ability for the user to scroll horizontally within a view. Users can shift the columns and scroll horizontally to see events that spill into next columns. • Right-click capabilities on calendar events, enabling users to take actions without having to open an event first.
Checkbox	Option of a small or medium size check box.
Checklist	Can be configured to enable end users to edit the list by reordering, adding, or removing items. Editing rights also include the ability to add and delete links in a checklist or to specify link text for a particular link address.
Container	Allows separate configuration of inner and outer layer CSS. New controls in the UI Builder Styles tab enable a designer to set CSS properties of layers independently to avoid display issues in special use cases.
Content tree	<p>Expands user keyboard interactions. You can configure the following for a node or selection of nodes:</p> <ul style="list-style-type: none"> • Enable to drag as a copy (default) or move. • Enable a component to accept a drop above, below, or on an item to create a parent/child relationship.
Display value block	<p>If the <code>hideLabels</code> property is set to true, the <code>displayInline</code> property is hidden.</p> <p>This component offers the Record secondary values preset. This preset defines the title of a record dynamically from the secondary values related list for the table configured in the form header record.</p>
Email Composer	<p>The following functionality was added to Email composer:</p> <ul style="list-style-type: none"> • Configuration properties that provide the following capabilities: <ul style="list-style-type: none"> ◦ Render the email composer in compact mode ◦ Configure the ratio of the resizable panes and the minimum width of the right pane ◦ Define the default position of the pane's divider

Components (continued)

Component	Enhancement
	<ul style="list-style-type: none"> ◦ Disable the user's ability to resize panes by dragging the divider ◦ Save the user's preference for pane sizes • A new event that is dispatched when the user changes the ratio of the resizable panes.
Form	Offers the Record form preset, which provides a form for a user to view or edit the selected record. The form fields and sections that are displayed are defined by the default view based on the table selected.
Form Templates	Offers the Record form template preset, which enable selection of a predefined form template or creation of a new template that populates specific fields on the record. Form templates are used with the form component.
Heading	Offers the Record title preset, which defines the title of a record dynamically from the primary field for the table configured in the form header record.
Node map	<p>Designers can now do the following:</p> <ul style="list-style-type: none"> • Use another map layout that displays grouped nodes in layered containers. • Enable users to search for nodes by name. • Select from more status icons and node colors. • Reduce spacing between nodes. • Merge edges to make the node map cleaner.
Radio buttons	Provides the option of a small or medium size check box.
Record tags	Offers the Record tags preset, which enables creating and maintaining additional attributes and information related to a record.
Resizable panes	<p>Designers can now do the following:</p> <ul style="list-style-type: none"> • Resize panes vertically. • Define the pane position. • Select the default pane to display. • Define the width of the top and left panes. <p>This component offers the Record resizable panes preset, which enables a user to control spacing and pane visibility.</p>
Ribbon	Offers the Record ribbon preset, which helps users quickly scan important information about the record, including the record overview and time line. Configuration properties can be used to optimize screen real estate.

Components (continued)

Component	Enhancement
Tabs	Offers an option for tabs to be displayed vertically. Tabs replaces the Record Tabs component in the Record page template. This component was named Tab Set in previous versions.
Tab Set	Renamed in this release to Tabs and enhanced.
Timeline	Enables a popover that displays details for a point on the time line and select a macroponent to display in this popover. The contents of the slot in the popover can be any component or macroponent, that can include action items.
Typeahead multi	Keeps the drop-down panel open for selection until dismissed by pressing the Escape or Tab key or by clicking outside the component.

Page templates

Page	Enhancements
Record	<ul style="list-style-type: none"> • Re-engineered with a controller and preset configuration values for the principal components. • Record Tabs component replaced with the Tab component. • Details tab contains Resizable panes, Form, and Activity Stream components. • Contextual sidebar opens Attachments, Agent Assist, and Form Templates.

Deprecations

Components

Component	Description
Dashboard viewport	The Dashboard viewport component is deprecated. All pages using the Dashboard Viewport component will be updated automatically to use the Dashboard component from the Dashboard page template.
Dropdown panel	Dropdown panel is deprecated. Use Dropdown list (<code>now-dropdown-list</code>) with the Dropdown (<code>now-dropdown</code>) component instead.

Page templates

Page template	Description
Agent assist	The Agent assist page template is deprecated and is replaced by the Agent assist component. All existing pages using the Agent assist page template continue to be supported. You can now embed the Agent Assist component directly into a tab to replace the function of the page template.
Inbox	The Inbox page template is deprecated, and there is no replacement. However, existing pages that use Inbox will continue to work normally in instances upgraded to Tokyo or later.

Activation information

Next Experience Components is a Now Platform feature that is active by default.

Accessibility information

Data visualization charts

Chart type	Enhancements
Time series	Access data with keyboard interactions by moving focus through the UI elements and trigger actions on interactive elements.
Bar	Access data with keyboard interactions by moving focus through the UI elements and trigger actions on interactive elements.
Pie/Donut	Access data with keyboard interactions by moving focus through the chart segments and legend and trigger actions on interactive elements.

Related ServiceNow applications and features

UI Builder [↗](#)

UI Builder is a low-code tool that enables developers to quickly build pages for workspace and portal web-based experiences.

Workspace UI [↗](#)

Use components to build custom workspace experiences for agents who solve internal or external customer issues.

Process Automation Designer release notes

The ServiceNow® Process Automation Designer application enables process owners to create multiple-flow processes from a task board interface. Process Automation Designer was enhanced and updated in the Tokyo release.

Process Automation Designer highlights for the Tokyo release

- Duplicate an existing process to copy its trigger, lanes, activities, and experience configuration.
- Use reference qualifiers to view only what you want to see in reference fields.
- Navigate better organized Activity properties in General, Automation, and Experience tabs.
- Configure Activity properties without needing to leave Process Automation Designer to find action and flow outputs.
- Go directly to an activity's source flow in Flow Designer in Activity properties.

See [Process Automation Designer](#) for more information.

New in the Tokyo release

[Duplicate a process](#)

Make a copy of an existing process with the same trigger, lanes, activities, and experience configurations as the original. Edit the duplicated process to quickly create a working variation.

UI changes

[New look for activity properties](#)

Activity properties are organized by General, Automation, and Experience tabs.

Changed in this release

[Reference qualifiers added](#)

Process Automation Designer now supports reference qualifiers. Use qualifiers to see only the data you want in reference type fields, the same way you do in Flow Designer.

[Create a process definition](#)

- In the new Automation tab of Activity properties, a link takes you to the activity's source flow in Flow Designer.
- In Activity properties, the outputs of an activity's flows and actions are now displayed.

Activation information

Process Automation Designer is a Now Platform feature, which requires a separate subscription. To build processes for applications, you need a separate subscription to the associated application. For details, see [Activate Process Automation Designer](#).

Related ServiceNow applications and features

[Flow Designer](#)

Flow Designer is a Now Platform[®] feature that enables process owners to automate work. Build multi-step flows from reusable components without having to code.

[Playbook Experiences](#)

ServiceNow® Playbook experiences enable you to customize the default Playbook user experience to interact with your desired business process workflow.

Table Builder release notes

The ServiceNow® Table Builder application is a modern, centralized way to create tables and forms and manage display logic. Table Builder was enhanced and updated in the Tokyo release.

Table Builder highlights for the Tokyo release

- The application name was changed from “AES Table Builder” to “Table Builder” in the ServiceNow Store.
- Make fields on a form inactive and prevent them from appearing in the available list of fields in the form editor. Inactive fields may be reactivated from the **Table** tab.
- Access a new forms list view through an additional actions menu on the **Forms** tab in Table Builder.
- Find specific field columns using search keywords or filtering with the improved navigation on the **Table** tab.

See [Table Builder](#) for more information.

i Important: Table Builder is available in the ServiceNow Store. For details, see the “Activation information” section of these release notes.

New in the Tokyo release

[Table Builder](#)

This application now displays as “Table Builder” in the ServiceNow Store instead of “AES Table Builder.”

[Formula Builder](#)

Configure calculated values when configuring field column information without needing to write a script.

[All form views list](#)

Starting in Table Builder 23.0.1, access a filterable list of form views when working with forms in App Engine Studio. This navigational menu also allows you to quickly navigate to a different form view, create a form view, duplicate a form view, or configure a related list or UI action.

[Table field column search and filtering](#)

Starting in Table Builder 23.0.1, filter the list of available table fields for a selected table using keywords or select an option to filter inactive or extended fields on the **Table** tab in App Engine Studio.

Changed in this release

[Inactive fields](#)

Make fields on a form inactive and prevent them from displaying in the available list of fields in the form editor. Inactive fields may be reactivated from the **Table** tab.

Activation information

Table Builder is a Now Platform feature that is active by default when you install App Engine Studio.

Browser requirements

Internet Explorer is not supported.

Related ServiceNow applications and features

[App Engine Studio](#)

Create apps in App Engine Studio and then create the data model in Table Builder.

Table Builder for App Engine release notes

The ServiceNow® Table Builder for App Engine application is a modern, centralized way to create tables, forms, and flows, and manage display logic. This premium version of Table Builder for App Engine is available only to App Engine v2 licensed customers. Table Builder for App Engine is a new application in the Tokyo release.

Table Builder for App Engine highlights for the Tokyo release

- This application includes all features and changes in the standard Table Builder release notes (see [Table Builder release notes](#)).
- Build custom flows that run when records on a selected table are created and updated.
- Create data tables for your application from existing PDF forms in App Engine Studio when you have Table Builder for App Engine installed.

See [Table Builder](#)  for more information.

i Important: Table Builder for App Engine is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Table Builder for App Engine features

[Table Builder](#)

This application includes all new features and changes from the standard Table Builder release notes (see [Table Builder release notes](#)) in addition to those features listed here.

[Flows](#)

Build custom flows that run when records on a selected table are created and updated.

[Create tables from PDF forms](#)

Beginning with Table Builder 23.0.1, you can quickly create data tables for your application from existing PDF forms in App Engine Studio when you have Table Builder for App Engine installed. After you have imported a PDF, the PDF extractor lets you select text in the displayed form and then configure a new field from it, enabling you to build out your data model faster.

Activation information

Install Table Builder for App Engine by requesting it from the ServiceNow Store. 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](#).

Additional requirements

You must be an App Engine v2 licensed customer to install Table Builder for App Engine. Contact your account team for details.

Browser requirements

Internet Explorer is not supported.

Related ServiceNow applications and features

[App Engine Studio](#)

Create apps in App Engine Studio and then create the data model in Table Builder.

UI Builder release notes

The ServiceNow® UI Builder application is a web user interface builder for building pages for configurable workspaces, App Engine Studio generated workspaces and portals, or custom web experiences with Next Experience Components and custom web components. UI Builder was enhanced and updated in the Tokyo release.

UI Builder highlights for the Tokyo release

- Simplify how your users can create a page. Your users can create record pages faster with the new Standard Record page template and blank record page template.
- Enable preset auto-configure components for your users.
- Reduce the cost of ownership and provide easier page maintenance for your users.
- Provide upgrade-safe templates for your users.

See [UI Builder](#) for more information.

New in the Tokyo release

[Presets](#)

Select a preset to apply a pre-defined configuration to certain components. Presets simplify the configuration of component properties and event handlers. You can also override preset values to customize components or disable presets.

[Controllers](#)

Use the new Record Controller to encapsulate the business logic that is related to record pages and to simplify component configuration. Controllers can bind to data, similar to data resources, and also include state parameters and scripting. Presets use the data in a controller to auto-configure a component.

[Standard Record Page template](#)

Use the new Standard Record page template that includes the default presets for components and the Record Controller that wires components to data and

automatically applies test values. This template reduces the time to create record pages and can be customized while being upgrade-safe. A blank record page template that includes only the Record Controller is also available.

[Preset-defined event mappings](#)

Use a preset to apply event mappings automatically for certain components. You can also override event mappings that are configured by presets or disable presets.

UI changes

Events

On a first click, the **Events** tab shows only existing event mappings. If no event mappings have been configured, you can select **Add event mapping** to add event mappings.

Changed in this release

[Customize tabs](#)

Customize your tabs to render vertically. You can create Viewport extension tabs in a set next to the empty container and repeater tabs, and then apply the conditions to hide the individual tabs in a set.

[Create pages](#)

Reduce the time to create pages by using the new templates that use presets and controllers. Former page templates are made available as legacy templates.

[Table Builder access](#)

When the Table Builder plugin is installed, Table Builder is now accessible from UI Builder when adding a form component to a page. When the form component is being configured, users can select **Edit form views** to launch the **Forms** tab in Table Builder.

[Edit JSON](#)

The JSON editor (released in San Diego) has been enhanced. Use the JSON editor anywhere in UI Builder where JSON exists. You can edit nested JSON objects and save empty property values in the JSON editor.

Removed in this release

- Users can't edit variant and subpage templates after creating a variant or subpage.
- Users can't create tabs from a template in the contextual sidebar, viewport modal, viewport tabs, or viewport components.

Activation information

UI Builder is a Now Platform feature that is active by default.

Browser requirements

Internet Explorer is not supported.

Related ServiceNow applications and features

[App Engine Studio](#)

Create apps in App Engine Studio and then create the user interface in UI Builder.

Customer Service Management release notes

Customer Service Management has new and updated features in the Tokyo release.

Customer Service Management (CSM) release notes

The ServiceNow® Customer Service Management application enables customer service organizations and service operations to collaborate on customer problems proactively to resolve customer issues. Customer Service Management was enhanced and updated in the Tokyo release.

Customer Service Management highlights for the Tokyo release

- Enable agents to place orders faster, improving efficiency and customer satisfaction, with [Order Management for Customer Service Management](#).
- Enable agents to evaluate, prioritize, and resolve cases more quickly with [Task Intelligence for Customer Service](#) features, including multi-lingual case categorization, attachment-based case categorization, sentiment analysis, and document intelligence.
- Unify operations across internal and external [business locations](#) within a brand.
- Proactively serve customers on third-party sites or mobile apps with [Engagement Messenger](#).
- Display [Recommended Actions](#) based on case context and enable agents to perform these actions with a single click.

See [Exploring Customer Service Management](#) for more information.

Important information for upgrading Customer Service Management to Tokyo

Customer Service Management `report_view` access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

New in the Tokyo release

[Task Intelligence for Customer Service](#)

Use the Task Intelligence capabilities, powered by AI, to automate some of the routine aspects of the task life cycle such as task creation, routing, and resolution, and to increase agent productivity.

[Task Intelligence: Sentiment analysis](#)

Detect and display the initial and ongoing sentiment of customer service cases. Help agents gauge customer emotions and better prioritize their work while enabling them to provide more empathetic and compassionate customer experiences.

[Task Intelligence: Case categorization](#)

- **Multi-lingual case categorization:** Use an AI model pre-trained in multiple languages to understand text in emails and cases created in different languages and to predict and automatically populate fields on the case form.

Display the predictions as recommendations until you gain confidence in the model.

- **Attachment-based case categorization:** Use an AI model to parse email and case attachments and to auto-populate the Case form based on signals contained in the attachment text.

Task Intelligence: Document Intelligence [🔗](#)

Extract relevant information from PDF and image files, such as credit card numbers, vendor names, or customer addresses, and add that information to fields on the Case form.

Task Intelligence: Language detection

Identify the language used to create customer service cases. Add the language to the **Language** field on the case record and/or add the language to the case as a skill. Cases can then be routed to agents with the necessary language skills.

Task Intelligence Admin Console [🔗](#)

Use the Admin Console to rapidly deploy AI solutions and measure business impact. Set up predictive models, track model performance, and preview the agent experience.

CSM Configurable Workspace record pages [🔗](#)

Use the **CSM default record page** and the **CSM Interaction record page** to display record information in CSM Configurable Workspace. These pages, available with the CSM Configurable Workspace v23.0.5 store app, are built with UI Builder constructs such as presets and controllers.

If you install the CSM Configurable Workspace v23.0.5 store app and you want to use any of the following features, you must also upgrade to the corresponding store apps:

- Recommended Actions for Customer Service v24.0.0
- Playbooks for Customer Service Management v2.1.0
- Case Playbook for Onboarding v4.1.0
- Case Playbook for Complaints v4.1.0
- FSM Configurable Dispatcher Workspace v23.2.3

For the following functionality, it is recommended that you use the existing **Record Default** page and the **Interaction Record Page**:

- Creating or editing knowledge articles from a record.
- Displaying custom tabs on a record.
- Composing messages from an interaction record.

Recommended Actions: Enhanced Call to Action [🔗](#)

Quickly launch a call to action (CTA) within a guidance. Agents can access recommended actions in the contextual side panel in CSM Configurable Workspace and execute a guidance with a single click.

Recommended Actions: Guidances and Resource Generators [🔗](#)

Use configured guidances, resource generators, and demo data to launch the recommended actions quickly.

Support for external business locations [🔗](#)

- Enhance the industry data model to unify operations across internal and external business locations (EBL).
- Support the day-to-day operations of service organizations with a self-service portal.
- Extend the service organization staff data model to capture relationships between staff and service organizations.

[Service organization install base](#)

Extend proactive customer support to the industry data model, by tracking products and services installed at service organizations.

[Enhanced address data model for accounts](#)

Define addresses once and reuse them within an account hierarchy, or across account hierarchies. The enhanced address data model makes it possible to link a location with multiple accounts without creating multiple location records.

[Enable language selection for guest users](#)

Enable unauthenticated users to choose a locale from the self-service portal header and view content in the chosen locale.

Unauthenticated users will be able to choose a locale and view content in their chosen locale on a portal.

Authenticated users will be able to easily choose a language from the widget on the portal header.

[Quick start tests for Customer Service Management](#)

After upgrades and deployments of new applications or integrations, run quick start tests to verify that Customer Service Management works as expected. If you customized Customer Service Management, copy the quick start tests and configure them for your customizations.

Changed in this release

Applications moved to the ServiceNow Store

The following applications are available on the ServiceNow Store, providing customers with access to new features and enhancements in between releases.

- CSM Configurable Workspace
- Guided Decisions
- Recommended Actions

[Recommended Actions](#)

- The Next Best Actions feature has been renamed as Recommended Actions.
- Get notified when the guidance or guided decision tree encounters an error.
- Use the CSM default record page and the CSM Interaction record page to display field recommendations in CSM Configurable Workspace.

[Playbooks for Customer Service Management](#)

The Playbooks for Customer Service Management v2.1.0 store release supports the **CSM default record page** and the **CSM Interaction record page** introduced in the CSM Configurable Workspace v23.0.5 store app.

Deprecations

Starting with the Tokyo release, the following applications have been deprecated:

- The Legacy - Workforce Optimization for Customer Service plugin (com.snc.wfo.csm) 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.
- The Vaccine Administration Management v5.0 is no longer deployed, enhanced, or supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support Knowledge Base.

Activation information

Customer Service Management is a Now Platform feature that is available with activation of the Customer Service plugin (com.sn_customerservice.com). For details, see [Activate Customer Service Management](#).

Additional Customer Service Management features are available with activation of other plugins. For details, see [Additional plugins for Customer Service Management](#).

Install any ServiceNow Store applications by requesting them from the ServiceNow Store. 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](#).

Browser requirements

ServiceNow workspaces do not support mobile devices. Starting with the Orlando release, ServiceNow workspaces do not support Internet Explorer or Microsoft Edge. Instead, use Microsoft Edge - Chromium or one of the other supported browsers listed in [Browser support](#).

Related ServiceNow applications and features

[Communities](#)

From the Customer Service and Consumer Service Portals, enable your customers to connect, engage, and collaborate using the ServiceNow[®] Communities application. Customer Service agents can create cases from community discussion threads and resolve cases with community content.

[Customer Project Management](#)

The Customer Project Management plugin (com.snc.csm_ppm) enables you to create projects for a customer account using the ServiceNow[®] Project Portfolio Suite with Financials application. It also gives end users visibility into their projects from the Customer Service Portal. This plugin requires the Project Portfolio Suite with Financials plugin (com.snc.financial_planning_pmo).

[Event Management](#)

Customer Service Management provides an integration with ServiceNow[®] IT Operations Management Event Management. This integration enables you to create cases proactively from alerts either manually or through automation. Customer Service agents can track the accounts and the corresponding install base items that are affected by the alert. They can also track the operational status of an account's install base to better correlate customer issues and provide faster responses.

[Field Service Management](#)

Customer Service Management includes an integration with the ServiceNow® Field Service Management application. With this integration, users and customers can perform the following tasks:

- Field service technicians can view customer account and contact information on work orders and work order tasks in the Field Service Management application.
- Customer service agents can create work orders from cases in the Customer Service Management (CSM) application.
- Customers and consumers can view case-related work orders from the Customer Service and Consumer Service Portals.

Financial Management [↗](#)

Customer Service Management includes an integration with the ServiceNow® Financial Management application. This integration provides cost allocations for Customer Service Management, which you can view on the Financial Management workbench.

Note: The Financial Management For CSM plugin (com.snc.financial_management_for_csm) is no longer available for direct activation by the administrator. You can request this plugin through the Now Support Customer Service system.

Knowledge Management [↗](#)

From the Customer Service and Consumer Service Portals, enable your customers to search for shared information using the ServiceNow® Knowledge Management application. Customer service agents can resolve cases with Knowledge content.

Process Automation Designer [↗](#)

Customer Service Management provides an integration with the ServiceNow® Process Automation Designer application. This integration provides the ability to configure processes such as playbooks.

Process Optimization [↗](#)

ServiceNow® Process Optimization helps analysts and process owners analyze the effectiveness of their business processes. Create automated business process flows from your data so that you can monitor and more quickly discover inefficiencies in your processes.

Continual Improvement Management [↗](#)

Use ServiceNow® Continual Improvement Management to request improvement opportunities. You can implement phases and tasks to meet performance goals, track progress, and measure success. You can also view, create, and associate improvement initiatives from within the Process Optimization application.

Service Management applications

Customer Service Management includes integrations with the following ServiceNow® Service Management applications: [Incident Management](#) [↗](#), [Problem Management](#) [↗](#), [Change Management](#) [↗](#), and [Request Management](#) [↗](#). With these integrations, users can create incident, problem, change, and request records from customer service cases. Customers can also submit requests from the Customer Service Portal.

UI Builder [↗](#)

UI Builder is a low-code web user interface builder that enables developers to quickly build pages for workspace and portal web-based experiences. Use the base system and custom web components to build your pages.

[Workforce Optimization for Customer Service](#)

Manage and maintain the productivity of your workforce from a single application using ServiceNow® Workforce Optimization for Customer Service. With this application, you can efficiently route work to your team, manage your team's skills and schedules, and monitor their performance.

[Workspace](#)

ServiceNow® Workspace is a graphical user interface that puts multiple tools on one page, including the tools that agents must find, research, and resolve issues. CSM Configurable Workspace and CSM Agent Workspace are customer service-specific implementations that provide tier 1 agents with the tools that they must respond to customers and to resolve cases.

Order Management for Customer Service Management release notes

The ServiceNow® Order Management application enables you to create products and capture and manage customer orders. You can also create product catalogs, add pricing to product offerings, and group products into bundles. Order Management was enhanced and updated in the Tokyo release.

Order Management highlights for the Tokyo release

- Enable cloud-based order creation and an order system.
- Use a data model that works with external Configure, Price, Quote (CPQ) systems.
- Let your agents manage all aspects of the order process.
- Select configurable product offerings that have recurring pricing and customizable product arrangements.
- Enable your customers to create and track orders from the user-friendly Customer Service Portal.
- Capture your orders for all types of product configurations.

See [Exploring Order Management](#) for more information.

i Important: Order Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Groups products into bundles](#)

Group products into product bundles:

- [Add Attribute Adjustment Pricing](#) - Add attribute adjustment pricing to product offerings.
- [Create product catalogs](#) - Create an Order Management product catalog for basic products, configurable products, and bundle products.

[Order capture for all product offerings](#)

Capture orders for all product offerings.

[Configurable product offerings](#)

Create configurable product offerings.

Activation information

Install Order Management by requesting it from the ServiceNow Store. 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 more details, see [Install Order Management](#).

Related ServiceNow applications and features

[Customer Service Management Overview](#)

The Customer Service Management (CSM) application enables you to provide service and support for your external customers through communication channels such as web, email, chat, telephone, and social media.

Workforce Optimization for Customer Service release notes

Use the ServiceNow® Workforce Optimization for Customer Service application to manage and maintain the productivity of your workforce from a single location. Workforce Optimization for Customer Service was enhanced and updated in the Tokyo release.

Workforce Optimization for Customer Service highlights for the Tokyo release

- Use Demand Forecast to enable managers to view their agent staffing forecast at 15-, 30-, and 60-minute intervals.

See [Exploring Workforce Optimization for Customer Service](#) for more information.

New in the Tokyo release

[Demand Forecast for managers at 15-, 30-, and 60-minute intervals](#)

As a manager, view the staffing forecast at 15-, 30-, and 60-minute intervals in the team calendar using the Demand Forecast application.

Deprecations

Starting with the Tokyo release, Legacy Workforce Optimization 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.

To access the next generation of the Workforce Optimization for Customer Service application, transition to the Workforce Optimization for Customer Service application that is available from the ServiceNow Store. You can now configure Workforce Optimization for Customer Service using the [UI Builder](#). For more information see, [Workforce Optimization for Customer Service](#).

Activation information

Workforce Optimization for Customer Service is a Now Platform feature that is available with activation of the Workforce Optimization for Customer Service plugin (com.snc.wfo_csm). For details, see [Activate Workforce Optimization for Customer Service](#).

Related ServiceNow applications and features

[Advanced Work Assignment](#)

Automatically assign work items to your agents based on their availability, capacity, and skills using ServiceNow® Advanced Work Assignment.

[Skills Management](#)

Assess the skills that your organization needs, identify gaps, and plan for the hiring and training of your teams using ServiceNow® Skills Management.

[CSM Workspaces](#)

Agents can swap shifts, manage their time-off requests and approvals, and complete assigned trainings using ServiceNow® CSM Agent Workspace.

DevOps release notes

DevOps has new and updated features in the Tokyo release.

DevOps Change Velocity release notes

The ServiceNow® DevOps application provides data insights, accelerate change, and increase visibility in your DevOps environment using a single system. DevOps Change Velocity was enhanced and updated in the Tokyo release.

DevOps Change Velocity highlights for the Tokyo release

- Set up your coding, planning, and orchestration tools more quickly.
- Make use of orchestration capabilities for GitHub Actions.
- Import historical data for Microsoft Azure DevOps artifacts. The imported data provides insights into root causes for complete change traceability.
- Use the default change automation and approval policy to enable auto-reject, auto-approve, or defer for manual approval for change requests.
- Generate DevOps scripted pipeline steps with the Jenkins snippet generator.

See [DevOps](#) and [DevOps Change](#) for more information.

Important: DevOps is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Import Azure DevOps artifacts](#)

Import Azure DevOps artifacts to enhance traceability.

[JFrog integration with DevOps](#)

The JFrog integration enables you to track artifacts published to JFrog from Jenkins builds.

[Accelerating DevOps Change](#)

The Change automation and approval policy enables the auto-rejection, auto-approval, or deferral for manual approval for change requests for metrics on commits, code coverage, test results, sonar scan results, risk inputs, and more. To help users to quickly take corrective action, reasons for rejection are captured in work notes.

[Jira integration with DevOps](#)

Integrate the Jira planning tool with DevOps.

[GitHub integration with DevOps](#)

Integrate GitHub with DevOps.

[SonarQube integration with DevOps](#)

The SonarQube integration enables code quality checks on your DevOps pipelines.

[Managing pull request pipelines from DevOps](#)

Manage Jenkins pipeline's pull requests for GitHub and BitBucket coding sources from ServiceNow DevOps. You can enable the change approval process on your pull request to control pull request merge approvals from ServiceNow DevOps and monitor pull request details associated with the change request.

[Monitor SonarQube new code metrics](#)

Monitor SonarQube new code metrics configured on your GitHub Actions, Jenkins, or Azure DevOps pipelines in ServiceNow DevOps. New code metrics helps you focus on the most relevant changes in your project.

[Importing existing GitLab pipelines and repositories](#)

Import existing GitLab pipeline and repository data into ServiceNow DevOps to view and manage GitLab data.

[Split tool integration with DevOps](#)

Integrate the Split tool with ServiceNow DevOps to manage feature flag requests from ServiceNow DevOps.

[Rally integration with DevOps](#)

Integrate the Rally planning tool with DevOps to import projects, user stories, and defects from the Rally tool into DevOps to enable change acceleration.

[Argo CD integration with DevOps Change Velocity](#)

Integrate Argo CD with DevOps Change Velocity to automate the deployment of applications from GitHub repositories.

[Veracode integration with DevOps Change Velocity](#)

Connect Veracode that is integrated with your CI/CD pipelines to DevOps Change Velocity to retrieve security scan results. This helps you determine how vulnerable your code is.

UI changes

New look for DevOps

DevOps has a new, modernized look and feel. For more information, see [Next Experience UI](#).

[Improved Getting started process for Jenkins](#)

The initial setup process of connecting to your coding, planning, and orchestration tools has been improved.

[SonarQube](#)

The Sonar tool name has been renamed SonarQube.

Permission checks

The **Permission check result** and **Last permission check** fields have been added to the tool details page of all connected tools to display the status of the permission checks.

Changed in this release

New DevOps Insights workspace experience

The new DevOps Insights workspace provides a more efficient, modernized way for you to work. For more information, see [DevOps Insights reports and Pipeline UI](#). Standard dashboard is still supported in this release.

Monitor Sonar scans as non-admin user

Monitor Sonar scans configured on your GitHub Actions, Jenkins, or Azure DevOps pipelines in ServiceNow DevOps as a non-admin Sonar user.

DevOps Demo Validate Subflow

Copy the DevOps Demo Validate Subflow subflow to resolve the tool connection error for custom tool integrations when the validate subflow is not configured, and an integration capability record with the same subflow name does not exist for the associated tool integration.

Associate services to GitHub Actions pipeline steps

Map services to GitHub Actions pipeline steps and identify the type of each step to define where the services will be deployed in the pipeline.

Change request ID in Jenkins pipeline

When you trigger a scripted Jenkins pipeline and a change request is created as part of the pipeline execution stage in ServiceNow DevOps, you can retrieve the change request number in the Jenkins pipeline by running the `snDevOpsGetChangeNumber` script after the change request is approved in ServiceNow DevOps.

Azure build artifact changes

- Build artifacts created using the Publish Build Artifacts task will be part of the artifact repository whose name will be defaulted to the build pipeline name.
- If two artifacts with the same name, belonging to the same repository, and having different versions are used as release triggers for a release pipeline, then the related lists (like work items, commits, test summaries, etc) will include DevOps data related to both the artifact versions when a change exists in the release pipeline.

Permission check for GitHub tool

Check the permission requirements of the GitHub tool before connecting from the workspace to prevent any errors when you discover, import, or configure the tool. You can perform the permission check only when OAuth 2.0 is selected as the authentication type, and the OAuth is created using GitHub apps.

OAuth 2.0 credentials for GitHub Apps - JWT

Authenticate connection requests from ServiceNow DevOps to GitHub by setting up OAuth 2.0 credentials for GitHub Apps - Json Web Token (JWT).

Delete standalone connection and credential aliases

Free up space on your system by running a background script to delete connection and credential aliases that don't label any connection or credential records.

Retrieve and update change request details from a pipeline

Retrieve and update change request details associated with a Jenkins pipeline by running the `snDevOpsGetChangeNumber` and `snDevOpsUpdateChangeInfo` scripts respectively in the pipeline.

[Cancel change request when a pipeline step is canceled](#)

Cancel a change request when the associated stage in the pipeline fails or is canceled by setting the `sn_devops.cancel_change_on_pipeline_cancel` property to true.

[Jenkins folder depth](#)

Retrieve only those orchestration tasks and pipelines that are in folders whose nesting level in Jenkins is less than or equal to the number specified in the `sn_devops.discover.folder.depth` property. For example, if you want to discover orchestration tasks and pipelines for a folder structure that is nested two times in your Jenkins environment, you must enter 2 as the value for this property.

[Permission checks for connected tools](#)

Perform permission checks on connected tools at any time, to verify if the existing credentials have necessary permissions.

[Update tool credentials](#)

Update the tool credentials for connected tools with credentials that have sufficient permissions for seamless discovery and import of data from your tool.

[DevOps auto discover tool associations scheduled job](#)

Automatically discover new pipelines, plans, and repositories for all connected tools by running the DevOps auto discover tool associations scheduled job.

[Set up system accounts from DevOps Change workspace](#)

Enable DevOps admins to connect with external tools by setting up system accounts.

[Azure DevOps connection at organizational level](#)

Connect with your Azure DevOps instance at the organization level or at a project level.

[Tool owner role](#)

New Tool owner role to enable users to create tools and perform tool related actions.

[Application access control](#)

Control user access to applications through user groups. Users with DevOps App Owner role can edit and associate objects with the application.

[Tool access control](#)

Control user access to a tool through user groups, with the option to allow all app owners to view and associate the tool's objects to applications.

[Notifications on tool credential expiration](#)

Configure notifications to be sent to tool users on expiration of tool credentials or when credentials are about to expire to alert them and prevent any loss of data.

[Last event received alert](#)

Alert DevOps admins when events were being last received to caution them about any possible issues that might occur with their tool connection.

[Change request state in Jenkins or GitHub Actions pipeline logs](#)

Configure how and when the change state must be displayed in the Jenkins or GitHub Actions pipeline logs. This enables developers to view the status of the change in the console logs of the pipeline itself.

[Enable change control automatically for Jenkins pipeline](#)

Enable change control automatically for declarative or scripted pipelines in Jenkins by running the pipeline if you have used the `snDevOpsChange` script.

[DevOps API](#)

The `app()` and `tool()` methods have been updated to enable the Azure DevOps tool connection at the organization level.

[DevOps multi-model change](#)

Use change models in DevOps Change Velocity that enables better flexibility in defining change models or processes to reflect modern development practices.

[Secure token authentication for integration user](#)

Configure Azure DevOps, Jenkins, and GitHub Actions using token-based authentication for the integration user for better security.

[ServiceNow DevOps change request state in Azure DevOps pipeline logs](#)

View the change request state and the corresponding policy conditions in the Azure DevOps (ADO) pipeline console logs whenever the state of a change request is updated without having to navigate to ServiceNow® DevOps Change Velocity.

[Get and update change request details](#)

Retrieve and update change request details associated with an Azure DevOps pipeline and the GitHub Actions workflow by using the ServiceNow® DevOps extensions available in the Azure DevOps and GitHub Actions marketplace.

[Configure webhooks manually](#)

As a tool owner or DevOps admin, access the token and `sys_id` for webhooks by configuring webhooks manually in your third-party tool rather than configuring them automatically from ServiceNow® DevOps Change Velocity.

[GitHub Actions deployment gates](#)

Enforce quality gates on every deployment environment in GitHub Actions and retrieve the change details from within the Deployment Protection Rule console logs of GitHub Actions.

[Simplified setup](#)

Spend less time in the initial setup of ServiceNow® DevOps Change Velocity thanks to the removal of the `CreateDevOpsTool` connection setup activity.

[Validate ServiceNow DevOps extension in Azure DevOps](#)

Validate the installation of ServiceNow DevOps extension in Azure DevOps with a playbook activity.

[Configure webhooks automatically in Rally](#)

Configure webhooks automatically as part of the playbook while connecting to the Rally tool.

[Assign services to the pipeline steps](#)

While associating pipelines with an application, for each selected pipeline, all steps or stages are imported from the last successful execution.

Activation information

Install DevOps by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

Now Intelligence [Performance Analytics](#)

ServiceNow® Performance Analytics is an in-platform process optimization solution to create management dashboards, report on KPIs and metrics, and answer key business questions. The application helps increase quality and reduces the costs of service delivery.

IT Service Management [Change Management](#)

The ServiceNow® Change Management application provides a systematic approach to control the life cycle of all changes, facilitating beneficial changes to be made with minimum disruption to IT services.

Strategic Portfolio Management (SPM) [Agile Development](#)

The ServiceNow® Agile Development application helps you deliver software projects more efficiently by managing and tracking software development life-cycles using an iterative, incremental, and flexible approach.

Governance, Risk, and Compliance [Risk Management](#)

Use the ServiceNow® Governance, Risk, and Compliance Risk Management application to continuously monitor and identify high-impact risks, improve your risk-based decision-making, and reduce reaction time effectively. The application also provides structured workflows for the management of risk assessments, risk indicators, and risk issues.

DevOps Config release notes

The ServiceNow® DevOps Config application manages and validates configuration data in your DevOps environment using a single system. DevOps Config is a new application in the Tokyo release.

DevOps Config highlights for the Tokyo release

- Manage and secure all configuration data in a consolidated model with role-based access control as the single source of truth.
- Automatically validate configuration data before deployments to prevent non-compliant changes in production, and ensure adherence to policy frameworks.
- Integrate common DevOps tools and processes in your environment with DevOps Config.

See [DevOps Config](#) for more information.

Important: DevOps Config is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

DevOps Config features

[DevOps Config Insights dashboard](#)

Use the DevOps Config Insights dashboard to identify opportunities for managing your configuration data.

Starting with DevOps Config v2.1.0, the DevOps Config Insights store app is rolled into the DevOps Config store app. Therefore, it's no longer necessary to install DevOps Config Insights separately, and it can be uninstalled from your instance after installing DevOps Config v2.1.0.

[Microsoft Azure DevOps and Jenkins orchestration tool integration](#)

Integrate Microsoft Azure DevOps and Jenkins orchestration tools to manage configuration data within DevOps Config.

Starting with DevOps Config v3.0.0:

- Combine your application code and config data in a single Jenkins or Microsoft Azure DevOps pipeline. The pipeline no longer fails on non-config related changes when getting a snapshot.
- View policy validation results as test results (instead of just passed snapshots) on the ADO build tests results page when getting a snapshot for an Azure DevOps pipeline.
- View results that are compliant with exception in the test results file when getting a snapshot for a Jenkins or Azure DevOps pipeline so that you can take action.
- Upload configuration data to a collection, or to a variable folder for a Jenkins or Azure DevOps pipeline.

Default set of DevOps Config policies [↗](#)

Use the optional DevOps Config Policy content pack to achieve faster time to value, or to customize a policy based on the needs of your environment.

Starting with DevOps Config v2.1.0, use these data model focused policies added to DevOps Config Policy content pack (v1.2.0) to validate your configuration data:

- correctHostRegex
- differentKeyNamesSameValues
- keyNamingConvention
- keyPathValidator
- listComparator
- nodesKeyComparator
- nodesValueComparator

Starting with DevOps Config v3.0.0, use these data model advanced policies added to DevOps Config Policy content pack (v1.3.0) to validate your configuration data:

- duplicateValues
- keyValueSubstringCheck

Default set of DevOps Config exporters [↗](#)

Use the optional DevOps Config Exporter content pack to achieve faster time to value, or to customize an exporter based on the needs of your environment.

Starting with DevOps Config v2.1.0, use multiple keys as an input for the `returnValueforUniqueKeyName` exporter in DevOps Config Exporter pack (v2.1.0).

Application synchronization with the DevOps Change Velocity application [↗](#)

Leverage application model objects created between DevOps Config and DevOps Change Velocity applications.

DevOps Config API

Starting with DevOps Config v2.1.0, programmatically manage your applications using the DevOps Config REST API.

[Component libraries and shared components](#) ↗

Starting with Configuration Data Management v4.1:

- Create and manage component libraries to organize shared components which can be used across various applications.
- Submit requests to add application components to a component library so that they can be shared across multiple applications.
- Use the Config Data Analyzer tool to compare and identify the similarities and differences in:
 - [Latest config data](#) ↗ for the same or different applications
 - [Snapshots](#) ↗ of any deployables from the same or different applications
 - [Committed changesets](#) ↗ of the same or different applicationsYou can also [compare two snapshots of the same deployable](#) ↗ to identify the changes between them.

Activation information

Install DevOps Config by requesting it from the ServiceNow Store. 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](#) ↗.

Related ServiceNow applications and features

[DevOps Change](#) ↗

Use the ServiceNow[®] DevOps Change Velocity application with your DevOps toolchain to provide data insights, accelerate change, and increase visibility in your DevOps environment using a single system.

Field Service Management release notes

The ServiceNow[®] Field Service Management application helps your organization manage location-based work more efficiently and safely. Field Service Management was enhanced and updated in the Tokyo release.

Field Service Management highlights for the Tokyo release


- **Inventory management:** Field service agents can request and source multiple parts. Agents receive mobile notifications when part requests are raised by their peers and accordingly approve or reject requests.
- **Territory planning:** Territory planners can create, manage, and visualize territories.
- **Crew operations:** Field Service dispatchers can create crews and add recommended agents to crews within Dispatcher Workspace.
- **Capacity-based appointments:** Dynamic rules for a single appointment service catalog enable customer service agents and customers to book appointments based on defined capacity even before agents are assigned.

See [Field Service Management](#) ↗ for more information.

New in the Tokyo release

Appointment Booking and Capacity Enhancements

Enhancements to appointment booking configuration

- [Create varying duration appointment schedules](#) : Maintain a single catalog item with different appointment booking rules to enable varying durations of appointments.
- [Book appointments based on capacity](#) : Ensure that the right amount of appointments are available to customers based on the available capacity while booking appointments. Customer Service agents can book appointments for customers or customers can book appointments on their own.

Crew Operations Enhancements for dispatcher

Enhancements to crew operations capability:

- Recommend the most eligible agents for a crew task based on the required skills, availability, and location of the task.
- View the period for which the agent is a member of the crew.
- Create task-specific crews and add agents to the crew while viewing the recommended agent schedule and availability in Dispatcher Workspace.





Territory Planning

View, create, and manage service territories and allocate resources to them to ensure that work order tasks are scheduled only to agents or crews belonging to the same territory. This helps reduce the travel time and travel costs for an agent or a crew.

Dynamic mapping of work order templates to work orders

- Dynamically identify the appropriate work order task templates to create work order tasks.
- Inherit attribute values dynamically from source records such as cases, incidents, or CIs to work order records.

Manage your inventory using the Now Mobile Agent application

- [Request multiple parts](#) : Create part requests from **My work** and **Inventory** screens with the required quantity, either directly or by fetching them from an existing part requirement.
 - [Push notifications](#) : Field service agents receive mobile notifications when their peers request parts and can approve or reject the requests. Notifications are sent to the requesting agent when the part requests are cancelled.
 - [View transfer orders](#) : If a part request is accepted, the parts are moved between field agent stockrooms. A transfer order is created when the part request is accepted and the parts are sourced.
- [Improved search experience for parts](#) : View stockrooms with available parts relative to an agent's location. Agents can set up a preferred stockroom that maps with assignment groups. Agents can also view the last known location of

their peers' stockrooms if they have enabled the geolocation option to track their locations.

- [Request parts for personal stockroom](#) : Create a requirement to request parts for a personal stockroom without the context of work order task.

[Mobile experience for Field Service Management enhancements](#)

Enhance the on-shift and off-shift process and optimize ways to access questionnaires. Update estimated task end-time. Improve card actions and card sizes. Improve the workflows in the offline mode.

Install Base Integration with Work Order

Vendors can offer field support for sold products and convert cases into work orders quickly.

[Quick start tests for Field Service Management](#)

After upgrades and deployments of new applications or integrations, run quick start tests to verify that Field Service Management works as expected. If you customized Field Service Management, copy the quick start tests and configure them for your customizations.

[Now Mobile experience for Field Service Contractor](#)

Field Service Contractor in ServiceNow Agent mobile application provides flexibility to manage work order tasks on-the-go. You can manage work order tasks, create incidentals, reassign task, view details of an agent, and update parts usage directly from the ServiceNow Agent agent application.

UI changes

Asset Map and My Part requirements screens in Now[®] Mobile Agent app

The part information card displays fields based on the configuration with additional information such as Last position update, Mandatory, and WOT in **Asset Map** and **My Part requirements** screens.

Inventory ALP screen in Now[®] Mobile Agent app

The Inventory ALP screen has quick actions to enable you to check part availability and create part requests.


[Appointment Booking Service Configuration page in Now Platform](#)

The **Enable day level configuration** option has been renamed **Enable advance configurations** to create advanced service configurations.

Deprecations

The ServiceNow Classic app is deprecated. Therefore, the Service Management Geolocation Mobile (com.snc.work_management_m) plugin that was used in conjunction with the ServiceNow Classic app is also deprecated.

Activation information

Field Service Management is available with activation of the Field Service Management (com.snc.work_management) plugin. For details, see [Activate Field Service Management](#) .

Additional Field Service features are available with the activation of other plugins. For details, see [Additional plugins for Field Service Management](#) .

Activate the Field Service Advanced Parts Sourcing plugin (com.snc.fsm_advanced_parts_sourcing) to request and source multiple parts. Agents can receive mobile notifications when part requests are raised by their peers and accordingly approve or reject requests.

Activate the Field Service Territory Planning plugin (com.snc.fsm_territory_planning) to create and manage service territories.

Activate the Template Management for Field Service plugin (com.snc.fsm_template_management) to automatically identify the work order templates for a work order.

Related ServiceNow applications and features

Financial Management [↗](#)

Field Service Management integrates with the ServiceNow[®] Financial Management application to allocate, track, and report expenses in your organization.

i Note: The Financial Management for CSM plugin (com.snc.financial_management_for_csm) is no longer available for direct activation. You can request this plugin through Now Support Customer Service.

Customer Service Management [↗](#)

The Customer Service with Field Service Management plugin (com.snc.csm_fsm_integration) integrates the Field Service Management and ServiceNow[®] Customer Service Management (CSM) applications to enable you to view account and contact information on work orders and work order tasks in the Field Service Management application.

Project Portfolio Management [↗](#)

Field Service Management integrates with the ServiceNow[®] Project Portfolio Management application to enable you to create work orders directly from project tasks.

UI Builder [↗](#)

UI Builder is a low-code web user interface builder that enables developers to quickly build pages for workspace and portal web-based experiences. Use the base system and custom web components to build your pages.

Workspace [↗](#)

ServiceNow[®] Workspace is a graphical user interface that puts multiple tools on one page, including the tools that agents must find, research, and resolve issues. CSM Configurable Workspace and CSM Agent Workspace are customer service-specific implementations that provide tier 1 agents with the tools that they must respond to customers and to resolve cases.

Employee Service Management release notes

Employee Service Management has new and updated features in the Tokyo release

Employee Center release notes

The ServiceNow[®] Employee Center application is a standard multi-department, dynamic portal for service delivery and employee engagement. Employee Center was enhanced and updated in the Tokyo release.

Employee Center highlights for the Tokyo release

- Improve performance using scoped caching for HR criteria optionally to save the evaluation results.
- Access the Preferences page, now available under the user avatar when you opt in to Employee Profile.
- Configure two new topic-level controls, Topic manager and Topic contributor, to use decentralized topic management.

See [Employee Center](#) for more information.

Important: Employee Center is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Audiences

Add a scoped cache for HR criteria to optionally save the evaluation results in the cache. This optional feature is available by passing a Boolean value of **true** as the `useCache` parameter. You can also define how long to retain the cached information via the `sn_hr_core.cache.hrcriteria.ttl` system property.

Content Governance

Provides the ability for employees to request content to be created, reviewed, and approved by content managers, and then published or distributed.

Language support for Content Experiences and Content Publishing

Content Experiences and Content Publishing supports integration with Localization Framework. This allows language translation fulfillers to provide translations faster and efficiently.

When creating content from the Content Library in Content Publishing, users have an option to select a different language to view in a session similar to changing a language at login.

Configure additional permission levels for topic management

Enable decentralized management of topics by introducing two new topic-level controls, Topic manager and Topic contributor.

Quick start tests for Employee Center and Employee Center Pro

After upgrades and deployments of new applications or integrations, run quick start tests to verify that Employee Center works as expected. If you customized Employee Center, copy the quick start tests and configure them for your customizations.

Changed in this release

Preferences widget for Employee Profile

User preferences can be accessed as a separate Preferences widget for customers who have opted in to Employee Profile.

Activation information

Install Employee Center by requesting it from the ServiceNow Store. 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](#).

HR Service Delivery release notes

The ServiceNow® HR Service Delivery application improves the employee service experience by automating HR interactions and providing a single platform for all HR services. HR Service Delivery was enhanced and updated in the Tokyo release.

HR Service Delivery Case and Knowledge Management release notes

The ServiceNow® HR Service Delivery Case and Knowledge Management application enables you to standardize the documentation, interaction, and fulfillment of employee inquiries and requests, which helps to improve your HR department's efficiency and services over time. HR Service Delivery Case and Knowledge Management was enhanced and updated in the Tokyo release.

HR Service Delivery Case and Knowledge Management highlights for the Tokyo release

- Collaborate with multiple participants and sign ServiceNow - generated documents with Document Template integration with DocuSign and Document Template integration with AdobeSign.
- Empower your HR agents to work on and manage employee relations cases by pulling them from NAVEX EthicsPoint directly into a ServiceNow instance with Employee Relations integration with Navex Ethicspoint.
- Enhance the working experience of your people managers with Manager Hub, which is a self-service interface for your people managers to proactively engage with their teams.

See [HR Service Delivery](#) for more information.

Important information for upgrading HR Service Delivery to Tokyo

HR Service Delivery report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

New in the Tokyo release

[Document Template integration with DocuSign](#)

Enable the use of the DocuSign application for signing documents that are generated from ServiceNow Document Templates.

- Allow multiple participants to collaboratively work on a single document.
- Choose a signing type, select a signing partner, and sign with a mobile device or from any portal.

[Document Template Integration with AdobeSign](#)

Enable the use of Adobe Sign application for signing documents that are generated from ServiceNow Document Templates.

- Allow multiple participants to collaboratively work on a single document.
- Choose a signing type, select a signing partner, and sign with a mobile device or from any portal.

Employee Relations integration with NAVEX EthicsPoint [↗](#)

Use the power of Now Platform workflows to empower your HR agents. You can pull employee relation cases from NAVEX EthicsPoint into Now Platform, which enables an HR agent to work on employee relation cases from a ServiceNow instance.

Manager Hub [↗](#)

Increase your people managers' proactive engagement with their teams by providing insights and recommended actions for what's most urgent and important to drive team success. You can enable your people managers to grow as leaders through knowledge resources.

HR Service Delivery Process Optimization [↗](#)

- Enable your company to analyze and improve service delivery processes by leveraging ServiceNow platform Process Optimization capabilities.
- Access a best practice content pack for HR Service Delivery containing preconfigured process optimization models that help analysts and process owners understand the effectiveness of their processes and spot opportunities to improve performance.

HR Case Management [↗](#)

- Provide your administrators with the options to configure search parameters so that your agents get better search results for their cases.
- Provide your agents with the flexibility to add approvals to a case that is part of an HR service.

Agent Workspace for HR Case Management [↗](#)

- Enable your administrators to configure adhoc approvals at each HR service level. You can provide your agents with the flexibility to add approvals to a case that is part of an HR service.
- Enable attachment transfers from an interaction to a case so that your HR agents get the entire history of an interaction.
- Enable your agents to get a better understanding of a case by reviewing the approval history and work notes in the activity stream.
- Customize the tab labels for HR cases. Your agents can gain better insights into a case by hovering their mouse devices over the case number.
- Update the profile information for an employee in the **At a Glance** panel based on the change in the **Subject person** field. Your agents can verify that the information is correct even before saving the change.
- Enable your agents to access the checklist as a separate tab from the contextual side panel, independent of the fulfillment instructions in an HR case.
- Enable your agents to use the **Sign document** button on an HR task to easily authenticate the documents and send them to the appropriate requesters.
- Enable your agents to preview and edit the HTML-type documents that are attached to an HR case by using Document Templates.

- Enable your agents to send communication that is related to a case by using the **Send email** feature in HR Workforce Administration cases and in HTML type documents in Document Templates.
- Enable your agents to minimize errors while typing an email. In HR Workforce Administration Cases, the **To** field in Compose email (Send email) is automatically populated with the email address of the **Subject person**.
- Enable your agents to add special handling notes for special instructions to be highlighted in an employee relations case.
- Enable your agents to block other agents from accessing a particular ER case by using the **Restrict** form action.
- Enable your administrators to configure search parameters to have better search results for cases.
- Enable agents in the Agent Workspace to create document tasks from HTML Doc Templates.
- Enable participants to sign the document tasks created from HTML Doc Templates in Agent Workspace.

HR document templates [↗](#)

- Configure participants in the Document template using advanced scripting.
- Mark the participants in the Document template optional via the Optional field so that if the participant is empty the document task is not created for this participant.

Performance Improvement Plan (PIP) service [↗](#)

Manage employee performance issues within Employee Relations, using the Performance improvement plan (PIP) service. Organisations handle employee performance issues in close co-ordination with HR teams, Employee Relations teams, and/or Legal teams. Proper processes must be followed, and appropriate documentation and communication must be maintained. With this feature, a manager can:

- Initiate a PIP case for an employee and involve the Employee Relations advisory to handle and support the PIP case more efficiently.
- Track the progress of tasks and take the necessary action — Structured workflow (with a lifecycle event) auto-initiates tasks for a manager, an employee, and an Employee Relations agent.

Quick start tests for HR Service Delivery [↗](#)

After upgrades and deployments of new applications or integrations, run quick start tests to verify that HR Service Delivery Case and Knowledge Management works as expected. If you customized HR Service Delivery Case and Knowledge Management, copy the quick start tests and configure them for your customizations.

Deprecations

- Options to dispatch requests or tasks by using a workflow are no longer supported. Existing customers with Service Management core are not affected.
- The surveys configuration option is no longer supported. The navigation modules for HR surveys and trigger conditions were removed. Existing customers with Service Management core are not affected.
- The Service Management Geolocation Mobile that is used for viewing and dispatching tasks from a mobile map is deprecated and is no longer supported. A ServiceNow employee can activate this plugin. Existing customers are not affected.

Activation information

- HR Service Delivery Case and Knowledge Management is a Now Platform feature that is available with activation of the Human Resources Scoped App: Core plugin (com.sn_hr_core). For details, see [Activate Case and Knowledge Management](#).
- Agent Workspace for HR Case and Knowledge Management is available with the activation of Agent Workspace for HR Case Management (com.sn_hr_agent_ws) and the Human Resources Scoped App: Workspace (com.sn_hr_agent_workspace).
- After you install or upgrade to the latest Agent Workspace for HR Case and Knowledge Management from ServiceNow Store, you might encounter Restricted Caller Access (RCA) approval messages requesting for an update in the access request.
- Request the Manager Hub, Document Template integration with AdobeSign, Document Template integration with DocuSign, and Employee Relations integration with Navex Ethicspoint applications from ServiceNow Store. 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](#).

Intelligent Service Delivery release notes

The ServiceNow® Intelligent Service Delivery enables you to use AI capabilities for enhanced productivity, round the clock assistance and deeper data analysis. Intelligent Service Delivery was enhanced and updated in the Tokyo release.

Intelligent Service Delivery highlights for the Tokyo release

- Have an enhanced employee experience when using Virtual Agent to complete common self-service HR tasks.
- Enable employees to obtain near real-time responses to their queries through Issue Auto Resolution via their preferred channels.
- Display 'Learning recommendations' to the employees when creating a journey for them, enabling them to see the relevant learning courses that they can take.

Important information for upgrading HR Service Delivery to Tokyo

HR Service Delivery report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

New in the Tokyo release

HR Service Delivery Virtual Agent [↗](#)

Complete common self-service HR tasks using predefined Virtual Agent topics (chatbot conversations) added to the HR Service Delivery Virtual Agent.

- Download Payslip Request (Template)
- Enrol new Beneficiary Request (Template)
- Change in Benefits Inquiry (Template)
- Tuition Reimbursement Request (Template)
- HR Account Access (Template)
- Employment Verification Letter Request (Template)
- 401k Benefits inquiry (Template)
- HSA Inquiry (Template)
- Check Case status (Template)

Note that the corresponding NLU intents are available only in the English language.

Installing and activating the HR VA plugin will automatically activate the AI Search fallback as the default fallback greeting experience for Employee Service Center and other chat channels like Microsoft Teams, SMS, Slack, Workplace, Mobile web and Mobile app.

Improve engagement for employees and managers working with Journey/Lifecycle events by sending Actionable Notifications on various channels as nudges. Employees can also complete the action by interacting with the action buttons on the Virtual Agent.

Machine learning solutions for HR Service Delivery [↗](#)

When creating a journey for an employee, managers can provide 'Learning recommendations' for employees to recommend relevant learning courses. The recommendations are based on the courses taken by similar employees during their specific journey.

Issue Auto Resolution for HR Service Delivery [↗](#)

Enable your employees to ask for help through the channels that they prefer and receive a near real-time response in the channels where they are at. IAR provides automatic resolution to the high-volume routine HR cases, resulting in cost savings and a better employee experience.

To use SMS as a response channel, Twilio plugin must be installed. After the plugin installation, customers can use the default templates provided by ServiceNow or their own templates for SMS notifications.

Omni-channel universal request creation [↗](#)


Auto-create a universal request for every HR case that is created.

This feature enables organizations to create a universal request for every HR case that is created, using any channel. It extends the unified ticket experience that Universal Request provides for all the HR cases, irrespective of the channels they are created from.




Associate tickets [↗](#)

From an HR case that is the primary ticket of a universal request, you can create tickets for another department and associate them to the same universal request as the HR case. This feature enables agents to collaborate, and it enables organizations to trace back efforts against a single universal request.

Deprecations

- [HR Service Delivery Virtual Agent](#)  HR Service Delivery Virtual Agent and NLU - The General HR Inquiry topic and the corresponding NLU (intent and utterances) have been deprecated.

Activation information

- HR Service Delivery Virtual Agent is available with activation of the Human Resources Scoped App: Core plugin (com.sn_hr_core), the Glide Virtual Agent plugin (com.glide.cs.chatbot) that provides the Virtual Agent framework, and the HR Service Delivery Virtual Agent Conversations plugin (sn_hr_va). For details, see [HR Service Delivery Virtual Agent](#) .
- Install Issue Auto Resolution by requesting it from the ServiceNow Store. 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](#) .


Employee Journey Management release notes

The Employee Journey Management application enables employees and managers in your organization to initiate and manage journeys, driving employee engagement and productivity. Employee Journey Management was enhanced and updated in the Tokyo release.

Employee Journey Management highlights for the Tokyo release

Employee Journey Management enables your organization to create and implement employee journeys in a consistent and easy process.

Important information for upgrading HR Service Delivery to Tokyo

HR Service Delivery report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#) .

New in the Tokyo release

[Journey Designer](#)

Enable employees, managers, and the organization to initiate and manage journeys to drive employee engagement and productivity:

- Journey designer combines the employee experience of Lifecycle Events and Journey Accelerator, so that managers and employees have a single interface to manage all their journeys.
- When using the Manager Hub app, managers can create, access, and track journeys for their team members.

- Managers can create and monitor journeys, and access and view team analytics for journeys. When using Listening Posts with Journey designer, team satisfaction scores are available.
- Managers and mentors can send personalized messages to employees.
- Managers can add new tasks and milestones, and include quick links for their employees.
- When used with Learning posts, administrators and managers can include recommended learning courses with recommendations powered by machine learning.
- Add a Journeys widget to the Employee Center home page to access and monitor active journeys.

i Important: Journey designer is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Learning Core [↗](#)

- Enable advanced security and access controls with course catalogs in Learning Core. Provide advanced security, life-cycle management, approval process management, multiple course state managements, and course progress.
- Group courses into collections to drive specific learning objectives and outcomes.

Removed in this release

- Recommended Learning and search support for learning courses on portal pages are no longer supported on Learning Core.

Activation information

- Install Journey designer by requesting it from the ServiceNow Store.
- Install Learning Posts by requesting it from the ServiceNow Store.

i Note: Installing Learning Posts automatically activates the Learning Core [sn_lc] application. Learning Core contains the base set of tables, content, learning bases, roles, and access configuration that are used in the Learning Posts [sn_lnp] application.

- 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](#) [↗](#).

Legal Service Delivery release notes

The ServiceNow[®] Legal Service Delivery applications provide a unified experience between employees requesting legal support and the legal teams serving them. Legal Service Delivery was enhanced and updated in the Tokyo release.

Legal Service Delivery highlights for the Tokyo release

- Streamline the process for requesting and managing complaints by using the Legal Investigations application.
- Provide a seamless user experience to your employees by using Universal Request to request services from the legal department.
- Simplify legal document storage and retrieval by integrating with cloud storage providers to store legal matter documents.

See [Legal Service Delivery](#) for more information.

i Important: Legal Service Delivery is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading Legal Service Delivery to Tokyo

Before upgrading Legal Service Delivery to Tokyo, you must set the value of the `glide.rollback.blacklist.TableParentChange.change` system property to **false**. If this property doesn't exist in the System Property [sys_properties] table, [add the property](#) and set its value to false.

After the upgrade, some tables installed with [Legal Request Management](#), [Legal Digital Forensics](#), and [Legal Simple Contracts](#) applications extend the Application File [sys_metadata] table to enable seamless migration of Practice Areas, Intake Forms, Contract configurations, and Forensic configurations into update sets.

If you upgrade to the Tokyo version without updating the system property value, the tables will not extend the Application File table. To manually update the table changes, see the [Manual upgrade steps for reparenting table changes in Tokyo \[KB1163388\]](#) article in the Now Support Knowledge Base.

New in the Tokyo release

ServiceNow[®] Legal Investigations application

ServiceNow[®] Legal Investigations is a Legal Practice app included with Legal Service Delivery that enables the Legal department in your organization to accept complaints through a simple intake process.

Employees can file complaints either by name through Legal Service Portal or Employee Center portal, or anonymously through the Anonymous Report Center portal. The legal team can conduct legal investigations, including conducting interviews, gathering evidence, and preparing final reports with recommended actions to address these complaints.

Better together: Legal Investigations and HR Service Delivery Employee Relations

Integrate Legal Investigations with ServiceNow[®] HR Service Delivery Employee Relations to provide a seamless experience for employees to submit complaints via universal requests and for legal counsels to work on them, transferring them between Legal and HR departments.

Enable external storage to store documents attached to legal matters

Enable documents attached to legal matters to be stored on an external storage system. You can configure multiple external cloud storage providers to store these documents. Control access permissions for these documents in real

time to different users who can view legal matters via a scheduled job or on-demand while adhering to document retention policies.

[Provide seamless legal services through Universal](#)

Enable integration of legal services with Universal Request to provide a single point of reference for employees to make requests to any department, including Legal. Routing agents can route universal requests to appropriate legal teams to seek legal support. The legal team can transfer requests for more action from Legal to other departments while keeping employees informed throughout.

[Customizable Legal Service Delivery properties](#)

Configure system properties to administer features that affect how Legal Service Delivery apps work, like integrations with external storage and schema overrides.

[Create an intake workflow to request legal support for legal contracts](#)

Create a legal contract intake workflow by creating a record producer and configuring base system settings so that employees can request the legal department's guidance on legal contracts.

[Track updates on existing Conflict of Interest requests](#)

Review and validate changes requested to existing Conflict of Interest requests before approving or rejecting them.

[Define response templates for quick communication](#)

Define response templates with reusable text that legal fulfillers can use in the work notes, comments, emails, or chats to send users consistent messages quickly while working on legal requests.

[Integrate with Microsoft SharePoint for storing legal request and legal matter documents](#)

Integrate with Microsoft SharePoint to store documents in legal requests and legal matters in the Microsoft SharePoint storage system.

[Get insight into the complaints-related metrics in the Legal Executive dashboard](#)

Use the complaints-related indicators on the Legal Executive dashboard to gain insight into the complaints data and make informed decisions.

[Use Catalog Builder to manage record producers for legal services](#)

Create an intake form for legal services in Catalog Builder by using the base system catalog templates for legal request and legal matter.

UI changes

External Storage tab

The **External Storage** tab in the [Artifacts form of a legal matter](#) has been renamed **External Links**.

Simple Contracts module

The **Simple Contracts** module under the **Legal Administration** has been renamed **Simple Contracts Admin**.

Ethics Complaints module

The **Ethics Complaints** module under the **Legal Administration** has been renamed **Legal Investigations Admin**.

Create Legal Request button

The **Create Legal Request** button on the [Universal Request form](#) has been renamed **Create Legal Ticket**.

Enable legal request creation from universal request option

The **Enable legal request creation from universal request** option in the [Intake Form's](#) [Options](#) field has been renamed **Enable Legal Ticketing in Universal Request**.

Changed in this release

Legal Request Management [↗](#)

- When the Universal Request option is enabled for legal services, email notifications for legal requests are updated to include universal request-related exceptions when notifying requesters.
- When the request fulfiller assigned to a legal request is changed, both the previous and new request fulfillers are notified via email.
- Access to attachments of legal requests or legal matters is restricted for the system admins who are not scoped admins.
- Access to all email notifications related to legal requests or legal matters is restricted for the system admins who are not scoped admins.
- [Task Configurations](#) [↗](#) associated with the tables of Legal Service Delivery apps replace the existing To-dos Widget Mapping settings for legal items' approvals through Employee Center.

Legal Matter Management [↗](#)

- When a legal matter is created from a legal request, all the attachments in the legal request are referenced in a new artifact of the legal matter and are listed in the **Documents** tab.
- When the Universal Request option is enabled for legal services, email notifications for legal matters are updated to include universal request-related exceptions when notifying requesters.
- When the matter owner assigned to a legal matter is changed, both the current and new matter owners are notified via email.

Activation information

Install Legal Service Delivery applications by requesting them from the ServiceNow Store. 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](#) [↗](#).

Related ServiceNow applications and features

Workspace [↗](#)

ServiceNow[®] Workspace is a suite of tools that enables agents to find, research, and resolve issues. Legal Service Delivery includes the Legal Counsel Center workspace lawyers can use to track legal requests and matters, enabling them to categorize, prioritize, and efficiently address legal issues.

Virtual Agent [↗](#)

The ServiceNow[®] Virtual Agent application provides user assistance through conversations within a messaging interface. You can use Virtual Agent to design and build automated conversations that help your employees obtain information and services from the legal department quickly.

Universal Request release notes

The ServiceNow® Universal Request application delivers a comprehensive set of features to support cross-departmental Enterprise Service Management (ESM) or Global Business Services (GBS) service delivery models. Universal Request was enhanced and updated in the Tokyo release.

Universal Request highlights for the Tokyo release

- Use the ability to create a Universal Request record through any channel to provide a seamless employee experience.
- Create associated tickets for universal request and enable multiple departments work simultaneously.

For more information, see [Universal Request](#).

New in the Tokyo release

[Automatically create universal request for requests submitted from all available channels](#)

Attach a universal request for a record creation through the channels to provide a seamless experience to employees. UR is auto-created from any of the following channels:

- Now Platform
- Workspace
- Virtual Agent
- Email
- Interaction
- Self-service

[Simultaneously work on multiple department tickets using the associated ticket creation capability](#)

Create an associated cross-department ticket and assign it to the relevant department to be worked on. The UR is automatically attached to the new associated ticket and can be tracked.

UI changes

Module and form renamed

- **Direct Transfer Configuration** module is renamed to **Mapping configuration**.
- **Transfer Fields Mapping** form is renamed to **Fields Mapping**.

Form fields renamed

- **Target Table** field in the **Mapping configuration** form is renamed to **Table**.
- **Transfer Mapping** field under **Fields Mapping**, **Service Set**, and **Service Configuration** forms is renamed to **Mapping configuration**.

Changed in this release

Assignment group and Assigned to field's restriction removed for RITM transfer

ITIL users can transfer RITM requests associated as a primary ticket a UR without any **Assignment group** or **Assigned to** field restrictions.

Activation information

Universal Request is a Now Platform feature and is available on activating the Universal Request plugin (com.snc.universal_request). Additional Universal Request features and integration capabilities are available with the activation of other plugins. For more information, see [Universal Request plugins](#).

Environmental, Social, and Governance Management release notes

The ServiceNow® Environmental, Social, and Governance Management application helps you to manage all your environmental, social, and governance (ESG) commitments. The ESG Management application also enables you to report on the progress that you make on your ESG initiatives. ESG Management is a new application in the Tokyo release.

ESG Management highlights for the Tokyo release

- Provide the data for ESG metrics by using a modern and intuitive user interface that resembles a spreadsheet.
- Use calculated metrics, formerly known as composite metrics, with an enhanced aggregation and calculation logic to handle advanced use cases for ESG metrics.
- Calculate greenhouse (GHG) emissions by using various emission factors and the enhanced metrics calculation engine.
- Convert the metric data collection unit into another, preferred reporting unit.

See [ESG Management](#) for more information.

i Important: ESG Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

ESG Management features

[Create a material topic](#)

Create material topics for your organization so that you can identify the areas where you want to make an ESG impact. Material topics are topics that reflect the organization's most significant impacts on the society, environment, and people.

[Create an ESG goal](#)

Establish and track the progress of your organization's ESG goals. Some examples are as follows:

- Use renewable energy by the end of the year 2035.
- Increase diversity in the workplace by 50 percent.

[Create an ESG target](#)

Create ESG targets to track the progress of the ESG goals that you set for your organization. By creating a target, you can use the target to see how well your organization is meeting these goals.


[Collect metrics](#)

Gather metrics to track the effectiveness and performance of your ESG initiatives. For example, you can define a metric to measure the greenhouse gas (GHG) emissions for the business entities in your organization.

[Convert metric data from any unit to the reporting unit](#)

Enter your raw data in a metric data task and then convert the metric data into a different unit of measurement for disclosures and reporting. For example, let's say that you enter data about water usage in liters but your organization needs the report in US gallons and the metric definition unit is set to US gallons. By using this feature, liters are converted to US gallons.

[Provide responses for multiple metrics at once](#)

Use the metric tasks module () to provide the data for multiple metric data tasks. By using filters, you can select the metric group that you want to provide data for, and view the responses that you've entered and submitted. You can also track overdue metrics.

[Create your emission factor library](#)

Create emission activities and emission factors to maintain your emission factor library. An emission factor is a representative value that relates the quantity of a pollutant released to the atmosphere with the activity that is associated with the release of that pollutant. You can choose to associate a factor with an activity.

[Specify a formula for metric definition score](#)

Specify a formula that helps you to calculate a metric definition score. You can either use the predefined functions or you can create your own custom formula. You can also specify how frequently you want to collect the data and the level at which the data must be aggregated.

[Create a disclosure](#)

Create an ESG disclosure for your organization. A disclosure refers to the reporting of data that relates to an organization's environmental, social, and governance performance. Disclosures enable investors to make informed decisions by identifying companies that may pose a risk.

[Integrate ESG Management with Watershed](#)

Import data from the Watershed tool to enable your organizations to measure carbon emissions, renewable energy, and what their impact is to the environment. With this data, your organization can reduce emissions and report on the progress that is being made to reduce your carbon footprint.

[Integrate ESG Management with Urjanet](#)

Starting with version 15.0.2, use the Urjanet ESG integration and get your utilities data automatically from Urjanet and avoid manual data entry from your various facilities or office owners.

[Use the metric data table for data collection](#)

Starting with version 15.0.2, use the metric data table for data to provide data for multiple metrics. The metric data table provides an easy to use interface like a spreadsheet with a task management workflow. As a data owner, you can access the metric data table and complete the tasks assigned to you. The metric data table provides the following benefits:

- Maintains an audit trail of all changes to the data and the users who made the changes.
- Enables you to view the metrics segregated by entities.

- Gives additional information to the data owner for reference such as instructions to follow while providing the data.
- Provides the ability for the users to attach files in the Contextual side panel and attach the relevant documents and links.
- Enables ESG program managers and metrics managers to view the data submitted by the data owners and approve or reject the data with comments.
- Allows data owners to view the rejection comments in the Activity tab.
- Helps you to view how the past data is trending.
- Provides a filter to see metric groups that have open tasks and displays the number of open tasks in parentheses.

[Aggregate metric definition data at the entity level](#)

Starting with version 15.0.2, aggregate the calculated metric definition data at the entity level to get an overall score at the metric definition level.

[Use the ESG admin role to manage and configure the set up for ESG integrations](#)

Starting with version 15.0.2, as an ESG administrator, with the role sn_esg.admin, you can manage all the items within the ESG Management application and configure the set up for all the ESG integrations.

Activation information

Install ESG Management by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

Project Portfolio Management

When you create goals for your material topics, you have to perform some tasks to accomplish those goals. The tasks that you perform are captured in the form of programs and projects. When you integrate with Project Portfolio Management, you can create programs and projects for your goals. To learn more about program management and how to create programs, see [Program Management](#).

Integrated Risk Management

If you integrate ESG Management with IRM, you get a governance framework and you can add risks, risk statements, policies, control objectives, and issues to your goals. To learn more about how to manage your ESG risks, see [Integration with IRM](#).

Governance, Risk, and Compliance release notes

The ServiceNow[®] Governance, Risk, and Compliance application was enhanced and updated in the Tokyo release.

Governance, Risk, and Compliance highlights for the Tokyo release

- Use the new user Interface (UI) that supports the confidentiality configuration on GRC tables.
- View the directly related records on the related list in the entity form with the new UX buttons that were introduced.
- Synchronize the risk and control owner with the entity owner.
- Configure multiple classes for the same table with the enhancement to the Entity class rule filter.

See [Governance, Risk, and Compliance](#) for more information.

i Important: Governance, Risk, and Compliance is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading Governance, Risk, and Compliance with Tokyo

Starting with Governance, Risk, and Compliance version 14.0, the business user (sn_grc.business_user) role is removed from the GRC Reader (sn_grc.reader) role and added to GRC user (sn_grc.user) role. For more information, see [KB1123608](#).

New in the Tokyo release

Configure confidentiality on GRC tables

Create confidential records in your Governance, Risk, and Compliance table. A new table, confidentiality configuration, is added so that you can enable confidentiality in your GRC tables. For more information, see [Configure confidentiality in GRC tables](#).

Miscellaneous entity related enhancements

Enhancements include:

- Use the Sync with entity owner feature to ensure that the risk owner and control owner are always in sync with the entity owner without making any manual updates.
- Two new buttons were added in the seven related lists of the entity form. One button shows the records that are directly related to the entity and the other button removes the additional filter to show all the upstream and downstream records.
- Use the Entity class rule filter to configure multiple classes in the same table. The entities that are created from that table automatically pick the class that matches the condition that is defined in the class rule filter.

360° view enhancements

Enhancements include:

- A new **Order** field is added in the relationship registries to change the position of the field in the pie chart.
- For upgrading customers, the order value was changed from null to 0.

Changed in this release

Role changes for risk response task

Role changes have been made for the following action buttons on the risk response task form:

- **Back to Draft:** Accessible to risk owner
- **Work in Progress:** Accessible to assigned user
- **Request Review:** Accessible to assigned user
- **Close:** Accessible to risk owner
- **Cancel:** Accessible to risk event owner

Role changes for risk acceptance task

Role changes have been made for the following action buttons on the risk acceptance task form:

- **Request Approval:** Accessible to assigned user
- **Request More Information:** Accessible to the risk owner

UI changes

Entity related UI changes

- The new **Sync with entity owner** field was added in the risk and control form.
- Two new UI buttons were added on seven related lists on the entity form that include:
 - Upstream entities
 - Downstream entities
 - Downstream risks
 - Downstream controls
 - Downstream engagements
 - Downstream issues
 - Downstream tasks
- The Entity class rule filter related list was added in the entity class rule form.

360° view changes

A new **Order** field was added in the relationship registries of the 360° view configuration form.

Activation information

Install Governance, Risk, and Compliance applications by requesting them from the ServiceNow Store. 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](#).

Advanced Risk release notes

The ServiceNow[®] Advanced Risk application enables you to identify, analyze, evaluate, treat, and monitor risks that could impact your organization in achieving its business objectives. Advanced Risk was enhanced and updated in the Tokyo release.

Advanced Risk highlights for the Tokyo release

- Configure and enable multi-level approval workflow for advanced risk assessments.
- Analyze your risk posture with the enhanced heatmap workbench.
- Assess controls based on a group factor consisting of manual or automated factors or a combination of both.
- Simulate a risk assessment to verify whether the Risk Assessment Methodology (RAM) is configured correctly.
- Evaluate similar risk events recommendations to reduce duplicate efforts.

See [Advanced Risk Assessment](#) for more information.

Important: Advanced Risk is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Multi-level approval workflow for advanced risk assessments

Configure and enable a multi-level approval workflow for risk assessments to review and escalate risks to relevant stakeholders. The no-code configuration setup helps you to define multiple approvers based on factors such as RAM and risk ratings. You can also delegate the approver privilege to others who can approve or reject the risk assessments on your behalf.

Enhanced heatmap workbench

Use the enhanced heatmap workbench to visualize, analyze, and report the risk posture more effectively. The heatmap workbench enables you to do the following:

- View the risk movement from inherent to residual risk.
- View the risk trend for the last five assessments on a particular risk.
- Gain risk insights and compare the risk performance to initiate actions.
- Locate the risk on the heatmap more effectively.
- Use the dynamic filter to personalize the heatmap by entities and top risks.

Assess a control using group factor

Assess a control based on multiple factors such as design and operational effectiveness using the group factor functionality. Group factors include manual or automated factors or a combination of both. This feature enables you to perform a detailed assessment of controls to strengthen the control environment and manage your risk better.

Simulate a risk assessment

Simulate a risk assessment to verify the associated RAM configuration in the draft state. This feature helps risk admins validate a factor, scoring logic, and the workflow and make necessary changes to the RAM before it is published. The simulated risk assessments are not used for risk aggregation and are deleted after the RAM is published.

Similar risk events recommendations

Train and use the similarity solution definition for similar risk events recommendations. Managing a risk event is easy when you identify similar risk events and associate them to capture and analyze the actual impact of the risk

event. This capability reduces the manual effort in managing similar risk events and improves overall organizational efficiency.

Metrics integration with risk workspace [↗](#)

Monitor your key risks and controls closely and continuously with GRC: Metrics and define thresholds indicating alerts for the changing risk and control performance. Operational Risk managers, IT Risk managers, and Business Op Risk managers can define, manage, and monitor these metrics to strengthen their IT and operational risks. Use GRC: Metrics to do the following:

- Identify KRIs and KCIs that breached the thresholds.
- Analyze the breach trend to assess risk impact and likelihood.
- Track overdue KRI and KCI tasks.
- Create metric definition to monitor risk performance.
- Analyze the root cause of the breached metrics and track the action plan.

Changed in this release

Role hierarchy changes

The GRC Business User [sn_grc.business_user] role has been removed from the contains role of GRC Reader [sn_grc.reader] and added to GRC user [sn_grc.user]. Changes have been made in the Advanced Risk application to match the new hierarchy.

Access control lists (ACL) changes

The following changes have been made to the ACLs:

- The **Risk relevance** field on the risk form can be edited by a user with the risk user [sn_risk.user] role.
- The **Risk Event Task** form can be edited by a user with the GRC business user [sn_grc.business_user] role.
- The **Additional comments** field on the **Risk Event Task** form can be edited only by a user with the GRC business user [sn_grc.business_user] role.

Role changes for risk event task

Role changes have been made for the following action buttons on the **Risk Event Task** form:

- **Back to Draft:** Accessible to risk event owner
- **Work in Progress:** Accessible to the assigned user
- **Request Review:** Accessible to the assigned user
- **Close:** Accessible to the risk event owner
- **Cancel:** Accessible to the risk event owner

A user with the GRC business user [sn_grc.business_user] role can access **All Open Tasks**, **All Tasks**, and **My Open Tasks** in risk events.

Risk event tasks can be assigned only to a user with the GRC business user [sn_grc.business_user] role. Users with the risk reader [sn_risk.reader] role can no longer be assigned with the risk event tasks.

Activation information

Install Advanced Risk by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

GRC Risk Management

Use the Risk Management with the ServiceNow® Advanced Risk application to identify and monitor high-impact risks, improve your risk-based decision-making, and reduce reaction time from days to minutes.

GRC Approver Configurator

Use the GRC Approver Configurator with the ServiceNow® Advanced Risk application to set up multi-level approvals and select approvers based on the business rules.

Business Continuity Management release notes

The ServiceNow® Business Continuity Management application was enhanced and updated in the Tokyo release.

Business Continuity Management highlights for the Tokyo release

- Use role-based licensing to include BCM operator and BCM lite operator user roles.
- Enable your users to view tasks in real time with visual indications of the current plan, sub-plans, upcoming plans, and related tasks.
- Use the updated demo data to support events that are scoped to multiple purposes or coverage areas.
- Use the BCM event-scoping recovery task logic and subset options that assist your program managers and planners.

See [Governance, Risk, and Compliance](#) for more information.

Important: Business Continuity Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

BCM Operator and Operator Lite

Use role-based licensing to distinguish between the BCM operator and BCM lite operator roles. These roles offer flexible licensing terms that are based on whether your operator has a read-only access or can complete certain types of tasks.

BCM event scoping enhancement

Create forms to track your related assets and related plans. These forms can help identify your related assets during event scoping and your related plans during an exercise.

Use the updated dependency field for your recovery tasks, regardless of the scope.

Create a primary plan with multiple dependent plans.

Use the updated Business Impact Analysis (BIA) plan form interface so that you can include the dependencies and prerequisites that are related to identifying related asset dependencies in the CMDB and BIA.

Restrict which users can write to BIA.

Activation information

Install Business Continuity Management by requesting it from the ServiceNow Store. 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](#).

Operational Resilience release notes

The ServiceNow® Operational Resilience application enables an organization to continue to provide its business services in the face of adverse operational events, such as a pandemic, extreme weather, or hacking. Operational Resilience was enhanced and updated in the Tokyo release.

Operational Resilience highlights for the Tokyo release

- Monitor the status of your business services, service incidents, outages, and open issues to see if they align with your supporting pillars (categories that are used to organize your risk data).
- Assess the importance and the duration of the impact tolerance of your business services.
- Review the status of risks, controls, and priority issues that are related to the supporting pillars that support your business services.
- Analyze multiple failure scenarios to identify a single point of failure.

See [Operational Resilience](#) for more information.

Important: Operational Resilience is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Business services and related lists](#)

Add business services into your Operational Resilience application and monitor their status on the dashboard. View the service dependencies and issues that are related to the processes, importance and impact assessments, scenario analysis, and so on.

[Perform a scenario analysis for your business service](#)

Perform a scenario analysis for your business services by analyzing the scenarios and events. Determine if any service was breached. After completing the evaluation, approve the analysis.

[Analyze the importance and impact tolerance of your business services](#)

Analyze the importance rating and impact tolerance duration of your business services by selecting a questionnaire template in the Importance and Impact Tolerance assessment. Review the rating that is generated based on the questionnaire response. After completion of the analysis, approve the assessment.

[Self-attest your business services](#)

Verify the status of your business services and determine if any service was breached. After the verification is complete, self-attest the status of the business services by signing and generating the self-attestation report. You can upload the PDF of the self-attestation report in the application.

Activation information

Install Operational Resilience by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[GRC Policy and Compliance Management](#)

Monitor the controls associated with your entities and publish their reports on the dashboard. To learn more about the controls and the GRC: Policy and Compliance Management application, see [Manage controls](#).

[GRC Risk Management](#)

Monitor the risks associated with your entities and publish their reports on the dashboard. To learn more about the risks and the Risk Management application, see [Using Risk Management](#).

[GRC Advanced Risk](#)

Use Advanced Risk Assessment to create an integrated risk platform. This integrated platform supports various kinds of risk assessment methodologies. It enables you to integrate risk assessment as part of your overall decision-making process. To learn more about the Advanced Risk application, see [Advanced Risk Assessment](#).

Policy and Compliance Management release notes

The ServiceNow® Policy and Compliance Management application provides a centralized process for creating and managing policies, standards, and internal control procedures that are cross-mapped to external regulations and best practices. Policy and Compliance Management was enhanced and updated in the Tokyo release.

Policy and Compliance Management highlights for the Tokyo release

- Use the IT compliance workspace to manage your organization's IT related compliance activities.
- Evaluate the compliance status of DevOps policies and GRC control objectives integrating with Policy as a Code Engine (PaCE).
- Take advantage of Advanced Risk Assessment to enhance risk assessment in policy exceptions.
- Set access control imitations at the record level to allow only certain users to securely access the record.
- Monitor and revise your organization's policies periodically to avoid audit and compliance risks.

See [Policy and Compliance Management](#) for more information.

Important: Policy and Compliance Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

IT Compliance Workspace [↗](#)

Provide a current view of IT compliance aspects around various business applications, business services, business processes, servers, assets, and CMDB CIs used in the enterprise after configuring IT-related data. As an IT compliance manager, you can view only the IT-related risk and compliance data in the IT Compliance Home page of the Compliance Workspace. This workspace highlights:

- Compliance impact of entities in use
- State of compliance activities
- State of remediation and exception activities
- Audit activity and status

DevOps Accelerator [↗](#)

Allow customers to evaluate compliance for DevOps policies and control objectives using Policy as a Code Engine (PaCE) integration. This accelerator provides pre-mapping between control objectives from regulations, standards, frameworks such as CIS controls, NIST 800-53, ISO 27002, and PCI DSS and DevOps policies from the DevOps Config Policy Content pack.

Policy exception enhancements [↗](#)

Allow multiple policy exceptions on the same control and multiple extensions to the policy exception. You can withdraw or cancel an exception request before it is approved.

Using Advanced risk assessment to assess risk in policy exception [↗](#)

Facilitate the ability of the compliance user or risk user to take the risk assessment in the Advanced Risk Assessment application to evaluate the risk rating in policy exceptions.

Reusing existing evidence from audit and compliance related items [↗](#)

Inform the audit and compliance user about the evidences that already exist for the related items of an engagement. If evidences exist, then the Request Evidence pop-up displays a message that there are existing evidences that you might want to add.

A compliance and audit user can also add existing evidences from its related items to a compliance or audit object if the evidence is in the Closed state or has been approved within six months of the due date of the evidence response.

Changed in this release

Role hierarchy change [↗](#)

The Business User (sn_grc.business_user) role has been removed from the contains role of GRC Reader (sn_grc.reader) and added to GRC user (sn_grc.user) role. Accordingly, changes have been made in Policy and Compliance Management application to match this new hierarchy.

Activation information

Install Policy and Compliance Management by requesting it from the ServiceNow Store. 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](#).

Browser requirements

Policy and Compliance Management requires the latest public release and two previous release versions of the following browsers:

- Chrome, Firefox and Firefox ESR, and Microsoft Edge Chromium
- Safari 12.0 and later versions

Related ServiceNow applications and features

[Advanced Risk Assessment](#)

Use Advanced Risk Assessment to create an integrated risk platform. This integrated platform supports mapping qualitative rating criteria of the risk assessment methodology with the risk rating of the policy exception in the Policy exception risk rating mapping table for the final risk rating score. For more information on qualitative risk assessment, see [Risk rating methodologies](#).

Industry products release notes

Industry products has new and updated features in the Tokyo release.

Financial Services Operations release notes

Financial Services Operations applications have new and updated features in the Tokyo release.

Commercial Lines Claims release notes

The ServiceNow[®] Commercial Lines Claims application enables your organization to quickly set up the various stages of the claim process, starting from the first notice of loss to claim closure. Commercial Lines Claims is a new application in the Tokyo release.

Commercial Lines Claims highlights for the Tokyo release

- Use the strong claims data model to build any claims service
- Manage claims workflows using cases within a dedicated application and centralized visualization of all claim records for a customer
- Use dedicated playbooks and workspaces built for various claim personas
- Monitor key statistics and track performance with ServiceNow[®] Performance Analytics and ServiceNow[®] Process Optimization
- Follow a baseline workflow for first notice of loss to claim settlement for commercial auto

See [Commercial Lines Claims](#) for more information.

Important: Commercial Lines Claims is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Commercial Lines Claims features

Commercial Lines Claims application

Coordinate efforts with the associated departments, such as adjuster and special investigation unit departments required to manage tasks related to a claim.

Customized playbook experience [↗](#)

Complete claims workflows using dedicated playbooks and workspaces designed for each role. Playbooks provide step-by-step guidance through tasks to ensure that every step gets completed at the right stage of the process.

Performance Analytics [↗](#) and Process Optimization [↗](#)

Use Performance Analytics and Process Optimization dashboards to gain insight into how your team and service flows are performing.

Claims data model [↗](#)

Gain the benefit of claims tables from the Insurance Claims data model to build any claims flow.

Activation information

Install Commercial Lines Claims by requesting it from the ServiceNow Store. 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](#) [↗](#).

Localization information

Commercial Lines Claims is available in all languages that the Now Platform supports. For more information, see [Activate a language](#) [↗](#).

Related ServiceNow applications and features

Financial Services Operations Core [↗](#)

ServiceNow[®] Financial Services Operations Core stores the customer data that is required for handling claims requests.

Financial Services Document Processor [↗](#)

ServiceNow[®] Financial Services Document Processor enables collecting and verifying documents that are used in workflows.

Customer Service Management [↗](#)

ServiceNow[®] Customer Service Management enables the extension of tables from the ServiceNow application into the Commercial Lines Claims application.

Playbooks for Customer Service Management [↗](#)

Playbooks for ServiceNow[®] Customer Service Management provides a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

Configure Contributor Users [↗](#)

The CSM Contributor User plugin (com.snc.csm_contributor_user) enables middle-office teams such as relationship managers to create cases for customer requests.

Financial Services Business Deposit Operations release notes

The ServiceNow® Financial Services Business Deposit Operations application enables your financial organization to digitize end-to-end management of origination, servicing, and closure of both business deposit accounts. Financial Services Business Deposit Operations was enhanced and updated in the Tokyo release.

Financial Services Business Deposit Operations highlights for the Tokyo release

- Version 2.2.0: View cases assigned to a location manager's branches with Branch operations support.

See [Financial Services Deposit Operations](#) for more information.

i Important: Financial Services Business Deposit Operations is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Version 2.2.0: [View location manager branch locations for cases](#)

The **Branch location** field is added to all case tables and case forms. Various roles can access the case list view to see cases assigned to a manager's branch. To view the branch location that a case is assigned to, select a case from the list to view the branch location on the case record.

Version 2.2.0: [Use demo data for branches](#)

Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate use of branch operations features.

Activation information

Install Financial Services Business Deposit Operations by requesting it from the ServiceNow Store. 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](#).

Localization information

Financial Services Business Deposit Operations is available in all languages that the Now Platform supports. For more information, see [Activate a language](#).

Related ServiceNow applications and features

[Financial Services Operations Core](#)

ServiceNow® Financial Services Operations Core stores the customer data that is required for handling deposit service requests.

[Financial Services Document Processor](#)

ServiceNow® Financial Services Document Processor enables ServiceNow® Financial Services Operations applications to collect and verify documents that are used in workflows across these applications.

[Performance Analytics Content Pack for FSO](#)

The ServiceNow® Performance Analytics Content Pack for FSO enables the content pack for the ServiceNow® Performance Analytics and Reporting Solution for Financial Services Deposit Operations.

[FSO Process Optimization Content Pack](#)

The ServiceNow® FSO Process Optimization Content Pack provides process optimization capabilities to Financial Services Deposit Operations. Process Optimization enables analysts and process owners to analyze the effectiveness of their business processes for deposit operations.

[Customer Service Management](#)

ServiceNow® Customer Service Management enables the extension of tables from the ServiceNow® Customer Service Management application into the Financial Services Deposit Operations application.

[Playbooks for Customer Service Management](#)

Playbooks for ServiceNow® Customer Service Management provide a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

[CSM Contributor User](#)

The CSM Contributor User plugin (com.snc.csm_contributor_user) enables middle-office teams such as relationship managers to create cases for customer requests.

Financial Services Business Lifecycle release notes

The ServiceNow® Financial Services Business Lifecycle application enables simplified and streamlined management of the entire banking business life cycle. Financial Services Business Lifecycle was enhanced and updated in the Tokyo release.

Financial Services Business Lifecycle highlights for the Tokyo release

- Version 2.2.0: View cases assigned to a manager's branches with Branch operations support.

See [Financial Services Business Lifecycle](#) for more information.

Important: Financial Services Business Lifecycle is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Version 2.2.0: [View location manager branch locations for cases](#)

The **Branch location** field is added to all case tables and case forms. Various roles can access the case list view to see cases assigned to a manager's branch. To view the branch location that a case is assigned to, select a case from the list to view the branch location on the case record.

Version 2.2.0: [Use demo data for branches](#)

Use sample customer, account, and report items from demonstration data for FSO branch operations.

Activation information

Install Financial Services Business Lifecycle by requesting it from the ServiceNow Store. 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](#).

Localization information

Financial Services Business Lifecycle is available in all languages that the Now Platform supports. For more information, see [Activate a language](#).

Related ServiceNow applications and features

[Financial Services Document Processor](#)

ServiceNow® Financial Services Document Processor enables collecting and verifying documents that are used in workflows.

[Performance Analytics Content Pack for FSO](#)

The Performance Analytics Content Pack for FSO enables the content pack for the ServiceNow® Analytics and Reporting Solution for Financial Services Customer Lifecycle Operations.

[FSO Process Optimization Content Pack](#)

The FSO Process Optimization content pack provides process optimization capabilities to Financial Services Business Lifecycle. Process Optimization enables analysts and process owners to analyze the effectiveness of their business processes for life-cycle operations.

[Customer Service Management](#)

ServiceNow® Customer Service Management enables the extension of tables from the ServiceNow® Customer Service Management application into the Financial Services Customer Lifecycle Operations application.

[Playbooks for Customer Service Management](#)

Playbooks for ServiceNow® Customer Service Management provide a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

[CSM Contributor User](#)

The CSM Contributor User plugin (com.snc.csm_contributor_user) enables middle-office teams such as relationship managers to create cases for customer requests.

Financial Services Business Loan Operations release notes

The ServiceNow® Financial Services Business Loan Operations application enables your financial organization to quickly resolve customer-initiated requests and system-generated exceptions around business loan servicing. Financial Services Business Loan Operations was enhanced and updated in the Tokyo release.

Financial Services Business Loan Operations highlights for the Tokyo release

- Version 2.1.0: View cases assigned to a manager's branches with Branch operations support.

See [Financial Services Loan Operations](#) for more information.

Important: Financial Services Business Loan Operations is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Version 2.1.0: [View location manager branch locations for cases](#) ↗

The **Branch location** field has been added to all case tables and case forms so the branch location assigned to a case is visible in case records.

Version 2.1.0: [Use demo data for branches](#) ↗

Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate the use of branch operations features.

Activation information

Install Financial Services Business Loan Operations by requesting it from the ServiceNow Store. 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](#) ↗.

Localization information

Financial Services Business Loan Operations is available in all languages that the Now Platform supports. For more information, see [Activate a language](#) ↗.

Related ServiceNow applications and features

[Financial Services Operations Core](#) ↗

The Financial Services Operations Core application stores the customer data that is required for handling loan service requests.

[Financial Services Credit Operations](#) ↗

The ServiceNow[®] Financial Services Credit Operations enables the management of credit cases and tasks that are used in Financial Services Loan Operations workflows.

[Financial Services Document Processor](#) ↗

The Financial Services Document Processor enables ServiceNow[®] Financial Services Operations applications to collect and verify documents that are used in workflows across these applications.

[Performance Analytics Content Pack for FSO](#) ↗

The Performance Analytics Content Pack for FSO enables the content pack for the ServiceNow[®] Performance Analytics and Reporting Solution for Financial Services Loan Operations.

[FSO Process Optimization Content Pack](#) ↗

The FSO Process Optimization content pack provides process optimization capabilities to Financial Services Loan Operations. Process Optimization enables analysts and process owners to analyze the effectiveness of their business processes for loan operations.

[Customer Service Management](#) ↗

ServiceNow[®] Customer Service Management enables the extension of tables from the ServiceNow[®] Customer Service Management application into the Financial Services Loan Operations application.

[Playbooks for Customer Service Management](#) ↗

Playbooks for ServiceNow® Customer Service Management provide a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

[CSM Contributor User](#)

The CSM Contributor User plugin middle-office teams such as relationship managers to create cases for customer requests.

Financial Services Card Operations release notes

The Financial Services Card Operations application enables you to create and manage card service requests, including the requests for new cards, increasing or decreasing credit limits, and blocking or unblocking credit cards. Financial Services Card Operations was enhanced and updated in the Tokyo release.

Financial Services Card Operations highlights for the Tokyo release

- Enable customers and agents to create disputes for financial accounts, such as credit card accounts.
- Provide baseline and configurable business rules for auto-decisioning of dispute cases. Auto-decisioning examples include denials of a dispute, providing provisional or final credit, and routing a dispute for manual investigation.
- Provide trigger fraud reporting tasks from a dispute to a card network.

See [Financial Services Card Operations](#) for more information.

i Important: Financial Services Card Operations is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Version 2.1.0: [View location manager branch locations for cases](#)

The **Branch location** field has been added to all case tables and case forms so the branch location assigned to a case is visible in case records.

Version 2.1.0: [Use demo data for branches](#)

Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate the use of branch operations features.

[Manage dispute service requests](#)

Initiate and manage cases for dispute requests. Each case triggers a specific workflow that is designed for dispute requests. Assignment rules route the workflow tasks to the appropriate back-office agents, such as card dispute agents, who work on the tasks to fulfill the dispute request. You can use a case playbook to handle card dispute operation processes. A case playbook includes activities and tasks for end-to-end guidance from the time that a case is initiated to the fulfillment of the request.

Activation information

Install Financial Services Card Operations by requesting it from the ServiceNow Store. 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](#).

Localization information

Financial Services Card Operations is available in all languages that the Now Platform supports. For more information, see [Activate a language](#).

Related ServiceNow applications and features

[Financial Services Operations Core](#)

Stores the customer data that is required for handling card requests.

[Financial Services Document Processor](#)

Enables collecting and verifying documents that are used in workflows.

[Customer Service Management](#)

Enables the extension of tables from the ServiceNow® application into the Financial Services Card Operations application.

[Playbooks for Customer Service Management](#)

Provides a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

[Configure Contributor Users](#)

Enables middle-office teams such as relationship managers to create cases for customer requests.

Financial Services Client Lifecycle release notes

The ServiceNow® Financial Services Client Lifecycle application enables simplified and streamlined management of the entire banking customer life cycle. Financial Services Client Lifecycle was enhanced and updated in the Tokyo release.

Financial Services Client Lifecycle highlights for the Tokyo release

- Version 2.2.0- View cases assigned to a manager's branches with Branch operations support.

See [Financial Services Client Lifecycle](#) for more information.

Important: Financial Services Client Lifecycle is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Version 2.2.0- [View branch manager locations for cases](#)

The **Branch location** field is added to all case tables and case forms. Various roles can access the case list view to see cases assigned to a manager's branch. To view the branch location that a case is assigned to, select a case from the list to view the branch location on the case record.

Version 2.2.0- [Use demo data for branches](#)

Use sample customer, account, and report items from demonstration data for FSO branch operations.

Activation information

Install Financial Services Client Lifecycle by requesting it from the ServiceNow Store. 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](#).

Localization information

Financial Services Client Lifecycle is available in all languages that the Now Platform supports. For more information, see [Activate a language](#).

Related ServiceNow applications and features

>

[Financial Services Document Processor](#)

ServiceNow® Financial Services Document Processor enables ServiceNow® Financial Services Operations applications to collect and verify documents that are used in workflows across these applications.

[Performance Analytics Content Pack for FSO](#)

Performance Analytics Content Pack for FSO enables the content pack for the ServiceNow® Performance Analytics and Reporting Solution for Financial Services Customer Lifecycle Operations.

[FSO Process Optimization Content Pack](#)

The FSO Process Optimization content pack provides process optimization capabilities to Financial Services Customer Lifecycle Operations. Process Optimization enables analysts and process owners to analyze the effectiveness of their business processes for life-cycle operations.

[Customer Service Management](#)

ServiceNow® Customer Service Management enables the extension of tables from the ServiceNow® Customer Service Management application into the Financial Services Customer Lifecycle Operations application.

[Playbooks for Customer Service Management](#)

Playbooks for ServiceNow® Customer Service Management provide a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

[CSM Contributor User](#)

The CSM Contributor User plugin enables middle-office teams such as relationship managers to create cases for customer requests.

Financial Services Complaint Management release notes

The ServiceNow® Financial Services Complaint Management application enables financial organizations to quickly and efficiently resolve customer complaints. Financial Services Complaint Management was enhanced and updated in the Tokyo release.

Financial Services Complaint Management highlights for the Tokyo release

- Version 1.3.0- Branch operations support enables various roles to view cases assigned to a manager's branches and the branch locations associated with cases.

See [Financial Services Complaint Management](#) for more information.

Important: Financial Services Complaint Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Version 1.3.0- [View branch manager locations for cases](#)

The **Branch location** field has been added to all case tables and case forms so the branch location assigned to a case is visible in the case record.

Version 1.3.0 - [Use demo data for branches](#)

Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate use of the branch operations features.

Activation information

Install Financial Services Complaint Management by requesting it from the ServiceNow Store. 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](#).

Localization information

Financial Services Complaint Management is available in all languages that the Now Platform supports. For more information, see [Activate a language](#).

Related ServiceNow applications and features

[Financial Services Operations Core](#)

Stores the customer data that is required for handling customer complaints.

[Performance Analytics Content Pack for FSO](#)

Enables the content pack for the ServiceNow® Performance Analytics and Reporting Solution for Financial Services Complaint Management.

[FSO Process Optimization Content Pack](#)

Provides process optimization capabilities to Financial Services Complaint Management. Process Optimization enables analysts and process owners to analyze the effectiveness of their business processes for handling complaints.

[Customer Service Management](#)

Enables the extension of tables from the ServiceNow® Customer Service Management application into the Financial Services Complaint Management application.

[Playbooks for Customer Service Management](#)

Provides a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

Financial Services Credit Operations release notes

The ServiceNow® Financial Services Credit Operations application manages the credit tasks used in workflows across Financial Services Operations applications. Financial Services Credit Operations was enhanced and updated in the Tokyo release.

Financial Services Credit Operations highlights for the Tokyo release

- Version 2.1.0 - Branch operations support enables various roles to view cases assigned to a manager's branches and the branch locations associated with cases.

See [Financial Services Credit Operations](#) for more information.

i Important: Financial Services Credit Operations is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release



Version 2.1.0: [View location manager branch locations for cases](#) 

The **Branch location** field has been added to all case tables and case forms so the branch location assigned to a case is visible in case records.

Version 2.1.0: [Use demo data for branches](#) 

Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate the use of branch operations features.

Activation information

Install Financial Services Credit Operations by requesting it from the ServiceNow Store. 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](#) .

Localization information

Financial Services Credit Operations is available in all languages that the Now Platform supports. For more information, see [Activate a language](#) .

Related ServiceNow applications and features

[Financial Services Loan Operations](#) 

The ServiceNow[®] Financial Services Loan Operations supports personal and business loans, enabling financial organizations to resolve customer-initiated requests and system-generated exceptions around loan servicing.

[Financial Services Card Operations](#) 

The Financial Services Card Operations application digitizes and automates the card operations of your financial institution, enabling quick processing of credit card applications and card transaction disputes.

Financial Services Operations Core release notes

The ServiceNow[®] Financial Services Operations Core application provides a data model that enables financial institutions to create flexible data structures that meet their business needs. Financial Services Operations Core was enhanced and updated in the Tokyo release.

Financial Services Operations Core highlights for the Tokyo release

- Version 1.9.0 - Branch operations support is provided with the following feature set components: Location manager contributor role with personalized workspace and dashboard for viewing metrics and managing cases.

See [Financial Services Operations Core](#)  for more information.

i Important: Financial Services Operations Core is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Version 1.9.0- [Location manager contributor role](#) and [workspace](#)

The Location manager contributor role has been added, enabling users assigned the role to use a workspace and landing page from which to see case overviews across branches that they manage.

Version 1.9.0 - [View performance metrics for branches](#)

Location managers can view branch performance metrics on the workspace's Branch Performance Metrics page, such as service level agreement (SLA) breaches for locations that they manage.

Version 1.9.0 - [Create cases for a branch](#)

Location managers can create customer cases for branches they manage from the link to the create case form on the role's workspace landing page.

Version 1.9.0 - [View and assign branch locations to cases](#)

See cases assigned to a managed branch by accessing the case list view. View the branch location that a case is assigned to or assign a case to a branch.

Version 1.9.0- FNOL representative landing page

A landing page for the first-notice-of-loss (FNOL) representative persona has been added. From the landing page, FNOL representatives can view tasks and metrics to see their performance and how to prioritize their work.

Version 1.9.0- [Claim approval engine](#)

Monitor and check the accuracy of reserve and payment amount requests through the claim approval engine that has been added for claim reserve and claim payment components.

UI changes

Version 1.9.0 - Updated Claim Base table label

The Claim Policy Base table label has been changed to Claim Base.

Activation information

Install Financial Services Operations Core by requesting it from the ServiceNow Store. 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](#).

Localization information

Financial Services Operations Core is available in all languages that the Now Platform supports. For more information, see [Activate a language](#).

Related ServiceNow applications and features

[Financial Services Document Processor](#)

Enables collecting and verifying documents that are used in workflows.

[Customer Service Management](#)

Enables the extension of tables from the ServiceNow[®] application into the Financial Services Operations Core application.

[Playbooks for Customer Service Management](#)

Provides a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

[Configure Contributor Users](#)

Enables middle-office teams such as relationship managers to create cases for customer requests.

[Performance Analytics Content Pack for FSO](#)

Enables the content pack for the ServiceNow® Analytics and Reporting Solution for Financial Services Operations Core.

[FSO Process Optimization Content Pack](#)

ServiceNow® Process Optimization helps analysts and process owners analyze the effectiveness of their business processes.

Financial Services integration with Socure release notes

The ServiceNow® Financial Services integration with Socure application enables fulfillers to verify a customer's identity within Financial Services applications to streamline customer risk analysis. Financial Services integration with Socure was enhanced and updated in the Tokyo release.

Financial Services integration with Socure highlights for the Tokyo release

- Verify applicant identity and eligibility with plugin dependency on Financial Services Know Your Customer (KYC).
- Improve customer risk determination with sub-flow executions that look up customer fraud scores.

See [Integrating Financial Services Operations with Socure](#) for more information.

i Important: Financial Services Operations integration with Socure is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Changed in this release

Financial Services integration with Socure dependency on Financial Services Know Your Customer

The Financial Services Know Your Customer (com.sn_bom_kyc) dependency plugin is automatically installed when you install the Financial Services Operations integration with Socure plugin.

Customer fraud score lookup

When the Socure – Perform KYC for consumer sub-flow and the Socure – Perform KYC for contact sub-flow are executed, the customer's fraud score is looked up.

Application name change

The Financial Services Operations integration with Socure application name changed to Financial Services integration with Socure in the Tokyo release. All pages using the Financial Services integration with Socure application will be updated with the new name.

Activation information

Install Financial Services integration with Socure by requesting it from the ServiceNow Store. 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](#).

Localization information

Financial Services integration with Socure is available in all languages that the Now Platform supports. For more information, see [Activate a language](#).

Related ServiceNow applications and features

[Financial Services Know Your Customer](#)

Financial Services Know Your Customer enables verification of an applicant's identity and evaluates their eligibility.

[Integration Hub](#)

Automate integration tasks using ServiceNow components for ServiceNow® Flow Designer, or develop custom integrations. A separate subscription is required.

[Integration Hub available spokes](#) available spokes

Activate spokes to enhance your Flow Designer experience with integration-specific content. Use pre-built flows and actions to automate your integrations or create your own integration automation.

Financial Services integration with Jack Henry Associates jXchange release notes

The ServiceNow® and Financial Services integration with Jack Henry Associates (JHA) jXchange enables your agents to use the lookup functionality of the JHA jXchange SilverLake core banking application. The Financial Services integration with Jack Henry Associates jXchange is a new application in the Tokyo release.

Financial Services integration with Jack Henry Associates jXchange highlights for the Tokyo release

- Integrate your customer's information and financial account data with your deposit and loan accounts so that your fulfillers can create and manage cases easier.
- Look up the information about your customers and financial accounts with a unique identifier when you integrate the JHA jXchange spoke with the Financial Services Operations.
- Use the pre-built subflows that use the Jack Henry Associates jXchange spoke actions:
 - Look up Customers Information Stream
 - Look up Customer Information by ID
 - Look up Financial Accounts Stream
 - Look up Financial Account by Account Details
- Learn how the subflows automatically store the action responses into the correct Product model, Financial, Account, Contact, and Consumer tables, which can then be used for any service request or case.

For more information, see [Exploring Financial Services integration with Jack Henry Associates jXchange](#).

Important: Financial Services integration with JHA is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Includes subflows in the middle layer to consume Jack Henry Associates jXchange spoke actions [↗](#)

Learn how the Financial Services middle layer helps to integrate with the Financial Services Operations application and stores the information to the data model. This layer includes subflows that consume the actions in the JHA spoke. Each action has both individual subflows and combined subflows to call all the actions together. The subflows can be called from the flow by passing the financial account and account type as an input to look up customer details and financial account details.

New mapping tables to store responses from API [↗](#)

No new tables were created for storing the data during integration. However, five mapping tables were created for JHA integration.

Activation information

Install the Financial Services Operations integration with JHA by requesting it from the ServiceNow Store. 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](#) [↗](#).

Related ServiceNow applications and features

Integration Hub [↗](#)

Automate integration tasks by using ServiceNow components for Flow Designer, or develop custom integrations. A separate subscription is required.

Integration Hub available spokes [↗](#)

Activate spokes to improve your Flow Designer experience with integration-specific content. Use pre-built flows and actions to automate your integrations or create your own integration automation.

Financial Services Payment Operations release notes

The ServiceNow[®] Financial Services Payment Operations application streamlines and automates the payment operations in the front, middle, and back office of your financial institution. Financial Services Payment Operations was enhanced and updated in the Tokyo release.

Financial Services Payment Operations highlights for the Tokyo release

- Version 1.4.0- Branch operations support enables various roles to view cases assigned to a manager's branches and the branch locations associated with cases.

See [Financial Services Payment Operations](#) [↗](#) for more information.

i Important: Financial Services Payment Operations is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Version 1.4.0- [View location manager branch locations for cases](#) [↗](#)

The **Branch location** field is added to all case tables and case forms. Various roles can access the case list view to see cases assigned to a manager's branch.

To view the branch location that a case is assigned to, select a case from the list to view branch location on the case record.

Version 1.4.0- [Use demo data for branches](#)

Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate use of branch operations features.

Activation information

Install Financial Services Payment Operations by requesting it from the ServiceNow Store. 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](#).

Localization information

Financial Services Payment Operations is available in all languages that the Now Platform supports. For more information, see [Activate a language](#).

Related ServiceNow applications and features

[Financial Services Operations Core](#)

Stores the customer data that is required for handling payment requests.

[Performance Analytics Content Pack for FSO](#)

Enables the content pack for the ServiceNow[®] Performance Analytics and Reporting Solution for Financial Services Payment Operations.

[FSO Process Optimization Content Pack](#)

Provides process optimization capabilities to Financial Services Payment Operations. Process Optimization enables analysts and process owners to analyze the effectiveness of their business processes for payment operations.

[Customer Service Management](#)

Enables the extension of tables from the ServiceNow[®] Customer Service Management application into the Financial Services Payment Operations application.

Financial Services Personal Deposit Operations release notes

The ServiceNow[®] Financial Services Personal Deposit Operations application enables your financial organization to digitize end-to-end management of origination, servicing, and closure of personal deposit accounts. Financial Services Personal Deposit Operations was enhanced and updated in the Tokyo release.

Financial Services Personal Deposit Operations highlights for the Tokyo release

- Version 2.2.0 - View cases assigned to a location manager's branches with Branch operations support.

See [Financial Services Deposit Operations](#) for more information.

Important: Financial Services Personal Deposit Operations is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Version 2.2.0-View location manager branch locations for cases [↗](#)

The **Branch location** field has been added to all case tables and case forms so that the branch location assigned to a case is visible in the case record.

Version 2.2.0- Use demo data for branches [↗](#)

Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate use of the branch operations features.

Activation information

Install Financial Services Personal Deposit Operations by requesting it from the ServiceNow Store. 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](#) [↗](#).

Localization information

Financial Services Personal Deposit Operations is available in all languages that the Now Platform supports. For more information, see [Activate a language](#) [↗](#).

Related ServiceNow applications and features

Financial Services Operations Core [↗](#)

Financial Services Operations Core stores the customer data that is required for handling deposit service requests.

Financial Services Document Processor [↗](#)

ServiceNow[®] Financial Services Document Processor enables ServiceNow[®] Financial Services Operations applications to collect and verify documents that are used in workflows across these applications.

Performance Analytics Content Pack for FSO [↗](#)

Performance Analytics Content Pack for FSO enables the content pack for the ServiceNow[®] Performance Analytics and Reporting Solution for Financial Services Deposit Operations.

FSO Process Optimization Content Pack [↗](#)

FSO Process Optimization Content Pack provides process optimization capabilities to Financial Services Deposit Operations. Process Optimization enables analysts and process owners to analyze the effectiveness of their business processes for deposit operations.

Customer Service Management [↗](#)

ServiceNow[®] Customer Service Management enables the extension of tables from the ServiceNow[®] Customer Service Management application into the Financial Services Deposit Operations application.

Playbooks for Customer Service Management [↗](#)

Playbooks for ServiceNow[®] Customer Service Management provide a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

CSM Contributor User [↗](#)

The CSM Contributor User plugin (com.snc.csm_contributor_user) enables middle-office teams such as relationship managers to create cases for customer requests.

Financial Services Personal Loan Operations release notes

The ServiceNow® Financial Services Personal Loan Operations application enables your financial organization to quickly resolve customer-initiated requests and system-generated exceptions around personal loan servicing. Financial Services Personal Loan Operations was enhanced and updated in the Tokyo release.

Financial Services Personal Loan Operations highlights for the Tokyo release

- Version 2.1.0- Branch operations support enables various roles to view cases assigned to a manager's branches and the branch locations associated with cases.

See [Financial Services Loan Operations](#) for more information.

Important: Financial Services Personal Loan Operations is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Version 2.1.0: [View location manager branch locations for cases](#)

The **Branch location** field has been added to all case tables and case forms so the branch location assigned to a case is visible in case records.

Version 2.1.0: [Use demo data for branches](#)

Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate the use of branch operations features.

Activation information

Install Financial Services Personal Loan Operations by requesting it from the ServiceNow Store. 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](#).

Localization information

Financial Services Personal Loan Operations is available in all languages that the Now Platform supports. For more information, see [Activate a language](#).

Related ServiceNow applications and features

[Financial Services Operations Core](#)

Stores the customer data that is required for handling loan service requests.

[Financial Services Credit Operations](#)

Enables the management of credit cases and tasks that are used in Financial Services Loan Operations workflows.

[Financial Services Document Processor](#)

Enables ServiceNow® Financial Services Operations applications to collect and verify documents that are used in workflows across these applications.

[Performance Analytics Content Pack for FSO](#)

Enables the content pack for the ServiceNow® Performance Analytics and Reporting Solution for Financial Services Loan Operations.

[FSO Process Optimization Content Pack](#)

Provides process optimization capabilities to Financial Services Loan Operations. Process Optimization enables analysts and process owners to analyze the effectiveness of their business processes for loan operations.

[Customer Service Management](#)

Enables the extension of tables from the ServiceNow® Customer Service Management application into the Financial Services Loan Operations application.

[Playbooks for Customer Service Management](#)

Provides a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

[CSM Contributor User](#)

Enables middle-office teams such as relationship managers to create cases for customer requests.

Financial Services Treasury Operations release notes

The ServiceNow® Financial Services Treasury Operations application enables financial organizations to digitize the end-to-end onboarding of treasury products through automated workflows. Financial Services Treasury Operations was enhanced and updated in the Tokyo release.

Financial Services Treasury Operations highlights for the Tokyo release

- Version 2.2.0 - Branch operations support enables various roles to view cases assigned to a manager's branches and the branch locations associated with cases.

See [Financial Services Treasury Operations](#) for more information.

Important: Financial Services Treasury Operations is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Version 2.2.0- [View branch manager locations for cases](#)

The **Branch location** field has been added to all case tables and case forms so that the branch location assigned to a case is visible in the case record.

Version 2.2.0- [Use demo data for branches](#)

Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate use of the branch operations features.

Activation information

Install Financial Services Treasury Operations by requesting it from the ServiceNow Store. 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](#).

Localization information

Financial Services Treasury Operations is available in all languages that the Now Platform supports. For more information, see [Activate a language](#).

Related ServiceNow applications and features

[Financial Services Operations Core](#)

Stores the customer data that is required for handling treasury service requests.

[Financial Services Document Processor](#)

Enables ServiceNow® Financial Services Operations applications to collect and verify documents that are used in workflows across these applications.

[Performance Analytics Content Pack for FSO](#)

Enables the content pack for the ServiceNow® Performance Analytics and Reporting Solution for Financial Services Treasury Operations.

[FSO Process Optimization Content Pack](#)

Provides process optimization capabilities to Financial Services Treasury Operations. Process Optimization enables analysts and process owners to analyze the effectiveness of their business processes for treasury operations.

[Customer Service Management](#)

Enables the extension of tables from the ServiceNow® Customer Service Management application into the Financial Services Treasury Operations application.

[Playbooks for Customer Service Management](#)

Provides a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

[CSM Contributor User](#)

Enables middle-office teams such as relationship managers to create cases for customer requests.

Group Life Servicing release notes

The ServiceNow® Group Life Servicing application gives your organization the tools to quickly establish, update, and maintain group life and disability insurance policies. Group Life Servicing is a new application in the Tokyo release.

Group Life Servicing highlights for the Tokyo release

- Manage group life and disability insurance workflows using cases within a dedicated application.
- Avoid redundancy and complete workflows with confidence using dedicated playbooks and workspaces designed specifically for individual roles.
- Coordinate effort across departments and collaborate to achieve case resolution promptly and more efficiently.
- Monitor key statistics and track performance with ServiceNow® Performance Analytics and ServiceNow® Process Optimization.
- Use baseline service flows.

See [Group Life Servicing](#) for more information.

i Important: Group Life Servicing is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Group Life Servicing features

Group Life Servicing application [↗](#)

Manage group life and disability insurance policies. Coordinate efforts with the associated departments and offices required to manage tasks related to life insurance policy changes. Use a baseline service flow to change member information.

Customized playbook experience [↗](#)

Initiate and complete insurance workflows using dedicated playbooks and workspaces designed for each role. Playbooks provide step-by-step guidance through tasks to ensure that every step gets completed at the right stage of the process. Use or enhance baseline service flows for Group Life Servicing.

Performance Analytics and Process Optimization dashboards

Use Performance Analytics and Process Optimization dashboards to gain insight into how your team and the service flows are performing.

Data model for servicing life insurance

Gain the benefit of tables from the Now Platform and the ServiceNow[®] Customer Service Management (CSM) application with the ServiceNow[®] Financial Services Operations Core data model for life insurance.

Activation information

Install Group Life Servicing by requesting it from the ServiceNow Store. 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](#) [↗](#).

Related ServiceNow applications and features

Financial Services Operations Core [↗](#)

Financial Services Operations Core stores the customer data that is required for handling life servicing requests.

Financial Services Document Processor [↗](#)

Document Processor enables collecting and verifying documents that are used in workflows.

Customer Service Management [↗](#)

Customer Service Management enables the extension of tables from the ServiceNow application into the Group Life Servicing application.

Playbooks for Customer Service Management [↗](#)

Playbooks for Customer Service Management provides a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

Configure Contributor Users [↗](#)

Use the CSM Contributor User plugin (com.snc.csm_contributor_user) to enable middle-office teams such as relationship managers to create cases for customer requests.

[Performance Analytics Content Pack for FSO](#)

Performance Analytics Content Pack for FSO enables the content pack for the ServiceNow® Analytics and Reporting Solution for Group Life Servicing.

[FSO Process Optimization Content Pack](#)

FSO Process Optimization Content Pack helps analysts and process owners analyze the effectiveness of their business processes.

Individual Life Servicing release notes

The ServiceNow® Individual Life Servicing application gives your organization the tools to quickly establish, update, and maintain individual life and disability insurance policies. Individual Life Servicing is a new application in the Tokyo release.

Individual Life Servicing highlights for the Tokyo release

- Manage individual life and disability insurance workflows using cases within a dedicated application.
- Avoid redundancy and complete workflows with confidence using dedicated playbooks and workspaces designed specifically for individual roles.
- Coordinate effort across departments and collaborate to achieve case resolution promptly and more efficiently.
- Monitor key statistics and track performance with ServiceNow® Performance Analytics and ServiceNow® Process Optimization.
- Use baseline service flows.

See [Individual Life Servicing](#) for more information.

i Important: Individual Life Servicing is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Individual Life Servicing features

[Individual Life Servicing application](#)

Manage individual life and disability insurance policies. Coordinate efforts with the associated departments and offices required to manage tasks related to life insurance policy changes.

[Customized playbook experience](#)

Initiate and complete insurance workflows using dedicated playbooks and workspaces designed for each role. Playbooks provide step-by-step guidance through tasks to ensure that every step gets completed at the right stage of the process. Use or enhance baseline service flows for Individual Life Servicing.

Performance Analytics and Process Optimization dashboards

Use the Performance Analytics and Process Optimization dashboards to gain insight into how your team and the service flows are performing.

Data model for servicing life insurance

Gain the benefit of tables from the Now Platform and the Customer Service Management (CSM) application with the ServiceNow® Financial Services Operations Core data model for life insurance.

Activation information

Install Individual Life Servicing by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[Financial Services Operations Core](#)

Financial Services Operations Core stores the customer data that is required for handling life servicing requests.

[Financial Services Document Processor](#)

Document Processor enables collecting and verifying documents that are used in workflows.

[Customer Service Management](#)

Customer Service Management enables the extension of tables from the ServiceNow® application into the Individual Life Servicing application.

[Playbooks for Customer Service Management](#)

Playbooks for Customer Service Management provides a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

[Configure Contributor Users](#)

Use the CSM Contributor User plugin (com.snc.csm_contributor_user) to enable middle-office teams such as relationship managers to create cases for customer requests.

[Performance Analytics Content Pack for FSO](#)

Performance Analytics Content Pack for FSO enables the content pack for the ServiceNow® Analytics and Reporting Solution for Individual Life Servicing.

[FSO Process Optimization Content Pack](#)

FSO Process Optimization Content Pack helps analysts and process owners analyze the effectiveness of their business processes.

Personal Lines Claims release notes

The ServiceNow® Personal Lines Claims application enables your organization to quickly set up the various stages of the claim process, starting from the first notice of loss to claim closure. Personal Lines Claims is a new application in the Tokyo release.

Personal Lines Claims highlights for the Tokyo release

- Use the strong claims data model to build any claims service.
- Manage claims workflows using cases within a dedicated application and centralized visualization of all claim records for a customer.
- Use dedicated playbooks and workspaces built for various claim personas.
- Monitor key statistics and track performance with ServiceNow® Performance Analytics and ServiceNow® Process Optimization.
- Follow a base system workflow for first notice of loss to claim closure for personal auto claims.

See [Personal Lines Claims](#) for more information.

i Important: Personal Lines Claims is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Personal Lines Claims features

Personal Lines Claims application

Coordinate efforts with the associated departments, such as adjuster and special investigation unit departments required to manage tasks related to a claim.

Customized playbook experience

Complete claims workflows using dedicated playbooks and workspaces designed for each role. Playbooks provide step-by-step guidance through tasks to ensure that every step gets completed at the right stage of the process.

Performance Analytics and Process Optimization dashboards

Use Performance Analytics and Process Optimization dashboards to gain insight into how your team and service flows are performing.

Claims data model

Gain the benefit of claims tables from the Insurance Claims data model to build any claims flow.

Activation information

Install Personal Lines Claims by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

Financial Services Operations Core

ServiceNow[®] Financial Services Operations Core stores the customer data that is required for handling claims requests.

Financial Services Document Processor

ServiceNow[®] Financial Services Document Processor enables collecting and verifying documents that are used in workflows.

Customer Service Management

ServiceNow[®] Customer Service Management enables the extension of tables from the ServiceNow application into the Personal Lines Claims application.

Playbooks for Customer Service Management

Playbooks for ServiceNow[®] Customer Service Management provide a way to visualize business process workflows in a simple, task-oriented view, ensuring consistent responses to commonly encountered situations.

Configure Contributor Users

The CSM Contributor User plugin (com.snc.csm_contributor_user) enables middle-office teams such as relationship managers to create cases for customer requests.

Healthcare and Life Sciences release notes

Healthcare and Life Sciences has new and updated features in the Tokyo release.

Healthcare and Life Sciences Service Management Core release notes

The ServiceNow® Healthcare and Life Sciences Service Management Core application streamlines healthcare operations with automated processes. Healthcare and Life Sciences Service Management Core was enhanced and updated in the Tokyo release.

Healthcare and Life Sciences Service Management Core highlights for the Tokyo release

- Role-based access to healthcare cases, tasks, and data
- Domain separation support in Healthcare and Life Sciences Service Management Core
- Account and contact support in Healthcare and Life Sciences Service Management Core

See [Healthcare and Life Sciences Service Management Core](#) for more information.

i Important: Healthcare and Life Sciences Service Management Core is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Improvements in role-based access to healthcare cases, tasks, and data

Assign the following roles for managing base-level access to healthcare cases, tasks, and data:

- sn_hcls.case_task_viewer
- sn_hcls.case_viewer
- sn_hcls.consumer_agent
- sn_hcls.data_access_user
- sn_hcls.employee_patient
- sn_hcls.customerservice_agent

Domain separation support in Healthcare and Life Sciences Service Management Core

Use domain separation at the basic support level in Healthcare and Life Sciences Service Management Core.

Enable B2B2C for use with Healthcare and Life Sciences Service Management Core

Enable the business-to-business-to-consumer (B2B2C) model in Healthcare and Life Sciences Service Management Core by configuring the Customer Data Models for B2B2C application.

Healthcare and Life Sciences data model enhancements

Use the Clinical device install base item [sn_hcls_clinical_device_install_base_item] table added to the data model for storing the details of clinical devices.

Activation information

Install Healthcare and Life Sciences Service Management Core by requesting it from the ServiceNow Store. 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](#).

Localization information

Healthcare and Life Sciences Service Management Core is available in all languages that the Now Platform supports. For more information, see [Activate a language](#).

Related ServiceNow applications and features

[Pre-Visit Management](#)

The Pre-Visit Management application is based on the Healthcare and Life Sciences data model available within the Healthcare and Life Sciences Service Management Core application.

[Patient Support Services](#)

The Patient Support Services application includes a data model that extends the Healthcare and Life Sciences data model available within the Healthcare and Life Sciences Service Management Core application.

Patient Support Services release notes

The ServiceNow® Patient Support Services application streamlines patient onboarding, education, and engagement for various patient support services. Patient Support Services was enhanced and updated in the Tokyo release.

Patient Support Services highlights for the Tokyo release

- Agent connectors and contributors for enrollment cases
- Domain separation support in Patient Support Services

See [Patient Support Services](#) for more information.

i Important: Patient Support Services is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Agent connectors and contributors for enrollment cases](#)

Determine who can act as an agent connector or contributor for enrollment cases by assigning the following roles:

- sn_patientservice.agent_connector
- sn_patientservice.contributor

[Enrollment case contributors](#)

Users with a contributor profile associated with a service portal can create enrollment cases for patients.

[Domain separation support in Patient Support Services](#)

Use domain separation at the basic support level in Patient Support Services.

Removed in this release

The sample Enrollment Request Form [enrollment_request_form] page was removed.

Activation information

Install Patient Support Services by requesting it from the ServiceNow Store. 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](#).

Localization information

Patient Support Services is available in all languages that the Now Platform supports. For more information, see [Activate a language](#).

Related ServiceNow applications and features

[Healthcare and Life Sciences Service Management Core](#)

The Patient Support Services application is based on the Healthcare and Life Sciences data model available within the Healthcare and Life Sciences Service Management Core application.

Pre-Visit Management release notes

The ServiceNow® Pre-Visit Management application streamlines the scheduling process of procedure requests for patients and increases visibility of pre-authorization approvals prior to scheduled procedures. Pre-Visit Management was enhanced and updated in the Tokyo release.

Pre-Visit Management highlights for the Tokyo release

- Agent connectors and contributors for procedure request cases
- Domain separation support in Pre-Visit Management

See [Pre-Visit Management](#) for more information.

i Important: Pre-Visit Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Agent connectors and contributors for procedure request cases](#)

Determine who can act as an agent connector or contributor for procedure request cases by assigning the following roles:

- sn_previsit.agent_connector
- sn_previsit.contributor

[Procedure request case contributors](#)

Users with a contributor profile associated with a service portal can create procedure request cases for patients.

[Domain separation support in Pre-Visit Management](#)

Use domain separation at the basic support level in Pre-Visit Management.

Activation information

Install Pre-Visit Management by requesting it from the ServiceNow Store. 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](#).

Localization information

Pre-Visit Management is available in all languages that the Now Platform supports. For more information, see [Activate a language](#).

Related ServiceNow applications and features

[Healthcare and Life Sciences Service Management Core](#)

The Pre-Visit Management application is based on the Healthcare and Life Sciences data model available within the Healthcare and Life Sciences Service Management Core application.

Vaccine Administration Management release notes

The ServiceNow[®] Vaccine Administration Management application accelerates the immunization tracking process by providing sample content and workflows to manage vaccinations. Vaccine Administration Management was enhanced and updated in the Tokyo release.

Vaccine Administration Management highlights for the Tokyo release

- Scoped caching is supported to increase application performance and efficiency.
- Domain separation support in Vaccine Administration Management.

See [Vaccine Administration Management](#) for more information.

i Important: Vaccine Administration Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Configure VAM property to enable scoped cache](#)

Use scoped caching to improve application speed and efficiency. Existing users using a global cache can configure a system property to enable scoped caching.

[Domain separation and Vaccine Administration Management](#)

Use domain separation at the basic support level in Vaccine Administration Management.

Activation information

Install Vaccine Administration Management by requesting it from the ServiceNow Store. 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](#).

Additional requirements

To use Vaccine Administration Management:

- You must have the following plugins installed:
 - Healthcare and Life Sciences Service Management Core (com.sn_hcls)
 - Appointment Booking (com.snc.appointment_booking)

To use Virtual Agent conversations for Vaccine Administration Management, you must have the Virtual Agent plugin (com.glide.cs.chatbot) installed.

Localization information

Vaccine Administration Management is available in all languages that the Now Platform supports. For more information, see [Activate a language](#) .

Related ServiceNow applications and features

[Healthcare and Life Sciences Service Management Core](#)

The Vaccine Administration Management application is based on the Healthcare and Life Sciences data model available within the Healthcare and Life Sciences Service Management Core application.


Redox Inbound Integration release notes

The ServiceNow[®] Redox Inbound Integration application enables bidirectional integrations between multiple healthcare systems to improve care capacity. Redox Inbound Integration is a new application in the Tokyo release.

Redox Inbound Integration highlights for the Tokyo release

- Enables electronic medical records (EMR) and electronic health records (EHR) healthcare systems to integrate with the ServiceNow[®] Healthcare and Life Sciences data model. This data model is based on the Health Insurance Portability and Accountability Act (HIPAA) and the Health Level Seven International (HL7) industry standards.
- Avoids the cost and complexity of implementing point-to-point integrations by enabling bidirectional integration between multiple EMR systems and a ServiceNow instance.

See [Redox Inbound Integration](#)  for more information.

 **Important:** Redox Inbound Integration is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Redox Inbound Integration features

[Exchange real-time healthcare data with Redox Inbound integration](#)

Receive and update healthcare data from external healthcare systems into a ServiceNow instance to easily integrate scheduling, medication, provider, claim, and patient administration information and view patient clinical summaries, without depending on the different ways that individual healthcare systems store and transmit healthcare data.

Activation information

Install Redox Inbound Integration by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[Healthcare and Life Sciences Service Management Core](#)

The Redox Inbound Integration application is based on the Healthcare and Life Sciences data model available within the Healthcare and Life Sciences Service Management Core application.

Manufacturing release notes

Manufacturing has new and updated features in the Tokyo release.

[Operational Technology Incident Management v2 release notes](#)

The ServiceNow[®] Operational Technology Incident Management v2 application enables engineers to resolve Operational Technology (OT) asset and production process issues quickly. Operational Technology Incident Management v2 was enhanced and updated in the Tokyo release.

[Manufacturing Process Manager release notes](#)

The ServiceNow[®] Manufacturing Process Manager application enables your teams to map and visualize the industrial equipment models and associated production processes at individual facilities. Manufacturing Process Manager was enhanced and updated in the Tokyo release.

[Operational Technology Vulnerability Response release notes](#)

The ServiceNow[®] Operational Technology Vulnerability Response application enables effective prioritization and remediation of ServiceNow[®] Operational Technology (OT) vulnerabilities at a site level. Operational Technology Vulnerability Response was enhanced and updated in the Tokyo release.

[Service Graph Connector Integration for Claroty CTD release notes](#)

The ServiceNow[®] Service Graph Connector Integration for Claroty CTD application automates the import of detected assets and Claroty CTD sites. Service Graph Connector Integration for Claroty CTD is a new application in the Tokyo release.

Public Sector Digital Services release notes

The ServiceNow[®] Public Sector Digital Services application enables you to develop public sector applications that deliver digital services to your constituents such as benefits, licenses, and service requests. Public Sector Digital Services was enhanced and updated in the Tokyo release.

Public Sector Digital Services highlights for the Tokyo release

- Provide digital services tailored for constituent businesses such as small businesses, non-profit or for-profit organizations, and educational institutions.
- Improve efficiency by implementing a shared service model that supports government agencies, citizens, businesses, and visitors.
- Resolve non-emergency service requests quickly, consistently, and efficiently by providing a Service Request Playbook to agents that automates the process for handling those requests.

See [Public Sector Digital Services](#) for more information.

i Important: Public Sector Digital Services is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Business services support model](#)

Enable business owners to request services and submit cases for new business or product registrations.

[Agency support model](#)

Enable agencies and agency members to share relevant cases and information in their configurable workspaces, provide services to constituents and businesses, and submit agency cases.

[Service Request Playbook application](#)

Implement an end-to-end workflow for handling and resolving non-emergency service requests submitted by the public, for example 311 or 211 service requests for government agencies in the United States through the Service Request Playbook application. Enable constituents to select non-emergency requests from a service catalog on the Government Service Portal. Help agents resolve these requests quickly and efficiently by providing predefined resolution processes.

[Submit non-emergency service requests using Virtual Agent](#)

Enable constituents and business owners to easily submit non-emergency service requests using a pre-built Virtual Agent Service Request conversation topic that runs in supported chat and messaging channels, including Engagement Messenger.

[Integration with Field Service Management](#)

Enable government agents and field service technicians to create work orders for tasks such as inspections on reported issues and fixing reported issues through the CSM Integration with the Field Service Management application.

Activation information

Install the Public Sector Digital Services Core and the Service Request Playbook applications by requesting them from the ServiceNow Store. 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](#).

Note: Some functionality in the Service Request Playbook is available only with a subscription.

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](#).

Related ServiceNow applications and features

Customer Service Management

The ServiceNow® Customer Service Management application enables customer service organizations and service operations to collaborate on customer problems proactively to resolve customer issues.

CSM Configurable Workspace

The CSM Configurable Workspace suite of tools provides government agents with the tools that they need to help answer customer questions and resolve customer issues.

Technology Industry release notes

The ServiceNow® Technology Industry solution has new and updated features in the Tokyo release.

Technology Provider Service Management release notes

The Technology Provider Service Management application connects your entire technology provider operation with one platform so that you can deliver the best proactive care and quality of service for your customers. Technology Provider Service Management was enhanced and updated in the Tokyo release.

Technology Provider Service Management highlights for the Tokyo release

- Enable your users to have the required access to create requests and orders from the published items in the service catalog on the customer's instance.
- Resolve and fulfill multiple customer tasks, such as incidents, cases, and service requests, between ServiceNow instances.

See [Technology Provider Service Management](#) for more information.

Important: Technology Provider Service Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Technology Provider Service Management features

Service Bridge

The ServiceNow® Service Bridge and Service Bridge Providers applications enable providers and customers to connect and track services directly between instances without the need to configure and maintain custom integrations.

Proactive Service Experience Workflows

The Telecommunications, Media and Technology Assurance Workflows application has been renamed to Proactive Service Assurance Workflows in the November 2022 Store release.

Activation information

Install Technology Provider Service Management by requesting it from the ServiceNow Store. 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](#).

Service Bridge (Technology) release notes

The ServiceNow® Service Bridge applications enable providers and customers to connect and track services directly between instances without having to configure and maintain custom integrations. Service Bridge was enhanced and updated in the Tokyo release.

Service Bridge highlights for the Tokyo release

- Provide your users with the required access to create requests and orders from the published items in the service catalog on the customer's instance.
- Resolve and fulfill multiple customer tasks, such as incidents, cases, and service requests, between ServiceNow instances.
- Enable a customer to read the choice list for a catalog reference field directly from the provider's ServiceNow instance.
- Enable a provider or a customer to transform the inbound and outbound data for remote tasks.

i Important: Service Bridge is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading Service Bridge to Tokyo

To upgrade to the Tokyo version of the Service Bridge applications, see the [Service Bridge-Upgrade steps for San Diego store release to Tokyo store release \[KB1120583\]](#) article in the Now Support Knowledge Base.

New in the Tokyo release

Global transform in Service Bridge for providers

Enables providers to create a default transform definition that can be applied globally to all customer instances that match the configuration.

Support for glide_list fields in remote task definition

glide_list type fields can be used while defining the inbound and outbound fields for a remote task definition. With glide_list type fields, you can sync multiple records between the provider and customer tables.

Service Bridge authorized users

Provide your users with the required access to create the requests and orders from the published items in the service catalog on the customer's instance. The customer can also manage the list of users within the provider's criteria from the provider's own instance.

Service Bridge remote task

Resolve and fulfill multiple customer tasks, such as incidents, cases, and service requests, between the provider and customer instances. The Remote Task Outbound Assignment enables the sender to provide more relevant information

for tasks, such as incidents, cases, and requests and the receiver to act on these tasks.

[Service Bridge remote choice fields](#)

Enable a provider's customer, in their own instance, to read the choice list of a Remote Choice field directly from the provider's instance. Remote Choice fields are available in the remote record producers. You no longer have to replicate and maintain the data between the ServiceNow instances of the provider and their customers.

[Service Bridge Transform Framework](#)

With the Transform Framework, the provider can transform the inbound and outbound data for remote tasks between their ServiceNow instance and the customer's instance.

Changed in this release

Single group for administrator tasks and automated emails

There's now only one group for admin tasks and automated email notifications. That group is the Service Bridge admins. In previous versions of the Service Bridge application, there were two admin groups. They were the Service Bridge admins for the automated email notifications and the Service Bridge admin group for all administrator tasks.

Addition of a Service Bridge channel to Customer Service Management (CSM)

Case tasks in the provider's instance are now created with the automatic assignment of a Service Bridge channel value, instead of eBonding.

Activation information

Install **Service Bridge** by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[Instance Data Replication \(IDR\)](#)

ServiceNow[®] Instance Data Replication (IDR) copies data updates from one instance to one or more other instances. It enables you to maintain consistent data across different organizations in your company. IDR provides a one-to-many replication, which enables one instance to propagate data across different departments and business units to keep data in synch. With IDR, you can also modify data during replication.

[Flow Designer](#)

ServiceNow[®] Flow Designer is a Now Platform feature for automating processes in a single design environment. Flow Designer enables process owners to use natural language to automate approvals, tasks, notifications, and record operations without coding.

[Record producer](#)

A record producer is a specific type of catalog item that enables you to create task-based records, such as incident records, from the service catalog. The look and feel of a record producer is similar to that of a catalog item. However, the record producer generates a task record, such as an incident, instead of a requested item.

Proactive Service Experience Workflows release notes

The ServiceNow® Proactive Service Experience Workflows application helps you to resolve network-initiated incidents and to proactively notify impacted customers. Proactive Service Experience Workflows was enhanced and updated in the Tokyo release.

Proactive Service Experience Workflows highlights for the Tokyo release

- The Decision Table has been upgraded to the Decision Builder and the Assignment Group on an incident record is now dynamically updated.
- Added new functionalities to the Incident Management application:
 - The Needs Attention flag is turned on when an incident is created or an escalation is raised on an incident.
 - The Needs Attention flag is turned off when an incident is updated by an assigned user or a user from the assigned group.
 - Auto-closure of the related cases when an incident is set to Resolved.
 - Synchronization of additional comments between the cases and incidents.
- Enhanced functionalities on the Service Operations Workspace are:
 - A New Affected Accounts impact card with the following related action:
 - Identify Affected Accounts: Refreshes the impacted services and identifies the impacted customers.
 - A New Cases impact card with the following related list of actions:
 - Generate Proactive Cases: Creates or updates the cases for the affected accounts.
 - Notify Customers: Enables Network Operations Center (NOC) agents to communicate with the affected customers through proactive cases.

See [Proactive Service Experience Workflows](#) for more information.

i Important: Proactive Service Experience Workflows is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[New affected accounts and cases impact cards](#)

Identify the affected accounts and generate proactive cases by using the new Affected Accounts and Cases impact cards.

[Escalate an incident](#)

Resolve an incident by escalating it to the higher level of the network operations' groups and users.

Changed in this release

[Application renamed to Proactive Experience Workflows](#)

The Telecommunications, Media, and Technology Assurance Workflows application has been renamed to Proactive Service Experience Workflows in the November 2022 Store release.

Activation information

Install Proactive Service Experience Workflows by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

Field Service Management

The ServiceNow® Field Service Management application helps organizations manage work tasks performed on location. Match tasks to agents based on skills, geographic territory assignments, and available inventory. Agents can record details on assigned tasks like completion status, travel time to jobs, and time spent.

Incident Management

ServiceNow® Incident Management restores normal service operation while minimizing impact to business operations and maintaining quality. Any user can record an incident and track it through the entire incident life cycle until service is restored and the issue is resolved.

Process Optimization

ServiceNow® Process Optimization helps analysts and process owners quickly analyze and optimize their business processes. Create automated business process flows from your data that enable you to monitor and more quickly discover inefficiencies in your processes.

Order Management for Telecommunications, Media, and Technology release notes

The ServiceNow® Order Management for Telecommunications, Media, and Technology application enables service providers to capture, manage, and fulfill orders from enterprise customers. Order Management for Telecommunications, Media, and Technology was enhanced and updated in the Tokyo release.

Order Management for Telecommunications, Media, and Technology highlights for the Tokyo release

- Capture change and disconnect multi-site, multi-product customer and service orders using Order Capture UI.
- Create and manage multiple versions of catalog entities such as, product offerings, product specifications, service specifications, and resource specifications using Catalog versioning feature.
- Visualize the complete hierarchy of a product or service order with the statuses of order line items, decomposed orders, and order tasks on a single UI.
- Access enhanced open APIs that are fully conformant with TMF.
- Create and manage compatibility rules to define horizontal relationships among products, services, and resources specifications.

See [Order Management for Telecommunications, Media, and Technology](#) for more information.

Important: Order Management for Telecommunications, Media, and Technology is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Activation information

Install Order Management for Telecommunications, Media, and Technology (App Version: 2.0.3) by requesting it from the ServiceNow Store. 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](#).

Telecommunications release notes

Telecommunications has new and updated features in the Tokyo release.

Important information for upgrading Telecommunications, Media, and Technology

In the Tokyo release, a new internal plugin called Telecommunications, Media, and Technology Core (sn_tmt_core) is automatically installed. It includes all the common functions that were previously part of the Telecom Core or Product Catalog Advanced plugins. For more details, see [Telecommunications, Media, and Technology plugin \[KB1121711\]](#) article in the Now Support Knowledge Base.

Telecommunications Service Management release notes

The ServiceNow[®] Telecommunications Service Management application connects your entire telecommunications operation, from network to customer, with one platform to deliver proactive care and maximize the availability and quality of service. Telecommunications Service Management was enhanced and updated in the Tokyo release.

Service Bridge (Telecommunications) release notes

The ServiceNow[®] Service Bridge applications enable providers and customers to connect and track services directly between instances without having to configure and maintain custom integrations. Service Bridge was enhanced and updated in the Tokyo release.

Service Bridge highlights for the Tokyo release

- Provide your users with the required access to create requests and orders from the published items in the service catalog on the customer's instance.
- Resolve and fulfill multiple customer tasks, such as incidents, cases, and service requests, between ServiceNow instances.
- Enable a customer to read the choice list for a catalog reference field directly from the provider's ServiceNow instance.
- Enable a provider or a customer to transform the inbound and outbound data for remote tasks.

i Important: Service Bridge is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading Service Bridge to Tokyo

To upgrade to the Tokyo version of the Service Bridge applications, see the [Service Bridge-Upgrade steps for San Diego store release to Tokyo store release \[KB1120583\]](#) article in the Now Support Knowledge Base.

New in the Tokyo release

[Global transform in Service Bridge for providers](#)

Enables providers to create a default transform definition that can be applied globally to all customer instances that match the configuration.

[Support for glide_list fields in remote task definition](#)

`glide_list` type fields can be used while defining the inbound and outbound fields for a remote task definition. With `glide_list` type fields, you can sync multiple records between the provider and customer tables.

[Service Bridge authorized users](#)

Provide your users with the required access to create the requests and orders from the published items in the service catalog on the customer's instance. The customer can also manage the list of users within the provider's criteria from the provider's own instance.

[Service Bridge remote task](#)

Resolve and fulfill multiple customer tasks, such as incidents, cases, and service requests, between the provider and customer instances. The Remote Task Outbound Assignment enables the sender to provide more relevant information for tasks, such as incidents, cases, and requests and the receiver to act on these tasks.

[Service Bridge remote choice fields](#)

Enable a provider's customer, in their own instance, to read the choice list of a Remote Choice field directly from the provider's instance. Remote Choice fields are available in the remote record producers. You no longer have to replicate and maintain the data between the ServiceNow instances of the provider and their customers.

[Service Bridge Transform Framework](#)

With the Transform Framework, the provider can transform the inbound and outbound data for remote tasks between their ServiceNow instance and the customer's instance.

Changed in this release

Single group for administrator tasks and automated emails

There's now only one group for admin tasks and automated email notifications. That group is the Service Bridge admins. In previous versions of the Service Bridge application, there were two admin groups. They were the Service Bridge admins for the automated email notifications and the Service Bridge admin group for all administrator tasks.

Addition of a Service Bridge channel to Customer Service Management (CSM)

Case tasks in the provider's instance are now created with the automatic assignment of a Service Bridge channel value, instead of eBonding.

Activation information

Install Service Bridge by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[Instance Data Replication \(IDR\)](#)

ServiceNow® Instance Data Replication (IDR) copies data updates from one instance to one or more other instances. It enables you to maintain consistent data across different organizations in your company. IDR provides a one-to-many replication, which enables one instance to propagate data across different departments and business units to keep data in synch. With IDR, you can also modify data during replication.

Flow Designer [↗](#)

ServiceNow® Flow Designer is a Now Platform feature for automating processes in a single design environment. Flow Designer enables process owners to use natural language to automate approvals, tasks, notifications, and record operations without coding.

Record producer [↗](#)

A record producer is a specific type of catalog item that enables you to create task-based records, such as incident records, from the service catalog. The look and feel of a record producer is similar to that of a catalog item. However, the record producer generates a task record, such as an incident, instead of a requested item.

Telecommunications, Media, and Technology Assurance Workflows

The ServiceNow® Telecommunications, Media, and Technology Assurance Workflows application helps you resolve network-initiated incidents and to proactively notify impacted customers. Telecommunications, Media, and Technology Assurance Workflows was enhanced and updated in the Tokyo release.

Changed in this release

Application renamed to Proactive Service Experience Workflows [↗](#)

The Telecommunications, Media and Technology Assurance Workflows application has been renamed to Proactive Service Assurance Workflows in the November 2022 Store release.

i Note: To learn more about the changes in this release, see [Proactive Service Experience Workflows release notes](#).

Order Management for Telecommunications, Media, and Technology release notes

The ServiceNow® Order Management for Telecommunications, Media, and Technology application enables service providers to capture, manage, and fulfill orders from enterprise customers. Order Management for Telecommunications, Media, and Technology was enhanced and updated in the Tokyo release.

Order Management for Telecommunications, Media, and Technology highlights for the Tokyo release

- Capture your changes and disconnect multi-site and multi-product customer and service orders by using the Order Capture user interface (UI).
- Create and manage multiple versions of your catalog entities, such as the product offerings, product specifications, service specifications, and resource specifications, by using catalog versioning.
- Visualize the complete hierarchy of a product or service order by using a single UI to look at the status of your order line items, decomposed orders, and order tasks.

- Access enhanced open APIs that fully conform with the Telemangement Forum (TMF).
- Create and manage the compatibility rules so that you can define the horizontal relationships among your products, services, and resources specifications.

See [Order Management for Telecommunications, Media, and Technology](#)  for more information.

i Important: Order Management for Telecommunications, Media, and Technology is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Change and disconnect an order \(product\)](#)

Enable your agents to change and disconnect customer (product) orders directly in the Now Platform by using the Order Capture UI. Your agents can now create change or cancel orders on behalf of the customers. For example, your agents can modify or cancel the customer's product inventory directly in the Now Platform.

[Change and disconnect an order \(service\)](#)

Enable your agents to change and disconnect customer service orders directly in the Now Platform by using the Order Capture UI. Your agents can now create change or disconnect service orders on behalf of the customers. For example, your agents can modify or cancel the customer's service inventory directly in the Now Platform.

[Catalog versioning](#)

Create and launch new versions of an existing product offering, product specification, service specification, or resource specification with the required changes. You can easily accommodate the changes in your product offerings in different catalog versions and modify the already published entities.

[Orchestration Plan UI for order agents](#)

Visualize an order that has all the domain orders, order tasks, and their current states on one UI page. Your agents don't have to go to multiple UI lists to know the current state of an order and they can also easily identify and resolve any delay or fallout in the order fulfillment process.

[TMF APIs conformance](#)

Achieve seamless integration of Telecommunications Service Management (TSM) solutions with the order management systems and other systems.

The following open APIs include the enhancements that conform with TMF:

- Trouble ticket management API (TMF 621)
- Product order API (TMF 622)
- Product inventory API (TMF 637)
- Alarm management API (TMF 642)

[Horizontal relationships among products, services, and resources](#)

Enable your product catalog managers to define the compatibility rules for establishing horizontal relationships among the product, service, and resource order specifications. Also, you can use an enhanced product inventory

module to capture and manage the details of the related product and service inventories after the order fulfillment process is complete.

Note: The current version of the compatibility rules supports only the creation and fulfillment of new product and service orders.

UI changes

New look for Order Management for Telecommunications, Media, and Technology

The Configurable workspace for Order Management for Telecommunications, Media, and Technology has a new look. For more information, see [the Next Experience UI](#).

Changed in this release

Enhanced UI Builder page for Order Capture

Starting with this Tokyo release, a new UI Builder page for the Order Capture has been introduced in the Order Management for Telecommunications, Media, and Technology application to improve the user experience, scalability, and performance. The previous UI Builder record page variant (Order Creation Record Page) has been deleted to support this new page.

The Telemangement Forum (TMF) APIs have been modified, and new APIs have been added in the Tokyo release. To learn more about how to use these APIs to integrate your applications with the Now Platform, see the [Developer guides](#).

Order currency for Product order

To learn more about the updates for order currency starting from this Tokyo release, see the [Order currency for Product order \[KB1122859\]](#) article in the Now Support Knowledge Base.

External ID columns for Account (customer_account), Contact (customer_contact) and Location (cmn_location) tables

Starting with the Tokyo release, the Order Management for Telecommunications, Media, and Technology application (version: 3.0.1), introduces a new field, **sn_tmt_core_external_id** for the External ID. The existing **sn_ind_tsm_core_external_id** and **sn_ind_tmt_orm_external_id** fields for the external ID have been deprecated. To learn more, see [Telecommunications, Media, and Technology plugin \[KB1121711\]](#).

Activation information

Install Order Management for Telecommunications, Media, and Technology (App Version: 2.0.3) by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[Configuration Management Database \(CMDB\)](#)

The Order Management for Telecommunications, Media, and Technology application creates the required CIs (configuration items) and installs base items for the services and resources that are delivered to customers. It enables the assurance that service begins when an order has been fulfilled.

[Customer Service Management](#)

The Order Management for Telecommunications, Media, and Technology application uses the ServiceNow® Customer Service Management account, consumer, and product inventory data model. Customer service agents have full visibility into products and services that have been delivered to customers using Order Management for Telecommunications, Media, and Technology.

Service Bridge

The ServiceNow® Service Bridge applications enable providers and customers to connect and track services directly between instances without the need to configure and maintain custom integrations.

Telecommunications Network Inventory release notes

The ServiceNow ServiceNow® Telecommunications Network Inventory solution enables network architects to define the elements of physical and logical network infrastructures. With this application, you can create a digital inventory model that enables you to plan, deploy, and manage your telecommunications networks and services. Telecommunications Network Inventory is a new application in the Tokyo release.

Telecommunications Network Inventory highlights for the Tokyo release

- Define a catalog of inventory functions and subflows to execute the network inventory design and assign activities via user-defined flows/subflows.
- Initiate change requests in the Telecommunications Network Inventory application for the order tasks of Order Management for Telecommunications and Media application with the help of OMT - TNI integration.
- Create various CI inventory group of and apply actions to the group of CIs using inventory group in workspace.
- Define managed network functions to manage and track your network functions that are delivered through Virtual Network Functions(VNF) and Cloud-native Network Functions (CNF).
- Define your servers, virtual machines, kubernetes cluster, and kubernetes pod to track and manage their CIs. Install Discovery and Service Mapping Patterns (com.sn_itom_pattern) plugin from ServiceNow Store to see kubernetes cluster and pod CIs in your instance.
- Define the IP addresses from network inventory workspace to help you track and manage all IP addresses.
- Define the inventory models from network inventory workspace to help you track the technical information from the manufacturer about the equipment, including compatibility and physical characteristics.
- Define the network inventory templates and their relationships to each other for use in the equipment instantiation process.
- Instantiate your network inventory assets by using templates, the Change model process, and the Template API.

- Design and assign your network inventory resources to build a digital representation of your networks.
- View the network inventory data that is associated with the sites, inventory resources, and assets by using the User Interface Builder-based Network Inventory Workspace.

See [Telecommunications Network Inventory](#) for more information.

i Important: Telecommunications Network Inventory is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

By using the Telecommunications Network Inventory function catalog, you can access the functions that help you to automate the network inventory's Design and Assign process. You can use these functions and subflows to create, update, and retrieve a configuration item (CI) while you are performing the Design and Assign process.

[Network Inventory Design and Assign](#)

Design and reserve the network inventory resources that are required for you to build a digital representation of your networks. The Design and Assign functionality is a set of inventory tasks that you can perform sequentially, or in parallel, to enable you to accurately, efficiently, and consistently build the network service topologies and capacity for your customers or for your own network service.

[Network Inventory model definition](#)

Create the inventory models to help you track the technical information from the manufacturer about an equipment model, its associated equipment holders, network interfaces, interface cards, and logical and physical connections. An inventory model contains the metadata about its physical characteristics, including the dimensions, compatibilities, and configurations.

[Network Inventory template definition](#)

Define the network inventory templates and their relationships to each other. A template includes the rules on how the equipment configurations should be generated and are based on the specific operating requirements from the manufacturer.

[Network Inventory Workspace](#)

View the network inventory data that is associated with your network sites, telco equipment, equipment holders, interface cards, network interface cards, and logical and physical connections. The Network Inventory Workspace enables a network inventory manager to search and explore the existing network inventory and to examine the health and recent activity of the CMDB Network Inventory classes, to effectively plan, design, build, and manage a network inventory.

i Note: The Network Inventory Workspace landing page is only compatible with the Tokyo release and above.

Activation information

Install Telecommunications Network Inventory by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[Configuration Management Database \(CMDB\)](#)

With the Configuration Management Database (CMDB) application, build logical representations of assets, services, and the relationships between them that comprise the infrastructure of your organization. Details about these components are stored in the CMDB, which you can use to monitor the infrastructure, helping ensure integrity, stability, and continuous service operation.

[Telecommunications](#)

The Telecommunications solution connects your entire telecommunications operation, from network to customer, with one platform to deliver proactive care and maximize the availability and quality of service. It makes work flow better across the value chain by connecting service delivery, customer care, and operations workflows on one platform.

IT Asset Management release notes

IT Asset Management has new and updated features in the Tokyo release

Software Asset Management release notes

The ServiceNow® Software Asset Management product systematically tracks, evaluates, and manages software licenses, compliance, and optimization. The Software Asset Management product was enhanced and updated in the Tokyo release.

Software Asset Management highlights for the Tokyo release

- Elevate your user experience by using the Contract renewal workflow to renew your software contracts, the Asset Management Executive dashboard to get visibility into IT Asset Management key performance indicators (KPIs), and the Success portal to track the progress of your Software Asset Management goals.
- Streamline the integration of your SaaS applications through the SaaS playbook and optimize your SaaS spend by managing licenses for Workday applications.
- Track and optimize your perpetual software licenses by using unlimited licensing support and publisher-based enhancements for IBM, Oracle, and Microsoft.
- Evaluate the costs of migrating your on-premise resources to public cloud platforms with the Cloud Insights and Cloud Migration Assessment applications.

See [Software Asset Management](#) for more information.

Important: Software Asset Management SaaS License Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading Software Asset Management to Tokyo

For information about upgrading from the Software Asset Management Foundation plugin (com.snc.sams), see [Revert Software Asset Management customizations](#).

New in the Tokyo release

[Simulate the cost of migrating on-premise resources to the cloud](#)

Get an estimate before moving to Microsoft Azure or AWS cloud by simulating the cost of migrating your on-premise resources to the cloud. You also receive

recommendations on End of Life for hardware and software, as well as resource utilization. The recommendation also differentiates the cost of various cloud providers with or without the cost of Bring Your Own License. When you decide on the cloud provider, you can create a change request to perform the migration.

[Track the success of your Software Asset Management application via the Success portal](#)

Create success goals and activities to assess the performance of the Software Asset Management application in your environment. You can use the Success portal dashboard to view your open and completed goals and activities, as well as your projected and actual savings.

[Perform health check scans on the configurations in your Software Asset Management application](#)

Run health check scans on your ServiceNow instance to determine the health of your Software Asset Management configurations. If configuration errors are detected, you get suggestions for correcting those errors. You can use the Health check dashboard to view the results of the health scan and gain a better understanding of your configurations.

[Get visibility into critical IT Asset Management KPIs using the Asset Management Executive dashboard](#)

Enable the executives in your organization to gain actionable insights into IT Asset Management KPIs. Your executives can use the Asset Management Executive dashboard to view KPIs such as the total spend, potential savings, and expiring contracts. You can access the Asset Management Executive dashboard if either the Software Asset Management application or the Hardware Asset Management application is installed in your ServiceNow instance.

[Create entitlements with unlimited allocations and unlimited rights](#)

Create entitlements for Per User, Per Device, and User Subscription metrics that support unlimited allocations and unlimited rights to license any number of software installations without incurring a true-up cost.

[Allow for advance reporting by associating software installations to software models](#)

Update normalized discovery models automatically with a matching software model reference. The association of software installations, discovery models, and software models enables you to use advanced reporting for licensable and non-licensable products.

[Use host affinity rules on Microsoft Windows Server licensing on an on-premise cluster](#)

Use host affinity rules that are configured for Windows Server Standard while calculating license consumption. You can optimize and significantly reduce the number of licenses that are required, which results in cost savings for your organization.

[Integrate Salesforce CRM application through Playbook](#)

Use the SaaS Playbook to guide you through the entire process of integrating the Salesforce CRM application. The Playbook helps you verify each action and provides context throughout each step of the integration process. You can also navigate to the complete documentation through the Playbook.

[Integrate with Workday applications out-of-the-box](#)

Use the ServiceNow SaaS License Management application to integrate with the Workday applications such as Workday Human Capital Management and

Workday Financial Management introduced in version 10.0.2 of Software Asset Management - SaaS License Management.

[Renew software contracts through Contract renewal workflow](#)

Use the Contract Renewal workflow to notify contract owners when a contract is about to expire or already expired and allow them to renew or expire the contract record. This workflow maintains the contract history while updating software licenses, terms, and conditions to a new contract.

[Manage user-based IBM licenses](#)

Use the Software Asset Management publisher pack for IBM to manage the following user-based licenses for your IBM products:

- Authorized User
- Authorized User Value Unit (AUVU)
- External User Value Unit (XUVU)
- Employee User Value Unit (EUVU)

Create entitlements and software models so that you can measure the compliance of these licenses and better optimize your IBM licensing costs.

[Optimize licensing on Microsoft SQL Server clusters based on total cost](#)

Optimize the licensing on your Microsoft SQL Server clusters by assigning licenses to the physical hosts and virtual machines (VMs) within each cluster based on total cost. With cost-based licensing, you can license a combination of physical hosts and VMs within each Microsoft SQL Server cluster, which enables you to automatically implement the most cost-effective licensing solution for each cluster. Cost-based licensing also considers any Microsoft Software Assurance (SA) benefits that are available for your Microsoft SQL Server software.

[Analyze infrastructure details for physical hosts and virtual machines \(VMs\) that are running Microsoft Windows Server or Microsoft SQL Server across hybrid environments](#)

Use the Windows and SQL Server Infrastructure report to view and analyze infrastructure details for the physical hosts and VMs that are running Microsoft Windows Server or Microsoft SQL Server across both on-premise and public cloud environments. With this report, you can view the consolidated infrastructure details for these hosts and VMs without having to locate and select each resource individually in the License usage view (Software Asset Workspace) or License Workbench (Software Asset Management classic application).

[Discover and report on Oracle Fusion Middleware products using the Oracle-verified Discovery and Software Asset Management applications](#)

Save time when discovering and reporting on data for your Oracle Fusion Middleware products by using the Oracle-verified Discovery and Software Asset Management applications. With the verification and enrollment of ServiceNow in the Oracle Third-Party Tool Vendor (3PTV) Program, both applications are verified to collect and report on the installation and usage data for your Oracle products without requiring any Oracle measurement tools.

Changed in this release

[SaaS License Management store application name](#)

In the [ServiceNow Store](#), the name of the ServiceNow® SaaS License Management application has changed from Software Asset Management -

SaaS License Management Integrations to Software Asset Management - SaaS License Management.

[Option to create direct and SSO integration profiles in SaaS License Management](#)

If you are using Software Asset Workspace, the option to create direct and SSO integration profiles in Core UI is turned off. You can create integration profiles from the License operations view in Software Asset Workspace.

Deprecations

Starting with the Software Asset Management - SaaS License Management 10.0.10 version, Cisco Webex Meetings integration is no longer deployed or enhanced. Instead, use the [Cisco Webex integration](#) profile to integrate with Webex Meetings and other Webex applications.

Activation information

Software Asset Management is available with activation of the Software Asset Management Professional plugin (com.snc.samp). For details, see [Request Software Asset Management](#).

The Software Asset Workspace is available with activation of the Software Asset Workspace plugin (com.sn_sam_workspace). After this plugin is activated, you can't revert to the classic Software Asset Management application. For details, see [Request Software Asset Management](#).

To activate the Next Experience, make sure that the `glide.ui.polaris.experience` system property in your instance is set to true.

Install Software Asset Management SaaS License Management by requesting it from the ServiceNow Store. 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](#).

Install Data Collection for Oracle Global Licensing and Advisory Services by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[Hardware Asset Management](#)

The ServiceNow[®] Hardware Asset Management product is a licensable application that provides advanced workflow, automation, and mobile capabilities to track and manage your asset environment.

[Enterprise Asset Management](#)

The ServiceNow[®] Enterprise Asset Management product is a licensable application that manages the entire life cycle of your connected and non-connected enterprise assets. This product provides a comprehensive end-to-end solution for maintaining enterprise assets, minimizing costly downtime, and maximizing enterprise asset usability.

[Cloud Insights](#)

The ServiceNow[®] Cloud Insights product is a licensable application that enables you to analyze all costs that are associated with your cloud assets. You can use this information to optimize operations and reduce your cloud spend.

[Contract Management](#)

The ServiceNow® Contract Management application enables you to track and manage your contracts.

Hardware Asset Management 5.0 release notes

The ServiceNow® Hardware Asset Management (HAM) provides advanced workflow, automation, and mobile capabilities to track and manage your asset environment. Hardware Asset Management was enhanced and updated in the Tokyo release.

Hardware Asset Management highlights for the Tokyo release

- Seamlessly navigate to multiple views in the Hardware Asset Workspace and use data visibility, notifications, and actionable alerts to optimize costs and mitigate compliance risks.
- Plan the roll-out of Hardware Asset Management and perform the basic configuration by using the HAM Guided Setup in Hardware Asset Workspace.
- Automatically identify# and track hardware asset locations by integrating your Zebra technology RFID system with your ServiceNow instance.
- Maintain contract history and save time and effort by copying hardware asset information from an old contract to a new one.
- Efficiently manage your sourcing through the Asset operations view and contract details through the Contract management view.

See [Hardware Asset Management](#) for more information.

Important: Hardware Asset Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Configure Hardware Asset Management applications through Guided Setup](#)

Configure the Hardware Asset Management applications on your ServiceNow instance through the Hardware Asset Management Guided Setup, which provides a sequence of tasks to be performed and organizes configuration activities into various categories.

[View hardware products and models on the Content lookup portal page](#)

Find the details of all the hardware products and model numbers within the content library via an intuitive user interface. The Content lookup portal has been expanded to include the hardware, product, and model content libraries.

[Renew hardware contracts through Contract renewal workflow](#)

Notify contract owners of an upcoming contract expiration and enable them to renew the contract record by using the Contract Renewal workflow. This workflow maintains the contract history during updating assets, terms, and conditions for a new contract.

[Identify and track your asset locations automatically with RFID](#)

View the RFID Tag information like zone group, zone, and locations mapped with assets by integrating your Zebra technology RFID system with your ServiceNow instance.

[Source hardware requests in the Asset operations view](#)

See local stock, create transfer orders, and place purchase orders by using the Sourcing task in the Asset operations view.

[Visualize and work on contract details](#)

Visualize, renew, and manage details of contracts such as the contract number, contract start and end dates, and terms and conditions statements by using the Contract management view.

[Get visibility into critical IT Asset Management KPIs using the Asset Management Executive dashboard](#)

Gain actionable insights into IT Asset Management KPIs by using the Asset Management Executive dashboard to view KPIs such as total spend, potential savings, and expiring contracts. The Asset Management Executive dashboard is available if either the Software Asset Management application or the Hardware Asset Management application is installed on your ServiceNow instance.

[Quick start tests for Hardware Asset Management](#)

After upgrades and deployments of new applications or integrations, run quick start tests to verify that Hardware Asset Management Hardware Asset Management still works. If you customized Hardware Asset Management, copy the quick start tests and configure them for your customizations.

[Updated Mobile section on the Asset form](#)

Manage your mobile devices more effectively by specifying enrollment, platform, and ownership details of your mobile device in the relevant fields of the Mobile section on the Asset form.

Changed in this release

[New workflow to renew contracts](#)

The new Contract renewal workflow is a streamlined and managed process that enables you to renew contracts that are nearing their expiration date or have already expired. You can create a contract record referencing the original contract and manage related entities.

[Ability to look up hardware model by model number](#)

You can now look up the model number of hardware models through the *MakeAndModel*JS script. This capability is turned on by default in the Tokyo release. The `glide.cmdb.makeandmodel.use_model_number_lookup` property is set to true by default in the Tokyo version.

Note: This property isn't available if you are upgrading to Tokyo from a previous version. You must manually add this system property and set it to true.

Activation information

Install Hardware Asset Management by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[IT Asset Management](#)

ServiceNow[®] IT Asset Management includes a family of products that work together to integrate the technological, contractual, and financial aspects of technology asset management through the complete asset lifecycle.

Software Asset Management [↗](#)

The ServiceNow® Software Asset Management application enables you to systematically track, evaluate, and manage software licenses, software compliance, and software optimization. You can reclaim unused software rights, purchase new software rights, and manage allocations for entitlements.

Contract Management [↗](#)

The ServiceNow® Contract Management application enables you to track and manage your contracts.

Enterprise Asset Management release notes

The ServiceNow® Enterprise Asset Management application manages the entire life cycle of your enterprise's connected and non-connected assets. This end-to-end solution enables you to maintain and maximize the life of your assets and at the same time, minimize any costly downtimes. Enterprise Asset Management is a new application in the Tokyo release.

Enterprise Asset Management highlights for the Tokyo release

- Improve productivity by using multi-component models and multi-component assets.
- Eliminate manual processes by using intuitive workflows to transfer, dispose, request, and refresh your assets.
- Use streamlined workflows to remediate defective or recalled enterprise assets and to manage expiring lease contracts.

i Important: Enterprise Asset Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Enterprise Asset Management features

Track assets and their hierarchical relationships using multi-component models and multi-component assets [↗](#)

Use multi-component models and multi-component assets to track and maximize how your assets are used. You can associate more than one component to a model to create a multi-component model. To increase granularity, multi-component models and assets are further subdivided into pre-assembled and user-assembled models and assets. Also, you can add child assets to existing multi-component assets and replace and retire any asset in the multi-component asset.

Create disposal orders for your assets [↗](#)

Create disposal orders for your assets that have reached their end of life cycle or are no longer functional. The disposal order workflow guides you through the entire order process for asset disposal.

Request loaner assets to keep your organization running smoothly [↗](#)

Request a temporary or loaner asset and use it for a specified period of time. You can prepare, deploy, and reclaim loaner assets. You can submit a loaner order even if the product is not currently available in the location that you choose.

Create transfer orders for your assets [↗](#)

Create a transfer order so that you can transfer assets from one location to the other. A transfer order can contain one or more transfer order lines. A transfer order line can involve one non-consumable asset or multiple quantities of a consumable asset.

[Create a request for enterprise catalog items from the Service Catalog application](#)

Use an enterprise asset request flow to request, source, and deploy catalog items from the Service Catalog application. You can also associate the catalog item with the Standard Enterprise Asset Request flow to trigger the flow.

[Request an asset refresh](#)

Use the Enterprise Asset Refresh flow so that you can track the assets that are nearing the end of their life cycles and replace them with new assets.

[Audit your asset inventory](#)

Audit your asset inventory to learn where your assets are and what their current status is.

[Use heat risks maps to assess risks for models and assets](#)

Run reports to calculate a risk score against models and assets that are based on two risk vectors: likelihood and impact.

[Access the Enterprise Asset Workspace via licensed roles](#)

Use licensed roles to manage your work in the Enterprise Asset Workspace. The `enterprise_asset_manager` role grants you complete access to the Enterprise Asset Workspace. To perform tasks, use the `enterprise_asset_technician` role.

[Manage expiring contracts for leased enterprise assets](#)

Get notified and take action on leased enterprise assets that are nearing the end of their contracts. You can choose to return your leased asset, buy out your leased asset, or extend your lease contract.

[Manage the Return Merchandise Authorization \(RMA\) process for your defective enterprise assets](#)

Use Return Merchandise Authorization (RMA) orders to track and manage the process of repairing or replacing enterprise assets that are defective. You can submit RMA orders for serialized enterprise assets that either arrived defective or became defective within the specified warranty period. Based on your service or warranty contract with the asset vendor, you can choose to repair the defective enterprise asset on-site or ship the defective enterprise asset to the asset vendor for off-site repair or replacement.

[Manage the enterprise asset recall process](#)

Use recall orders to manage the process of identifying and remediating all enterprise assets that have been recalled by the asset manufacturer or regulator. Supported remediation actions include the replacement, repair, or retirement of your recalled enterprise assets. You can also choose to provide your users with additional instructions on how to operate your recalled enterprise assets.

[Extend Configuration Management Database \(CMDB\) classes for your enterprise assets and models](#)

Use the Expanded Model and Asset Classes application to add enterprise model and asset classes that extend out-of-the-box product model and asset classes within the CMDB class hierarchy. You can also use this application to create model categories that associate these enterprise model and asset classes with CMDB configuration item (CI) classes. Based on these classes and model categories, the Enterprise Asset Management application creates asset and model records that you can use to track and manage your enterprise assets. Discovery tools, such as the ServiceNow[®] Discovery application, can also use these classes and model categories to create asset and model records for discovered CIs.

Classify medical device-based enterprise models within the Configuration Management Database (CMDB) [↗](#)

Starting with version 1.2.0 of the Expanded Model and Asset Classes application, use the Medical Device model [sn_ent_medical_device_model] child class of the Enterprise good model [sn_ent_model] class to classify medical device-based enterprise models within the Configuration Management Database (CMDB). The application also updates the existing Medical device model category to associate with the new Medical Device model [sn_ent_medical_device_model] class, enabling you to create corresponding asset and model records for tracking and managing your medical device-based enterprise assets.

Activation information

Install Enterprise Asset Management by requesting it from the ServiceNow Store. 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](#) [↗](#).

IT Operations Management release notes

IT Operations Management has new and updated features in the Tokyo release.

ITOM Cloud Accelerate release notes

The ServiceNow[®] ITOM Cloud Accelerate application provides the workflows to assess the cloud readiness of your organization and enforce the cloud governance guidelines. ITOM Cloud Accelerate is a new application in the Tokyo release.

ITOM Cloud Accelerate highlights for the Tokyo release

- Plan, organize, and track the migration of the enterprise IT resources and workloads of your organization to the cloud.
- Remediate the missing and incorrect cloud resource tags.
- Check the cloud resources of your organization for configuration policy violations and fix them.
- Build custom workflows to interact with the cloud resources of your organization.

See [ITOM Governance](#) [↗](#) for more information.

i Important: The ITOM Cloud Accelerate features are available as separate applications in the ServiceNow Store. For details, see the Activation information section of the release note.

ITOM Cloud Accelerate features

Tag Governance [↗](#)

Use the Tag Governance application in a production instance to update the resource tags in the cloud. To use this feature, you need the ITOM Cloud Accelerate entitlement.

Cloud Migration Assessment [↗](#)

Use the ServiceNow[®] Cloud Migration Assessment application to plan, organize, and track the process of relocating your enterprise IT resources and workloads to cloud platforms. Analyze the IT resources using dashboards that visualize and summarize information on resources by different categories.

Cloud Configuration Governance [↗](#)

Use the ServiceNow® Cloud Configuration Governance application to check the configuration settings of cloud resources in your organization against a set of policies to identify violations. After identifying the violation, use remediation workflows to mitigate them.

Cloud Action Library [↗](#)

Use the ready-to-use actions and subflows of the ServiceNow® Cloud Action Library application to interact with the cloud resources of the organization. ServiceNow® ITOM Cloud Accelerate features, such as Cloud Configuration Governance, use these actions to operate.

Activation information

Install the ITOM Cloud Accelerate features by requesting them from the ServiceNow Store. 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](#) [↗](#).

To use the ITOM Cloud Accelerate features, you must have valid ITOM Cloud Accelerate entitlement. Contact your ServiceNow sales representative to procure the ITOM Cloud Accelerate entitlement.

Related ServiceNow applications and features

ITOM Visibility [↗](#)

The ServiceNow® ITOM Visibility product consists of ServiceNow® [Discovery](#) [↗](#), ServiceNow® [Service Mapping](#) [↗](#), Certificate Inventory and Management, Service Graph Connectors, Multisource CMDB, and Firewall Audits and Reporting. Discovery and Service Mapping give you a unified, connected view of your entire IT network and the services that it supports.

Discovery provides a replicable and reliable method to identify your enterprise IT infrastructure. Service Mapping creates an accurate, service-aware view of your infrastructure. Service Mapping continuously monitors IT resources for service-affecting changes and updates service maps in real time. For more information on ITOM Visibility, see [ITOM Visibility](#) [↗](#).

ITOM Licensing [↗](#)

ITOM enables you to view the total number of licenses assigned to your applications and CIs. This subscription provides the enhanced capability of viewing which specific CIs you have a license for. You can view the subscription breakdown for ITOM Health, ITOM Visibility, ITOM Optimization, and ITOM Cloud Accelerate. For details, see [View which CIs have an ITOM license](#) [↗](#).

ITOM Health release notes

The ServiceNow® ITOM Health product includes the ServiceNow® Event Management and the ServiceNow® Health Log Analytics applications, which enable you to track and maintain the health of services in your organization. ITOM Health was enhanced and updated in the Tokyo release.

ITOM Health highlights for the Tokyo release

- Monitor alerts using a modernized look and feel with the Service Operations Workspace.
- Utilize enhancements to the Service Operations Workspace UI to better visualize the impact of an alert on service offerings, and business and technical services.

See [ITOM Health](#) for more information.

ITOM Health features

Event Management

Identify health issues across your organization's IT infrastructure on a single management console. Get alert aggregations for discovered services, application services, and automated alert groups.

Health Log Analytics

Predict IT issues before they impact users. Solve issues faster by ingesting, analyzing, and correlating machine-generated log data in real time.

Related ServiceNow applications and features

ITOM Visibility

The ITOM Visibility product consists of [Discovery](#), [Service Mapping](#), Certificate Inventory and Management, Service Graph Connectors, Multisource CMDB, and Firewall Audits and Reporting . Discovery and Service Mapping provide a unified, connected view of your entire IT network and the services that it supports.

ITOM Optimization

The ITOM Optimization product contains the [Cloud Provisioning and Governance](#) feature. Using this feature, you can provision private and public cloud infrastructure and services to achieve consistent management and cost visibility.

Event Management release notes

The ServiceNow® Event Management application helps you to identify health issues across the data center on a single management console. Event Management provides alert aggregation for discovered services, application services, and automated alert groups. Event Management was enhanced and updated in the Tokyo release.

Event Management highlights for the Tokyo release

- Monitor alerts using a modernized look and feel with the Service Operations Workspace.
- Better visualize the impact of an alert on service offerings, and business and technical services by using enhancements to the Service Operations Workspace UI.
- Take advantage of enhancements to the efficiency and accuracy of metrics you receive in Metric Intelligence.

See [Event Management](#) for more information.

i Important: Event Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Service Operations Workspace for ITOM](#)

Use Service Operations Workspace with its configurable workspace that provides a modernized look and feel for triage and remediation of alerts, monitoring services, and integrating with ITSM. Service Operations Workspace provides the following features:

- Personalized landing page for the operator that displays assigned work and work priority.
- Remediation tasks using the Playbook, as well as insights and recommendations to more efficiently triage and remediate alerts.
- Extensive configuration and customization options.

Note that the legacy Operator Workspace is still supported in this release.

[Service Operations Workspace enhancements to align with CSDM](#)

The following Service Operations Workspace enhancements align with the Common Service Data Model (CSDM):

- Service dashboard tiles grouped according to a selected service portfolio, which enables you to view services by service offering
- An alert form table that displays the service offerings that are impacted by an alert

[Update the expiration date for active metrics](#)

Continue receiving data when a metric's expiration date arrives by extending the metric's expiration date.

[MID Server throttling mechanism for Metric Intelligence](#)

Configure your MID Server to protect against data bursts that might overload the instance while ensuring that you do not lose any data.

[Disable anomaly detection for Metric Intelligence](#)

Disable detection of Metric Intelligence anomalies during system maintenance because anomalies detected while maintenance is in progress are likely to be irrelevant.

[New statistical model for Metric Intelligence](#)

Decipher data collected by the skewed noisy classifier with approximately 30% greater efficiency by using the Median Absolute Deviation (MAD) statistical model.

[Event field mapping filter](#)

Configure event field mapping based either on the event monitoring source or on a custom filter condition for event field mapping, or both.

UI changes

Service Operations Workspace

The Service Operations Workspace replaces the Operator Workspace.

Changed in this release

[Run multiple event rules sequentially](#)

Execute multiple event rules in sequence rather than only the first matching event rule.

Improved log performance [↗](#)

Debug and logPayloadForDebug parameters have been added for selected connectors, providing enhanced debugging information for the connectors.

Retain alert field values when updating an alert [↗](#)

When updating an alert, empty values do not override values that exist in the event.

Anomaly alert events [↗](#)

Configure all events relevant to an anomaly alert to appear in the work notes of the alert.

Anomaly detection level [↗](#)

When working with metric to CI binding, the anomaly detection level appears automatically on the Metric to CI Mappings table.

Event field mapping enhancement [↗](#)

The **Copy Field** mapping type value copies the exact value of a field to the specified mapped field.

Removed in this release

When working with anomaly alerts in Metric Intelligence, the Info severity level has been replaced by the Clear Event status, which closes the alert.

Activation information

Event Management is available by activating the Event Management plugin (com.glideapp.itom.snac). For details, see [Request Event Management](#) [↗](#).

Related ServiceNow applications and features

Agent workspace for Metric Intelligence [↗](#)

ServiceNow[®] Agent Workspace for Metric Intelligence provides a central interface that enables you to view the health of a CI associated with an alert. Health details for a CI include various metric charts with control bounds and aggregations for single score charts.

Health Log Analytics [↗](#)

The Health Log Analytics application predicts IT issues before they impact users. The application helps you solve issues faster by ingesting, analyzing, and correlating machine-generated log data in real time.

Health Log Analytics release notes

The ServiceNow[®] Health Log Analytics application helps you predict IT issues before they impact users by ingesting, analyzing, and correlating machine-generated log data in real time. When Health Log Analytics detects a deviation from a normal pattern, it alerts you of a possible issue. Health Log Analytics was enhanced and updated in the Tokyo release.

Health Log Analytics highlights for the Tokyo release

- View Health Log Analytics system health alerts on the Event Management service map
- Use enhanced log data streaming capabilities

See [Health Log Analytics](#) for more information.

i Important: Health Log Analytics is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading Health Log Analytics to Tokyo

If your Health Log Analytics version is earlier than February 2022, contact Now Support or your ServiceNow sales representative to request an upgrade for the Health Log Analytics application core components.

New in the Tokyo release

[View Health Log Analytics system health alerts on the Event Management service map](#)

View system health alerts for Health Log Analytics on the ServiceNow® Event Management application service map. When the Health Log Analytics self-health checks that monitor the health of its components discover a system health issue, a notification triggers an alert. The service map helps you to better understand the source of the alert. It enables you to visualize the impact of the issue on the service through a visual representation of the data on the configuration items (CIs) that comprise the Health Log Analytics application and the relationships between these CIs.

Use enhanced log data streaming capabilities

Work with improved Health Log Analytics log data streaming capabilities that provide clear, actionable recommendations for resolving log streaming issues.

Changed in this release

New Service Operations Workspace experience

The new Service Operations Workspace provides a more efficient, modernized way for you to work.

i Note: In the Tokyo release, Service Operations Workspace is supported only when operated together with the Health Log Analytics application June 2022 version. Operator Workspace is still supported in the Tokyo release.

Activation information

Install Health Log Analytics by requesting it from the ServiceNow Store. For details, see [Health Log Analytics installation](#). 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](#).

Related ServiceNow applications and features

[Event Management](#)

The Event Management application uses events generated by Health Log Analytics. When Health Log Analytics detects an anomaly in your log data, it sends an event to Event Management. Event Management receives the event and generates an alert based on event and alert management rules.

[Agent Client Collector](#)

Agent data inputs beginning in Health Log Analytics application Version 21.0.1 - September 2021 use Agent Client Collector to stream logs to the ServiceNow instance.

[MID Server](#)

Health Log Analytics uses the ServiceNow® MID Server product to stream logs to the ServiceNow instance.

ITOM Visibility release notes

The ServiceNow® ITOM Visibility application provides a unified, connected view of your entire IT network and the services that it supports. ITOM Visibility was enhanced and updated in the Tokyo release.

ITOM Visibility highlights for the Tokyo release

- Manage the cloud operations of your organization with ServiceNow Cloud Operations Workspace.
- Take advantage of support for Google Cloud Platform (GCP) resources in the Performance Analytics Content Pack for Cloud Resources.
- Assess the readiness for performing mapping based on machine-learning using the Application service readiness dashboard.

See the [ITOM Visibility landing page](#) for more information.

i Important: ITOM Visibility is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading ITOM Visibility to Tokyo

ITOM Visibility report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

After upgrading to Tokyo, the install status is automatically set to "Installed" ("1") for all discovered infrastructure CIs. If your organization uses the install status, test Tokyo on your test instance before upgrading the production instance.

Use the CSDM lifecycle status for tracking life cycle stages and stage statuses for CIs. For more info, see:

To resolve issues related to the install status after upgrading to Tokyo, see [KB1213467](#).

New in the Tokyo release

[Application service readiness dashboard in configurable workspace](#)

Ensure that you are ready to discover and map application services based on machine learning (ML) by reviewing information on the Application service readiness dashboard. Service Mapping uses data processed by Predictive Intelligence to generate suggestions for traffic-based connections.

Support for IPv6 devices

IPv6 supports the following for Discovery via Discovery schedules and Quick Discovery.

- Systems:
 - Linux and Windows discovery patterns for horizontal discovery
 - Application Dependency Mapping (ADM)
 - Installed software
 - Application patterns
- vCenter
- SNMP devices
- Certificate Inventory and Management

IPv6 also supports Debug Mode in Pattern Designer.

IPv6 does not currently support the following:

- MID Server auto-selection
- Service Mapping
- Cloud Discovery or Cloud Provisioning and Governance

Cloud Operations Workspace [↗](#)

Use the Cloud Operations Workspace to slice and drill down into all your cloud resources by various dimensions such as region, accounts, and CI class types, as well as experiencing the new dark theme mode in the Next Experience UI. You can manage your cloud viewing preferences, set up cloud discovery schedules, and examine the trend of cloud resource growth.

Application CI life cycles [↗](#)

Control if application CIs should be updated based on running process status by setting the Discovery property `glide.discovery.adm.update.applications` to true. For existing customers upgrading to Tokyo, manually set this property to true.

SCP and SFTP file transfer method choice [↗](#)

Select the method to use for Probes and patterns to transfer files, SCP and SFTP, by setting the MID Server property `mid.discovery.file_transfer_protocol`. The default value is SCP.

Visibility Content application [↗](#)

Use the updated version of the patterns that were part of the family releases prior to the Tokyo release by installing the Visibility Content (sn_pattern_design) application. You can install the latest available version of this application from the ServiceNow Store or install it as a plugin on your ServiceNow instance.

Quick start tests for Service Mapping [↗](#)

After upgrades and deployments of new applications or integrations, run quick start tests to verify that Service Mapping works as expected. If you customized Service Mapping, copy the quick start tests and configure them for your customizations.

Changed in this release

Enhanced discovery patterns

- [GCP Global or Regional resources and DB services](#)
- [Extended Docker Image for Kubernetes](#) and [Docker Virtualization](#)
- [MSSQL components of the MSSQL server](#)
- [HPE BladeSystem Enclosure](#)
- [Couchbase Database](#)
- [Kubernetes](#) on GCP

[Agent Client Collector for Visibility](#)

Agent Client Collector for Visibility (ACC-V) now includes the following support:

- SAM Basic metering supports MAC.
- ACC-V supports data collection for Intel vPro Platform.
- Retrieves edition information for Adobe Acrobat and MS SQL Server with SAM installed.
- Detects portable applications, such as Firefox, VLC, Notepad++ etc, for Windows.
- Uses push-based Discovery to discover DNS names.
- Windows 11 Professional and Enterprise Editions, Windows 2022, macOS Monterey (x86), CentOS Stream 8 and 9, and RHEL 9.

[Certificate Inventory and Management](#)

Certificate Inventory and Management now supports Entrust CA Gateway.

[Analytics and Reporting for Cloud Resources](#)

- Performance Analytics Content Pack for Cloud Resources now supports GCP in the cloud analytics tables. Use the Cloud Operations Workspace application to view and drill down into details of Google Cloud resources.
- The default timeout for the scheduled job that fetches and populates the CI data in the analytics table has increased from 120 minutes to 360 minutes. You can use the `sn_disco_cd.scheduled_job_time_out_in_mins` property to change the default job timeout value.

[SNMP support for Discovery](#)

The default behavior for SNMP discovery is ALL for consistent behavior with Quick Discovery and Scheduled Discovery.

Activation information

ITOM Visibility is available with activation of the Discovery (com.snc.discovery) plugin and the Service Mapping (com.snc.service-mapping) plugin, which require the ITOM Visibility subscription. For details, see [Request Discovery](#) and [Request Service Mapping](#). For full ITOM Visibility functionality, install the latest ITOM Visibility out-of-band applications from the ServiceNow Store. For cumulative release note information for all released apps, see the ServiceNow Store version history release notes.

Related ServiceNow applications and features

[ITOM Health](#)

The ServiceNow® ITOM Health product includes the ServiceNow® Event Management and ServiceNow® Metric Intelligence applications, which help you track and maintain the health of services in your organization.

Event Management gathers alerts from infrastructure events that both third-party monitoring tools and the ServiceNow® internal agent capture. Event Management uses IT-related information that ServiceNow® Discovery gathers so it can map alerts to configuration items. Based on the collected information, Event Management then provides dashboards that show a consolidated view of all service-impact events.

The Agent Client Collector application enables you to do the following:

- Monitor your service availability.
- Examine the health and performance of your environment.
- Ensure that your infrastructure and its applications are running properly.

Agent Client Collector collects events and metrics. It runs in either a Windows or Linux environment.

[ITOM Optimization](#)

ITOM Optimization provides automation for the cloud workflows used to manage the cloud resources throughout their life cycle. It enables certified and enterprise-compliant cloud deployment, cost visibility, and other cloud management processes.

[ITOM Governance](#)

Use ITOM Cloud Accelerate workflows to assess your cloud readiness and enforce cloud governance guidelines. Check cloud resources in your organization against rules to identify violations or potential security issues. ITOM Cloud Accelerate comes with a set of customizable rules. Once the system identifies cloud configuration issues, use ITOM Cloud Accelerate workflows to remediate the issues and mitigate the violations. For cloud migration, you can plan and track resource migration process with Cloud Migration Assessment workflows.

[ITOM Licensing](#)

ITOM enables you to view the total number of licenses assigned to your applications and CIs. This subscription provides the enhanced capability of viewing which specific CIs you have a license for. You can view the subscription breakdown for ITOM Health, ITOM Visibility, ITOM Optimization, and ITOM Cloud Accelerate. For details, see [View which CIs have an ITOM license](#).

ITOM Optimization release notes

The ServiceNow® ITOM Optimization application provides automation for the cloud workflows used to manage the cloud resources throughout their life cycle. It enables certified and enterprise-compliant cloud deployment, cost visibility, and other cloud management processes. ITOM Optimization was enhanced and updated in the Tokyo release.

ITOM Optimization highlights for the Tokyo release

- Get the latest quality and security fixes for various core Open-Source libraries used in the product.

See [ITOM Optimization](#) for more information.

Activation information

The ServiceNow® Cloud Provisioning and Governance application is available with activation of the Cloud Provisioning and Governance (com.snc.cloud.mgmt) plugin, which requires a separate subscription. For details, see [Request the Cloud Provisioning and Governance application](#).

Related ServiceNow applications and features

Cloud Insights Billing

The ServiceNow® Cloud Insights Billing application has replaced the Cloud Provisioning and Governance native billing download capabilities. Use the Cloud Insights Billing application to set up billing download schedules and view the billing dashboards.

Cloud Provisioning and Governance: Terraform Connector

The ServiceNow® Terraform Connector app is available in the ServiceNow® Store. The app enables Cloud Provisioning and Governance to provide a provisioning path into multiple cloud platform resources. Create service catalog offerings for Amazon Web Services (AWS) Microsoft Azure, VMware vSphere, and IBM Cloud Platform by importing Terraform config templates.

The Terraform Connector app also supports the following:

- Schedule discovery of config management providers and config installers for both Terraform Enterprise (GitHub.com and GitLab.com) and Terraform Open-Source.
- Detect Terraform Infrastructure as Code (IaC) template changes and create a catalog item or update the catalog item with a new template version.
- Use the IaC change task workflow to handle changes to catalog items due to template changes.
- Specify metadata to populate the catalog item form fields and values.
- Reduce the Terraform Enterprise license cost by using workspaces that you have already discovered from your version control system (VCS), to provision cloud infrastructure.

Performance Analytics Content Pack for Cloud Resources

Use the Cloud Resources dashboard to see an aggregated view of all cloud resources. You can see the combined analytical views, visual summaries, and visual details of all your cloud resources. There are also new analytics tables and views that associate tags with resources so that you can build your own custom dashboards and reports. The ServiceNow® Performance Analytics Content Pack for Cloud Resources works with ServiceNow® Discovery and ServiceNow® Cloud Provisioning and Governance. It supports the following Cloud providers: Amazon Web Services (AWS), Microsoft Azure Cloud, and VMware Cloud.

ITOM Visibility

The ServiceNow® ITOM Visibility product consists of ServiceNow® [Discovery](#), ServiceNow® [Service Mapping](#), Certificate Inventory and Management, Service Graph Connectors, Multisource CMDB, and Firewall Audits and Reporting. Discovery and Service Mapping give you a unified, connected view of your entire IT network and the services that it supports.

Discovery provides a replicable and reliable method to identify your enterprise IT infrastructure. Service Mapping creates an accurate, service-aware view of your

infrastructure. Service Mapping continuously monitors IT resources for service-affecting changes and updates service maps in real time. For more information on ITOM Visibility, see [ITOM Visibility](#) .

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Integrate third-party products with ITOM Optimization

Extend the capabilities of Cloud Provisioning and Governance and its connectors by integrating the following third-party products with it:

- [VC Connector](#)
- [Cloud Provisioning and Governance: Oracle Cloud \(OCI\) Add-On for Terraform Connector](#)

Cloud Provisioning and Governance release notes

The ServiceNow® Cloud Provisioning and Governance (CPG) application provides a single interface to access cloud resources, publish cloud offerings to a catalog, and manage the usage of those resources. Cloud Provisioning and Governance was enhanced and updated in the Tokyo release.

Cloud Provisioning and Governance highlights for the Tokyo release

- Get the latest quality and security fixes for various core Open-Source libraries.

See [Cloud Provisioning and Governance](#) for more information.

Important information for upgrading Cloud Provisioning and Governance to Tokyo

Cloud Provisioning and Governance report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#) .

New in the Tokyo release

[Quick start tests for Cloud Provisioning and Governance](#)

After upgrades and deployments of new applications or integrations, run quick start tests to verify that Cloud Provisioning and Governance works. If you customized Cloud Provisioning and Governance, copy the quick start tests and configure them for your customizations.

Changed in this release

[Cloud Resource \(cmdb_ci_cmp_resource\) class scope change](#)

In the Tokyo release, the Cloud Resource (cmdb_ci_cmp_resource) class is moved from the CPG scope to Global scope as part of the core CMDB class models. This change is only applicable for the new customers who have onboarded with the Tokyo release.

Deprecations

In the Tokyo release, support for the Performance Analytics - Content Pack - Cloud Management plugin (com.snc.pa.cmp) is deprecated. This plugin is a part of the Cloud Management v1 plugin, which was deprecated in the Paris release.

Activation information

Cloud Provisioning and Governance is available with activation of the Cloud Provisioning and Governance (com.snc.cloud.mgmt) plugin, which requires a separate subscription. For details, see [Request the Cloud Provisioning and Governance application](#).

Related ServiceNow applications and features

Cloud Insights Billing

The ServiceNow® Cloud Insights Billing application has replaced the Cloud Provisioning and Governance native billing download capabilities. Use the Cloud Insights Billing application to set up billing download schedules and view the billing dashboards.

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- Use the IaC change task workflow to handle changes to catalog items due to template changes.
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Use the Cloud Resources dashboard to see an aggregated view of all cloud resources. You can see the combined analytical views, visual summaries, and visual details of all your cloud resources. There are also new analytics tables and views that associate tags with resources so that you can build your own custom dashboards and reports. The ServiceNow® Performance Analytics Content Pack for Cloud Resources works with ServiceNow® Discovery and ServiceNow® Cloud Provisioning and Governance. It supports the following Cloud providers: Amazon Web Services (AWS), Microsoft Azure Cloud, and VMware Cloud.

ITOM Visibility

The ServiceNow® ITOM Visibility product consists of ServiceNow® [Discovery](#), ServiceNow® [Service Mapping](#), Certificate Inventory and Management, Service Graph Connectors, Multisource CMDB, and Firewall Audits and

Reporting. Discovery and Service Mapping give you a unified, connected view of your entire IT network and the services that it supports.

Discovery provides a replicable and reliable method to identify your enterprise IT infrastructure. Service Mapping creates an accurate, service-aware view of your infrastructure. Service Mapping continuously monitors IT resources for service-affecting changes and updates service maps in real time. For more information on ITOM Visibility, see [ITOM Visibility](#) .

ITOM Licensing [↗](#)

ITOM enables you to view the total number of licenses assigned to your applications and CIs. This subscription provides the enhanced capability of viewing which specific CIs you have a license for. You can view the subscription breakdown for ITOM Health, ITOM Visibility, ITOM Optimization, and ITOM Cloud Accelerate. For details, see [View which CIs have an ITOM license](#) .

Integrate third-party products with Cloud Provisioning and Governance

Extend the capabilities of Cloud Provisioning and Governance and its connectors by integrating the following third-party products with it:

- [VC Connector](#) [↗](#)
- [Cloud Provisioning and Governance: Oracle Cloud \(OCI\) Add-On for Terraform Connector](#) [↗](#)

IT Service Management release notes

IT Service Management has new and updated features in the Tokyo release.

Benchmarks release notes

The ServiceNow[®] Benchmarks application gives you instant visibility into your key performance indicators (KPIs) and trends. It also gives you comparative insights into the industry averages of your peers. The Benchmarks application was enhanced and updated in the Tokyo release.

Benchmarks highlights for the Tokyo release

- Measure the Virtual Agent customer satisfaction scores, how many conversations were handed off to an agent, and the number of monthly unique users by using the Conversational Interfaces KPIs.
- Track the number of deflected incidents and the incidents that were auto-resolved with ITSM Virtual Agent KPIs.

See [Benchmarks](#) [↗](#) for more information.

i Important: Benchmarks Success Dashboard and Strategic Portfolio Management KPIs are available in the ServiceNow Store. For details, see the "Activation information" section of this release note.

New in the Tokyo release

Benchmarks Conversational Interfaces KPIs [↗](#)

Use Conversational Interfaces KPIs to measure the Virtual Agent customer satisfaction scores, how many conversations were handed off to an agent, and the number of monthly users.

Benchmarks ITSM Virtual Agent KPIs [↗](#)

Use Benchmarks ITSM Virtual Agent KPIs to measure metrics such as call deflections and auto-resolved incidents.

[Benchmarks Success Dashboard KPIs](#)

As a member of the leadership team or a process owner, use the Success Dashboard KPIs to gain insights into the metrics. For example, you can see how often calls were deflected or resolved without agent intervention.

[Benchmarks Strategic Portfolio Management KPIs](#)

Use the Strategic Portfolio Management KPIs to gain insights into the industry averages of your peers. You can compare the relative performance of your portfolio with global benchmarks that are based on the industry, size, or region.

[Linking Benchmarks KPIs to Performance Analytics KPIs](#)

Link Benchmarks Virtual Agent KPIs to Performance Analytics KPIs so that you can analyze KPI breakdowns and drill down into the data.

Activation information

The Benchmarks application is available when you opt in to the Benchmarks data collection.

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 details, see [Enable Benchmarks](#).

Note: You must install the [Success Dashboard](#) and [Strategic Portfolio Management](#) applications to access the respective Benchmarks KPIs.

Related ServiceNow applications and features

[Performance Analytics](#)

ServiceNow Performance Analytics is an in-platform process optimization solution to create management dashboards, report on KPIs and metrics, and answer key business questions to help increase quality and reduce the costs of service delivery.

[Continual Improvement Management](#)

Use the ServiceNow Continual Improvement Management application to request improvement opportunities and implement phases and tasks to meet performance goals, track progress, and measure success.

[Strategic Portfolio Management](#)

View the Strategic Portfolio Management (SPM) key performance indicators and trends that provide comparative insights relative to the industry averages of your peers.

[Success Dashboard](#)

Gain insights into the leadership team and process owners so that they can measure the performance of their ITSM implementation using the KPIs defined by ServiceNow.

Change Management release notes

The ServiceNow[®] Change Management application provides a modern approach to managing the lifecycle of all changes in your organization, enabling high-velocity change without compromising stability and governance. Change Management was enhanced and updated in the Tokyo release.

Change Management highlights for the Tokyo release

- Visually monitor the Change process health for a change model or change type. The process health is used as a parameter for the Risk Scoring Capability.
- Improve precision and drive additional change automation in your existing change process by implementing next-generation risk functionality.

New in the Tokyo release

[Change Model Success](#)

Change Model Success (CMS) indicates on landing page cards how successful each Change Model or Type is. It includes a Performance Analytics (PA) dashboard for drilling down into the various models for breakdowns by category.

[Next Generation Risk - Success Probability module](#)

Include evaluations of success probability in risk evaluations through a new Success Probability module. This new data-driven approach to risk evaluations uses a combination of success probability and impact to derive risk along with existing capabilities such as risk assessment, risk conditions, and risk intelligence.

[Advanced Security for Change Models](#)

Locate the right change model by using both role-based access controls and user criteria to tailor Change creation landing page views.

[Change Models - Declare Execution State](#)

Declare the execution state of a change when using models.

UI changes

Success Score Analytics

The **View change history details** button has been renamed **Success Score Analytics**.

Change Analytics submenus

New submenus have been introduced under the Change application in the **Change Analytics** section:

- Change Success Score dashboard
- Change Model Success dashboard
- Change Type success dashboard

Changed in this release

Statistics for standard change

The data for the successful implementation of standard changes is now calculated via a scheduled job once a day by default to improve the system performance. You can modify the frequency of the scheduled job to calculate the successful implementation of the change for a standard change template.

Activation information

Change Management is a Now Platform feature that is active by default.

Digital Portfolio Management release notes

The ServiceNow® Digital Portfolio Management application enables you to view and manage the full life cycle of your services and applications in a unified workspace. Digital Portfolio Management was enhanced and updated in the Tokyo release.

Digital Portfolio Management highlights for the Tokyo release

- Updated the Digital Portfolio Management (DPM) KPI groups to improve reporting:
 - Added visual spark lines to key performance indicators (KPI) and record views as another way to present data.
 - Added two new indicators to the Performance Snapshot KPI group.
 - Added the Availability insights KPI group to track application services.
 - Added the subscriber count to the headers of portfolios, taxonomies, and nodes.
 - Updated service offerings to show incidents, problems, changes, and outages (some conditions apply).
- Added ServiceNow® DevOps flow metrics to the business applications Plan tab.
- Added service offerings to the service portfolio Info tab.
- Added a Contacts tab for nodes in relationship maps.

See [Digital Portfolio Management](#) for more information.

Important: Digital Portfolio Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

KPI groups in Digital Portfolio Management

- View graphical representations (spark lines) of KPI data to see how each KPI is performing.
- View details of the added indicators to the Performance Snapshot KPI group: mean time to resolve and new requests.
- View the total subscriber number on each enterprise technology portfolio including nodes, services, service offerings, business applications, and application services. The subscriber indicator is now meta data so it's no longer part of the Performance Snapshot KPI group.
- Track availability data of application services with the provided Availability insights KPI Group.
- If an offering is in the Affected CIs list or the Impacted Services/CI list of an incident, problem, change, or outage, then you can see that record on the service offering in DPM.

Digital Portfolio Management life-cycle management

On the Plan tab of business applications, view flow metrics data to see the average flow time for epics and features and the average number and distribution of bugs and stories.

View relationship maps

For a selected solution in the relationship map, view its summary, current issues, and now, information about the teams and team members on the Contacts tab.

Activation information

Install Digital Portfolio Management by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[Service Portfolio Management](#)

Use the ServiceNow[®] Service Portfolio Management application to set up and manage your services and offerings, and then organize them in portfolios. In the Digital Portfolio Management application, you can view the health and status of those portfolios and track them in one centralized location.

[Service Builder](#)

As you view service information in Digital Portfolio Management, you can create and edit services and service offerings with quick access to the ServiceNow[®] Service Builder application.

[Performance Analytics](#)

Use ServiceNow[®] Performance Analytics to create reports on key performance indicators (KPIs) to monitor and analyze metrics.

[Digital Portfolio Management related applications and data sources](#)

Other related ServiceNow applications bring in data from your services, service offerings, business applications, and application services for you to view all of them in your unified workspace view. Except for Service Portfolio Management, the other related applications are optional and aren't required to use Digital Portfolio Management.

Incident Management release notes

The ServiceNow[®] Incident Management application restores normal service operations while minimizing the impact to business operations and maintaining quality. Incident Management was enhanced and updated in the Tokyo release.

Incident Management highlights for the Tokyo release

Secure access and view the reports in the dashboards using the new improved report_view access control lists (ACLs).

See [Incident Management](#) for more information.

Important information for upgrading Incident Management to Tokyo

Incident Management report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

New in the Tokyo release

Report View Access Control List (ACL) - Incident Management

Report_view access control lists (ACLs) are now active for both new and upgrade customers starting with the Tokyo release. This feature is added for the incidents and incident tasks to enable users to have a safer and more secure access to the reports available on the dashboards.

Activation information

Incident Management is active by default with the Incident plugin (com.snc.incident).

Service Operations Workspace for ITSM release notes

The ServiceNow® Service Operations Workspace application is a configurable workspace that provides a unified experience for multiple IT Service Management and IT Operations Management capabilities. Configure your agent experience using the easy-to-navigate interface of Service Operations Workspace for ITSM. Service Operations Workspace was enhanced and updated in the Tokyo release.

Service Operations Workspace for ITSM highlights for the Tokyo release

- Prioritize issues for tier-2 agents through an overview of outages, service announcements, and assignments.
- Improve the incident resolution time by investigating it using the metrics data collected from Agent Client Collector (ACC).
- Starting in version 1.3, experience Unified Navigation searches using AI search in Service Operations Workspace.

See [Service Operations Workspace for ITSM](#) for more information.

i Important: Service Operations Workspace for ITSM is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading Service Operations Workspace to Tokyo

Ensure that the following applications have compatible upgraded versions:

- Service Operations Workspace ITSM Applications application (sn_sow_itsm_cont)
- Service Operations Workspace ITOM Applications application (sn_sow_itom_cont)

Compatible SOW versions

SOW-ITSM (sn_sow_itsm_cont)	SOW-ITOM (sn_sow_itom_cont)
1.1.x	21.0.y
1.2.x	21.1.y
1.3.x	21.2.y, 21.5.y, and 21.6.y
2.0.x	22.0.y
2.1.x	22.1.y and 22.y.y

Here, x is the sub-version of Service Operations Workspace ITSM Applications application (sn_sow_itsm_cont) and y is the sub-version of Service Operations Workspace ITOM Applications application (sn_sow_itom_cont).

New in the Tokyo release

[Service Operations Workspace for ITSM landing page for tier-2 agents](#)

Prioritize work for tier-2 agents by evaluating an overview of assignments, outages, and service announcements.

[Shift schedule of a tier-1 agent on Service Operations Workspace for ITSM landing page](#)

When the Shift Planning for Configurable Workspace application (sn_uib_agent_sp) is installed, view the shift schedule of a tier-1 agent.

[Investigate experience for an incident](#)

Streamline investigation and accelerate resolution of an incident by retrieving and capturing metrics data for affected CIs. This metrics data is collected from various servers and computers using Agent Client Collector (ACC).

[User presence in Microsoft Teams](#)

View the availability of a user on Microsoft Teams before reaching out to the user via chat.

[Interactions in Service Operations Workspace](#)

- Reduce the interaction request queue in an agent's inbox by enabling automatic assignment of interactions using Advanced Work Assignment (AWA) assignment rules.
- Starting in version 1.3, an agent can perform any of the following tasks while working on an interaction.
 - Complete an interaction
 - Abandon an interaction when a user does not respond
 - Search for KB articles using Agent Assist

[AI Search in Service Operations Workspace](#)

Quickly find the required search results using intelligent query features. Search multiple record types at once using global search from the Next Experience Unified Navigation search field. You can switch between global search results and results from workspace applications that you have access to.

Changed in this release

[Experts on-call recommendations for an incident](#)

Experts on-call recommendations are now based on all configuration items and services associated with the incident.

[Collaboration using MS Teams from an interaction](#)

Collaboration using MS Teams is now available for all types of interactions, for example, chat, phone, or walk-up.

Activation information

Service Operations Workspace for ITSM is active by default and its default version is 1.0 in Tokyo. When you upgrade from any previous release to Tokyo from ServiceNow Store, Service Operations Workspace for ITSM 1.0 is automatically installed.

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](#).

Related ServiceNow applications and features

[Change Management](#)

Change requests track changes to the infrastructure or a business service.

[Incident Management](#)

Incidents restore normal service operation while minimizing the impact to business operations and maintaining quality.

[Interaction Management](#)

Interactions are a centralized location for all communication channels. You can respond to an incoming chat, phone, walk-up, or messaging interaction faster.

[On-Call Scheduling](#)

Identifies available on-call members of a support group who can be contacted to resolve an issue.

[Problem Management](#)

Problems identify the root cause of the recurring incidents or a major incident and help prevent them from happening again.

[Recommendation Framework](#)

Dynamic and contextual recommendations are available for an incident to perform a relevant action.

[Predictive Intelligence](#)

Machine-learning algorithms provide dynamic and contextual recommendations for resolving an incident.

[Request Management](#)

Catalog requests initiate a catalog request flow from a different IT Service Management flow such as an incident flow.

[ServiceNow for Microsoft Teams](#)

A connected experience is available for users to collaborate in Service Operations Workspace for ITSM.

[Advanced Work Assignment](#)

Interactions can be automatically assigned to your agents based on their availability.

[Service Level Management](#)

Service level agreement (SLA) information for an incident can be accessed on the Service Operations Workspace for ITSM landing page and incident record page.

[Walk-up Experience](#)

Walk-up interactions and queues can be easily managed in Service Operations Workspace for ITSM.

[Workforce Optimization for ITSM](#)

An agent schedule can be managed using Workforce Optimization for ITSM Scheduling. Use Coaching to review and complete assigned trainings.

[Service Operations Workspace for ITOM](#)

Unified experience is available for multiple IT Operations Management workflows in this configurable workspace.

Service Portfolio Management release notes

The ServiceNow® Service Portfolio Management application enables you to plan, design, build, and implement your service portfolios. Service Portfolio Management was enhanced and updated in the Tokyo release.

Service Portfolio Management highlights for the Tokyo release

- View availability results.
- Convert services in bulk.

See [Service Portfolio Management](#) for more information.

Changed in this release

[View availability results](#)

Service owners can create and map service commitments and associate them to application services as well as to service offerings.

- Availability capability now resides in an availability module as part of the core capability. This capability enables you to report on availability for application services and extends that reporting ability to other configuration items (CIs) as well.
- The enhanced reporting mechanism reduces an unplanned outage duration when it overlaps with a planned outage. If an unplanned outage in full or in part overlaps with a planned outage, then the unplanned outage time that overlaps will not be included in the total outage time.

Note: On upgrade, customers identified as having a heavy data load, the system initiates a long-running background job, which could take a long duration. For more information, see [KB1123644](#).

Plugin and role information

Plugin	Roles
<p>The "com.snc.availability" plugin is found under the core capability plugin (app-cmdb)</p> <ul style="list-style-type: none"> • Assign the "com.snc.availability" plugin the name "Availability" • The plugin is included with the base system (no license required for IT Service Management). • The plugin enables three modules: <ul style="list-style-type: none"> ◦ Commitments ◦ Configure commitments ◦ Results 	<ul style="list-style-type: none"> • To view: <ul style="list-style-type: none"> ◦ app_service_user ◦ service_viewer • To create: <ul style="list-style-type: none"> ◦ app_service_admin

[Convert services in bulk](#)

System administrators can bulk convert services from the cmdb_ci_service table to dedicated child tables: cmdb_ci_service_business and cmdb_ci_service_technical.

- When a service record is converted, the record and all its relationships remain intact.
- Service offerings cannot be converted. Attempts to migrate result in a warning message.

Activation information

Service Portfolio Management Core (com.snc.service_portfolio_core) is a Now Platform feature that is active by default.

Related ServiceNow applications and features

[Configuration Management Database \(CMDB\)](#)

Service Portfolio Management - Core adds the Service Offering table [service_offering] to the CMDB.

[Service Catalog](#)

Service Portfolio Management integrates with ServiceNow[®] Service Catalog at the service offering level of the application. You can choose services from an existing catalog as well as initiating service catalog additions.

[Service Level Management](#)

Service Level Agreement (SLA) commitment support functionality is added to Service Portfolio Management by integrating with ServiceNow[®] Service Level Management.

[Service Builder](#)

ServiceNow[®] Service Builder provides a guided walk-through to help service and portfolio owners create and edit services and service offerings.

Walk-up Experience release notes

The ServiceNow[®] Walk-up Experience application enables you to create and manage an on-site support channel where requests and issues are resolved and fulfilled by experienced agents, whether in person, in real time, or remote. Walk-up Experience was enhanced and updated in the Tokyo release.

Walk-up Experience highlights for the Tokyo release

- Optimize the efficiency of a Walk-up location by accepting appointment bookings based on the reason for the visit.
- Configure variable time slots based on the reason selected.
- Enhance the check-in experience of requesters at a location with improved badge reader integration.

See [Exploring Walk-up Experience](#) for more information.

New in the Tokyo release

[Badge reader integration](#)

The new badge reader integration provides an improved on-site check-in experience for a requester to access a location. The enhancements include the following:

- A new user badge configuration enables you to manually create or add other configuration (tables) from where the user ID and badge ID-mapping information can be retrieved. Based on this, the user ID is retrieved from the badge ID and the requester can scan the badge to access and check in to the location.
- The check-in reason (issue or request) can also be configured for each badge reader. This enables auto population of the check-in reason based on the badge reader. If the check-in reason is not configured for a badge reader, then the reason that is configured for the location is considered.

Auto-population of Reason [↗](#)

The check-in reason is now auto populated based on the location (on-site) and also the badge reader if the badge reader is configured with a check-in reason.

Variable time slots (work duration and date) for appointments [↗](#)

Variable time slots (work duration and date) for appointments can be configured and booked based on the check-in reason (issue or request) for a location. This feature helps to provide information to the customers about the availability of the agents for a location and also manage the walk-up locations more effectively and efficiently.

Select the **Enable advance configuration** check box in Appointment Configuration to create and configure variable time slots. This feature enables you to create multiple configuration rules for a location. Each rule can have multiple advanced configuration for time slots (work duration and date) without any time or date overlap. You can link the rule to a check-in reason and book variable time slots and dates based on the selected check-in reason for a location.

Activation information

Walk-up Experience is a Now Platform feature that is available with activation of the Walk-up Experience plugin (com.snc.walkup). For details, see [Activate Walk-up Experience](#) [↗](#).

Browser requirements

You can access Walk-up Experience through the ServiceNow[®] Workspace. ServiceNow workspaces do not support mobile devices.

Starting with the Orlando release, ServiceNow workspaces do not support Internet Explorer or Microsoft Edge. Instead, use Microsoft Edge-Chromium or one of the other supported browsers listed in [Browser Support](#).

If you are on New York or an earlier release and using Internet Explorer 11 or Microsoft Edge with any workspace, such as ServiceNow[®] CSM Agent Workspace or ServiceNow[®] Vendor Management Workspace, then you must first migrate to a newer browser. After you upgrade to a new browser, you can upgrade to at least the Orlando release. For more information, see the [Internet Explorer 11 Performance \[KB0683275\]](#) [↗](#) article in the Now Support Knowledge Base.

Related ServiceNow applications and features

Agent Workspace [↗](#)

Use ServiceNow[®] Agent Workspace to access and complete interactions at a walk-up queue location. Agent Workspace moves the agents away from the list

and from the form interaction fulfillment experience to a configurable service desk application.

[Advanced Work Assignment](#)

Access a personal inbox where interactions are automatically pushed for assignment based on schedules and rule configurations with ServiceNow® Advanced Work Assignment.

[Skill-based routing for ITSM](#)

Identify skills for a specific set of conditions defined for incidents or interactions. Use business rules to automatically add the skills to those types of work items. In the Walk-up Experience application, the work items get automatically assigned to the right agents based on their skills.

Vendor Management Workspace release notes

The ServiceNow® Vendor Management Workspace application enables you to monitor the performance of your company's vendors and manage all vendor-related information from one location. Vendor Management Workspace was enhanced and updated in the Tokyo release.

Vendor Management Workspace highlights for the Tokyo release

- Clone and then configure the Vendor Management Workspace pages by using the [Next Experience UI Builder](#).
- Access context-sensitive help by using the Help panel in every Vendor Management Workspace screen. You can edit the content and personalize it to fit your needs.

See [Vendor Management Workspace](#) for more information.

Important information for upgrading Vendor Management Workspace to Tokyo

Vendor Management Workspace report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

New in the Tokyo release

[Cloning and configuring a Vendor Management Workspace page using Next Experience UI Builder](#)

Clone the read-only Vendor Management Workspace pages so that you can customize them to fit your needs by using the UI Builder.

Activation information

Vendor Management Workspace is available with activation of the Vendor Manager Workspace (com.snc.sn_itsm_vendor) plugin, which requires a separate subscription. For details, see [Activate Vendor Management Workspace](#).

Related ServiceNow applications and features

[Performance Analytics](#)

Use ServiceNow® Performance Analytics to create reports and to monitor and analyze your vendor's performance.

[Risk Management](#)

Use ServiceNow[®] Risk Management to assess risks that may negatively impact your vendor's performance.

[Service Owner Workspace](#)

Use the ServiceNow[®] Service Owner Workspace to manage and monitor your vendor's portfolios and services from a central location.

Workforce Optimization for ITSM release notes

The ServiceNow[®] Workforce Optimization for ITSM application enables you to manage and maintain the productivity of your workforce from a single location. Workforce Optimization for ITSM was enhanced and updated in the Tokyo release.

Workforce Optimization for ITSM highlights for the Tokyo release

- Assign any type of work item that is based on your teams' skills and available capacity by using the calendar in .
- Empower your teams to sign up for shifts that are based on their availability and preference.
- Enable your agents to assess their skill proficiency that is based on your request in Service Operations Workspace. You can approve or reject skills. Agents can also request the review of new skills that they have been using to be added to their profile.
- Capture and analyze feedback by using surveys.
- Monitor improvement opportunities in Workforce Optimization for ITSM by using Process Optimization.
- Create learning paths and monitor the progress that your teams have made to learn new content. You can also provide your teams with a guided path so that your teams can achieve advanced skills and competencies.

See [Workforce Optimization for ITSM](#) for more information.

Important: Workforce Optimization for ITSM is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading Workforce Optimization for ITSM to Tokyo

Improved forecasting methods: Demand Forecast uses improved forecasting methods to forecast data. The naive methods for forecasting indicator scores have been upgraded to linear regression methods. Where the older naive methods used only the first and last scores of the most recent season, the upgraded methods use all the available scores over the evaluation period. In addition, the older Linear and Drift methods have been replaced with a single Linear method, and the calculation of the 95% prediction interval has been improved. When you upgrade, the following updates are made to the forecast algorithm that is used in Demand Forecast:

- The Naive Seasonal algorithm is renamed to Seasonal.
- The Naive Seasonal Drift algorithm is renamed to Seasonal Trend.
- The Drift algorithm is removed.

Enabling text indexing for schedule plans and shift plans: When you upgrade to Workforce Optimization for ITSM version 1.1.1, you must [enable text indexing](#) for the following tables:

- Schedule [sn_shift_planning_schedule_plan]
- Shift plan [sn_shift_planning_shift_plan]
- Shift [cmn_rota]

If you don't perform the text indexing after your upgrade, you can't search the schedule plans and shift plans by keywords. You can only search by the name of the schedule and shift plans.

Workforce Optimization for ITSM Report View ACLs: report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

Coaching with Learning: When you upgrade to the Workforce Optimization for ITSM Tokyo release, the following updates are automatically made:

- The **Learning Catalog** is renamed to the **Learning Library**. All courses within the learning catalog are moved to the learning libraries.
- As a manager, when you create a course item or a learning path, you must associate that course or path with a course catalog. Depending on the security constraints that are enforced for each catalog, users can access the courses or paths within the catalog.

Note: All existing courses are migrated to the **Default Course Catalog**.

After you upgrade to the ITSM Shift Planning Host v 5.3.0 application from the ServiceNow Store:

- To enable the agents to sign up for shifts, you must set the `sn_shift_planning.enable_agent_signup` property to **true**.
- The following label changes to the filters for schedules are automatically made:
 - **State** is renamed to **Schedule plan state**.
 - **Dates** is renamed to **Schedule plan dates**.

New in the Tokyo release

[Work scheduler](#)

As a manager, assign work for your agents more effectively by their skills and availability.

[Surveys in Workforce Optimization for ITSM](#)

- As a manager, you can create surveys and publish them. You can then assign the published surveys to an agent or a group. You can also share the survey with other teams by adding the managers of those teams as the owners of the survey.
- As an agent, you can complete surveys that are assigned to you in Service Operations Workspace. When a survey is published, you can receive notifications for surveys that are assigned to any group that you belong to.

[Requesting a skill assessment](#)

- As a manager, you can request your teams or team members to review their existing skill proficiencies and update them. You can also request that they add new skills that they have been using that are not in their skill profile yet.
- As an agent, you can evaluate the skill level for an existing skill or add a new skill and request approval to update those skills in your profile in Service Operations Workspace. You can also get notified when your manager requests a skill review.

Learning path [↗](#)

- As a manager, you can create a learning path, add relevant skills and course items, and publish the path. When your agents complete the path, any skills that are associated with the path are automatically added to the agent's profile.
- As an agent, you can enhance your skills set by completing learning tasks from internal or external learning content in Service Operations Workspace.

Agent shift sign-ups [↗](#)

- As a manager, empower your teams to sign up for shifts that are based on their availability and preference.
- As a team member, you can sign up for work shifts that are assigned to a schedule plan in your assignment group in Service Operations Workspace.

Analyzing skill trends [↗](#)

As a manager, you can analyze trends for the top five skills that are in demand.

Roles added for Workforce Optimization for ITSM [↗](#)

The following roles have been added in Workforce Optimization for ITSM:

- `sn_wfo_work_sched.manager`: This role is inherited by the `sn_wfo_cfg_itsm.manager` role.
- `sn_wfo_skillreview.user`: This role is inherited by the `sn_wfo_cfg_itsm.employee` role.
- `sn_wfo_skillreview.manager`: This role is inherited by the `sn_wfo_cfg_ws.manager` role.

Cloning and configuring a Workforce Optimization for ITSM page using Next Experience UI Builder [↗](#)

The Workforce Optimization for ITSM application pages are read-only. To configure the pages, you must first clone an existing page and customize the page for your needs by using the UI Builder.

Integrating Workforce Optimization for ITSM with Process Optimization [↗](#)

As a manager, you can get insights into the processes of your workforce and find potential areas that you could optimize.

Scheduling enhancements [↗](#)

- Use pagination to scroll through your agents' schedules.
- Use pagination to scroll through shifts. Use the `sn_shift_planning.shift_calendar.page_size` system property to set the maximum calendar page size to enable pagination.

- Use the `sn_shift_planning.shift_calendar.agent_count_max` system property to set the maximum number of agents that the logged-in manager manages. When the number of agents exceed this value, the shift plan pop-up for a shift displays the agent count.

Deprecations

Starting with the Tokyo release, the Legacy - Workforce Optimization for ITSM plugin (com.snc.wfo_itsm) 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. For more information, see [Legacy - Activate Workforce Optimization for ITSM](#).

Activation information

Workforce Optimization for ITSM is available with the activation of the Workforce Optimization for ITSM plugin (sn_wfo_cfg_itsm). For details, see [Activate Workforce Optimization for ITSM](#).

The following applications have been moved to the ServiceNow Store:

- Team Performance [sn_team_perf]
- Coaching [sn_coaching]

These applications are enabled when you activate the Workforce Optimization for ITSM plugin (sn_wfo_cfg_itsm) plugin from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[Advanced Work Assignment](#)

Use ServiceNow[®] Advanced Work Assignment to automatically assign work items to your agents by their availability, capacity, and skills.

[Coaching](#)

Use the ServiceNow[®] Coaching application to monitor and improve your employees' performance. You can evaluate their skills and get them the training they need for skill growth.

[Performance Analytics](#)

Use ServiceNow[®] Performance Analytics to create reports on Key Performance Indicators (KPIs) to monitor and analyze metrics.

[Predictive Intelligence](#)

Use ServiceNow[®] Predictive Intelligence to recommend skills for agents that is based on the work that they have completed.

[Skills Management](#)

Assess the skills that your organization needs, identify gaps, and plan for the hiring and training of your teams.

[Service Operations Workspace for ITSM](#)

Improve your ITSM agent experience and manage your IT fulfillment volume more efficiently by using Service Operations Workspace. Manage your schedule and complete training by using Workforce Optimization for ITSM in the Service Operations Workspace.

Process Optimization [↗](#)

Analyze business processes and optimize them quickly.

Learning Posts [↗](#)

Create an omni-channel learning experience for your employees by empowering them with the right learning at the right time of need.

Surveys [↗](#)

Create, send, and collect responses for basic surveys. If installed, you can also use the Survey widget to set up a survey within Service Portal.

Mobile release notes

The ServiceNow[®] Mobile Platform enables you to access your instance from anywhere. The ServiceNow Mobile Platform was enhanced and updated in the Tokyo release.

Mobile highlights for the Tokyo release

- Manage workflows more efficiently in online and offline mode for Field Service Management experiences.
- Locate and reserve indoor site assets, such as a desk or meeting room with the new ServiceNow[®] Indoor Mapping application that supports wayfinding.
- Simplify your ServiceNow mobile app configuration with Mobile App Builder, which enables you to configure your apps with one unified tool.
- Enable mobile app users with enhanced notifications and adaptive authentication, which makes it possible to connect to any IP-restricted environment.

See [ServiceNow Mobile](#) [↗](#) for more information.

Important information for upgrading Mobile to Tokyo

Migrate from the ServiceNow Classic mobile app to the ServiceNow Mobile Platform to take advantage of features such as rapid development, offline capability, and integration with native mobile device features. For details on migrating to the ServiceNow Mobile Platform, see [Migrate from the ServiceNow Classic mobile app to the ServiceNow Mobile Platform](#) [↗](#).

ServiceNow Mobile Platform `report_view` access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#) [↗](#).

New in the Tokyo release

Offline mode enhancements [↗](#)

Use the offline mode capability when working in an area without internet access. Updated offline mode features and capabilities include the following updates:

- Supports the creation of new records and editing of existing records in offline mode. Agents no longer need to synchronize and go online to view these edits.
- Define which reference field records are cached in offline mode, giving control to admins to display relevant information.
- Enable agents to view and select reference fields, giving the option to access additional data while in offline mode.

Indoor wayfinding and reservations support [↗](#)

Use the Indoor Mapping application to configure indoor wayfinding and map reservations for the Now Mobile app. Using this feature, employees can locate indoor site features, such as desks or meeting rooms, and then reserve them. The feature also provides directions to site features so employees can find them.

Connect to any IP-restricted environment without a VPN application [↗](#)

Connect to IP-restricted environments without needing to install a VPN application. With this feature, mobile app users can download a single app to connect to these environments.

Map screen enhancements [↗](#)

Use maps screens to display an area with highlighted locations associated with records. The updated map screen experience includes the following enhancements:

- An initial zoomed-out map view showing highlighted points of interest, as well as the location of the user. This map overview helps users visualize the geographical context of numerous points of interest within a map.
- Option to view points of interest data in a list view, helping users easily understand the information displayed on a map. Users can quickly switch between the map view and list view.
- Updated UX design when tapping a pin that contains multiple points of interest. Users are navigated to a list view containing all the points of interests in a clear tabular outlay.

Input form screen enhancements [↗](#)

Use input form screens to streamline users' tasks with the following features:

- Users can submit the input form screen and then stay on it to create repeated actions, such as creating multiple part requirements.
- New screen input type that enables admins to generate data from a list screen or a parent list screen.
- Ability to search on reference inputs that do not support Zing search.
- Mobile UI rules are now supported for reference lists and screen input.

i Note: To see a list of fixes in each mobile app version, refer to the [Mobile app version history release notes for iOS and Android](#).

Changed in this release

Mobile notifications enhancements [↗](#)

Read notifications on your mobile apps as they occur so that you're enabled to respond effectively and in a timely way to push notifications from your ServiceNow instance.

Multiple multimedia posts in activity stream [↗](#)

Users can post multiple videos and images directly within a single activity stream flow, saving them time and effort. After selecting multimedia files an upload screen opens, detailing the upload progress of the selected files. In cases where files fail to upload, users are presented with information detailing the reason for the unsuccessful post.

Removed in this release

ServiceNow Classic is being removed in the Tokyo release. The ServiceNow Classic mobile app is being removed from the Apple App Store and the Google Play Store in mid-July, 2022. You can migrate from the ServiceNow Classic mobile app to the ServiceNow Mobile Platform to take advantage of features such as rapid development, offline capability, and integration with native mobile device features. For details on migrating to the ServiceNow Mobile Platform, see [Migrate from the ServiceNow Classic mobile app to the ServiceNow Mobile Platform](#).

Deprecations

To simplify the new hire to employee transition, the HR Onboarding workflows were migrated from the Mobile Onboarding app into the Now Mobile app. New hires can complete their onboarding journey within the [Now Mobile app](#) instead of the [Mobile Onboarding app](#). For more information, see the ServiceNow Community blog post [Now Mobile for New Hire Onboarding](#).

Activation information

ServiceNow Mobile Platform is a Now Platform feature that is active by default.

Accessibility information

The Indoor Wayfinding and Reservations feature introduces the following accessibility enhancements:

- Screen Reader support for both wayfinding and reservations.
- Users can zoom in or zoom out on the map by using enabled buttons on the map instead of pan gestures or a 2-finger pinch.
- Accessible route preferences can be selected for wayfinding.
- Map legends identify all icons with text descriptions.

Now Intelligence release notes

Now Intelligence have new and updated features in the Tokyo release.

Performance Analytics release notes

The ServiceNow[®] Performance Analytics application is an in-platform process optimization solution. It enables organizations to set, track, and analyze progress toward goals. Performance Analytics was enhanced and updated in the Tokyo release.

Performance Analytics highlights for the Tokyo release

- Track critical process metrics and trends.
- Measure process health and behavior against organizational targets.
- Identify process patterns and potential bottlenecks before they occur.
- Continually visualize historical and real-time process statistics in role-based dashboards. The dashboards enable individual stakeholders to make informed decisions.

See the [Performance Analytics](#) landing page for more information.

New in the Tokyo release

New data collector [↗](#)

Reduce the time, memory, and CPU usage for processing large data sets. The new, optimized data collector provides the following enhancements:

- Ability to handle over 10 million records without adverse impact to performance.
- Support for at least 10 breakdowns with breakdown matrix enabled.
- Support for additional conditions on indicators and breakdowns.
- Optimizations for Count Distinct aggregation.

i Important: In optimized collection, there is no limit to the number of elements in a breakdown source for that breakdown source to be collected. New properties allow you to set limits if necessary. For more information, see [Performance Analytics properties](#) [↗](#).

Autoregressive forecasting model [↗](#)

Use a linear combination of a trend, seasonal dummies, and past values to forecast future indicator values.

Changed in this release

Application admin role required to access scoped application data on Performance Analytics tables

When running scripts on the pa_scores_l1, pa_scores_l2, pa_scores, or pa_snapshots table, the platform admin and pa_admin roles no longer grant access to scoped application data. An admin role for the scoped application is now necessary. For example, to access scores and snapshots that belong to the HR scoped app via a background script, you need an HR scoped app admin role.

Improvements to scores forecasting [↗](#)

- Random Forest forecasts use a more precise trend formula. This improved formula allows for asymmetric confidence intervals (+ and - not the same size) when the data indicates them.
- Random Forest lag calculation improved.
- Random Forest now uses 199 instead of 99 trees, to give a more precise forecast.
- Seasonal Trend Loess uses a Seasonal Trend formula, whose results are combined with the forecast to calculate confidence intervals.

Activation information

Complimentary Performance Analytics for Incident Management is active by default. You cannot create indicators or breakdowns with this complimentary application.

The full features of Performance Analytics are available with a subscription. Activate the Performance Analytics Premium plugin that matches your subscription. For details, see [Activate your Performance Analytics subscription](#) [↗](#).

Related ServiceNow applications and features

[Natural Language Query](#)

ServiceNow® Natural Language Query (NLQ) enables you to enter plain language questions into the user interface. This feature helps users get answers about their data quickly and non-technical users to get information more easily.

Performance Analytics uses NLQ in Analytics Q&A.

Dashboards release notes

The ServiceNow® Dashboards application enables you to present visualizations of data from ServiceNow® Performance Analytics and Reporting. The Dashboards feature was enhanced and updated in the Tokyo release.

Dashboards highlights for the Tokyo release

- Provide visual overviews of your processes for specified users.
- Use multiple tabs to provide layers of meaning for different audiences.
- Add filters to limit the information in your data visualizations.

See [Dashboards](#) for more information.

New in the Tokyo release

[Homepage deprecation help tool](#)

Homepages are being phased out. Use the Homepage deprecation help tool to convert homepages to dashboards, retire homepages, and restore retired homepages as dashboards.

Platform Analytics Workspace

Create and view Next Experience dashboards in the new Platform Analytics Workspace, available in the ServiceNow Store. The Dashboard in-line editor included in this workspace greatly simplifies Next Experience dashboard creation. For more information, see [Platform Analytics Workspace release notes](#).

[Quick start tests for Dashboards](#)

Run quick start tests to verify that Dashboards works as expected after upgrades and deployments of new applications or integrations. If you customized Dashboards, copy the quick start tests and configure them for your customizations.

Changed in this release

Fix for dashboards migrated from the Dashboard Viewport to Advanced Dashboards

Many dashboards that were created in releases prior to San Diego using the Dashboard Viewport component did not migrate properly to Advanced Dashboards. The fix to this issue is documented in [KB1223780](#).

Deprecations

- The homepage feature is deprecated. If the Next Experience UI is enabled, upgrading customers can view existing homepages but cannot create homepages or edit existing homepages.
- The Dashboard Builder for workspaces has been removed. The new in-line editor replaces it for most use cases. You can create and edit more technical dashboards in the UI Builder. For more information, see [Create a dashboard with the In-line editor](#).
- The Dashboard viewport component is no longer supported for new dashboards.

The new inline and technical dashboard editors replace these components.

Activation information

The Dashboards application is a Now Platform feature that is active by default.

Related ServiceNow applications and features

Platform Analytics Workspace

Create and view Next Experience dashboards in the new Platform Analytics Workspace, available in the ServiceNow Store. The Dashboard designer included in this workspace greatly simplifies Next Experience dashboard creation. For more information, see [Platform Analytics Workspace release notes](#).

Platform Analytics Workspace release notes

The ServiceNow® Platform Analytics Workspace provides an Analytics Center for managing all Next Experience analytics. Platform Analytics Workspace is a new application in the Tokyo release.

Platform Analytics Workspace highlights for the Tokyo release

- Build data visualizations for any data source in a single place.
- Create and consume configurable workspace dashboards, with a unified filter and flexible configuration.
- Easily share configurable workspace dashboards and visualizations.
- View all configurable workspace dashboards from any workspace in a single location.

See [Performance Analytics and Reporting for Workspace](#) for more information about using this workspace in runtime.

See the [Next Experience Components reference](#) in the [ServiceNow® Developer Site](#) for information about configuring the reusable components in this workspace.

i Important: Platform Analytics Workspace is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Platform Analytics Workspace features

Create, edit, and configure configurable workspace dashboards

Use an inline editor to quickly and easily create and edit configurable workspace dashboards. Users with a role can use this editor to work on their dashboards in runtime. This inline editor is included in the Dashboard page

template. More technical users also have a powerful and feature-rich technical editor that brings dashboard construction functionality into the UI Builder.

[Configure visualizations](#)

If you cannot find the visualization you want, configure a new data visualization. You now have an inline visualization editor to quickly and easily create and edit data visualizations. You can even seamlessly create these new visualizations while editing a dashboard. Any user with a role can use this editor. With the right roles, you can save your visualization to the shared library.

Dashboard, Visualization, and KPI libraries

You have a unified experience for searching and viewing reusable configurable workspace dashboards, visualizations, or indicators. Search and view reusable visualizations for multiple workspaces or dashboards. Bookmark visualizations or filter on those shared with or created by you. Only in Platform Analytics Workspace can you browse the dashboards from every configurable workspace.

[Certify configurable workspace dashboards and visualizations](#)

Administrators can mark selected configurable workspace dashboards and data visualizations as certified for use across a department or organization. You can filter on certification when browsing through dashboards or visualizations.

[Export data visualizations](#)

From the Visualization Designer, you can export a data visualization as a PDF, a PNG, or a JPEG file. Use this feature to build presentations, to share the report with users off the instance, or to keep old reports on different versions to track progress.

Limitations:

- Scheduling is not available.
- Pivot, calendar, and indicator scorecard visualizations cannot be exported.
- You can only export visualizations from the visualization designer, not from dashboards.

This feature is available in update 1.1, from the ServiceNow Store.

[See data visualization usage](#)

Use the data visualization details pane to view all dashboards that contain the visualization. Furthermore, when you save or delete a visualization, you are warned of which dashboards contain the visualization and prompted to confirm your action.

This feature is available in update 1.1, from the ServiceNow Store.

Configure dashboards and visualizations more easily

Benefit from the following improvements to the user experience:

- Lazy loading on dashboards
- Can copy link URL
- Can share in editing mode
- Can edit visualization titles inline

These improvements are available in update 1.1 on the ServiceNow Store.

[Include this workspace's features in your configurable workspaces](#)

In the UI Builder, use the Analytics Center page template to include the features of the Platform Analytics Workspace in your own configurable workspace. You can also create a workspace with these features in the App Engine Studio. However, only the Platform Analytics Workspace lets you view dashboards in all the other workspaces.

UI changes

New visualization types

The Data Visualization component has had the following visualizations added for Tokyo:

- Pivot table: Helps you analyze data across multiple dimensions.
- Dial: Shows a single data point with an indication of progress toward a fixed goal.

Date range filtering and aggregation for indicators in single score, dial, bar, and pie chart visualizations

View sums and averages for indicator scores for the affected period. View indicator data for any selected data point. View the change of indicator value for a selected period in single score visualizations.

New data configuration options and UX improvements

- New description field, providing more context for the end user.
- Table values sortable by the order of choice fields.
- Absolute date ranges configurable for indicator time series.
- Legend alignment and truncation options available for time series charts.
- Decreased refresh time for single score visualizations, with refresh time displayable as either a relative or an absolute value.

Data visualization API exposed as data resource

Easy access for developers to data visualization APIs enables the following:

- Better control of data load time to optimize performance.
- Increased efficiency through reusable data across multiple components.
- Ability to perform more complex data modification, calculation, and styling before passing data to visualization.
- Ability to combine multiple data source types.

Changed in this release

[ACL Assessment for Reports](#)  compares reports against all report_view ACLs

Earlier versions of the ACL Assessment for Reports evaluated reports against a limited number of report_view ACLs. The latest version of the ACL assessment tool evaluates against all active report_view ACLs on the instance.

READ ACL support in the [ACL Assessment for Reports](#) 

A report is affected if a user has seen the report who would not be able to see it based on a report_view ACL or blocking READ ACL, in the case of reports based on tables without report_view ACLs.

Deprecations

- Dashboard Builder is no longer supported.
- The Dashboard viewport component is no longer supported for new dashboards.

The new inline and technical dashboard editors replace these components.

Activation information

The Platform Analytics Workspace is included in the App Analytics Workspace plugin (sn_app_analytics_w), which is active by default. Updates to this plugin are available on the ServiceNow Store. 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](#).

Additional requirements

Some functionalities require an active subscription to Performance Analytics.

Accessibility information

Keyboard navigation is available on the Data Visualization component. Users can use keyboard interactions to access data by moving focus through the UI elements, and trigger actions on interactive elements. The new keyboard interactions are documented in the usage guidelines for each data visualization type on the [ServiceNow® Developer site](#).

User Experience Analytics release notes

The ServiceNow® User Experience Analytics application enables you to understand user web and mobile experiences by visualizing your metrics and interactions through an interactive dashboard. User Experience Analytics was enhanced and updated in the Tokyo release.

User Experience Analytics highlights for the Tokyo release

- Add User Experience Analytics as a data source into the data visualization components of the UI Builder.
- Automatic activate the User Experience Analytics tracking capability for Service Portals.
- View a new and modernized look to the UI.

See [User Experience Analytics](#) for more information.

Important information for upgrading User Experience Analytics to Tokyo

User Experience Analytics report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

New in the Tokyo release

[User Experience Analytics for Service Portal](#)

You no longer need to manually install plugins and the tracking capability for individual Service Portals. The base system includes User Experience Analytics and enables its tracking capabilities for all available Service Portals on an instance.

Note: If you have existing Service Portals on your instance, the following conditions apply:

- If some of the Service Portals have tracking enabled prior to the upgrade, the remaining Service Portals that are not enabled are not tracked by default. These untracked Service Portals require a manual configuration.
- If none of the existing Service Portals have tracking enabled prior to the upgrade, then User Experience Analytics tracking is enabled by default for all the Service Portals.

Importing User Experience Analytics data into UI Builder

Import User Experience Analytics data through the UI Builder, helping to provide an alternative method to visualize data for analysis. The following User Experience Analytics KPIs and trend graphs are available within the UI Builder: active users, new users, sessions, events count, and event property breakdown.

UI changes

[New look for User Experience Analytics](#)

User Experience Analytics has a new, modernized look and feel. For more information, see [Next Experience UI](#).

Activation information

User Experience Analytics is a Now Platform feature that is active by default.

Browser requirements

To optimize your User Experience Analytics, use either a Google Chrome or Apple Safari browser.

Related ServiceNow applications and features

[Service Portal](#)

ServiceNow[®] Service Portal is a portal framework that enables administrators to build self-service experiences that are both web-friendly and mobile-friendly. You can monitor metrics for your instances. See user journeys using the User Experience Analytics dashboard and reporting tools.

[Mobile Agent app](#)

Use the ServiceNow[®] Mobile Agent to update records, coordinate with coworkers, track your location, and work without an internet connection from your mobile device.

[Virtual Agent](#)

ServiceNow[®] Virtual Agent provides your employees and customers with a friendly messaging interface with pre-built conversations powered by artificial intelligence. View and access Virtual Agent analytics and the Virtual Agent dashboard from User Experience Analytics.

Natural Language Understanding release notes

The ServiceNow[®] Natural Language Understanding (NLU) application provides an NLU Workbench and an NLU Service that you can use to enable the system to learn and respond to human-expressed intent. Natural Language Understanding was enhanced and updated in the Tokyo release.

Natural Language Understanding highlights for the Tokyo release

- Manage your intents and utterances more efficiently with improved guidance in the tool.
- Review your Virtual Agent (VA) chat log feedback in the Expert Feedback Loop.
- Publish your NLU models and corresponding Virtual Agent topics from within the Virtual Agent Designer application.

See [Natural Language Understanding](#)  for more information.

i Important: Intent Discovery, Model Performance, Cross-model Conflict Review, Multi-model Batch Testing, and the Expert Feedback Loop are all available in the ServiceNow Store. Ensure that you have the latest store plugin. For more information, see the NLU Workbench – Advanced Features store page. Also, see the "Activation information" section of these release notes.

New in the Tokyo release

Expanded language support

NLU now supports the Portuguese language for both intents and entities. Entity support (simple, mapped and open ended) is also extended to the Brazilian Portuguese and French Canadian languages. All languages now support fast (synchronous) training where training of a model can now be completed within 2~3 minutes.

If a model has more than 4500 utterances or 300 intents, it is automatically switched to slower (asynchronous) training that takes anywhere from 30 minutes to a couple of hours to complete depending on server bandwidth. Utterances for all languages are case insensitive during intent prediction.

Usability improvements for model management

Build and test your models with improved workbench screens and functionality. Build model content using improved guidance on vocabulary and more easily access model settings. You can also export or delete models on the model list page.

Multi-select utterances

Select multiple utterances while working in your intent. Delete multiple utterances at once to quickly build your model.

Virtual Agent and Natural Language Understanding authoring

NLU administrators can now use a seamless Virtual Agent (VA) and NLU authoring experience to publish their NLU model and its mapped VA topic through one **Publish** button.

Optional view for the NLU Expert Feedback Loop

See each utterance framed in a card by clicking the card icon in the Expert Feedback Loop. These cards appear on the page in groups of five.

Changed in this release

ServiceNow NLU update

The `com.glide.cs.intent_confidence_threshold` system property has been updated to 0 and should not be changed to a different value for ServiceNow NLU. The property is applicable only if you are using a different NLU provider for Virtual Agent.

[Model Performance chart improvements](#) ↗

View the performance for a specific model and also for models in a specific language by using language and model filters in the Model Performance application. Model performance tracking has also been improved by incorporating feedback captured from end users in Virtual Agent.

Naming and navigation changes

Batch Testing has been renamed to Multi-model Batch Testing. Conflict Review has been renamed to Cross-model Conflict Review. Both features are available under the **NLU Advanced Features** module in the application navigator. Batch testing and conflict detection for a single model is available within the model management phases.

Activation information

Natural Language Understanding is a Now Platform feature that is available with activation of the NLU Workbench (com.snc.nlu_studio), NLU Workbench - Core (com.glide.nlu), NLU Common Model (com.glide.nlu.model), and Predictive Intelligence (com.glide.platform_ml) plugins. To get the most out of the NLU Workbench, also install the [NLU Workbench - Advanced Features](#) ↗ application (com.snc.nlu.workbench.advanced) from the ServiceNow Store. For details, see [Activate the NLU Workbench](#) ↗.

Browser requirements

For optimal performance on the Now Platform[®], use NLU Workbench in the Google Chrome, Safari, Mozilla Firefox, or Microsoft Edge browsers. NLU Workbench isn't supported in Microsoft Internet Explorer.

Related ServiceNow applications and features

[Virtual Agent](#) ↗

Virtual Agent administrators can configure a Virtual Agent Designer conversation flow to consume NLU models so that agent chatbots can better understand user statements in conversations.

[AI Search](#) ↗

Natural Language Understanding uses AI Search to support multilingual NLU models.

[Predictive Intelligence](#) ↗

The NLU Service is included in the Predictive Intelligence plugin.

[NLU Service updates](#) ↗

Refer to the NLU Service updates documentation to stay up to date with changes to the NLU Service.

Natural Language Query release notes

The ServiceNow[®] Natural Language Query (NLQ) application provides the framework for you to query data in your instance by entering plain language into the user interface. Natural Language Query was enhanced and updated in the Tokyo release.

Natural Language Query highlights for the Tokyo release

- Quickly find data and meta data by entering plain-language requests into the user interface.
- Filter lists and tables with plain-language requests, removing the need to use the condition builder.
- Query data in other ServiceNow features and applications, such as Configuration Management Database (CMDB) and Analytics Q&A.
- Receive suggestions and provide feedback to queries to help improve NLQ on your instance.

See [Natural Language Query](#) for more information.

New in the Tokyo release

[Performance feedback](#)

Provide feedback on your queries to continuously improve NLQ. Feedback options are available in List View, Analytics Center, and Report Designer.

[CMDB multi-source support](#)

Use natural language to query CMDB multi-source reports. Obtain information about CIs discovered by various sources.

Activation information

NLQ is a Now Platform feature that is active by default.

Localization information

NLQ supports queries in the English, Spanish, French, German, and Japanese languages. However, language support may vary depending on the application or feature consuming NLQ.

Related ServiceNow applications and features

[CMDB Query Builder](#)

With the Configuration Management Database (CMDB) Query Builder, you can build complex infrastructure and service queries that span multiple CMDB classes, non-CMDB tables, and that involve many CIs that are connected by different relationships. Use NLQ in CMDB Query Builder to use natural-language when building queries.

[Analytics Center](#)

The Analytics Center provides analytics answers and insights of the data on your instance. You can make queries related to Performance Analytics and Reporting in Analytics Q&A. For example, use plain-language to quickly build reports on your data.

Process Optimization release notes

The ServiceNow® Process Optimization application enables analysts and process owners to view their business processes, analyze them, and make decisions that continually improve processes. Process Optimization was enhanced and updated in the Tokyo release.

Process Optimization highlights for the Tokyo release

- Mine multiple interconnected processes in one model so that it is easier to visualize and optimize connected workflows.
- Use Process Optimization for Employee workflow (On boarding, Core HR Services) and App Engine workflows.
- Provide managers visibility and understanding of how support teams are working by using Integrate Process Optimization with Workforce Optimization.

See [Process Optimization](#)  for more information.

New in the Tokyo release

Multidimensional mining

Support analyzing business processes that expand multiple sub processes in one view. For example, you can analyze your HR onboarding process including all facilitating processes such as IT, facilities, and finance.

Integration with Workforce optimization

Provide team leads and managers with full insight into the performance of their team or processes. Pre-defined improvement opportunities immediately show where performance can be improved.

HR and App engine

Enable users to apply multi-dimensional mining on multiple tables.

Improved finding definition condition

Include a wild card when configuring the insight rule that enables you to create start and stop conditions based on multiple values. In addition to the process level-based insights rules, you can define Now Platform specific insights for projects.

Related list conditions in an analyst workbench condition

Expand the condition builder in the analyst workbench to support related list conditions. You can filter and ultimately analyze cases with a bad customer satisfaction survey score.

Process graph improvements

Enable users to distinguish incoming versus outgoing node connections. Additional improvements are reorder connections for better readability, centralized outline of model, node design, and showing route variance as a pop-up.

UI changes

- Unified sharing experience that matches the Now Platform share experience
- Improved project cards details
- More information on the project card for immediate understanding of the mining scope and type of analysis
- Moved model statistics, bottleneck analysis, and activity legend to improve the menu panel navigation

Document Intelligence release notes

The ServiceNow® Document Intelligence application is an artificial intelligence (AI) solution that provides assistance to quickly and accurately extract information from documents to the Now Platform. Document Intelligence is a new application in the Tokyo release.

Document Intelligence highlights for the Tokyo release

- Accelerate extraction of structured and semi-structured documents such as forms, IDs, and more.
- Automate intelligently with responsible, feedback-driven AI for continual learning.
- Seamlessly integrate document processing steps into workflows.
- No code required.

See [Document Intelligence](#) for more information.

i Important: Document Intelligence is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Document Intelligence features

Processing Documents

Upload single or multi-page documents in JPEG, PNG, or PDF formats to start extracting data and text.

Create definitions and keys to tell the system exactly what to parse and pull from the documents.

Receive suggestions for data extracted from your documents.

View, analyze, and measure your extraction usage and effectiveness using the Document Intelligence dashboard.

Activation information

Install Document Intelligence by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

Document Intelligence for CSM

Use Document Intelligence for Customer Service Management to extract relevant information from email and case attachments, such as credit card numbers or customer addresses, and add that information to cases.

Financial Services Operations

Use Document Intelligence integrated with the digital workflows in the ServiceNow® Financial Services Operations applications to help your organization quickly automate document processing and accurately extract information from documents to the Now Platform.

Automation Engine

With ServiceNow® Automation Engine, you can create integrations and connections across multiple systems. Quickly connect with third-party APIs, build your own custom integrations, and automate repetitive tasks. Use the integration with Document Intelligence to quickly automate document processing and accurately extract information from documents to the Now Platform.

Now Platform App Engine

Now Platform App Engine product enhancements and updates in the Tokyo release.

Now Platform App Engine has new and updated features in the Tokyo release.

Studio release notes

The ServiceNow® Studio application enables you to create, review, and update application files from tabs. Studio was enhanced and updated in the Tokyo release.

Studio highlights for the Tokyo release

- Reduce the flags in your commit operations.
- Convert your company-owned applications that are installed from the Studio application repository from a published application back to the in-development mode state.

See [ServiceNow Studio](#) for more information.

Changed in this release

Reduce noise from commit changes

Reduce the flags from system-generated fields that are saved to XML files during a commit operation.

Convert custom applications to upgrade from the application repository

Convert your company-owned application that was installed from the ServiceNow Store application repository to in-development mode.

Activation information

ServiceNow® Studio is a Now Platform feature that is active by default.

Application Management release notes

The ServiceNow® Application Management application enables you to manage the applications and plugins in your instance. Application Management was enhanced and updated in the Tokyo release.

Application Management highlights for the Tokyo release

- Use the Continuous Integration (CI)/Continuous Delivery (CD) API to request application installation, plugin activation, rollback, and operations in your queue.
- Prevent CI/CD pipelines from timing out if a request is rejected when another operation is in-progress.

See [Application Management](#) for more information.

Changed in this release

Continuous Integration/Continuous Delivery (CI/CD) API

By using the CI/CD API, your CI/CD requests for application installation, plugin activation, rollback, and operations are now queued. Also, CI/CD pipelines are prevented from timing out if a request is rejected when another operation is in-progress.

Activation information

Application Management is a Now Platform feature that is active by default.

Now Platform administration release notes

Now Platform[®] administration product enhancements and updates in the Tokyo release.

Use Now Platform administration features to address the business needs of your organization. Administration features are active by default on all instances.

AI Search release notes

The ServiceNow[®] AI Search application provides a consumer-grade search engine for ServiceNow[®] Service Portal, ServiceNow[®] Now Mobile, and ServiceNow[®] Virtual Agent users. AI Search was enhanced and updated in the Tokyo release.

AI Search highlights for the Tokyo release

- Expand multilingual search capabilities with Simplified Chinese and Traditional Chinese search.
- Guide users to the best search result matches with search-based auto-complete suggestions.
- View the best matching results first with improved machine learning relevancy.

See [AI Search](#)  for more information.

Important information for upgrading AI Search to Tokyo

When you upgrade to Tokyo from a previous release, AI Search automatically reindexes content and metadata from the indexed sources for the Catalog Item [sc_cat_item] and Knowledge [kb_knowledge] tables. This one-time reindexing process is required to enable search experience improvements in this release.

When you view or edit search application configurations after upgrading to Tokyo from a previous release, the system may display a warning message telling you to reindex one or more indexed sources. This reindexing process (a one-time process for each indexed source listed) is required to populate search-based auto-complete suggestions correctly.

After you upgrade to Tokyo from a previous release, the default relevancy scores for your search results may change. Relevancy models trained in the previous release should continue to produce the same result ordering. Models trained more than one release ago may revert to the default relevancy model.

AI Search report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#) .

New in the Tokyo release

[Internationalization support for AI Search](#)

Expand multilingual search capabilities with Chinese-language search. AI Search identifies both Simplified Chinese and Traditional Chinese when indexing content and metadata for search. Chinese support includes configuration of stop words and synonyms.

[Auto-complete suggestions in AI Search applications](#)

Display titles and tables for search results as auto-complete suggestions. AI Search generates these search-based suggestions as you enter terms into the search query field. Select a search-based suggestion to navigate directly to the record, bypassing the search results page.

Changed in this release

[Stop words](#) and [Synonyms](#)

AI Search does not remove stop words from synonym expansions of search query terms. For instance, suppose you define `laptop` and `notebook computer` as synonyms and define `computer` as a stop word. If a user searches for `laptop`, AI Search expands the search query to match `laptop OR "notebook computer"` instead of matching `laptop OR notebook`.

[Synonyms](#)

When search query terms match a multi-term synonym, AI Search treats those terms as a quoted phrase. For example, if you define `401k` and `retirement account` as synonyms and a user searches for the unquoted terms `retirement account`, AI Search returns results that match the quoted phrase `"retirement account"`.

[Machine learning relevancy in AI Search](#)

AI Search improves relevancy for Catalog Items by indexing search keywords from the **Meta** field. Machine learning relevancy assesses **Meta** keyword matches and tag matches when computing relevancy scores for Catalog Items and Knowledge articles.

Activation information

AI Search is a Now Platform feature that is active by default.

Browser requirements

Internet Explorer is not supported.

Localization information

AI Search supports international languages. For details of language support by feature, see [Internationalization support for AI Search](#).

Related ServiceNow applications and features

[Advanced AI Search Management Tools](#)

The Advanced AI Search Management Tools application adds new functionality to AI Search:

- Administrators can review dashboards with metrics, trends, and reports relating to AI Search usage and configuration.
- Administrators can test searches with the Search Preview UI. Use this tool to understand your users' search results.
- Administrators with High Security access can bypass search source and content security filters in the Search Preview UI. Use this technique to see how these filters affect your users' search results.

[AI Search for Next Experience](#)

The AI Search for Next Experience application adds support for using AI Search as the search engine for Unified Navigation searches in Next Experience, including global search and configurable workspace search.

Core Now Platform release notes

The ServiceNow® Core Now Platform provides features and functionality to applications and other parts of the Now Platform. The Core Now Platform was enhanced and updated in the Tokyo release.

Core Now Platform highlights for the Tokyo release

- Migrate your IP addresses that are stored as string fields to the new IP address type.
- Restrict application logs modifications by installing the Protected Tables plugin.
- Bulk update or delete records without using scripts. Roll back bulk updates or deletes if necessary.

See [Now Platform Administration](#)  for more information.

Important information for upgrading Core Now Platform to Tokyo

To opt in to log protection, install the Protected Tables plugin (`com.glide.protected_tables`) that enables the platform to restrict update and delete operations on certain system log tables. Admins can customize the log table protection rules for each table in the Log Protection Admin panel.

Core Now Platform `report_view` access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#) .

New in the Tokyo release

[Data migration to new IP address type](#)

Provide support for migrating IP addresses that are stored as string fields to the new **IP Address(Validated IPV4,IPV6)** type. The new IP address type accepts only a valid IP address, pertaining to the new accepted type.

[Fallback language for system localization](#)

Set a language to fall back to when a translation is not available for the preferred language. If a translation is also not available in the fallback language selected, then the instance session uses English.

[Delete records safely](#)

Bulk delete data safely without using scripts. You can now preview a delete job to view affected records before you execute or schedule the job. You can also roll back a delete job to restore deleted records.

[Update records safely](#)

Bulk update data safely without using scripts. You can now preview an update job to view affected records before you execute or schedule the job. You can also roll back an update job to undo an update.

[Limiting ability to edit system log tables](#)

Configure system log table protection rules to limit the scope of modification and deletion of application log records. The rules enable you to determine the logging of changes or attempts to make changes in these tables.

[Scoped caches for faster access](#)

Use scoped caches to store custom data in memory for faster access, and define when it becomes invalidated.

Changed in this release

[System localization support](#)

Improved performance and speed of installing or updating a supported language plugin.

Restored edit rights for admin users in the Languages [sys_language] table. Users can activate or deactivate custom languages in the Languages table.

Updated translated choice records to be active by default only if they have a corresponding English choice record.

[JavaScript engine on the platform](#)

Updated the JavaScript engine to support the ECMAScript 2021 standard with a new ECMAScript 2021 (ES12) JavaScript mode that can be enabled for new or existing scoped applications. Review all server-side scripts and perform regression testing for any scoped applications that you update to use ECMAScript 2021 (ES12). Server-side scripts include access controls, scheduled jobs, script includes, and more. For more information about server-side scripts, see [Server-side scripting](#).

[Support for function fields in database views](#)

Database views now support function fields. If a table in the database view contains a function field, you can now see the function field's data in lists and reports based on the database view.

Activation information

Core Now Platform is a Now Platform feature that is active by default.

Import and Export release notes

The ServiceNow® Import and Export application enables you to import and export data to and from the Now Platform. Import and Export was enhanced and updated in the Tokyo release.

Import and Export highlights for the Tokyo release

- Use scripts in your ETL definitions to run custom logic, ignore incoming data, or write messages to the import log.
- Override a connection alias when you schedule an import.
- View details about import set runs, processed records, and errors all from the import set view.

See [Import sets](#) and [Export sets](#) for more information.

Important information for upgrading Import and Export to Tokyo

Import and Export report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

New in the Tokyo release

[Use an updated load-by-script experience for custom data sources](#)

Access the data source and import logs directly in the data loader script.

[Override a connection alias when you schedule an import](#)

For data sources that use a connection alias, use the default parent alias or override it with a child alias. Connection override is available on the Scheduled Data Import form, so you can select an alias without needing to write a script.

[Specify a column when mapping data to a reference field](#)

For reference fields, you can select a particular column to map data to in the target table.

[View detailed import statistics all in one place](#)

View information about the import set run, processed records, individual import set rows, errors, and log messages all through the import set view.

[ETL definition enhancements](#)

- Use an `on before` script to ignore records, log messages, or run custom logic before inserting or updating data.
- Use an `on after` script to log messages or run custom logic after inserting or updating data.
- Specify what to do if incoming data has a field with an empty value. Copy the empty value or ignore it and keep the existing value.

Activation information

Import and Export is a Now Platform feature that is active by default.

Upgrade Center release notes

The ServiceNow® Upgrade Center application helps you plan and manage your upgrades. Upgrade Center was enhanced and updated in the Tokyo release.

Upgrade Center highlights for the Tokyo release

- Explore the different release versions available to you in the Upgrade Preview module.
- Gain insights about the upgrade experience without actually upgrading your instance.
- Monitor the status of any ongoing upgrade and view the summary of your latest upgrade in the Upgrade Monitor module.
- View all your past upgrades in the Upgrade History module.
- Accelerate your upgrades using the Upgrade Plan feature.

See [Upgrade Center](#) for more information.

Important information for upgrading Upgrade Center to Tokyo

Upgrade Center report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

New in the Tokyo release

[Building and applying your upgrade plan](#)

Accelerate your upgrades by packaging your customizations into applications in an upgrade plan. You can also preview your upgrade plan before implementing it to your upgrades.

Activation information

Upgrade Center is a Now Platform feature that is active by default.

Related ServiceNow applications and features

[Automated Test Framework](#)

Upgrade Center displays recent ServiceNow[®] Automated Test Framework (ATF) test run results.

[Instance Scan](#)

Upgrade Center displays recent ServiceNow[®] Instance Scan scan results.

Dynamic Translation release notes

The ServiceNow[®] Dynamic Translation application enables translation of dynamically generated text. The text is translated using the translation service providers configured in the Dynamic Translation framework. Dynamic Translation was enhanced and updated in the Tokyo release.

Dynamic Translation highlights for the Tokyo release

- Translate HTML fields on the platform forms using Dynamic Translation.
- Translate email notifications to the recipient's preferred language at run time.
- Translate virtual agents chat to the recipient's preferred language at run time.
- Configure a link for Dynamic Translation in the activity stream to enable users to quickly and easily translate content.

See [Dynamic Translation](#) for more information.

New in the Tokyo release

[Add translate link to activity streams](#)

Provide a link on the activity stream for a single table or multiple tables (such as incident, case, task and so on) that enables users to easily and quickly translate the content.

Activation information

Dynamic Translation is available with activation of the Dynamic Translation plugin (com.glide.dynamic_translation). For details, see [Activate Dynamic Translation](#).

Localization information

All the messages on the user interface of the Dynamic Translation application have been localized.

Related ServiceNow applications and features

[Integration Hub](#)

Localization Framework uses ServiceNow® Integration Hub spokes to connect to translation service providers.

Localization Framework release notes

The ServiceNow® Localization Framework application enables users to localize the content of artifact items such as catalog items, NLU model (Natural Language Understanding Models), HTML Document Template and VA (Virtual Agent) topic, seamlessly into different languages with various translation modes. Localization Framework was enhanced and updated in the Tokyo release.

Localization Framework highlights for the Tokyo release

- Apply Localization Framework to surveys to reduce the time required for localization.
- Translate knowledge base articles in bulk by adding Localization Framework support.
- Increase user engagement by using email notification templates with Localization Framework.
- Reduce the time and effort required to process your localization effort by auto-creating localization projects.

See [Localization Framework](#) for more information.

New in the Tokyo release

[Auto-create localization projects](#)

Minimize the time required for localization processes by enabling the auto-creation of localization projects. When you enable auto-creation and request an artifact translation, the corresponding localization requested items are added to the project and the project starts automatically.

[Apply Localization Framework to surveys](#)

Survey authors can request translations of a survey into multiple languages.

[Translate knowledge base articles in bulk](#)

Facilitate the translation of knowledge base articles in bulk using Localization Framework.

[Support email notifications](#)

Notification admins can request translations of notification templates into multiple languages.

Activation information

Localization Framework is a Now Platform feature that is available with activation of the Localization Framework Installer plugin (com.glide.localization_framework_installer). For details, see [Activation of Localization Framework](#).

Related ServiceNow applications and features

[Integration Hub](#)

Localization Framework uses ServiceNow® Integration Hub spokes to connect to translation service providers.

Now Platform capabilities release notes

Now Platform® capabilities were enhancements and updates in the Tokyo release.

Expand the services your system of action delivers with Now Platform capabilities. Activate and configure these optional features to create custom business logic, manage and secure data, and build alternate user interfaces.

Admin Center release notes

The ServiceNow® Admin Center application provides a central hub for platform owners and admins to easily access platform capabilities, discover new applications, and get intelligent, actionable insights. Admin Center is a new application in the Tokyo release.

Admin Center highlights for the Tokyo release

- Discover what applications are included in your license and how they can be implemented to achieve your business goal.
- Implement the suggested solutions with the installation of recommended applications to work toward your business outcome.

See [Admin Center](#) for more information.

Important information for upgrading Admin Center to Tokyo

The latest version of the Admin Center application is available in the ServiceNow Store.

Admin Center features

[Adoption Blueprints](#)

Identify the Adoption Blueprints that are used to measure your organizational needs for achieving business growth. Each blueprint focuses on a strategic priority. It suggests applications and plugins best suited for your business goal.

[Recommended and optional applications](#)

The list of recommended and optional applications are in an ideal order based on your current scenario for a selected adoption blueprint. View the progress of

the number of recommended applications installed on the adoption blueprint cards.

[Maturity levels of applications](#)

Explore the different maturity levels of the recommended and optional applications on the Adoption Blueprints details page. The maturity levels are categorized as Build a foundation, Enhance the experience, Optimize the functionality, and Add advanced features.

Next Up card

Explore the information about the next recommended application installation by clicking **See details** on the Next Up card.

Sharing Adoption Blueprint details

Share the information about the recommended applications and features with another admin by clicking **Copy link** on the Adoption Blueprints details page.

Activation information

Admin Center is a Now Platform feature that is active by default.

Advanced Work Assignment release notes

The ServiceNow® Advanced Work Assignment application automatically assigns work items to your agents, based on their availability, capacity, and optionally, skills. Advanced Work Assignment (AWA) was enhanced and updated in the Tokyo release.

Advanced Work Assignment highlights for the Tokyo release

- Assign work tasks automatically.
- Enable the AWA Inbox API.

See [Advanced Work Assignment](#) for more information.

New in the Tokyo release

AWA Inbox API

Enable internal and external applications to handle incoming and ongoing work items by API.

[Auto assignment in AWA](#)

Configure AWA to assign work tasks automatically.

Changed in this release

[Auto-assigned work items added to Advanced Work Assignment dashboards](#)

The AWA dashboards now include advanced analytics information for auto-assigned work items.

[Universal capacity information added to Advanced Work Assignment dashboards](#)

The AWA dashboards now include universal capacity information.

Activation information

Advanced Work Assignment is a Now Platform feature that is available with activation of the Glide Advanced Work Assignment (com.glide.awa). For details, see [Activate Advanced Work Assignment](#).

Browser requirements

Similar to Workspace, AWA doesn't support mobile devices, Internet Explorer, or Microsoft Edge. Instead, use Microsoft Edge-Chromium or one of the other supported browsers that are listed in [Browser support](#).

Related ServiceNow applications and features

[Workspace](#)

The ServiceNow[®] Workspace application provides agents, case managers, help desk professionals, and managers with tools to help answer customer questions and to resolve customer problems.


Automated Test Framework release notes

The ServiceNow[®] Automated Test Framework enables you to create and run automated tests to confirm that your instance works after making a change, for example, after an upgrade, during application development, or when deploying instance configurations with update sets. Review failed test results to identify the changes that caused the failure and the changes you should review. Automated Test Framework was enhanced and updated in the Tokyo release.

Automated Test Framework highlights for the Tokyo release


- Reduce upgrade and development time by replacing manual testing with automated testing.
- Design tests once and reuse them in different contexts and with different test data sets.
- Keep test instances clean by rolling back test data and changes made after each test run.
- Create and schedule test suites to organize and run tests in batches.
- Reduce test design time by copying quick start tests and test suites. You can also create custom test steps to expand test coverage.

See [Automated Test Framework \(ATF\)](#)  for more information.

 **Important:** The ATF Test Generator and Cloud Runner application is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading Automated Test Framework to Tokyo

Copy and customize quick start tests provided by the Now Platform[®] to validate that your instance works after you make any configuration changes. For example, if you apply an upgrade or develop an application.

The tests can produce a pass result only when you run them on a base system without any customizations and with the default demo data that is provided with the application or feature plugin. To apply a quick start test to your instance-specific data, copy the quick start test and add your custom data. For more information, see [Available quick start tests by application or feature](#) .

New in the Tokyo release

[Cloud runner browser option](#)

Use the new Cloud Runner browser option to run a test in the ATF Test Generator and Cloud Runner store app. The option is visible even if you don't have the application installed.

Activation information

Automated Test Framework is a Now Platform feature that is active by default.

Note: By default, the system property that is used to run automated tests is turned off to prevent you from accidentally running these tests on a production system. To avoid data corruption or an outage, run tests only on development, test, and other non-production instances. For more information, see [Enable or disable executing Automated Test Framework tests](#).

To use the quick start tests for an application, activate the plugin that is associated with the application. For more information, see [Available quick start tests by application or feature](#).

Set the `sn_atf.runner.enabled` property to **True** to activate the content pack for the ATF Test Generator and Cloud Runner store application.

Browser requirements

Automated Test Framework supports running tests only from desktop browsers. You can't run tests or test suites from tablets, mobile browsers, or the mobile UI. Some desktop browsers require additional configuration. For more information, see [Browser recommendations for Automated Test Framework](#).

Automated Test Framework offers limited support for test design on tablets. You can't add new custom UI test steps from tablets because tablets can't retrieve components. Review any existing custom UI test steps that were added from a desktop browser instead.

Related ServiceNow applications and features

[Upgrade Center](#)

ServiceNow[®] Upgrade Center displays recent Automated Test Framework test run results.

Configuration Management Database (CMDB) release notes

The ServiceNow[®] Configuration Management Database (CMDB) application stores data about the infrastructure of your organization. CMDB was enhanced and updated in the Tokyo release.

CMDB highlights for the Tokyo release

- Use CI Attestation in [CMDB Workspace](#) to verify the existence of actual IT infrastructure and applications that you own, systematically and in bulk.
- Use Intelligent Search for CMDB in the CMDB Workspace, to use everyday natural language query (NLQ) in a search string to query for a set of CIs in the CMDB.
- Use new indicators and new drill-down Performance Analytics (PA) widgets in almost all indicators in the [CMDB Data Foundations dashboard \(2.0\) store app](#).
- Use enhancements in [IntegrationHub ETL \(3.0.1\)](#) that provide new functionality and greater flexibility, such as:

- Create a condition that is based on a data branch that is not within the top-level object, when creating a conditional class.
- Open an integration in read-only mode to examine its configuration and settings.
- Select one of the [Robust import set transformer properties](#) as an option when adding an attribute in a mapping.
- Create a query in Multisource Report Builder that compares multiple attribute values across more than two data sources to find discrepancies. Also, use [Reporting](#) to create a report that runs on a recurring schedule.
- Cascade-retire dependent CIs when you retire a CI. Also, perform a one-time cascade-cleanup of orphan dependent CIs that were left behind from previous delete or archive operations.
- In identification rules, add filter conditions to regular identifier entries, to further narrow Identification and Reconciliation Engine (IRE) searches.

See [Configuration Management Database](#) for more information.

New in the Tokyo release

[Intelligent Search for CMDB in CMDB Workspace](#)

Use Intelligent Search for the CMDB in the [CMDB Workspace](#), instead of CMDB Search, to construct search strings using everyday natural query language (NLQ). Intelligent Search queries can span multiple CMDB classes and involve many CIs that are connected by different relationships. Create custom synonyms and Implicit CMDB Relationships to fine-tune the search to your environment.

Intelligent Search parses the NLQ query as you type and provides a dynamic list of relevant suggestions that match single words or part phrases in your query. Then, Intelligent Search resolves any ambiguities in table names or relationship types and converts your natural language search string into a valid CMDB query that you can run. Complex search strings open fully constructed on a canvas of CMDB Query Builder where you can continue and refine or run the query.

Intelligent Search for CMDB functionality is integrated with CMDB Query Builder, letting you find CIs and their relationships using basic NLQ functions. The CMDB query is constructed dynamically as you type into a search field.

[CI attestation in CMDB Workspace](#)

Verify the existence of actual IT infrastructure and applications that you own, systematically and in bulk. As CIs are continuously ingested into the CMDB from various data sources, ensure the integrity of the CMDB by removing any stale CIs that are associated with IT infrastructure or applications that no longer exist.

Use the CMDB Data Manager to create an Attestation policy, specifying CIs that need to be attested and the attestation frequency. Assign attestation tasks to users that are familiar with or that manage the CIs, and who can attest or reject the IT infrastructure or applications that those CIs represent. Rejected CIs that are no longer needed can then be retired, archived, or deleted.

Users can see their assigned attestation tasks in the Attestation view when they log in to the CMDB Workspace, and review and process those attestation tasks.

[Cascade-retire dependent CIs](#)

When dependent CIs management is enabled, the system manages dependent CIs whenever CIs are deleted or archived, and now, also when CIs are retired. When a CI is retired, the system checks all the relationship records for that CI. For any relationship that is with a dependent CI, the system adds the dependent CI to the [cmdb_dependent_ci_ledger] table and sets the CI as ready to retire.

The system then generates a CMDB Data Manager retire policy for the set of dependent CIs and leverages the Data Manager to manage the review the retirement process.

Cleanup existing orphan dependent CIs [↗](#)

Apply processes of dependent CIs management to orphan dependent CIs from previous delete or archive operations. When enabling dependent CIs management, cascade-cleanup operations apply only from when the feature is enabled. You can improve the overall performance and data integrity of the CMDB by applying the same cascade-cleanup operations to orphan dependent CIs that existed in the CMDB before the feature was enabled.

Enable dependent CIs management to ensure future cascade-cleanup of any orphan dependent CIs and also activate the Cleanup Orphan CIs scheduled job to perform a one-time cascade-cleanup of dependent CIs that were previously orphaned.

Quick start tests for Configuration Management Database (CMDB) [↗](#)

After upgrades and deployments of new applications or integrations, run quick start tests to verify that CMDB works as expected. If you customized CMDB, copy the quick start tests and configure them for your customizations.

Changed in this release

CMDB Health metric rule tests are applied only to CIs in the local domain [↗](#)

CIs in the global domain are now evaluated only against CMDB Health metric tests specified in the global domain. Subdomains can override the metric tests propagated from the global domain. In these subdomains, local tests are applied only to the CIs in that subdomain and are not applied to the global domain CIs. Global domain CIs are visible in the subdomain and health results for those CIs that appear in subdomains. Health results in subdomains with local metric tests reflect this new behavior.

When CIs are failing metric tests, this new behavior saves data duplication and improves performance.

The score for the overall health metric is no longer stored in the CMDB Health Scorecard [cmdb_health_scorecard] table. Instead, the overall metric is calculated in real time when you access the [CMDB Health view](#) [↗](#). The scores of all other sub-metrics, including the correctness, completeness, and correctness Key Performance Indicators (KPIs), continue to be stored in the table as before.

Query capabilities in Multisource Report Builder [↗](#)

You can now create a query in Multisource Report Builder that does the following:

- Compares attribute values across more than two discovery sources to find discrepancies and to manage the trustworthiness of various data sources.
- Compares multiple attributes across the specified data sources, including the CMDB.

ServiceWatch Suite

Create a single query to find, for example:

- All Linux Servers where the CPU count and serial number are different for records reported by the ServiceNow platform and System Center Configuration Manager (SCCM).
- All Windows Servers where CPU count is reported differently across the ServiceNow platform, ServiceWatch Suite, SCCM, and Tivoli data sources.

After creating, saving, and running a query, you can now create a schedule for Multisource CMDB queries and then leverage [Reporting](#) to generate reports for the underlying Multisource CMDB data store.

Also, you can now use the new `cmdb_ms_user`, `cmdb_ms_editor`, and `cmdb_ms_admin` [Multisource CMDB user roles](#) to control access to Multisource CMDB functionality.

UI access to Multisource CMDB properties

Use the MultiSource Properties page to view and modify system properties that drive Multisource CMDB behavior without adding the property to the system first.

Configure regular identifier entries in identification rules with filter conditions

Advanced options let you add filter conditions to regular identifier entries in identification rules to further narrow the set of CIs that IRE searches for matches.

Add and set the

`glide.identification_engine.enable_identifier_optional_condition` system property to **true** to enable these advanced options for regular identifier entries in identification rules.

Delete stale records in related tables using the CMDB Data Manager

Use the Delete CMDB Related Entry policy type in CMDB Data Manager to delete orphan, stale, or otherwise irrelevant records in non-CMDB related tables. The non-CMDB related tables in the Related Entry [`cmdb_related_entry`] table have references to CMDB tables. A CI in a related table can, for example, become orphan if the referenced CI in the CMDB is deleted. Remove those CIs, which are no longer needed to maintain the integrity of the system.

CMDB Data Manager requirement for setting up the CSDM life cycle standards

The CMDB Data Manager requirement that the ServiceNow[®] Common Service Data Model (CSDM) life cycle standards are set up, applies now at the CMDB Data Manager policy level, and applies to most but not all policy types. For the Attestation policy type, for example, this requirement does not apply.

If you attempt to use a policy type that requires the CSDM life cycle standards and that requirement isn't met, an error message appears and the operation fails.

For information about the life cycle standard requirement, see [Configure the environment for CMDB Data Manager](#).

CMDB Data Foundations dashboard (2.0) store app

The CSDM and the CMDB Data Foundations dashboards Version 2.0 contains 11 new indicators and new drill-down Performance Analytics (PA) widgets in almost all indicators on the CMDB Data Foundations dashboard.

The CMDB indicators are now grouped by function and purpose under 4 tabs such as the Customization and the ITSM Processes tab. Use the CMDB Data Foundations Dashboard for insights into key foundational indicators of your CMDB. Each metric also has a linked KB article that provides further guidance to ensure that the CMDB is properly configured for optimal usage and to mitigate any potential risks.

IntegrationHub ETL (3.0.1) [🔗](#)

IntegrationHub ETL 3.0.1 is enhanced as follows:

- When generating entities for a nested payload, new entities are created only for the top-level object and any arrays nested within the data. Entities are no longer generated for data within a flat object which is instead associated to the nearest collection or to the top-level object through dot walking.

In the next example, you can map from 'name' and then from 'general' without copying data because both are associated with the same source entity:

```
{
  "name": "foo",
  "general": {
    "location": "California",
    "owner": "Fred Luddy"
  },
  "disks": [{
    "name": "fooDisk",
    "type": "storage"
  }]
}
```

- When creating a conditional class, you can now create a condition that is based on a data branch that is not within the top-level object.
- When IntegrationHub ETL isn't detecting any incoming data from the data source for a Service Graph connector, the integration is available but in read-only mode. In read-only mode you can examine the details of the integration even though it isn't populated with actual data. However, you can't make any updates. Read-only mode is useful for studying an existing connection for the purpose of creating a new connection that is similar to the read-only connection. Using read-only mode can also assist in troubleshooting issues with the connection.
- When IntegrationHub ETL detects validation errors in an ETL transform map, it no longer automatically deletes the invalid mappings. Instead, you are prompted to either confirm the deletion or keep the invalid mappings. You can use the `sn_int_studio.validation.enabled` system property to enable or disable the validation process.
- You can now modify the import data source of an ETL transform map. However, be cautious as this change can result in substantial changes to the data integration. Aligning to the import set table of the new data source might require the removal of columns and associated transforms, or the addition of new columns.

- You can now select one of the [Robust import set transformer properties](#) as an option when adding an attribute in a mapping.
- When mapping a lookup rule (such as the 'Serial Number Lookup 1' rule), you can add lookup filters which are attribute or plugin conditions that must be met for data to be mapped to the specified classes.

Deprecations

- Starting with the Tokyo release, CMDB Search is being prepared for future deprecation. Documentation for CMDB Search is no longer available, however, the feature is activated on new instances and will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Knowledge Base.

To search through the CMDB, use [Intelligent Search for CMDB in CMDB Workspace](#).

- The Microsoft SCCM legacy plugin is no longer deployed, enhanced, or supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Knowledge Base.

To upgrade from the Microsoft SCCM legacy plugin, see [Upgrade from SCCM plugin to Service Graph connector for Microsoft SCCM](#).

Activation information

CMDB is a Now Platform feature that is active by default with the Configuration Management (CMDB) (com.snc.cmdb) plugin.

Related ServiceNow applications and features

Common Service Data Model (CSDM)

Common Service Data Model (CSDM) provides prescriptive guidelines for service modeling within CMDB and is the standard for all ServiceNow products that use the CMDB. CSDM provides a framework for mapping data from your IT services and other products to the CMDB. Following the CSDM framework ensures that the required data for your ServiceNow application maps correctly to the appropriate CMDB tables.

Service Graph Connectors

Use predefined ServiceNow® Service Graph connectors to import data from third-party applications, such as Microsoft SCCM, into your CMDB. Visit the [ServiceNow Store](#) website to view the available Service Graph connectors, and to download the connectors that you need. In addition, you can use the [IntegrationHub ETL](#) store app to create and manage custom ETL transform maps so that you can integrate third-party data into the CMDB without compromising its integrity.

CMDB Workspace

Use CMDB Workspace to search, explore, and gain insights into the CMDB. The CMDB Workspace is a store app that provides a central place for working with the CMDB. In CMDB Workspace you can examine health and recent activity, and access various CMDB dashboards and tools to support tasks in your organization.

Conversational Interfaces release notes

The ServiceNow® 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. Conversational Interfaces applications were enhanced and updated in the Tokyo release.

Conversational Interfaces Home release notes

The ServiceNow® Conversational Interfaces Home application enables you to install, manage, and monitor your virtual and live agents to support your users through chat. Conversational Interfaces Home was enhanced and updated in the Tokyo release.

Conversational Interfaces Home highlights for the Tokyo release

- View how your bot is performing through the Analytics dashboard.
- Install and configure Agent Chat and Virtual Agent and track your progress using the progress bar
- Enhanced chat administration experience.
- Collaborate to resolve issues.

See [Conversational Interfaces](#) for more information.

Important information for upgrading Conversational Interfaces Home to Tokyo

Conversational Interfaces Home is included with the Tokyo release, so existing customers don't need to install it. However, it is also available as an app from the ServiceNow Store, and subsequent updates should be installed from there.

New in the Tokyo release

More interactive and proactive configuration cards

Use new and enhanced cards to set up and maintain your chat environment, such as Brand your bot, Set up your NLU, and Create your bot's greeting. This feature also provides intelligence, letting you know what has not been configured yet, as well as if an app is out of date.

Progress bar

Use cards to quickly check the features that you've configured and determine which features to implement in your bot.

Quick view of Virtual Agent usage through the admin dashboard

Monitor Virtual Agent usage and performance metrics to understand, measure, and proactively manage Virtual Agent adoption in your organization. Review the number of active Virtual Agent users and successful conversations, or discover the least-used topics, incomplete topics, or topics that were transferred to a live agent.

Sidebar

Improve collaboration between agents and subject matter experts to resolve issues through the new real-time record-based collaborative chat platform within Next Experience.

Set up conversation history

View previous history within a conversation panel.

Chat attachments transferred to interaction records

Requester attachments and images are automatically attached to their corresponding interaction record.

Drag and drop attachments

Drag files from the desktop into a conversation panel to easily send files to a requester.

Chat quick action to search for knowledge articles

Search knowledge articles based on the requester's knowledge access.

[Turn off auto-logging on interaction_related_record table](#)

Ability to turn off automatic logging of related records while working on an interaction.

Changed in this release

[Dynamic language detection and machine translation for 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 chose to switch when prompted, then the live agent will see the conversation in the user's chosen language. Because this switch might cause some confusion for both the agent and the customer, consider turning on Dynamic Translation for Agent Chat as well.

Activation information

Conversational Interfaces Home is a Now Platform[®] feature that is active by default.

Related ServiceNow applications and features

[Agent Chat](#)

Provide your agents with a workspace that has built-in productivity features for engaging with customers.

[Advanced Work Assignment](#)

Automatically route work to the most qualified agent based on criteria that you define, such as agent availability, capacity, skills, and familiarity with customer history and accounts.

[Virtual Agent](#)

The Virtual Agent platform provides user assistance through conversations within an intelligent messaging interface. Virtual Agent helps solve ordinary issues and delivers results for common requests. Because Virtual Agent handles the general, everyday tasks and requests, your agents and technicians are free to focus on more complex user issues.

Virtual Agent release notes

The ServiceNow[®] Virtual Agent application provides user assistance through a conversational messaging interface so that you can design and build automated conversations that help users to quickly obtain information and to perform common work tasks. Virtual Agent was enhanced and updated in the Tokyo release.

Virtual Agent highlights for the Tokyo release

- Enable dynamic language detection and machine translation in Virtual Agent conversations, using services such as Google Translate or Microsoft Translator.
- Create topics in the Virtual Agent Designer simplified interface, including improved yes/no handling and support for variations in bot response.
- Specify Google Dialogflow Essentials (ES) as the NLU provider for Virtual Agent, in addition to existing providers, such as IBM Watson or Microsoft LUIS.
- Configure branding for your Slack application and accelerate the conversational experience with Virtual Agent.
- Introduction of end-user friendly channel names and destination types for the third-party applications integrated with Virtual Agent.

See [Virtual Agent](#) for more information.

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.

Important information for upgrading Virtual Agent to Tokyo

- New [Portable Virtual Agent Web Client](#), a Seismic component, simplifies adding Virtual Agent to a third-party website. The legacy method of embedding Virtual Agent in a third-party web page will continue to work.
- In previous releases, Virtual Agent Designer topic blocks and custom controls were published in the Global scope. In this release, topic blocks and custom controls are now included in the scope of the calling topic.

New in the Tokyo release

[Support for Google Dialogflow ES as an NLU service provider](#)

Configure Virtual Agent to use the intents, entities, and utterances that you define in a Google Dialogflow ES agent.

[Dynamic language detection and machine translation for Virtual Agent](#)

Support some languages at a lower cost than professional translation. Admins can enable Dynamic Translation in conversations and determine which languages will be translated dynamically by machine, instead of using professional platform translations. In bot conversations, Virtual Agent detects the user language based on the initial user utterance and gives the user the option to continue in the detected language. User utterances can be translated as well.

[Locale and custom language support for topic discovery](#)

If a user's language code is unsupported or locale-specific, NLU topic discovery returns results from the primary language in the model by default. For a better user experience, designate a fallback language for custom or locale-specific languages. For example, configure Mexican Spanish (es-mx) to use Spanish (es) as the fallback language.

[Chat transcript download](#)

Download a chat transcript. The chat transcript CSV file includes various data elements related to user input, Virtual Agent response, NLU performance,

and so on, that help Virtual Agent administrators to troubleshoot individual conversations.

[Chat branding enhancements](#)

Customize the default icons used in the chat window, including Start/End Conversation, Send, Attachment, Search, and so forth.

[Web client enhancements](#)

- Support for [Smart links](#) which lets you customize how links open from the chat client. As an admin, you can use regular expressions to configure where and how chat links open: in a new window, in the chat window, or in a pop-up window. For this release, smart links are available only for the web client channel.
- The web client pop-up window displays information when a user clicks links for KB articles, forms, and catalog items.

[Mobile web client enhancements for iOS and Android](#)

- Displaying the wait time countdown when transferred to a live agent.
- Support for native maps to show location (Apple Maps and Google Maps).
- Support for viewing text and links as Virtual Agent menu options.

[Microsoft Teams enhancements](#)

- [Enable Microsoft Teams integration in ServiceNow Protected Platform \(SPP\)](#): When installing Conversational Integration with Microsoft Teams, the Now Platform dynamically determines the bot type. For example, it determines whether to install a commercial bot or a regulated market bot.
- Configure promoted topics for the Microsoft Teams channel.
- Provision to turn on or turn off the confirmation banner when a user sends a response to Virtual Agent in Microsoft Teams conversations.
- Order a Catalog item during a conversation in Microsoft Teams through the Task Module.

[Slack enhancements](#)

- [Branding for Slack](#): Customize the Conversational Integration with Slack application to improve the setup and conversational experiences, and to reduce the configuration time.
- Configure promoted topics for the Slack channel.

[Omni-channel deflection for Issue Auto Resolution](#)

- Fall back to AI Search results when no matching Virtual Agent topic is found.
- Support email and SMS as response channels with Issue Auto Resolution for HR.
- Follow up with the user at preset intervals, through all supported channels, when the user has not acted on the notification.
- Replace the existing SLA with the Task SLA engine.

UI changes

[Simplified Virtual Agent Designer user interface](#)

The topic authoring experience has been simplified. When configuring a topic, the most relevant property fields are shown. You can still access optional, advanced fields when needed.

[Reference Choice user input control](#)

The Reference Choice user input control is now called Dynamic Choice user input control.

[Multi-flow Output bot response control](#)

The Multi-flow Output bot response control is now called Multi-response bot response control.

[Uninstall Conversational Integration with Microsoft Teams](#)

An automated script enables un-installation of the Conversational Integration with Microsoft Teams application on your ServiceNow instance with a click.

Changed in this release

[Virtual Agent Designer chat components and custom controls](#)

- In a user input where a "Yes" or "No" answer is expected, Virtual Agent accepts natural variations such as "yeah" or "nope." This applies to Boolean responses and when Virtual Agent prompts the user for confirmation for a recognized entity or default value.
- Bot response variations provide a richer, more natural user experience.
- The new show icon (👁️) in the Variables sidebar displays where a variable is used. This helps topic authors track where variables are being used if they need to modify or delete them.
- The rich text editor in Virtual Agent controls now supports numbered lists.
- Support for data entry and data pill for array string, array datetime, and glide list data types makes it easier to use the Action utility without coding. The Action utility lets you integrate Flow Designer actions and subflows in your topic.
- Ability to collapse or expand node property sheets to maximize the canvas.
- Simplified publishing for both topics and NLU models.

[Virtual Agent chat enhancements](#)

If a user is in an active Virtual Agent conversation and opens a new chat window from an email link or other source, Virtual Agent asks the user if they want to switch to the new conversation or remain in their current conversation.

[Virtual Agent notifications](#)

- Configure Virtual Agent notification providers from Virtual Agent settings in Conversational Interfaces Home.
- New users of the web client channel without previous conversations can now receive notifications.
- Virtual Agent sends a message acknowledging script or flow actions.
- Enhanced capacity for high volume notifications and increased the default values for number of recipients per notification and number of notifications per day.

[AI Search in Virtual Agent](#)

- Customize Genius Card results by creating and editing templates.
- Enable users to launch catalog order items from AI Search results.

[Topic Recommendations](#)

Topic Recommendations is now installed with Virtual Agent. When using Topic Recommendations, the app now checks the ServiceNow Store and notifies you when an update is available.

[Conversational Custom Chat Integration Framework \(CCCIF\)](#)

Admins can control the topic order display (promoted topics).

[Conversational Integration with Microsoft Teams](#)

The bot response time in Microsoft Teams has been improved.

Deprecations

- The **Metaphone** field in the Edit Translations form was removed. This field was used for managing localization in Virtual Agent Designer.
- The `com.glide.cs.suggest.enable_phonetic_search` system property was removed. This property was used to enable the metaphone feature.

Activation information

Virtual Agent is available with activation of the Glide Virtual Agent plugin (`com.glide.cs.chatbot`), which requires a separate subscription. For details, see [Activate Virtual Agent](#).

- Note:** The Glide Virtual Agent plugin initially installs the Topic Recommendations and Conversational Analytics apps. Subsequent updates to these apps must be installed from the ServiceNow Store.

Virtual Agent Lite is a subset of the Virtual Agent platform that is available to ITSM customers. It does not require activation and works with ITSM Virtual Agent Life conversations, which are also available to ITSM customers.

Browser requirements

Virtual Agent supports various browsers, including Internet Explorer 11 and Microsoft Edge.

Localization information

The Localization Framework is integrated in Virtual Agent Designer.

Related ServiceNow applications and features

[Conversational Interfaces Home](#)

The ServiceNow[®] Conversational Interfaces Home application enables you to install, manage, and monitor your virtual and live agents to support your users through chat.

[Natural Language Understanding](#)

Virtual Agent integrates with the ServiceNow[®] Natural Language Understanding application, which provides the NLU Workbench for creating ServiceNow NLU models. Virtual Agent uses these models to recognize and process user utterances, intents, and entities in bot conversations.

Pre-built Virtual Agent topics, topic blocks, and ServiceNow NLU models [↗](#)

The following ServiceNow business applications provide pre-built Virtual Agent conversation topics, ServiceNow NLU models, and, in some cases, topic blocks as reusable components:

- Customer Service Management
- Field Service Management
- HR Service Delivery
- Instance Security Center
- ITSM Service Management
- Project Portfolio Management
- Universal Request

Decision Builder release notes

The ServiceNow[®] Decision Builder application provides an intuitive interface that you can use to create and manage decision tables. By modifying the rules and conditions in a decision table, you can more efficiently meet changing business requirements. Decision Builder was enhanced and updated in the Tokyo release.

Decision Builder highlights for the Tokyo release

- Added the ability to export decision tables to Microsoft Excel. Excel can be used to manage decision rows and users can import changes back into Decision Builder.
- Added more support for localization in the Decision Builder UI.
- Added UI support for Change Approval Policies through the new Change Approval Policy Builder module.
- Added the ability to open all decision rows in Decision rule view to enable complex rules. Decision tables with complex rules do not support the Edit in Excel feature.
- Added two new roles: `decision_rule_author` and `decision_rule_editor`.

See [Decision Builder](#) [↗](#) for more information.

i Important: Decision Builder is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes. To access these updates, please upgrade to the latest version of Decision Builder from System Applications.

New in the Tokyo release

[Edit in Excel](#) [↗](#)

Export your decision tables to Microsoft Excel for editing. Excel can then be used to simplify editing decision rows. You can import your changes in Excel back into Decision Builder.

[Decision rule view](#) [↗](#)

Open decision rows in Decision rule view to enable the management of complex rules.

i Note: Decision tables with complex rules do not support the Edit in Excel feature.

[Change approval policies](#) [↗](#)

Added UI support for creating a change approval policy using Decision Builder functionality.

[User roles and permissions](#)

Control access to features and capabilities by assigning the `decision_rule_author` and `decision_rule_editor` roles in Decision Builder.

Activation information

Decision Builder is a Now Platform feature that is available in all instances and can be upgraded to the latest version by updating the Decision Builder (`sn_decision_design`) plugin. For details, see [Update to the latest version of Decision Builder](#).

Localization information

The Localization Framework is integrated in Decision Builder. However, the new Edit in Excel feature does not support localization, so any instance that doesn't use English is not able to use Edit in Excel.

Document Services release notes

The ServiceNow® Document Services application provides a broad range of services related to document management, creation, maintenance, conversion, and integrating with third parties such as Microsoft SharePoint . Document Services was enhanced and updated in the Tokyo release.

Document Services highlights for the Tokyo release

- Upload and view documents linked to cases from Agent Workspace using document management.
- Add, view, and attach documents using the Documents widget in Service Portal.
- View the attached documents in the activity stream of the parent record.
- Integrate with Microsoft OneDrive for file storage and collaboration.
- Control user access to content with domain separation support.
- Ensure that Document Services is accessible to all users through accessibility features.

See [Document Services](#) for more information.

New in the Tokyo release

[Multi-Provider documents framework](#)

Integrate with third-party applications for file storage and collaboration.

[Documents widget](#)

Upload and link documents to other records on the platform using the Documents widget in Service Portal.

[Activity stream for documents](#)

Configure and track document actions like uploading and deleting in the activity stream of parent records linked to the document.

Document Management in Configurable Workspace

Upload and link documents to other records on the platform. Access documents, metadata, and document versions.

Changed in this release

[Domain separation support for Document Management](#)

Maintain the security of your documents by establishing defined domains.

[Notes for document versions](#)

Add context to document versions through the new **Notes** field.

[Extend tables in Document Management](#)

Add custom fields through extended tables in Document Management.

Activation information

Multi-Provider Documents Framework is a Now Platform feature available with activation of the Multi-Provider Documents Framework plugin (`com.snc.multiprovider_documents`). For details, see [Multi-Provider documents framework](#).

Accessibility information

- Screen reader support has been extended to buttons in the Document Viewer, providing explanations of the button action, for example, zooming, page controls, toggle sidebar, and so on.
- Keyboard navigation:
 - Added support to focus on page control buttons in Document Viewer using the Tab key.
 - Added a tab index to navigate through Document Viewer buttons in a linear order through the Tab key.

Instance Data Replication release notes

The ServiceNow® Instance Data Replication (IDR) application simplifies the customer experience during the data replication process between instances. Instance Data Replication was updated in the Tokyo release.

IDR highlights for the Tokyo release

- Replicate data from your producer instance to one or more consumer instances across different departments and business units and keep data synchronized.
- Maintain consistent data across different organizations in your company.
- Easily update records that have different `sys_ids` on the producer and consumer instances.

See [Instance Data Replication](#) for more information.

Important information for upgrading Instance Data Replication to Tokyo

Instance Data Replication `report_view` access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

Activation information

Instance Data Replication is available with activation of the IDR (`com.glide.idr`) plugin, which requires a separate subscription. For details, see [Request an Instance Data Replication \(IDR\) subscription](#).

Additional requirements

The consumer and producer must both be running the San Diego release or later to support the custom coalesce feature.

A field that is selected as the coalesce field for a replication entry, must have unique values. The field must also have the same name, length, and type on the producer and consumer instances.

The consumer and producer must both be running the San Diego release or later to support concurrent job execution.

Instance Scan release notes

The ServiceNow® Instance Scan engine is used to check your instance for configurations that indicate health issues and identify opportunities to address best practices. Instance Scan was enhanced and updated in the Tokyo release.

Instance Scan highlights for the Tokyo release

- Scan your instance, update set, scoped application, or specific record using specified checks.
- Run custom checks against your existing configurations.
- Use as a tool in your development operations, release management, as well as pre- and post-upgrades.

See [Instance Scan](#) for more information.

Important information for upgrading Instance Scan to Tokyo

Instance Scan report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

Activation information

Instance Scan is a Now Platform feature that is active by default.

Related ServiceNow applications and features

[Upgrade Center](#)

ServiceNow® Upgrade Center displays recent Instance Scan scan results. Also, Instance Scan displays information about upgrade versions from Upgrade Center.

MID Server release notes

The ServiceNow® MID Server application enables communication and data transfers between a ServiceNow® instance and external applications, data sources, and services. MID Server was enhanced and updated in the Tokyo release.

MID Server highlights for the Tokyo release

- The MID Server can be configured for IPv6 to connect to the instance and use Discovery over IPv6 for specific addresses.
- The MID Server has improved back-ups for the keystore, especially using custom keypairs, and can be quickly restored if it becomes corrupted or deleted.
- You can now change the URL to check for install packages when upgrading or changing the MID Server.

See [MID Server](#) for more information.

Important information for upgrading MID Server to Tokyo

For the latest MID Server system requirements, see [MID Server system requirements](#). The following Java Runtime Environment (JRE) versions are supported:

- JRE11: Beginning with version 11.0.15
- JRE8: Beginning with version 1.8.0_275

If you have installed your own JRE, the upgrade process takes the following actions to ensure that the MID Server uses a supported JRE:

- If a MID Server is using an unsupported version of the JRE when it upgrades, the upgrade process replaces that JRE with the OpenJDK bundled with the MID Server installer.
- If a supported JRE is running on the MID Server host, the upgraded MID Server uses that version.

All MID Server host machines require access to the download site at `install.servicenow.com` to enable auto-upgrades. For additional details, read how the system manages [MID Server upgrades](#).

Only one Windows MID Server service is permitted per executable path. Upgraded Windows MID Servers that have multiple services pointing to the same installation folder cannot start. See [MID Server fails to start](#) for more information.

For more information about MID Server upgrades, see the following topics:

- [MID Server pre-upgrade check](#): Describes how the AutoUpgrade monitor tests the MID Server's ability to upgrade on your system before the actual upgrade.
- [Upgrade the MID Server manually](#): Describes how to upgrade your MID Servers manually.

New in the Tokyo release

[Support for IP-based Discovery over IPv6](#)

A MID Server configured for IPv6 can connect to the instance and use Discovery over IPv6 for specific addresses. A pure IPv6 MID Server connects to IPv6 by default, and the `ecc_agent` is automatically populated with IPv6. Contact Customer Service and Support to verify that your instance is IPv6 enabled. Cloud Discovery and Cloud Provisioning and Governance do not support IPV6-based discovery.

[Configure the MID Server Installation Package URL](#)

You can now change the URL to check for install packages when upgrading or changing the MID Server so the MID Server can update through specific

customer URLs within their environment. Note that this update does not work for regulated environments where different domain suffixes and addresses are used.

[MID Server Keystore Backup](#)

The MID Server has improved backups for the keystore, especially using custom keypairs. The keystore can be quickly restored if it becomes corrupted or is accidentally deleted. Previously, restoring a keystore with many custom keypairs would be time consuming.

[MID Server Logging Improvements](#)

The MID Server logs have been improved with the timezone of the MID Server included on timestamps, Java class names and line numbers for log entries, and improved log levels and warnings. The new formatter is used when writing to the `.../agent/logs/agent0.log.<number>` logs. All other log formats for the MID Server remain unchanged.

Changed in this release

[MID Server JRE Update](#)

New installations of MID Server and upgraded MID Servers provide and support the latest version of Java 11.

Activation information

MID Server is a Now Platform feature that is active by default.

Related ServiceNow applications and features

[Discovery](#)

Discovery uses the MID Server to launch probes and patterns that return information to the CMDB about devices and applications running in your environment. Discovery schedules select appropriate MID Servers based on their configured capabilities and assigned IP ranges.

[Orchestration](#)

Orchestration uses the MID Server to do work on internal and external systems. Orchestration selects MID Servers based on their capabilities and the applications that they are allowed to use.

[Service Mapping](#)

Service Mapping uses the MID Server to launch patterns that return information about business services running in your environment.

[Event Management](#)

Event Management uses the MID Server to receive and process events, collect data for root cause analysis (RCA), and collect SNMP traps.

[Cloud Management](#)

Cloud Management uses the MID Server to collect and process VMware events.

[Operational Intelligence](#)

Operational Intelligence uses MID Server clusters to capture operational metrics data from external data sources and analyze them for anomalies.

[Health Log Analytics](#)

Health Log Analytics uses the MID Server to collect log data streaming into your instance and help you identify the root cause of issues.

Notifications release notes

The ServiceNow[®] Notifications application enables you to create, manage, and send custom notifications for workflows for important events, actions, and alerts. Notifications was enhanced and updated in the Tokyo release.

Notifications highlights for the Tokyo release

- Send and manage email notifications in different languages.
- Support for authentication using client ID, client secret, and certificates via Microsoft Graph endpoints for inbound emails.
- Decrypt and verify signs for inbound emails, and encrypt and sign outbound emails using S/MIME (Secure/Multipurpose Internet Mail Extensions).
- Send and receive acknowledgment messages via messaging and chat channels.

See [Notifications](#)  for more information.

New in the Tokyo release

[Multilingual support for emails](#)

- Create multilingual email templates and layouts.
- Send email notifications in the language selected in the recipient's profile.

[Support for client certificate email authentication](#)

Read email via Microsoft Graph endpoints. Supports authentication using client ID and client secret as well as a certificate for inbound email.

[Support for S/MIME for inbound and outbound mails](#)

Enable or disable S/MIME for inbound and outbound emails and email notifications.

Changed in this release

[Acknowledgment message for flow actions](#)

Send and receive acknowledgment messages for the actions taken from messaging and chat channels.

Activation information

Notifications is a Now Platform feature that is active by default.

Knowledge Management release notes

The ServiceNow[®] Knowledge Management application enables you to share knowledge articles that provide users with information for self-help, troubleshooting, and task resolution. Knowledge Management was enhanced and updated in the Tokyo release.

Knowledge Management highlights for the Tokyo release

- Set up 301 and 404 redirects for retired articles to improve search relevancy.
- Initiate bulk translations of knowledge articles in multiple languages.

See [Knowledge Management](#) for more information.

Important information for upgrading Knowledge Management to Tokyo

- Knowledge Management `report_view` access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).
- Starting from the Tokyo release, the upgraded version Angular JS 1.5.11 is available with the base system.

New in the Tokyo release

Ability to set up 301 and 404 redirects for retired articles

Indicate a replacement article while retiring a knowledge article to which users will automatically be redirected with a 301 redirect response. If a replacement article is not available, the page displays the message `Knowledge record not found` as a 404 response.

Bulk translation for knowledge articles

Translate multiple knowledge articles in different languages at once by using the Bulk Translation feature, which supports the localization framework. You can only initiate a translation for a language added in the Localization settings.

Changed in this release

Feedback control at knowledge base level

- Enable or disable the ability to rate articles for a particular knowledge base.
- Enable or disable the ability to mark articles as helpful for a particular knowledge base.

Article template preview

Configure the sample text for a knowledge article template field that appears when you create a knowledge article.

Knowledge Management Overview dashboard

Starting from the Tokyo release, use the navigation path **Knowledge > Administration > Overview** to access the Knowledge Management Overview dashboard.

Deprecations

Starting from the Tokyo release, the Knowledge Management, Knowledge Management Overview, and My Knowledge homepages have been deprecated and replaced with the Knowledge Manager Overview dashboard. For more information, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support knowledge base.

Activation information

Knowledge Management is a Now Platform feature that is active by default. Also, the Knowledge Management Service Portal is available with the Knowledge Management Service Portal (com.snc.knowledge_serviceportal) plugin that is active by default.

Activate the Knowledge Management Advanced (com.snc.knowledge_advanced) plugin to enable advanced features for Knowledge Management. For more information on activating the plugin, see [Activate the Knowledge Management Advanced plugin](#).

Activate additional plugins that enable various Knowledge Management features. For more information, see [Additional plugins for Knowledge Management](#).

Related ServiceNow applications and features

[CSM Configurable Workspace](#)

ServiceNow® Workspace is a graphical user interface that collects the tools that agents need to find, research, and resolve issues on a single page. CSM Configurable Workspace and CSM Agent Workspace are customer service-specific implementations that provide tier 1 agents with the tools that they need to respond to customers and to resolve cases.

[Customer Service Management](#)

Add knowledge articles to Service Portal case records to resolve cases. Use knowledge articles in Agent Workspace to deflect cases. Create knowledge articles using templates from a case in Agent Workspace.

[Field Service Management](#)

Enable field service agents to [read knowledge articles using the Agent mobile app](#) that are attached to their work order tasks while offline.

[Communities](#)

Harvest knowledge from posts on a community. Create structured knowledge articles from unstructured discussions around a question.

[Problem Management](#)

Create structured knowledge articles from information generated from a Problem form that could be useful to solve similar issues.

[Incident Management](#)

Resolve issues by searching for knowledge articles from an incident. Flag issues with articles, edit articles from incidents, and report knowledge gaps while resolving an incident. Formalize tacit knowledge by creating articles from an incident using article templates.

[Employee Service Management](#)

Use knowledge blocks with HR Knowledge Management to simplify both HR knowledge authoring for writers and knowledge consumption for readers. Enable an HR agent to identify cases that have insufficient knowledge coverage and to report knowledge gaps using the [Demand Insights for HR Cases dashboard](#).

Assessments and Surveys release notes

The ServiceNow® Assessments and Surveys application helps you create, send, and collect responses for surveys. It also helps you evaluate, score, and rank records from any table in the system. Assessments and Surveys was enhanced and updated in the Tokyo release.

Assessments and Surveys highlights for the Tokyo release

- View each survey instance result in a separate row. Each survey question appears in the column heading with the answer to the question displayed in that column.
- Take advantage of a redesigned assessment-taking experience on the ServiceNow® Service Portal and the ServiceNow® Now Mobile app.
- Let your users start the survey from the same page where they left off in the previous session.

See [Assessments and Surveys](#) for more information.

Important information for upgrading Assessments and Surveys to Tokyo

When you upgrade to Tokyo from a previous release, Assessments and Surveys is activated by default on Service Portal and the Now Mobile app.

New in the Tokyo release

[Survey results in a single row](#)

View each survey instance result in a separate row. Each survey question appears in the column heading with the answer to the question displayed in that column. This arrangement makes it easier for your users to view, analyze, and if needed, export the survey results. Click the new **View Responses in Rows** link on the survey page to view the survey results in rows with each column as a question in the survey.

[New assessment experience](#)

Take advantage of a redesigned assessment-taking experience on Service Portal and the Now Mobile app. Your users can use a modern, competitive, and inclusive UI to complete the assessments assigned to them.

When you upgrade Assessments and Surveys to Tokyo, the new assessment feature, enabled by default, provides users with a refreshed experience. They can use the new My Assessments and Surveys widget to land on the assessments pages from Service Portal. The widget styles reflect the theme that has been selected for the relevant Service Portal. The assessment pages show a newly added progress bar (with the completion status in percentage) and pagination text.

Users can take the assessments on the Now Mobile app using a widget. Activate push notifications by setting the `glide.sg.universal_links.enabled` property to **true**. When an email notification is sent to users, a mobile push notification is also sent on mobile devices. Clicking the notification opens an assessment in the Now Mobile app.

[New survey experience](#)

Your users can resume the survey from the same page where they left off in the previous session.

Quick start tests for Assessments and Surveys

After upgrades and deployments of new applications or integrations, run quick start tests to verify that Assessments and Surveys works as expected. If you customized Assessments and Surveys, copy the quick start tests and configure them for your customizations.

For more information, see [Quick start tests for Assessments and Surveys](#) .

Deprecations

Old widgets and their Angular Providers for assessments are no longer supported on Service Portal and the Now Mobile app.

Activation information

Assessments and Surveys is a Now Platform feature that is active by default.

Related ServiceNow applications and features

[Employee Center](#)

After an assessment is assigned to users, the assigned assessment appears on the ServiceNow[®] Employee Center, where users can take the assessment.

[Now Mobile app](#)

Users can take an assessment that is assigned to them using the Now Mobile app.


Password Reset release notes

The ServiceNow[®] Password Reset application helps end users reset and change their passwords either by a self-service process or by getting help from a service desk agent. Password Reset was enhanced and updated in the Tokyo release.


Password Reset highlights for the Tokyo release

- Get the experience of a new configuration that lets the Password Reset application integrate with credential stores that do not provide an API to reset passwords using ServiceNow[®] Robotic Process Automation.
- Experience improved security to address user enumeration attacks on the password reset process.
- Verify users with two new topic blocks in ServiceNow[®] Virtual Agent: Soft PIN and Short Message Service (SMS).
- Let users create multiple credential store connections and map these connections to a password reset credential store during configuration so that it can be consumed during the run time.
- Set a password reset history value in the `password_reset.history.limit` property. This property checks the history of previous passwords based on the specified value.
- Configure the third-party credential stores to set the password reset, password change, and account unlock actions independent of each other.

See [Password Reset](#)  for more information.

 **Important:** Password Reset is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading Password Reset to Tokyo

Password Reset `report_view` access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#) .

New in the Tokyo release

New configuration for the Robotic Process Automation credential store

Get the experience of a new configuration that lets the Password Reset application integrate with credential stores that do not provide an API to reset passwords using Robotic Process Automation.

When a Robotic Process Automation user requests a password reset, a new password is generated automatically and sent to the user. Also, Robotic Process Automation uses asynchronous activity while resetting a password. For example, when a user requests a password reset, the password doesn't get reset immediately. The user receives a message that the request has been submitted successfully. After the process is completed, the user receives an appropriate message based on the success or failure of the password reset action.

More secure password reset process

Experience the security improvement for the password reset process. The reset process is enhanced to handle Denial of Service (DOS) attacks and user enumeration attacks. The valid user experience has changed. For example, suppose that a valid user is resetting a password using an incorrect method. The user is notified by an email or other notification channels instead of any communication on the UI.

New topic blocks in Virtual Agent: Soft PIN and SMS

Verify users with two new topic blocks in Virtual Agent: Soft PIN and SMS. Users enrolled in password reset can use the verification in Soft PIN and SMS.

Multiple credential store connections

Let users create multiple credential store connections and map these connections to a password reset credential store during configuration so that it can be consumed during the run time. This enhancement supports multiple Active Directory server credentials in Flow Designer in password reset flows.

Value for the `password_reset.history.limit` property [↗](#)

Set a password reset history value in the `password_reset.history.limit` property. This property checks the history of previous passwords based on the specified value. The earlier limit was 10 by default. Administrators can now set it based on organizational needs.

New configuration for the credential stores

Let your users experience using the password reset, password change, and account unlock actions independently for all the third-party credential stores. You can use subflows in the Flow Configuration to configure these settings.

Activation information

Password Reset is a Now Platform feature that is active by default.

This feature is active by default for users with a local password. For additional third-party credential support, install Password Reset applications from the [ServiceNow Store](#) [↗](#).

Related ServiceNow applications and features

Virtual Agent [↗](#)

Learn more about Virtual Agent support for Password Reset.

Password Reset Windows Application [↗](#)

The Password Reset Windows Application enables a user, who forgets the password or is locked out of a Windows computer, to reset the password directly from the Windows login screen.

Subscription Management release notes

The ServiceNow[®] Subscription Management application helps you manage your ServiceNow subscriptions. Subscription Management was enhanced and updated in the Tokyo release.

Subscription Management highlights for the Tokyo release

- Give your users the access they need by granting licenses to ServiceNow subscriptions and applications.
- Oversee the installation and use of applications, plugins, and tables on your instances.
- Track subscriptions, users, and custom resources to stay within compliance and help you make decisions about your subscription purchases.

See [Subscription Management](#)  for more information.

Important information for upgrading Subscription Management to Tokyo

Subscription Management report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#) .

New in the Tokyo release

[Increased transparency for capacity-based products](#)

View how allocation totals are computed for table queries and scripted definitions in capacity-based products. View the definition record for each product in the Subscription details page and execute the definition to view the latest results on demand.

Changed in this release

[One-to-many mapping for roles to applications](#)

License Management can now map a role to more than one application. You can view all the applications to which the role is mapped. For example, the itil role can have the Fulfiller role type for Incident Management, Problem Management, and Change Management. With this update, you can see all the applications that the itil role is mapped to.

Activation information

Subscription Management is a Now Platform feature that is active by default.

Related ServiceNow applications and features

[User administration](#)

Manage the individuals who can access your instance by defining them as users in the system. Create user groups and assign users to them. Use roles to specify what different users and user groups can see and do. Use groups and roles to ensure that your users have the right subscriptions in Subscription Management.

[Now Platform](#)

Now Platform[®] provides a single mobile and web application development platform to build business applications and extend existing apps. Combined with Subscription Management, you can deploy custom tables and track licensing usage of your developed apps.

Sitemap Generator release notes

The ServiceNow[®] Sitemap Generator application enables you to define and automatically generate XML sitemaps to improve the search engine optimization (SEO) of your public portal pages. Sitemap Generator is a new application in the Tokyo release.

Sitemap Generator highlights for the Tokyo release

- Create XML sitemaps for web crawlers to index your public portal pages and improve SEO for your portals.
- Sitemaps automatically regenerate daily based on all active sitemap definitions.

See [Sitemap Generator](#) for more information.

i Important: Sitemap Generator is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Sitemap Generator features

Define and generate sitemaps

Use static XML or a script to define a sitemap that automatically regenerates daily.

Deactivate a sitemap configuration to test a configuration before you make it active.

Regenerate the sitemap on demand.

Access sitemap files

Access the sitemap by URL or downloadable files. You can provide the URL in Google Search Console or in your robots.txt file for web crawlers to use.

Review sitemap generation logs

Check sitemap generation logs to troubleshoot any issues.

Activation information

Install Sitemap Generator by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

Service Portal

Create a sitemap for your public portal pages to improve SEO for your portals.

Knowledge Management

Include public knowledge articles in your sitemap to improve the search experience for knowledge base users.

Service Portal release notes

The ServiceNow® Service Portal application enables you to build a mobile-friendly self-service experience for your users. Service Portal was enhanced and updated in the Tokyo release.

Service Portal highlights for the Tokyo release

- Track user experience analytics for authenticated users by default to better understand the Service Portal user experience and identify how to improve it.
- Provide portal content in the languages or locales both guest and authenticated users prefer with a locale selector or language URL query parameter.

See [Service Portal](#) for more information.

Important information for upgrading Service Portal to Tokyo

[Report_view ACLs enabled with upgrade](#)

Service Portal report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

Report_view ACLs were previously enabled for new (zBoot) instances.

Note:

For a list of Service Portal report_view access control lists (ACLs), navigate to **All > System Security > Access Control (ACL)** and use the condition builder to add the following filter: **[Operation] [is] [report_view] AND [Package] [contains] [service portal] AND [Package] [is not] [Service Portal - Standard Ticket]**.

[User Experience Analytics tracking enabled by default](#)

The Service Portal Analytics plugin (com.glide.service-portal.analytics) is activated by default, and User Experience Analytics tracking for portals is on by default.

For upgrade customers who previously enabled User Experience Analytics tracking for some portals but not others, tracking settings for portals will not change after upgrading.

[TinyMCE 5 upgrade](#)

The TinyMCE HTML editor has been upgraded to version 5.10.2. If you have a customized TinyMCE implementation using Angular Providers in Service Portal, see [Changes in TinyMCE 5](#) for information about upgrading your customized version.

New in the Tokyo release

[Enable language selection for guest users](#)

Unauthenticated users can choose a locale and view content in their chosen locale.

Authenticated users can choose a locale from the widget on the portal header without having to select it in their profile.

Pass language as a query parameter in page URLs [↗](#)

Pass the language for the content of a page using a query parameter in the page URL (`lang=<language>`). The page returns in the language requested if the language is active on the instance and if the user accessing the page is a guest user or an authenticated user without a language preference set.

Changed in this release

Default portal updated to Employee Center [↗](#)

For new (zBoot) instances, Employee Center is the default portal. For upgrade instances, Service Portal remains the default portal.

If redirection is configured by setting the `glide.entry.first.page.script` system property to `new SPEntryPoint().getFirstPageURL()`, end users without roles who visit a full platform URL are redirected to the Employee Center portal. Users without roles who access a URL with the `/sp` suffix are directed to Service Portal. For more information about redirecting portal users, see [Single sign-on, logins, and URL redirects](#) [↗](#).

Removed in this release

The `glide.sp.analytics.enabled.portals` property has been removed. Use the `glide.analytics.tracking.restricted.portals` property to turn off tracking for portals.

Deprecations

The Usage Overview dashboards added by the Performance Analytics Content Pack for Service Portal are not supported in new instances and are deprecated for upgraded instances. Use the [User Experience Analytics for Service Portal](#) [↗](#) dashboards instead. Users with existing Usage Overview dashboards can still access them but can't edit or create new dashboards.

Activation information

Service Portal is a Now Platform feature that is active by default.

Browser requirements

The Tokyo release doesn't support Internet Explorer 11 so you cannot log in to Service Portal through that browser. The iOS version of Firefox does not support Service Portal pages.

Related ServiceNow applications and features

AI Search [↗](#)

The ServiceNow AI Search application provides modern search capabilities for Service Portal, Now Mobile, and Virtual Agent.

User Experience Analytics [↗](#)

After you enable User Experience Analytics for Service Portal, you can view detailed key performance indicator (KPI) data on a dashboard and on list views.

Authentication [↗](#)

Validate the identity of a user who accesses an instance and allow them to use features that match their role or job function. You can allow your portal users to log in without a password by enabling PIV/CAC card authentication.

[Sitemap Generator](#)

Define and automatically generate XML sitemaps to improve the search engine optimization (SEO) of your public portal pages.

Service Catalog release notes

The ServiceNow® Service Catalog application provides a requester view of the available services and products that departments within your organization offer. Service Catalog was enhanced and updated in the Tokyo release.

Service Catalog highlights for the Tokyo release

- Configure the Catalog Builder experience for catalog item editors.
- Transfer catalog items published through Catalog Builder easily using exclusive update sets.
- Monitor aggregated catalog item data using the Service Catalog Overview dashboard.
- Request catalog items from Virtual Agent in Service Portal in a more efficient way.
- Configure the default value for a question in Catalog Builder.

See [Service Catalog](#) for more information.

New in the Tokyo release

[Configurable Catalog Builder](#)

Configure the Catalog Builder so catalog item editors can enter custom details.

[Exclusive update sets for catalog items](#)

Transfer catalog items published through Catalog Builder from one instance to another easily by using update sets that are automatically and exclusively created for the catalog item. You can transfer catalog items created by a business user from a non-production to production instance.

[Service Catalog Overview dashboard](#)

Monitor aggregated catalog item data like fulfillment automation coverage, translation coverage, conversational coverage, and so on using the Service Catalog Overview dashboard.

[Default value configuration in Catalog Builder](#)

Configure the default value for a question in Catalog Builder so it is set when users open a catalog item form.

[Catalog item request experience from Virtual Agent in Service Portal](#)

- Request catalog items from Virtual Agent in a pop-up without navigating to a different tab.
- Request catalog items with rich text labels through Virtual Agent.
- View the default value for a question of a catalog item in Virtual Agent.
- View the value set by catalog data lookup for a catalog item in Virtual Agent.
- Search for a record in the reference, multiple choice, numeric scale, select box, lookup select box, or lookup multiple choice fields in Virtual Agent.

UI changes

[Service Catalog Wizards](#)

Configure the Catalog Builder experience through the new **Service Catalog Wizards** module on the Now Platform.

Changed in this release

Requested for value in requested item [↗](#)

In the Requested Item form, view the requester assigned to a requested item instead of the requester assigned to the parent request.

New system property [↗](#)

The *glide.sc.variable.attachment.delete.v2* system property enables you to automatically delete a `sys_attachment` record from the system when you replace or delete an attachment from a catalog item attachment variable. The default value is true.

Masked variables encryption [↗](#)

The default setting of the **Use encryption** field has been changed to true so configuring a masked variable with secure storage of information is now the default behavior.

Description field in Standard Ticket page [↗](#)

You can now map the **Description** field in the Standard Ticket page configuration record to any other field on the record.

Skipping questions in Request Catalog item topic block [↗](#)

You can no longer skip the following type of questions in the Request Catalog item topic block:

- Lookup Multiple Choice
- Select Box
- Lookup Select Box
- Yes/No
- Numeric Scale (If **Do not select first choice** configuration is not selected)
- Multiple Choice (If **Do not select first choice** configuration is not selected, or **Include none choice** configuration is selected)

Request Overview dashboard

The Request Overview dashboard can now be accessed only by users with the ITIL User role.

Sequence of states for requested item

The state for a requested item at the beginning of the request approval process is now Request Approved.

Display of list collector items

- To ignore the Before Query business rule while retrieving the display value of the list collector variable, set the *fetch_display_value_always* attribute of a list collector variable to true.
- To ignore the Before Query business rule while retrieving the display value of all list collector variables, set the *glide.sc.variable.fetch_display_value_always* system property to true.
- If both the *fetch_display_value_always* attribute and *glide.sc.variable.fetch_display_value_always* property are set, the *fetch_display_value_always* attribute value is considered first.

Hide options label property

If you find the **Options** label unnecessary, you can hide it through the **Hide options label** property of the Catalog Item UIB component.

New demo data content

Use sample catalog items from demonstration data in two new categories: Application and account access and Cables and Adapters.

List view for a catalog item in configurable workspace

Creation of a catalog item from the list view in a configurable workspace is no longer supported.

Delivery information for a request

The Buy Item (REST) and CartJS - orderNow (scripted) APIs no longer set the delivery information for a user for a request generated when the *delivery_address* parameter has an empty string value.

Activation information

Service Catalog is a Now Platform feature that is active by default.

Localization information

You can translate a catalog item into multiple languages using various translation methods. For more information, see [Localization Framework](#).

Related ServiceNow applications and features

[Request Management](#)

Request and fulfill catalog items based on defined flows.

[Service Portal](#)

Customize Service Portal to configure a Service Catalog from which your customers can request catalog items such as a service and product offering. Use Service Catalog widgets to build a catalog for your portal.

[Now Mobile app](#)

Enable users to request an item or service and track or approve requests on a mobile device.

[Workspace](#)

View variables and request items in Workspace.

[Virtual Agent](#)

Design a topic conversation in Virtual Agent by including reusable topic blocks to perform request submission tasks.

[AI Search](#)

Use AI-enabled search to quickly find relevant catalog items in Service Portal and Now Mobile.

Visual Task Boards release notes

The ServiceNow[®] Visual Task Boards application transforms the navigation of lists and forms into an interactive graphical experience. Visual Task Boards was enhanced and updated in the Tokyo release.

Visual Task Boards highlights for the Tokyo release

- View and update multiple task records, which appear as cards that can be moved between lanes.
- Track updates and edit records directly from the board.
- Use a graphic-rich environment for managing and collaborating on records.

See [Visual Task Boards](#) for more information.

Important information for upgrading Visual Task Boards to Tokyo

Visual Task Boards report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

Activation information

Visual Task Boards is a Now Platform feature that is active by default.

Now Platform security release notes

Now Platform[®] security product enhancements and updates in the Tokyo release.

Use the Now Platform[®] security to secure the instance, encrypt your data, authenticate users, and view your current compliance levels based on application security standards.

Encryption Key Management release notes

ServiceNow[®] Encryption and Key Management lets you protect data in your instance with encryption, tightly controlled key-access, NIST 800-57 based key life-cycle management, and FIPS 140-2-L3 key protection. Encryption and Key Management was enhanced and updated in the Tokyo release.

Encryption Key Management highlights for the Tokyo release

- Use regex within ServiceNow[®] Edge Encryption to validate IPv6 deny lists. IPv6 addresses and net masks can now be included in the deny list.
- Use the Infrastructure security pages to define versions, TLS certifications, and establish custom URLs.
- Use multi-module field encryption for attachments. When configured, a dialog window appears at upload time to select a module for encrypting attachments.

See [Encryption and Key Management](#) for more information.

Important information for upgrading Encryption and Key Management to Tokyo

Encryption contexts will automatically convert to Column Level Encryption field encryption modules and corresponding module access policies on the upgrade beginning with the San Diego release. A guided tour explaining this enhancement is available from the dashboard.

Encryption Key Management report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

New in the Tokyo release

[Edge Encryption updates for IPv6](#)

Use regex within ServiceNow® Edge Encryption to validate IPv6 deny lists. IPv6 addresses and net masks can now be included in the deny list.

[Infrastructure Security](#)

Use the Infrastructure security pages to define versions, TLS certifications, and establish custom URLs.

[Column level encryption for attachments](#)

Use multi-module field encryption for attachments. When configured, a dialog window appears at upload time to select a module for encrypting attachments.

[Windows Server 2019 Support for Edge Encryption](#)

Use Windows Server 2019 as a proxy server running the Edge Encryption application.

[Cloud Encryption](#)

Use Cloud Encryption for block encryption of the full database host along with enhanced key management. Cloud Encryption is available with the ServiceNow Platform Encryption subscription bundle.

Administrators can transition from a customer managed key to a ServiceNow managed key. Moving back to a ServiceNow managed key does not require downtime, and does not affect the operation of Cloud Encryption.

Use signature generation and verification to prevent unauthorized admin users from editing key management properties, approval records, and quorum approver groups for better security of these sensitive operations.

Changed in this release

[Edge Encryption support for instance configuration of Service Catalog variables](#)

Administrators can encrypt Service Catalog variables using a centralized configuration rather than using customized encryption rules for each record producer and its variables.

Activation information

The ServiceNow Platform Encryption subscription bundle is a group commercial entitlement that includes Column Level Encryption Enterprise, Cloud Encryption, and Database Encryption.

Column Level Encryption Enterprise is the unlimited license of Column Level Encryption The Column Level Encryption Enterprise plugin (com.glide.now.platform.encryption) is activated as part of the subscription bundle. For details, see [Encryption and Key Management subscription bundle](#).

Related ServiceNow applications and features

[Encryption and Key Management](#)

Encryption is a cryptographic procedure that converts plain text into cipher text to prevent anyone but the intended recipient from reading that data. ServiceNow® key management includes the activities involving the handling of

cryptographic keys and related security parameters during the end-to-end key lifecycle, and is an effective control based on NIST 800-57 guidelines.

[Key Management Framework](#)

The Key Management Framework lets you fully customize and manage how cryptographic operations are performed on your ServiceNow instance.

Authentication release notes

The ServiceNow® Authentication application supports many authentication mechanisms that enable you to validate the identity of users. Authentication was enhanced and updated in the Tokyo release.

Authentication highlights for the Tokyo release

- Customize SCIM protocols for your identity management with the System for Cross-domain Identity Management (SCIM) custom attribute.
- Perform provisioning and updates on identity resources through CRUD operations on the external system by using the new SCIM Client module.
- Use instance access using mobile apps from outside the network perimeter in an IP access control enabled instance.
- Use OAuth scope for auth scope or REST API scope.
- Access end user-specific information with OAuth tokens.

For more information, see [Identity and Authentication](#).

Important information for upgrading Authentication to Tokyo

Authentication report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

New in the Tokyo release

[SCIM customization](#)

Use SCIM custom attributes to support custom fields on the sys_user and sys_user_group tables through dynamic extension schema generation and override default SCIM mappings.

[SCIM Client](#)

Use the SCIM Client to provision and update the identity resources through CRUD operations exposed by the SCIM endpoint on an external system.

[Adaptive Authentication for Trusted Mobile Apps](#)

Support instance access using mobile apps from outside the network perimeter in an IP access control-enabled instance.

UI changes

New look for Authentication

Authentication has a new, modernized look and feel. For more information, see [Next Experience](#).

Changed in this release

[IPv6 as an IP Filter Criteria](#)

Use IPv6 as an IP filter criteria to filter users based on IP addresses. You can configure an authentication policy to allow or deny access to a particular address or range of addresses.

[Support of multiple IdP's with Custom URL's](#)

Enable your ServiceNow instance to be accessible from a company-branded or custom URL with multiple IdP support.

[OAuth scope to support auth scope or REST API scope](#)

Link the OAuth entity with auth scopes to manage the token issued by the OAuth entity only to access the REST APIs that are linked with the correct auth scope or REST API scope.

[Updates to the OAuth Framework to support end-user](#)

Invoke the API of a third party with an OAuth request that generates an OAuth token, which is user-specific. Any information that is related to the user can only be accessed with user-specific OAuth tokens.

[SAML2 Bearer Grant type support for outbound OAuth](#)

Use the SAML2 Bearer Grant type support for outbound OAuth grant type SAML2. For example, you can use the SAML2 Bearer Grant for the outbound authentication to SuccessFactors spoke.

Deprecations

- The [MultiSSO v1](#) is deprecated. Upgrade to MultiSSO v2 from MultiSSO v1.

For more information, refer to the [MultiSSO v2 upgrade instructions \[KB0756504\]](#) article in the Now Support knowledge base.

- The SAML 1.1 and SAML 1.1 Single Sign-On - Update 1 plugin is deprecated. The SAML-based identity providers (IdP) have already migrated to SAML 2.0. To use SAML 2.0, you must install the MultiSSO and configure your identity provider.
- The OpenID SSO plugin is deprecated. To use OpenID Connect (OIDC), you must install the MultiSSO and configure your OIDC-based identity provider.

Activation information

Authentication is a Now Platform feature that is active by default.

Related ServiceNow applications and features

[Platform Security](#)

Platform Security is built into all levels of the Now Platform. Implement the security features that are appropriate for your organization. Manage failed logins and encrypted password protection, access control rules, and audit logs.

Platform Security release notes

The ServiceNow[®] Platform Security set of capabilities protect your instance from security intrusions and keeps your data secure. Platform Security was enhanced and updated in the Tokyo release.

Platform Security highlights for the Tokyo release

- Use data privacy for data anonymization to protect sensitive user data so that it is no longer considered regulated private information.
- Use data filtration to deny access to tables and records based on subject conditions when performing read queries.
- Security Center is a new app that will replace the Instance Security Center in the future. There is new functionality and user experience that will continuously maintain the highest level of security posture and easily monitor for insecure events and behaviors.

See [Platform Security](#) for more information.

i Important: Instance Security Center is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Security Center

Use the larger set of Instance Security Hardening Setting recommendations with individual weights.

New Instance Security Hardening Setting Compliance scoring algorithm.

Compare and analyze changes across historical scores with the new Instance Security Hardening Setting Compliance data.

Explore the new security metrics and analytics user experience.

Create your own scan checks, suites, and scan schedules with the security scanner.

Access the learning page as a single destination to quickly find links to all the important security resources available to you to secure your ServiceNow deployments.

Data privacy

Remove personally identifiable information (PII) from user data when it is migrated from a production instance to a non-production instance.

De-identify users and apply anonymization per the GDPR (general data protection regulation) right to be forgotten, in which data (tables or columns) are de-identified when associated with a user.

Data filtration

Use data filtration as a separate form of access control designed to work along with the existing access control list (ACL) rules on your instance. Data filtration denies access to tables and records that don't match subject attributes defined by a security administrator.

Make auditing, reporting, and denying access to data easier with data filtration than using an ACL. ACLs are evaluated after data filtration runs. ACLs work on the remaining rows that were not filtered out by data filtration.

Add exclusion tables to prevent those tables from being used to create data filtration rules.

Access potential performance enhancements by not relying on scripting and improve auditing ability with declarative authorization controls.

Use table hierarchy support in data filtration rules. Use the new authorization mechanism to prevent search operations on protected fields.

Use data filtration enforcement to be aware of script versus java calls.

Use field query roles as the new authorization mechanism to prevent search operations on protected fields, as designated by the dictionary attribute.

Script Includes

Enforce role-based access control to be auto created when new client-callable script includes (CCSI) are included. See access controls as a related list directly from the CCSI form.

IP Address Access Control [↗](#)

IP Address Access Control added IPv6 support.

Avoid log tampering [↗](#)

Use protected tables to lock down and log any attempts to update or delete records in the system log tables as a system administrator. Specify separate controls for each system log table to identify update actions versus delete actions.

Antivirus Scanning [↗](#)

Use the support for HTTPS communication protocol for enhanced security and protection.

Other settings and security resources [↗](#)

Existing administrators can control access to older versions of AngularJS and JQuery usages and libraries. zBoot configurations do not have access, by default.

Activation information

Data privacy and PostClone script support are available with activation of the com.glide.data_privacy plugin. With Tokyo patch 3 or later, administrators can activate the data privacy plugin if you have the ServiceNow ServiceNow Vault entitlement. For previous releases, contact Customer Service and Support for activation. For details, see [Activate data privacy](#) [↗](#).

Data filtration is available with activation of the com.glide.data_filtration plugin. For details, see [Activate data filtration](#) [↗](#).

Now Platform User interface release notes

Now Platform[®] user interface product enhancements and updates in the Tokyo release.

These release notes describe product enhancements for core platform functionality in user interfaces, such as lists and forms.

Next Experience user interface release notes

The ServiceNow[®] Next Experience user interface delivers an intuitive, personalized experience that enables your organization to drive productivity, improve engagement, and inspire learning with the Now Platform. The Next Experience user interface was enhanced and updated in the Tokyo release.

Next Experience user interface highlights for the Tokyo release

- Enable your users to locate search results more efficiently.
- Provide your users with fewer clicks to access the items that they need to get working when they use the Next Experience user interface.
- Improve communication and encourage collaboration between your agents and users.

See [Next Experience UI](#) for more information.

New in the Tokyo release

[Sidebar overview](#)

Enable your agents to create, open, and search for discussions about their work with other agents.

[Configuring a custom menu](#)

Enable your administrators to add custom menus with items that are most useful for them to complete their work.

[Next Experience Readiness Checker](#)

Enable administrators to examine your instance for usage of applications that are not compatible with Next Experience.

Changed in this release

[Simplified Next Experience Setup](#)

Your administrators can now turn on the Next Experience user interface with one click.

Personalized Start Page

Your users have a new user preference that enables them to specify the page that appears when they log in to the Next Experience user interface.

AI Search

Your administrators can now configure AI Search as the search engine for Unified Navigation searches in the Next Experience user interface. Your users can now do a global search and a configurable workspace search.

Admin menu

Your administrators can use the newly added Admin menu within the Unified Navigation to provide them access to the default landing page. If they have installed the Admin Center store app on their instance, they can also access Admin Center from the Admin menu.

Record page experience

When a user opens a record page from the Next Experience landing page, the system now opens the record in the last experience the user worked in.

Activation information

The Next Experience is a Now Platform feature that is active by default.

Workspace release notes

The ServiceNow® Workspace application provides agents, case managers, help desk professionals, and managers with tools to help answer customer questions and to resolve customer problems. Workspace was enhanced and updated in the Tokyo release.

Workspace highlights for the Tokyo release

- Improvements to enhance usability by streamlining searches and providing larger previews of results for images in the activity stream.
- Ability to filter records even if the column you want to use as a filter is not currently on screen.

See [Workspace UI](#) for more information.

New in the Tokyo release

[Context specific actions in Workspace](#)

Ability to access form configuration options and direct navigation through right-clicking in the header bar of a tab to display a context menu.

Changed in this release

[Add keyword search to the activity stream](#)

Search entries in the activity stream using keywords. Results not matching the search criteria are filtered out.

[Show or hide system and user-generated emails in the activity stream filter](#)

Configure the activity stream to hide auto-generated and correspondence emails. End users can choose to filter out auto-generated or correspondence emails.

[Form personalization](#)

Agents can personalize (show or hide) the fields that appear on the form.

[Ability to access condition builder in reference lists](#)

Filter records even if the column you want to use as a filter is not currently on screen.

[Use Declarative Actions in Database Views](#)

Configure the declarative actions to display for database views. Export is included by default.

[Restrict ribbon configurations to the specific Workspace experience](#)

Restrict a ribbon configuration to a specific experience and disallow the ribbon configuration from appearing in the legacy workspace by selecting **Experience restricted** on the UX Ribbon Settings form.

Activation information

Workspace is a Now Platform feature that is active by default.

ServiceNow® Predictive Intelligence is available with ServiceNow® Agent assist by activating the `com.snc.contextual_search`, `com.glide.platform_ml`, and `com.snc.contextual_search.ml` plugins. Predictive Intelligence requires an additional subscription fee. For details, see [Activate a plugin](#).

Browser requirements

Workspace does not support mobile devices, Internet Explorer, or Microsoft Edge. Instead, use Microsoft Edge-Chromium or one of the other supported browsers that are listed in [Browser support](#).

Operational Technology release notes

Operational Technology has new and updated features in the Tokyo release.

Operational Technology Manager release notes

The ServiceNow® Operational Technology Manager application enables you to aggregate Operational Technology (OT) asset data from multiple sources so that you can build the foundational data relationships used in the Manufacturing solution. Operational Technology Manager was enhanced and updated in the Tokyo release.

Operational Technology Manager highlights for the Tokyo release

- Automatically map OT assets to the equipment model entities.
- Effortlessly import OT assets via a Microsoft Excel spreadsheet validation tool.
- Configuration Management Database (CMDB) OT class model updates and UI enhancements.

See [Operational Technology Manager](#)  for more information.

i Important: Operational Technology Manager is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Automatically map OT assets to an equipment model](#)

Use the Automated Mapping across the Zone-based IP Network Groups (AMAZING) feature so that an ISA editor role user can automatically map OT assets to equipment model entities based on the assigned site and IP address. If you have an admin role, you can upload OT subnet records via a spreadsheet. An ISA editor can also manually enter OT subnet records and then assign them to ISA equipment model entities. This feature is available when the ServiceNow® Manufacturing Process Manager is installed with Operational Technology Manager.

[Create an OT asset for the 3D printer or Network gear classes](#)

Create an OT asset for the 3D printer or Network gear classes manually by adding industrial 3D printer and Network gear classes to an interceptor.

[Add and view OT control modules](#)

View related control modules from the OT Control Module related list on the OT Control System form, and add an OT control module to a control system.

UI changes

More related lists on the OT Assets form

These related list tabs are added to the OT Assets or entity form:

- Incidents related list - View the Incidents related list tab on the OT Assets form in the platform and workspace to understand and manage the incidents that are associated with an OT asset.
- Mapped OT subnets - View the Mapped OT subnets related list on the ISA entity form to see all mapped OT subnets that are assigned to an equipment model entity.

[View the CMDB CI Timeline UIB component](#)

View the CMDB CI Timeline UIB component on the OT Asset details form for an IT or OT class record. This UIB component enables an OT engineer to understand the timeline of an OT asset.

[View configuration item relationships for an OT asset](#)

Select the Relationships icon in an OT asset record to view the CI relationships.

Changed in this release

[CMDB OT class model updates](#)

These updates to the CMDB OT class model enhance the OT user experience or enable you to make additional configurations:

- An ICS security analyst or OT engineer can view the programmable logic controller (PLC) switch state to determine potential risks.
- A Network Intrusion Detection System (NIDS) admin can monitor the changes to NIDS sensors from an activity stream to validate and perform corrective action.

Pre-import OT Worksheet Entry Review (POWER) tool

Use distributed Microsoft Excel spreadsheets to import OT assets for better manageability.

- Select **Run Validations** in the list view to trigger validation across all records.
- View the record import state.
- Select **Set to Valid** to manually set a record to valid.
- Added system properties:
 - The **sn_otsm_sgc.excel.nested.column.delimiter** system property enables a user to provide a delimiter to use for a transformed name.
 - The **sn_otsm_sgc.excel.fields.for.transformed.name** system property enables a user to provide the fields (comma-separated value) to construct the transformed name.

Related entry for CMDB Key Value V2 Table

A related entry associated to the hardware class is added to the CMDB Key Value V2 [cmdb_key_value_v2] table. This related entry association of the non-CMDB class CMDB Key Value V2 table with the hardware class [cmdb_ci_hardware] enables CMDB class mappings and data to populate.

Discovery Source URL fields for Service Graph Connector integration

Navigate to third-party discovery source systems from an OT configuration item to a device so that you can see more contextual detail about the configuration item.

Activation information

Install Operational Technology Manager by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[Configuration Management Database \(CMDB\)](#)

The Operational Technology Manager application automatically installs the latest version of the Operational Technology (OT) extension classes, available in the CMDB CI Class Models application in the ServiceNow Store. To learn more, see [Operational Technology \(OT\) extension classes](#).

Operational Technology Incident Management v2 release notes

The ServiceNow® Operational Technology Incident Management v2 application enables engineers to resolve Operational Technology (OT) asset and production process issues quickly. Operational Technology Incident Management v2 was enhanced and updated in the Tokyo release.

Operational Technology Incident Management v2 highlights for the Tokyo release

- The Operational Technology Incident Management v2 application enables manufacturers to manage OT asset incidents from open to closure with these key features:
 - Separate OT and IT incident data.
 - Separate OT and IT incident processes.
 - Assign a separate role for OT Incident Fulfiller.
 - Configure OT-specific properties.
 - Collaborate to resolve OT incidents via email notifications.
 - Choose from the new Safety, Productivity, and Quality incident categories that are tailored for industries.
 - Migrate incidents from v1 to v2 with a scheduled job.
 - Migrate old OT user roles to new OT user roles with a scheduled job.
 - Learn and find solutions for your site with read-only visibility for incidents reported at other sites.
 - New workspace OT incident list menu items.
 - New OT incident form look and feel.

See [Operational Technology Incident Management](#) for more information.

i Important: Operational Technology Incident Management v2 is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading Operational Technology Incident Management v2 to Tokyo

If you're an Operational Technology Incident Management user on previous releases, you must assign new Operational Technology Incident Management v2 roles to users originally assigned the OT Incident User (ot_incident_user) role. For more information, see [Assign new Operational Technology Incident Management roles](#).

New in the Tokyo release

[Assign new Operational Technology Incident Management roles](#)

Quickly assign new Operational Technology Incident Management v2 roles to users with the deprecated ot_incident_user role through a scheduled job.

[Migrate Operational Technology Incidents](#)

Quickly migrate OT incidents from the old incident table to the new OT incident table with a scheduled job.

[OT incident categories and subcategories](#)

Categorize OT incidents to assign incidents to the right team and shorten the time that it takes to troubleshoot issues.

[Visibility of OT incidents across sites](#)

Find solutions for your site with read-only visibility of OT incidents across sites.

[Define priority lookup rules for OT incidents](#)

Define priority lookup rules for an OT incident to calculate its priority. The calculated priority then helps organize and prioritize work.

[OT incident email notifications](#)

Provide context about changes made to an OT incident through email notifications, which result in better collaboration for its resolution.

[Configure OT incident state models](#)

Use state models for OT incident sites to practice site-specific incident workflow through the life cycle of an incident.

[Configure an OT incident task](#)

Create a set of OT incident tasks to fulfill and resolve the incident in steps.

[Configure OT-specific assignment groups](#)

Configure OT-specific assignment groups to view only OT type assignment groups in the incident record.

[OT Incident Management system properties](#)

Configure child OT incidents creation, OT incident task closure, fields copied over to OT incident task from OT incident, and OT incident activity formatter.

Changed in this release

[New OT incident user roles](#)

The new OT incident user roles installed with Operational Technology Incident Management v2 help separate IT and OT incident data.

[Create OT incident tasks](#)

Now site, equipment model entity, and OT asset context from an OT incident are available on the OT incident task as well.

[Access control for OT incidents](#)

The `ot_change_user` role is deprecated and the new `sn_ot_incident_read`, `sn_ot_incident_write`, and `sn_ot_incident_admin` roles) have been added.

UI changes

OT Incident list menu

The OT Incident list menu in the Manufacturing Workspace was updated to include the following menu items:

- Assigned to me
- Belong to my site
- All

Removed in this release

- The **Separating IT and OT incidents** task was removed from the Manufacturing Guided Setup under Operational Technology Incident Management.
- The OT Incident User role (`ot_incident_user`) is no longer supported.

Activation information

Install Operational Technology Incident Management v2 by requesting it from the ServiceNow Store. 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](#).

Operational Technology Incident Management v2 is dependent on Tokyo P5 or later.

Related ServiceNow applications and features

[IT Service Management](#)

When integrated with Operational Technology Service Management, the ServiceNow[®] IT Service Management application enables engineers to resolve OT asset and production process issues quickly.

Manufacturing Process Manager release notes

The ServiceNow[®] Manufacturing Process Manager application enables your teams to map and visualize the industrial equipment models and associated production processes at individual facilities. Manufacturing Process Manager was enhanced and updated in the Tokyo release.

Manufacturing Process Manager highlights for the Tokyo release

- Create, manage, and attach schedules with equipment model entities if you're a factory floor maintenance schedule planner.
- Understand the relationships between your OT assets and equipment model entities when viewing the CI form in Workspace.
- Automatically map your OT assets to the equipment model entities.

See [Manufacturing Process Manager](#) for more information.

i Important: Manufacturing Process Manager is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Managing equipment model entity schedules [↗](#)

Manage equipment entity schedules with the `sn_isa_schedules_admin` role and the Planned Downtime module, and create maintenance schedules as needed.

A dedicated role to manage ISA maintenance schedules [↗](#)

As a user who has the admin role, assign the `sn_isa_schedules_admin` role to the user in charge of maintaining the ISA schedules. Without the `sn_isa_schedules_admin` role, ISA editor, ISA viewer, ISA admin users get read-only access to the ISA schedules.

Planned Downtime module [↗](#)

Shows the association of equipment model entities with their downtime schedules.

New role for across the sites visibility of equipment model entity hierarchy

Helps the OT incident admin to administer OT incidents across sites without being added as site users.

Automatically map OT assets to an equipment model entity [↗](#)

Automatically map your OT assets to equipment model entities that are based on an assigned site and IP address when you have an ISA editor role. If you have an admin role, you can upload OT subnet records via a spreadsheet. An ISA editor can also manually enter OT subnet records and then assign them to ISA equipment model entities. This feature is available when the Manufacturing Process Manager is installed with Operational Technology Manager.

View sites assigned to users [↗](#)

See which sites are assigned to a user and change a user's site assignments and ISA role for any assigned sites by using the Site Users related list.

UI changes

View equipment model entity downtime slots

The **View schedule** UI action on the equipment model entity form in the workspace lets the user see all downtime slots for that entity.

Changed in this release

View OT assets and equipment model entities services relationships

The Services Relationship section on the OT asset form in the Manufacturing workspace enables an OT engineer to understand the relationships between OT assets and equipment model entities for all OT class and expected IT class records.

View sites associated with a user from guided setup

Access a related list view of sites that are assigned to a user. From the Manage the Equipment Model section of the guided setup, select **Configure** on the **Assign Users** tab to access the view of user-assigned sites.

Activation information

Install Manufacturing Process Manager by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[Operational Technology Manager](#)

ServiceNow® Operational Technology Manager enables you to aggregate Operational Technology (OT) asset data from multiple sources, so that you can build the foundational data relationships used in the Manufacturing solution.

Operational Technology Vulnerability Response release notes

The ServiceNow® Operational Technology Vulnerability Response application enables effective prioritization and remediation of ServiceNow® Operational Technology (OT) vulnerabilities at a site level. Operational Technology Vulnerability Response was enhanced and updated in the Tokyo release.

Operational Technology Vulnerability Response highlights for the Tokyo release

- Set a start time for an OT remediation task.
- Calculate the risk score at every entity level in an equipment model.
- Roll up the overall risk score to the entity of the parent equipment model entity.

See [Operational Technology Vulnerability Response](#) for more information.

i Important: Operational Technology Vulnerability Response is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Select a start time for an OT remediation task](#)

Set an expected start time for an OT remediation task using the time slots calculated from the equipment model entity schedules.

Changed in this release

[Configure risk rollup calculator](#)

Use the risk rollup calculator to calculate the risk score of the OT assets at each level for the equipment model entity. The overall risk score is rolled up to the parent equipment model entity.

Activation information

Install Operational Technology Vulnerability Response by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[CMDB CI Class Models store app](#)

The CMDB CI Class Models store app adds class models that extend the CMDB class hierarchy, including class descriptions, identification rules, identifier entries, and dependent relationships.

[Vulnerability Response](#)

When integrated with Operational Technology Vulnerability Response, the ServiceNow® Vulnerability Response application aids you in prioritizing and resolving OT vulnerabilities based on process criticality.

[Manufacturing Process Manager](#)

Use the ServiceNow® Manufacturing Process Manager application to create the ISA-95 Equipment Model data foundation that is required for the ServiceNow® Manufacturing solution, enabling you to create your own version of the equipment models in each of your manufacturing sites.

Vulnerability Response Integration with Microsoft Defender for IoT release notes

The ServiceNow® Vulnerability Response Integration with Microsoft Defender for IoT application enables the import of vulnerable items from Microsoft Defender for IoT and creates a single view of OT asset vulnerabilities and associated risk using the production process context. Vulnerability Response Integration with Microsoft Defender for IoT is a new application in the Tokyo release.

Vulnerability Response Integration with Microsoft Defender for IoT highlights for the Tokyo release

- Import the vulnerabilities from detected OT assets already imported using the ServiceNow® Service Graph Connector Integration with Microsoft Defender for IoT into the ServiceNow® Operational Technology Vulnerability Response application to take risk-based action with the production process context.
- Imports the detected vulnerabilities automatically on your own schedule.
- Automatically routes the vulnerable items for remediation to local site-based teams to take risk-based action.

See [Operational Technology Vulnerability Response](#) for more information.

i Important: Operational Technology Vulnerability Response is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Vulnerability Response Integration with Microsoft Defender for IoT features

[Vulnerability Response integration with Microsoft Defender for IoT](#)

Use the Vulnerability Response Integration with Microsoft Defender for IoT application with the Operational Technology Vulnerability Response application to track, prioritize, and resolve vulnerabilities on assets used in the production process.

Activation information

Install the Vulnerability Response Integration with Microsoft Defender for IoT application by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[CMDB CI Class Models store app](#)

The CMDB CI Class Models store app adds class models that extend the CMDB class hierarchy, including class descriptions, identification rules, identifier entries, and dependent relationships.

[Vulnerability Response](#)

When integrated with Operational Technology Vulnerability Response, the Vulnerability Response application aids you in prioritizing and resolving OT vulnerabilities based on process criticality.

[Manufacturing Process Manager](#)

Use the ServiceNow[®] Manufacturing Process Manager application to create the ISA-95 Equipment Model data foundation that is required for the ServiceNow[®] Manufacturing solution, enabling you to create your own version of the equipment models in each of your manufacturing sites.

[Integration with Service Graph Connector for Microsoft Defender for IoT](#)

Use the Service Graph Connector for Microsoft Defender for IoT with the ServiceNow[®] Operational Technology Manager application to import OT asset devices, connections, and sensor appliances.

Service Graph Connector Integration for Claroty CTD release notes

The ServiceNow[®] Service Graph Connector Integration for Claroty CTD application automates the import of detected assets and Claroty CTD sites. Service Graph Connector Integration for Claroty CTD is a new application in the Tokyo release.

ServiceNow[®] Service Graph Connector Integration for Claroty CTD highlights for the Tokyo release

- Import Claroty CTD sites (sensor appliances) and take advantage of metadata assignment capabilities.
- Import baselines (connections between OT assets).
- Import Installed Programs (software).
- Restrict users access to detected OT assets on a per-industrial site basis.
- Import OT assets detected by Claroty CTD sites with validated records automatically and assign them localized, contextual metadata (like location and support groups).
- Support the import of OT-specific attributes, including zone and Purdue Level, to define different levels of critical infrastructure.
- Create embedded OT Control Modules with relationships to the parent OT Control System, which can also be used to understand the context.
- Reconcile data from additional sources like ServiceNow[®] Discovery in the Multisource CMDB.

See [Service Graph Connector Integration for Claroty CTD](#) for more information.

i Important: Service Graph Connector Integration for Claroty CTD is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

ServiceNow® Service Graph Connector Integration for Claroty CTD features

Service Graph Connector Integration for Claroty CTD [↗](#)

Use the Service Graph Connector Integration for Claroty CTD application with the ServiceNow® Operational Technology Manager application to import detected OT assets and baselines (connections).

Activation information

Install Service Graph Connector Integration for Claroty CTD by requesting it from the ServiceNow Store. 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](#) [↗](#).

Related ServiceNow applications and features

CMDB CI Class Models store app [↗](#)

Operational Technology classes are imported with the Configuration Management Database (CMDB) configuration item (CI) classes.

Operational Technology Manager [↗](#)

Integrate Claroty CTD with the ServiceNow® Operational Technology Manager application to import detected assets and Claroty CTD sites (sensor/NIDS appliances).

Procurement Operations Management release notes

Procurement Operations Management has new and updated features in the Tokyo release.

Procurement Service Management release notes

The ServiceNow® Procurement Service Management application provides your employees with a simple automated tool that they can use to shop for goods and services that they need at work. Procurement Service Management was enhanced and updated in the Tokyo release.

Procurement Service Management highlights for the Tokyo release

- Manage a catalog of goods and services that your employees can use to order items that they need for their jobs.
- Simplify and streamline the way employees request help in sourcing or procuring goods and services.
- Provide transparency into the procurement process with regular updates.
- Automate the end-to-end procurement process workflows, from sourcing through requisitioning, to order fulfillment, receipt, and payment.
- Enable Procurement Specialists to source, negotiate, procure goods and services for an organization, and work on procurement tasks.

See [Procurement Service Management Sourcing and Procurement Operations](#) [↗](#) for more information.

i Important: Procurement Service Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Agent assist in Procurement Workspace Source-to-Pay Workspace](#)

Help procurement specialists triage requests by attaching knowledge articles to the requests, or create catalog service requests on behalf of requesters.

[Email composer with quick messages and response templates in Procurement Workspace Source-to-Pay Workspace](#)

Better track conversations between procurement specialists and requesters by directly sending emails from workspace with the ability to apply templated responses.

[Playbook: Process a return request](#)

- As shoppers or employees, submit a return request for a purchase that they have already received.
- As procurement specialists or fulfillers, access the eligibility of the return and initiate the return with the supplier.
- View SLAs that are defined for the new return goods service catalog item.

Create cases within a case

Help procurement specialists create sub-cases within a procurement case record.

[Procurement Strategy & Ops Dashboard](#)

View Service Level Agreements (SLAs) for the procurement organization, with visualizations for:

- Cycle times for purchase requisitions, sourcing requests, negotiations, and cases
- SLA breach times versus allotted times
- Overall SLA performance of the procurement team

[Approve a request from Employee Center](#)

- Approvers can now directly complete approval to-dos for purchase requisitions and sourcing requests in Employee Center.
- Customers can now activate a sourcing request approval workflow within their sourcing process.
- Enhanced the flexibility for system administrators to configure approval rules for objects other than purchase requisitions (such as sourcing requests, purchase orders, and invoices) and create flexible approval trigger conditions.

[Raise a general inquiry for procurement](#)

Help procurement teams better triage general procurement related requests from employees, with the General Inquiry workflow.

[NLU support for Procurement Service Management Virtual Agent](#)

Activate the Natural Language Understanding (NLU) content pack for Shopping Hub, which enhances the Virtual Agent experience for the employees. Ensure all dependencies are activated before enabling this plugin.

Changed in this release

Procurement Case Management [↗](#)

- Enhance the procurement service catalog browsing experience with more service catalog items
- Have case templates for each case type
- Change the prefix for [Procurement Case Management](#) [↗](#) records from PSREQ to PC

Procurement Workspace Source-to-Pay Workspace list page [↗](#)

- View related cases and tasks to procurement cases within the contextual sidebar in procurement case records.
- View related child cases and tasks to negotiation events and negotiations within the contextual sidebar in negotiation events and negotiation records.
- Improve your configuration experience with the updated the supplier profile page.

Playbook: Process a return request [↗](#)

Enhanced the ability to return multiple product lines within one return request.

Modified the Receipt table to additionally track credit memos for the return of items.

Add a sourcing request to a negotiation event [↗](#)

Create new or add to existing negotiation events directly in a sourcing request record in workspace.

Approval rule types [↗](#)

Enhanced the auditability for purchase approvals to show self-approved purchases, where the shopper or employee has the authorized purchasing power to self-approve their own purchases. This is an enhancement to the approval plans to show self-approved purchases.

Components installed with Procurement Service Management Sourcing and Procurement Operations [↗](#)

- Renamed this application to Procurement Common Architecture. This application was formerly named ShoppingHub.
- Moved specific tables to be commonly used and extended by other products. This makes this application a standalone application, with the following tables, ACLs, and form views available. When you purchase Procurement Service Management, you get both this standalone application along with core procurement workflows, business logic, and user experience. Having this standalone application alone does not make core procurement workflows, business logic, and user experience available.
 - Attribute (sn_shop_attribute)
 - Attribute Set (sn_shop_attribute_set)
 - Attribute Type (sn_shop_attribute_type)
 - Delivery Location (sn_shop_delivery_location)
 - ERP Address Mapping (sn_shop_erp_address_map)

- ERP Asset Category Mapping (sn_shop_erp_asset_category_map)
- ERP Material Group Mapping (sn_shop_erp_material_group_map)
- Invoice (sn_shop_invoice)
- Invoice Line (sn_shop_invoice_line)
- Job Code (sn_shop_job_code)
- Milestone (sn_shop_milestone)
- Office Location (sn_shop_office_location)
- Order Line Template (sn_shop_order_line)
- Order Template (sn_shop_order)
- Order to Contract Relationships (sn_shop_m2m_order_contract)
- Payment Terms (sn_shop_payment_term)
- Price Break (sn_shop_price_break)
- Pricing (sn_shop_m2m_product_contract)
- Product Group (sn_shop_product_group)
- Product Visuals (sn_shop_supplier_product_artifact)
- Purchase Order (sn_shop_purchase_order)
- Purchase Order Line (sn_shop_purchase_order_line)
- Receipt (sn_shop_receipt)
- Shipment Details (sn_shop_shipment_details)
- Shipment Product (sn_shop_shipment_product)
- Shipping Method (sn_shop_shipping_method)

Accessibility on NOW Mobile

Experience improved accessibility with issues from WCAG 2.1 AA audit findings fixed on NOW Mobile.

Activation information

Install Procurement Service Management by requesting it from the ServiceNow Store. 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](#).

Supplier Lifecycle Management release notes

The ServiceNow[®] Supplier Lifecycle Management application enables you to quickly onboard and collaborate with suppliers, manage supplier relationships, monitor risk, compliance, and performance across the supplier life cycle. Supplier Lifecycle Management is a new application in the Tokyo release.

Supplier Lifecycle Management highlights for the Tokyo release

- Manage supplier data, contacts, and performance to boost productivity of teams who engage with suppliers.
- Resolve supplier inquiries and requests using services that orchestrate complex, cross-functional workflows, thus increasing team productivity.

- Compare suppliers and establish corrective action plans for poor performers to mitigate risks.
- Streamlined process to orchestrate supplier onboarding activities.
- Automate supplier activation across disparate systems.
- Consolidate supplier data with processes that drive ongoing updates and compliance across your supplier network.

See [Supplier Lifecycle Management Supplier Lifecycle Operations](#)  for more information.

i Important: Supplier Lifecycle Management is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Supplier Lifecycle Management features

[Supplier Management Workspace Supplier Manager Workspace](#)

View all of your assigned cases and tasks at a glance, create and manage supplier cases, assign supplier tasks to contacts, manage supplier contacts, answer supplier queries, and collaborate with suppliers.

[Supplier Collaboration Portal](#)

Provide a single, one-stop experience for suppliers to get self-service, complete tasks and make requests into an organization.

[Supplier Lifecycle Management Supplier Lifecycle Operations integration with Craft](#)

Provide a pre-configured integration with Craft.io. Craft.io is a supplier intelligence platform that offers validated and comprehensive information about suppliers with which a company engages.

[Configuring a custom API to dynamically fetch supplier news](#)

Retrieve recent news and other articles from preferred news channels. There is a pre-configured integration with Microsoft Bing available with this application.

[Supplier Information tab](#)

Provide a 360-degree view of suppliers and contacts for a supplier case record. The Supplier Information tab shows details about the supplier and the supplier contact, a summary of all the open and overdue cases, and a list of all the cases by their priority.

[Managing supplier contacts from the Supplier Management Workspace Supplier Manager Workspace](#)

Supplier owners can do the following:

- Remove supplier contacts and delegate their tasks before removing the contacts.
- Elevate or restrict access to supplier contacts.

[Managing supplier contacts from the Supplier Collaboration Portal](#)

Primary supplier contacts and supplier admin can do the following:

- Remove supplier contacts and delegate their tasks before removing the contacts.
- Elevate or restrict access to supplier contacts.



[Supplier Management Workspace Supplier Manager Workspace Details page](#)

- View information about suppliers and supplier contacts on the Supplier overview and Supplier contacts contextual side panels respectively, in the supplier case details and supplier case record pages. This allows you to quickly view supplier information without navigating away from these pages.
- If a supplier has more than 5 contacts, the Supplier Contacts widget displays links that show a list of contacts that have been registered and a list of supplier cases for contacts that are pending registration. This widget also shows an Admin label next to the contact's name, which indicates that the contact is a primary contact.

[Manage documents from the Supplier Management Workspace Supplier Manager Workspace](#)

Enable supplier administrators to create supplier document configurations that allow suppliers to upload prerequisite documents.

Activation information

Install Supplier Lifecycle Management by requesting it from the ServiceNow Store. 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](#) .

Security Operations release notes

Security Operations has new and updated features in the Tokyo release.

Security Incident Response release notes

The ServiceNow[®] Security Incident Response (SIR) application helps your organization connect security and IT teams, respond faster and efficiently to threats, and view your organization's security posture. Security Incident Response was enhanced and updated in the Tokyo release.

Security Incident Response highlights for the Tokyo release

Security Incident Response Workspace

As a Security Analyst, you can:

- Perform your day-to-day operations with an improved user experience.
- Perform the complete incident investigation.
- Get an overview of the security incidents, response tasks and SLAs assigned to the analyst and team.
- Perform quick actions, orchestration activities, associate MITRE techniques, apply quick filters and perform Post Incident Review by taking assessment surveys and creating reports. View the SIR dashboards.

See [Security Incident Response Workspace](#) 


• DLP Incident Response integration with Microsoft

- Integrate with Microsoft to import Data Loss Prevention (DLP) incidents from multiple sources such as Microsoft purview apps (Microsoft Teams, Exchange Online, SharePoint Online, OneDrive for Business) and endpoint devices.

See [Data Loss Prevention Incident Response with Microsoft](#) 

- **Splunk OAuth Authentication**


Splunk Enterprise base Add-on is enhanced to support OAuth authentication.

- See [Set up the ServiceNow Security Operations add-on for Splunk](#) 
- Link and unlink additional records from the Major Security Incident Management workspace for the Security incidents and Remediation tasks (VR). With the `sn_msi.workspace_manager` role, you can use the new roll-up framework capability model to configure your linked records that roll up the information from your additional records to the Major Security Incident workspace.
- Proactively inspect, analyze, and contain the known or unknown threats on any endpoint by using the Microsoft Defender for Endpoint integration.
- Review and manage a remediation workflow of Data Loss Prevention (DLP) incidents from multiple sources, such as an endpoint, network, email, or cloud by using the Data Loss Prevention Incident Response Incident Response application.
- Enable API integration with Symantec so that your organization can import Data Loss Prevention Incident Response (DLP) incidents for endpoint, network, and email into the Now Platform. With this integration, you can enable an incident remediation workflow that involves your end users or employees, managers, and DLP analysts.
- Integrate with Proofpoint to provide an incident response workflow for email, endpoint, and cloud DLP IR.
- Integrate with Netskope to provide an incident response workflow for cloud DLP IR.

See [Security Incident Response](#)  for more information. Security Incident Response is available in the ServiceNow Store.

UI changes

New look for Security Incident Response Workspace

The SIR Workspace application has a modernized look and feel by using the ServiceNow[®] Next Experience UI. For more information on the Next Experience UI, see [Next Experience UI](#) .

Link Record

The new **Link Record** button can link related security incident records to Major Security Incident.

Unlink Record

The new **Unlink Record** button can unlink the selected security incident records from Major Security Incident.

New in the Tokyo release

[Security Incident Response](#)

SIR Workspace provides next gen user experience for the security analysts and SOC managers. Using this workspace the security analysts can manage the life cycle of security incidents from an initial analysis to containment, eradication, and recovery.

[Data Loss Prevention Incident Response with Microsoft](#)

The Data Loss Prevention Incident Response with Microsoft provides a core framework to import Data Loss Prevention (DLP) incidents from multiple sources such as Microsoft purview apps (Microsoft Teams, Exchange Online, SharePoint Online, OneDrive for Business) and endpoint devices enable remediation workflow involving end users, managers, and # DLP# operations team with automated incident assignment and escalations.

Changed in this release

[Major Security Incident Management workspace](#)

Use the Major Security Incident Management workspace to provide your organization with a more efficient, modernized way for you to work. The classic environment for Major Security Incident Management is still supported in this release.

[Set up the ServiceNow Security Operations add-on for Splunk](#)

Splunk Enterprise base Add-on is enhanced to support OAuth authentication. You are provided with ability to choose between Basic authentication and OAuth authentication.

[Microsoft Defender for Endpoint](#)

Use the Microsoft Defender for Endpoint integration to create configurations to retrieve details about the host, logged-in users, related machines, and other enrichment capabilities. You can request to isolate any machine from accessing the networks or remove the machines from isolation.

[Data Loss Prevention](#)

Identify, respond to, and protect your data loss channels with the Data Loss Prevention Incident Response (DLP) application. You can manage sensitive information for your customers, such as the financial and proprietary data, health records, or social security numbers. With this application, you can also automate the remediation workflows.

[DLP Incident Response integration with Proofpoint](#)

- Filter the DLP IR incidents to be imported into the Now Platform.
- You can update the incident state and notes in Proofpoint based on the actions that are performed on the incidents in the Now Platform.

[DLP Incident Response integration with Netskope](#)

- Filter the DLP IR incidents to be imported into the Now Platform.
- You can also update the incident state and notes in Netskope based on the actions that are performed on the incidents in the Now Platform.

Carbon Black integration

This integration is enhanced to support Carbon Black servers with version 7.1 or later.

Related ServiceNow applications and features

[Vulnerability Response](#)

Vulnerability Response is one member of the Security Operations application suite. Together, these applications connect security to your IT department, increase the speed and efficiency of your response, and give you a definitive view of your security posture.

Threat Intelligence [↗](#)

ServiceNow® Threat Intelligence application enables you to find indicators of compromise (IoC) and enrich security incidents with threat intelligence data.

Security Operations common functionality [↗](#)

When any of the plugins for the main Security Operations applications (Security Incident Response, Vulnerability Response, Threat Intelligence, or Configuration Compliance) are activated, the Security Support Common plugin is activated.

Configuration Compliance release notes

The ServiceNow® Configuration Compliance application enables you to prioritize and remediate the most critical configuration-related vulnerabilities in your environment quickly and efficiently. Configuration Compliance was enhanced and updated in the Tokyo release.

Configuration Compliance highlights for the Tokyo release

- Support to declaratively add additional filters to the data being ingested, by using API-level filters.
- Track the number of times a remediation task is deferred using a scheduled job.
- Cancel an approval workflow with a closed test result group.
- Remove yourself from being assigned to test result records as a remediation owner, if you determine they are not your responsibility.
- Use the Configuration Compliance [PA] dashboard to view data in Next Experience framework.
- Starting from version 18.0 of Vulnerability Response, use Configuration Compliance in Vulnerability Manager Workspace.

See [About Configuration Compliance](#) [↗](#) for more information.

i Important: Configuration Compliance is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading Configuration Compliance to Tokyo

- Due to a data model change in the Configuration Compliance application, upgrading might take noticeably longer than previous upgrades. For more information, see [KB0856498](#) [↗](#).
- If you have previously downloaded the application from the ServiceNow Store and a new version is available, you can update it in your Now Platform instance.
- For more information about released versions of the Configuration Compliance application, as well as third-party and ServiceNow applications that are compatible with Tokyo, see the [Vulnerability Response Compatibility Matrix and Release Schema Changes \[KB0856498\]](#) [↗](#) article in the HI Knowledge Base.
- For information about updates to third-party applications that are supported by Vulnerability Response and Configuration Compliance, see [Vulnerability Response integrations release notes](#).

Upgrade information for Configuration Compliance to Tokyo

Version	Upgrade description
14.3	<p>Certified for Tokyo in the ServiceNow Store.</p> <p>See the following section called "New in the Tokyo release" for more information.</p>

New in the Tokyo release

[Access Test Results in Vulnerability Manager Workspace](#)

Starting from version 18.0 of Vulnerability Response, Vulnerability Manager Workspace supports Configuration Compliance.

[Configure risk score to risk rating mapping for Configuration Compliance](#)

Starting with version 14.5 of Configuration Compliance (CC), you can modify the existing or configure more than five risk ratings through the Risk Score Weights table.

[Persist deferral date for manual exceptions for test result groups even after exception expiry](#)

Starting with version 14.5 of Configuration Compliance (CC), if a deferred test result group is reopened by a scanner before the exception window expires, the state of the test result group changes from Open to Deferred. Additionally, the deferred until date persists even after the test result group reopens after the expiration date.

[Performance Analytics Dashboard for Configuration Compliance](#)

Install and use the Configuration Compliance [PA] dashboard to view data in Next Experience framework. It provides a comprehensive view of compliance trends, configuration issues, remediation trends, and exception management for easy management and remediation.

[Calculating the remediation target rule](#)

Starting from Configuration Compliance V14.5, you can calculate the remediation targets using the **Target from (date)**.

The **Target from (date)** is a new field specifying the date or the date and time from which the remediation target rule must be applied.

[New Qualys integrations to retrieve test results](#)

Qualys has introduced new APIs to resolve the issues in the existing ones. The following integrations have been created for the new APIs, to retrieve the host IDs for each policy:

- Qualys PCRS Policy Host Integration
- Qualys PCRS Test Results Integration

The new APIs do not support some of the filters that the earlier APIs supported, such as tags.

[Manage exception requests using Vulnerability Response or GRC in Configuration Compliance](#)

Manage vulnerability exception requests for configuration issues using either Vulnerability Response or GRC: Policy and Compliance Management

integration. Based on the module selected, the flow is managed by either Vulnerability Response or GRC.

Remove assignments from test result groups [↗](#)

Remediation owners can remove themselves from assignments from test result group records that they determine are not their responsibility. The **Unassign** UI action clears the Assigned to and Assignment group fields and sends a daily digest to vulnerability managers when records are modified.

- This feature is available on test result group (CRG) records.
- The **Unassign** UI action clears the Assigned to and Assignment group fields and sends notifications to administrators that records are not assigned.
- A default approval work flow is introduced for unassign feature. An approval request is sent to the approver that the request is raised for the removal of assignment group for a test result group. Vulnerability admins can disable the approval process if needed.
- A link is included to the Unassigned Module in the daily digest that is sent to vulnerability managers.
- Updated Records are displayed in the Unassigned module for Configuration Compliance.
- A daily scheduled job counts the records that are updated with this feature and aggregates them by the assignment rules that initially assigned them. You can use the counts that are displayed for each rule to help you monitor how effective your assignment rules are.

Track deferral counts for test results and test result groups [↗](#)

Track the test result or test results groups that are deferred multiple times in the Multiple deferrals module. A scheduled job, *set deferral counts*, runs daily to post counts in the Deferral count column for records that are deferred more than one time.

Quick start tests for Configuration Compliance [↗](#)

After upgrades and deployments of new applications or integrations, run quick start tests to verify that Configuration Compliance works as expected. If you customized Configuration Compliance, copy the quick start tests and configure them for your customizations.

UI changes

Next Experience for Configuration Compliance

Configuration Compliance has a new, modernized look and feel. For more information, see [the Next Experience UI](#) [↗](#).

Changed in this release

Roll up test result values to test result group [↗](#)

The Rollup test result values to test result group and configuration test scheduled job runs every hour and updates the status of a test rest group based on the status of its test results.

Fixed:

Fixed work notes issue in the **Unassign** UI action.

Activation information

Install Configuration Compliance by requesting it from the ServiceNow Store. 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](#).

Vulnerability Response integrations release notes

Third-party integrations with the ServiceNow® Vulnerability Response application help to enrich your vulnerability data. ServiceNow applications and third-party integrations that are compatible with the Vulnerability Response application were enhanced and updated in the Tokyo release.

Vulnerability Response integrations highlights for the Tokyo release

- Use the Vulnerability Response integration with the CISA Known Exploited Vulnerabilities (KEVs) catalog to ingest data to help you effectively prioritize and remediate vulnerabilities.
- Starting with version 2.2, Microsoft Azure Security Center is renamed to Microsoft Defender for Cloud Integration for Security Operations.
- Introduced the base system CI lookup rules, Name and S3 Bucket for Microsoft Azure Security Center and Palo Alto Prisma Cloud.

See [Vulnerability Response integrations](#) for more information.

Important: Third-party and ServiceNow applications for Vulnerability Response are available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Important information for upgrading Vulnerability Response to Tokyo

- For more information about the released versions of the Vulnerability Response application, as well as third-party and ServiceNow applications that are compatible with Tokyo, see the [Vulnerability Response Compatibility Matrix and Release Schema Changes \[KB0856498\]](#) article in the HI Knowledge Base.
- For information about the new features for Vulnerability Response, see [Vulnerability Response release notes](#).

New in the Tokyo release

Ingest additional metadata for cloud assets

Qualys, Tenable for Vulnerability Response and Rapid7 scanners can now receive additional metadata for cloud assets such as Cloud Account Name, Cloud Account ID, Region, Provider, Cloud Tags and so on. A new CI Lookup Rule, 'Cloud Resource ID', has been introduced to match the cloud CIs based on the cloud metadata. You can use this information to identify the target teams responsible for patching vulnerabilities.

Tenable.io, Qualys, and Rapid7 InsightVM Vulnerability Integrations

Customize the filtering parameters for your scheduled queries with the third-party scanners that are supported by Vulnerability Response. From your Now Platform instance, without coding or adding additional queries, further refine your imported vulnerability data with parameters that are provided by the scanner products. All Qualys integrations support filtering using Qualys query parameters.

The following integrations support filtering by providing JSON content in the request body:

- Tenable.io Assets Integration
- Tenable.io Fixed Vulnerabilities Integration
- Tenable.io Open Vulnerabilities Integration
- Rapid7 InsightVM Vulnerable Item Integration API
- Rapid7 InsightVM Vulnerability Integration API
- Rapid7 InsightVM Asset List Integration API
- A new Qualys parameter, *include_only_confirmed*, allows you to filter only for vulnerabilities of the type, *confirmed*. Activate this parameter from the Qualys integration instance parameters. It is inactive by default.

Manual ingestion of vulnerabilities [↗](#)

To effectively protect the assets against unknown threats, such as zero day exploits, you can use manual ingestion to import a set of vulnerabilities and CI data into Vulnerability Response. You can proactively ingest the vulnerabilities and remediate them instead of waiting for scanners to report the assets, which are at risk.

CISA Known Exploit Vulnerability bulletin integration [↗](#)

The Vulnerability Response integration with CISA ingests data from the Cybersecurity & Infrastructure Security Agency (CISA) to help you determine and prioritize the remediation of actively exploited vulnerabilities.

- The ingested Known Exploited Vulnerability (KEVs) in the ServiceNow Vulnerability Response enrich the existing CVEs and roll up to the Third-Party Vulnerability Entries table.
- The KEVs include vulnerabilities from infrastructure, container, and cloud applications.

Quick start tests for Vulnerability Response [↗](#)

After upgrades and deployments of new applications or integrations, run quick start tests to verify that Vulnerability Response and integrations work as expected. If you customized Vulnerability Response, copy the quick start tests and configure them for your customizations.

UI changes

Next Experience for Vulnerability Response

Vulnerability Response has a new, modernized look and feel. For more information, see [the Next Experience UI](#) [↗](#).

Changed in this release

Enhancements to vulnerability integration runs [↗](#)

Starting from Tenable v3.3, you can view the following information for the vulnerability integration runs:

- Total chunks: Total number of chunks generated by Tenable.
- Available chunks: Number of chunks available for download for ServiceNow.



[Renamed Microsoft Azure Security Center integration](#)

Starting with version 2.2, Microsoft Azure Security Center is renamed to Microsoft Defender for Cloud Integration for Security Operations.

[New CI lookup rules for Microsoft Azure Security Center and Palo Alto Prisma Cloud](#)

Introduced new base system CI lookup rules, Name and S3 Bucket.

Activation information

Install third-party integrations by requesting them from the ServiceNow Store. 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](#) .


Vulnerability Response release notes

The ServiceNow[®] Vulnerability Response application brings security and IT together to enable you to remediate your most critical vulnerabilities more quickly and efficiently. Vulnerability Response was enhanced and updated in the Tokyo release.


Vulnerability Response highlights for the Tokyo release


- Starting with version 19.0 of Vulnerability Response, view the dashboards in the Vulnerability Response Workspaces.
- Starting with version 19.0, assess the exposure of your assets to zero-day vulnerabilities by using the Vulnerability Analyst Workspace.

See [About the Vulnerability Response application](#)  for more information.


 **Important:** Vulnerability Response is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.


Important information for upgrading Vulnerability Response to Tokyo

Due to a data model change in the Vulnerability Response application, upgrading might take noticeably longer than previous upgrades. For more information, see [KB0856498](#) .

While upgrading to a newer version, the upgrade time might increase based on the data and version that you are upgrading from. This is due to additional schema changes added during the upgrade. For more information, see [KB0856498](#) .

When you upgrade the Vulnerability Response application from older versions to version 15.x, the default remediation task rule in the base system is deactivated. For more information, see [Vulnerability Response Workspaces and updates to remediation task and remediation task rules](#) .

Vulnerability Response report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#) .

- When you upgrade to a new version of the Vulnerability Response application, your new version is available on your instance and ready for installation. Updates to Vulnerability Response are available in the ServiceNow[®] Store.
- For more information about released versions of the Vulnerability Response application, compatibility with Tokyo, and schema changes, see the [Vulnerability Response compatibility Matrix and Release Schema Changes \[KB0856498\]](#)  article in the HI Knowledge Base.

When you upgrade to version 18.0 of the Vulnerability Response on Rome, Vulnerability Manager Workspace is not supported.

New in the Tokyo release

[CI lookup rules module has moved](#)

Starting with version 19.0, you can find the CI Lookup Rules module in your instance at **Security Operations > CMDB > CI > Lookup Rules**.

[Remediate application vulnerable items, container vulnerable items, and configuration issues in Vulnerability Manager Workspace](#)

Starting with version 18.0, Vulnerability Manager Workspace supports Application Vulnerability Response, Container Vulnerability Response, and Configuration Compliance. Therefore, you can create watch topics in the Vulnerability Manager Workspace for Application Vulnerable Items, and Container Vulnerable Items, and Configuration Issues.

[Transfer remediation task when transferring records to a remediation effort](#)

Starting with version 18.0, when you transfer Vulnerable items (VIs) of a remediation effort to a new remediation effort in the same watch topic, then the Remediation Task associated with these VIs is also transferred to the new remediation effort.

[View Remediation Tasks from classic UI in the Vulnerability Manager Workspace](#)

Starting with version 18.0, you can view and work on the Remediation Tasks that belong to classic UI in the Vulnerability Manager Workspace.

[View vulnerability libraries](#)

Starting with version 18.0, you can view details of the Common Vulnerability and Exposures (CVEs), Third-Party Entries (TPEs), Common Weakness Enumeration (CWEs), App Vulnerabilities, Policies and Tests under Libraries on the List page.

[Provide additional information in Request Exception form in Vulnerability Manager Workspace](#) [Request exceptions for remediation tasks and records from the Vulnerability Manager Workspace](#)

You can provide additional information by answering the questionnaire in the Request Exception form for host vulnerable items (VITs), application vulnerable items (AVITs), container vulnerable items (CVITs) and Remediation Tasks in Vulnerability Manager Workspace.

[Provide additional information in the Mark False Positive form in Vulnerability Manager Workspace](#)


You can provide additional information by answering the questionnaire in the Mark False Positive form for host VITs AVITs, CVITs and Remediation Tasks in Vulnerability Manager Workspace.

[Request GRC Policy Exception from Vulnerability Manager Workspace](#)

You can request GRC Policy Exception for host VITs, AVITs and Remediation Tasks from Vulnerability Manager Workspace.

[Explore the Vulnerability Analyst workspace](#)

The Vulnerability Emergency Response application is used by vulnerability analysts to address zero-day or critical vulnerabilities. By identifying the affected configuration items (CIs), vulnerability analysts can respond by generating vulnerable items and assigning them to the remediation team for analysis. Some key features are:

- Automatic assessments of CISA KEY CVE or CPE-based assessment
- Software-based assessment for zero-day vulnerabilities
- Assess the exposure of your assets to zero-day vulnerabilities with [Exposure assessment](#)  in the workspace.

[Configure risk score to risk rating mapping for Vulnerability Response](#)

Starting with version 18.0 of Vulnerability Response (VR), you can modify the existing or configure more than five risk ratings through the Risk Score Weights table.

[Configure risk score to risk rating mapping for Application Vulnerability Response](#)

Starting with version 18.0 of Application Vulnerability Response (AVR), you can modify the existing or configure more than five risk ratings through the Risk Score Weights table.

[Configure risk score to risk rating mapping for Container Vulnerability Response](#)

Starting with version 1.2 of Container Vulnerability Response, you can modify the existing or configure more than five risk ratings through the Risk Score Weights table.

[Persist deferral date for manual exceptions even after exception expiry](#)

Starting with version 18.0 of Vulnerability Response (VR), if a deferred vulnerable item (VIT) is reopened by a scanner before the exception window expires, the state of the vulnerable item changes from Open to Deferred. Additionally, the deferred until date persists even after the vulnerable item reopens after the expiration date.

[Persist deferral date for manual exceptions of application vulnerable items even after exception expiry](#)

Starting with version 18.0 of Application Vulnerability Response (AVR), if a deferred application vulnerable item (AVIT) is reopened by a scanner before the exception window expires, the state of the AVIT changes from Open to Deferred. Additionally, the deferred until date persists even after the AVIT reopens after the expiration date.

[Persist deferral date for manual exceptions of container vulnerable items even after exception expiry](#)

Starting with version 1.2 of Container Vulnerability Response, if a deferred container vulnerable item (CVIT) is reopened by a scanner before the exception window expires, the state of the CVIT changes from Open to Deferred. Additionally, the deferred until date persists even after the CVIT reopens after the expiration date.

[Manage exception requests using Container Vulnerability Response or GRC](#)

Manage vulnerability exception requests for container vulnerabilities using either the Exception management module in Container Vulnerability Response or GRC: Policy and Compliance Management integration. Based on the module selected, the flow is managed by either Container Vulnerability Response or Governance, Risk, and Compliance (GRC).

[Automating workflows for duplicate vulnerabilities](#)

When an asset is scanned with multiple scanners, there's a chance of identifying the same vulnerability as duplicates by the different scanners. Starting from Vulnerability Response and Application Vulnerability Response v17.1, you can automatically resolve these duplicate vulnerable items.

For example, if the Qualys or Tenable or Rapid7 and Microsoft scanners identify the same vulnerability, you can choose to automatically resolve the duplicate vulnerabilities.

[Adding proof to Rapid7 vulnerable item keys](#)

Starting from Vulnerability Response V17.1, you can add proof as a vulnerable item (VI) key for the Rapid7 VIs. Including the proof for specific vulnerabilities enables the Rapid7 scanner integration to create VIs for each proof received from Rapid7.

Splitting detections into different VIs based on proof creates multiple VIs that enable you to assign the vulnerabilities to the appropriate remediation owners.

[Calculating the remediation target rule for VR and AVR](#)

Starting from V17.1, you can calculate the remediation targets using the **Target from (date)**.

The **Target from (date)** is a new field specifying the date from which the remediation target rule must be applied.

[Manage exception requests using Vulnerability Response or GRC in Application Vulnerability Response](#)

Manage vulnerability exception requests for application vulnerabilities using either Vulnerability Response or GRC: Policy and Compliance Management integration. Based on the module selected, the flow is managed by either Vulnerability Response or GRC.

[Reevaluate and regroup vulnerable items automatically](#)

If the assignment group on a VI changes on reapplication of assignment rules, you can automatically re-evaluate and regroup the vulnerable items by enabling the business rule **Link to Remediation Tasks** and system property `sn_vul.rerun_task_rules`. On assignment group change, the business rule moves the vulnerable items to the relevant group or creates a new group if they can't be grouped under any existing group. The system property `sn_vul.rerun_task_rules` unlinks the vulnerable items from the remediation tasks where the condition no longer matches, and reapplies the remediation task rules.

[Vulnerability Response Workspaces](#)

This version of the Vulnerability Response application supports the Vulnerability Manager and IT Remediation workspaces.

[Remove assignments from vulnerable items and remediation tasks](#)

Remediation owners can remove themselves from assignment from vulnerable item records that they determine are not their responsibility. The **Unassign** UI action clears the Assigned to and Assignment group fields and sends a daily digest to vulnerability managers when records are modified. You can modify the Assigned to and Assignment group fields on vulnerable item records in Vulnerability Response and Application Vulnerability Response that are incorrectly assigned to you or to your groups. This feature is available on the following records:

- Remediation tasks (VUL) in both the classic environment and the Vulnerability Response Workspaces.
- Vulnerable items (VIT) in both the classic environment and the Vulnerability Response Workspaces.

- Application vulnerable items (AVIT).
- Container vulnerable items (CVIT).
- A default approval work flow is introduced for unassign feature. An approval request is sent to the approver that the request is raised for the removal of assignment group for VI or remediation task. Vulnerability admins can disable the approval process if needed.
- Updated records are displayed in Unassigned modules for Vulnerability Response and Application Vulnerability Response.
- A link is included to the Unassigned Modules in the daily digest that is sent to vulnerability managers.
- A daily scheduled job counts the records that are updated with this feature and aggregates them by the assignment rules that initially assigned them. You can use the counts that are displayed for each assignment rule to help you monitor how effective your assignment rules are.

[Track deferral counts for vulnerable items and remediation tasks](#)

Track the number of times a vulnerable item (VI), application vulnerable item (AVIT), container vulnerable item (CVIT), or a remediation task (VUL) is deferred. A scheduled job, *set deferral counts*, runs daily to post the counts for the records that are deferred more than one time in the Deferral count column in the Multiple deferrals modules for VR, AVR, and CVR.

[Quick start tests for Vulnerability Response](#)


After upgrades and deployments of new applications or integrations, run quick start tests to verify that Vulnerability Response works as expected. If you customized Vulnerability Response, copy the quick start tests and configure them for your customizations.

[Identifying potential duplicate VIs from different scanners](#)

If you are using multiple scanners on the same asset to detect vulnerabilities, multiple vulnerable items (VIs) might be created. Starting from Vulnerability Response v16.5, you can identify the potential duplicate VIs to ensure that the potential duplicate vulnerabilities are not assigned to the remediation owners.

UI changes

Next Experience for Vulnerability Response

Vulnerability Response has a new, modernized look and feel. For more information, see [the Next Experience UI](#) .

Changed in this release

[Enhancements to the Software Bill of Materials applications](#)

The Data Model for SBOM, SBOM Core, and the SBOM Response applications that are required for the Software Bill of Materials product have the following enhancements. These changes are compatible with version 19.0.6 of Vulnerability Response.

- Data Model for SBOM (version 1.0.4): Display name is a new field on the BOM Component table. This field uses the name and version as the displayed value of a component.
- SBOM Core (version 1.0.8): Added the BOM Entities related list on the component form. You can see all the BOM entities that the component is used in on this related list. You can manually upload BOM documents as expected.
- SBOM Response (version 2.0.6): The data model is updated so it supports the Vulnerability Intelligence use case. Discovered application and SBOM component are two new fields displayed on the AVI form. Mark as false positive and Request exception are supported on AVIs in the SBOM Workspace.

Vulnerability Response Workspaces [↗](#)

The Vulnerability Response workspaces provide a more efficient, modernized way for you to work. Note that the classic environment for Vulnerability Response is still supported in this release.

JSON-based API introduced for Veracode in Application Vulnerability Response (v3.4) [↗](#)

Starting from Veracode V3.4, a JSON-based API from Veracode is being used to retrieve the list of applications. This API provides the capability to bring in the 'last policy compliance check date' for these applications, signifying when these applications were last scanned by Veracode. The previous XML-based integration has been changed to inactive (deprecated).

The feature is expected to improve the Veracode integration performance by introducing delta-support at the application level.

Enhancements to Patch Orchestration [↗](#)

Starting from V16.5, remediation owners can navigate to the scorecards and view the preferred patch associated with the configuration items. They can use this information to remediate the critical vulnerabilities in the assets that they own.

Roll up VIs' values to remediation task [↗](#)

The Rollup vulnerable item values to vulnerability and group scheduled job runs every 15 minutes and updates the status of a remediation task based on the status of its vulnerable items.

Activation information

Install Vulnerability Response by requesting it from the ServiceNow Store. 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](#) [↗](#).

Strategic Portfolio Management release notes

Strategic Portfolio Management (formerly IT Business Management) has new and updated features in the Tokyo release.

Advanced Goal Framework release notes

The ServiceNow[®] Advanced Goal Framework application enables you to automate the actual value of your targets for the goals that are defined using the ServiceNow[®] Goal Framework application. Advanced Goal Framework is a new application in the Tokyo release.

Advanced Goal Framework highlights for the Tokyo release

- Automate the actual value of your targets for the goals by collecting the actuals from benefit plans, cost plans, survey assessments, and PA Indicators.
- Use different types of target sources - such as Assessments/Surveys, PA Indicator, or Custom scripts - for automating the actual value of your targets.
- Use the predefined script for benefit plans to automate the actual value of your targets when you select Benefit Plans as your target source.

See [Advanced Goal Framework](#) for more information.

i Important: Advanced Goal Framework is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

Advanced Goal Framework features

Target automation

Automate the actual value of your targets by configuring the target sources for the targets. After the **Actual value** field on the [Target form](#) is auto-updated, the progress of the target is updated, and then the target's progress is rolled up to its goal.

The following target source types are supported for automating the actual value of a target.

- PA Indicator
- Assessment/Survey
- Custom script

i Note: With the Custom script option, any table that is present on the Now Platform can be configured as a target source.

Activation information

Install Advanced Goal Framework by requesting it from the ServiceNow Store. 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](#).

i Note: You can install Advanced Goal Framework only when you own the ServiceNow® Strategic Portfolio Management (SPM), formerly the ServiceNow IT Business Management (ITBM) Pro license.

Related ServiceNow applications and features

Alignment Planner Workspace

Use the Advanced Goal Framework application in the ServiceNow® Alignment Planner Workspace (APW) to automate the progress of your targets.

Important: You can install Advanced Goal Framework only when you own the ServiceNow® Strategic Portfolio Management (SPM, formerly the ITBM) Pro license. When you own the SPM Pro license and install Alignment Planner Workspace, the Advanced Goal Framework application also gets installed automatically.

Goal Framework [↗](#)

The Advanced Goal Framework application is an extension to the Goal Framework application. When you install Advanced Goal Framework, you get all the features of Goal Framework along with the target automation feature.

Agile Development 2.0 release notes

The ServiceNow® Agile Development 2.0 application provides an Agile software development environment for product-based or project-based efforts, using the Scrum framework. Agile Development 2.0 was enhanced and updated in the Tokyo release.

Agile Development 2.0 highlights for the Tokyo release

Experience the ServiceNow Agile Development 2.0 application in a modernized UI.

See [Agile Development 2.0](#) [↗](#) for more information.

UI changes

New look for the planning pages in Agile Development 2.0

The following pages of Agile Board now have a new, modernized look and feel.

- Program level
 - Backlog
 - Planning
- Team level
 - Backlog
 - Sprint Planning

For more information on the new UI, see [Next Experience UI](#) [↗](#).

Activation information

Agile Development 2.0 is available with the activation of the Agile Development 2.0 plugin (com.snc.sdlc.agile.2.0). For details, see [Activate Agile Development 2.0](#) [↗](#).

The Agile Development 1.0 plugin (com.snc.sdlc.scrum.pp) is no longer available. If you're using Agile Development 1.0, upgrade to Agile Development 2.0 for enhanced Agile capabilities.

Related ServiceNow applications and features

[Agile Development 2.0 — Unified Backlog](#) [↗](#)

Maintain a centralized backlog that contains records of different task types, such as defects, problems, incident tasks, and stories. You can prioritize and reorder different task type records in one location without converting records to stories.

[Agile Development v2 mobile app](#) [↗](#)

From your mobile device, update the status of your work for the current sprint. You can track stories and scrum tasks for the assignment groups to which you belong.

[Scrum Programs for Agile Development 2.0](#)

Plan and track the work of multiple teams that work together, either toward a common short-term outcome or on an ongoing basis. For activation information, see [Activate Scrum Programs](#).

[Microsoft Azure DevOps Integration for Agile Development](#)

Enable bidirectional synchronization of records between Microsoft Azure DevOps with Agile Development 2.0 by integrating the two applications.

[Atlassian Jira Integration for Agile Development](#)

Enable bidirectional synchronization of records between Atlassian Jira and Agile Development 2.0 by integrating the two applications.

[Performance Analytics Content Pack for Agile 2.0](#)

Improve your Agile processes and practices using preconfigured dashboards with data visualizations from Performance Analytics Content Pack for Agile 2.0.

[Test Management applications](#)

Use the ServiceNow® Test Management 1.0 or Test Management 2.0 applications to streamline the management of testing processes to help you deliver software products more efficiently and with fewer errors.

Alignment Planner Workspace release notes

The ServiceNow® Alignment Planner Workspace application helps product and portfolio managers drive organizational alignment while navigating the challenges of agile and product transformations. Alignment Planner Workspace (APW) was enhanced and updated in the Tokyo release.

Alignment Planner Workspace highlights for the Tokyo release

- Support different planning structures in the company using lens with the enhanced data model.
- Align relevant work to strategy and drive shared outcomes using the prioritization and roadmap features of portfolio plans.
- Automate the actual value of your targets for the goals by collecting the actuals from the tables such as benefit plans, cost plans, survey assessments, and PA Indicators.
- Visualize and manage your goals and their targets from the Overview tab in the Goals module.
- Enable bi-directional synchronization of planning items between Alignment Planner Workspace and other execution applications such as ServiceNow® Project Portfolio Management (PPM), Agile 2.0, or ServiceNow® SAFe.

See [Alignment Planner Workspace](#) for more information.

i Important: Alignment Planner Workspace is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Lens and portfolio plans](#)

Use pre-defined lenses in APW to build a personalized portfolio of work. For example, you can plan work from the perspective of a delivery organization, strategic investments, or products.

Portfolio plans are flexible, user-defined portfolios that are built using a lens. Use portfolio plans to do the following:

- Enable focused planning of work in the desired perspective.
- Improve alignment of work to business strategy.
- Reduce time spent on aligning execution teams to the right work.

Prioritization [🔗](#)

Determine the right work to invest in using the Prioritization tab for your portfolio plan.

- Understand the work backlog for your portfolio from a consolidated grid view.
- Evaluate, rank, and prioritize work items using data points such as planned cost, benefit, and associated goals.

Guided setup [🔗](#)

After installing APW, you can use the guided setup to help you with the required core configuration. This guidance includes steps to do the following:

- Configure lens setup.
- Integrate APW with PPM, Agile 2.0, or SAFe.
- Configure ServiceNow® Goal Framework.

Alignment Planner Workspace with PPM, Agile 2.0, and SAFe [🔗](#)


Integrate APW with PPM, Agile 2.0, and SAFe to enable import, export, and bidirectional synchronization of planning items between APW and PPM, Agile2.0, or SAFe.

Goal management in APW [🔗](#)

- [Visualize and manage your goals from the Overview tab \[🔗\]\(#\)](#): The Overview tab provides a summary of all your goals in a particular portfolio plan. The tab has multiple widgets that help you drill down in the goals and targets, see their details, and manage them.
- [Goal management in APW using Goal Framework \[🔗\]\(#\)](#): The Goal Framework helps you create and align your goals according to your organization's portfolio plans.

[Goal relationship with planning and strategic items \[🔗\]\(#\)](#): Create goal relationships with planning and strategic items. When a goal relationship is created with a planning item (Project, Demand, or Epic), the record appears in the Planning items related list on the Goal form. When a goal relationship is created with a strategic item (Program or Initiative), the record appears in the Other items related list on the Goal form.

- [Goal management in APW using Advanced Goal Framework](#): The Advanced Goal Framework in APW enables you to automate the actual value of your targets for the goals that are defined using Goal Framework.

Automate the progress of your targets by automating the **Actual value** field on the [Target form](#) . You can automate the actual value of your targets by configuring target sources for the targets.

The following types of target sources are supported for automating the actual value of a target.

- PA Indicator
- Assessment/Survey
- Custom script

Note: With the Custom script option, any table that is present on the Now Platform can be configured as a target source.

Note: Defining and managing goals using the goal management features in the workspace requires a ServiceNow® Strategic Portfolio Management (SPM), formerly ServiceNow® IT Business Management (ITBM), Pro license.

UI changes

Backlog is now Prioritization

APW backlog is renamed as Prioritization. The Prioritization tab is accessible from the Planning menu of a portfolio plan.

Ad hoc roadmaps are now Free-form roadmaps

Ad hoc roadmaps are renamed as Free-form roadmaps. Free-form roadmaps are accessible from the home page of Alignment Planner Workspace.

Navigation menu in the workspace UI

The top-level menu in the workspace UI is changed as follows:

- Home: Contains navigation to portfolio plans and free-form roadmaps.
 - Portfolio plans contain navigation to Goals, Prioritization, and Roadmap.
- Lists: Contains a list view of the tables grouped by lens and planning items.

Changed in this release

Plugin dependencies

The Alignment Planner Workspace integrations for PPM and Agile 2.0 application is renamed as Alignment Planner Workspace with PPM, Agile 2.0, and SAFe. This application is now a dependency and is installed automatically with Alignment Planner Workspace.

Removed in this release

- Planning hierarchies and planning organizations are no longer available.
- Some of the earlier APW tables are removed. For an updated list of tables available with APW, see [Components installed with Alignment Planner Workspace](#) .

Activation information

Based on the SPM license that you have, install one of the following applications by requesting it from the ServiceNow Store:

- SPM Standard: Install Alignment Planner Workspace (sn_align_ws).
- SPM Professional: Install Alignment Planner Workspace (sn_align_ws) or Lenses for Alignment Planner Workspace (sn_apw_advanced).

The Lenses for Alignment Planner Workspace application provides additional Strategic Investments and Product lenses, and also installs the Alignment Planner Workspace (sn_align_ws) application as a dependency.

Application Portfolio Management release notes

The ServiceNow® Application Portfolio Management application provides visibility into your business applications, rationalizes them, helps to determine their business value, and provides them with business context. Application Portfolio Management was enhanced and updated in the Tokyo release.

Application Portfolio Management highlights for the Tokyo release

- Define the software standards for your organization by using the Technology Reference Model (TRM) module.
- Discover the unapproved software that is part of your business application and avoid high security risks to your organization.
- Add and manage new software in the TRM library, by selecting software from the ServiceNow® Software Asset Management (SAM) catalog.
- Create and manage your architectural artifacts using the Architectural Artifacts module.
- Associate your architectural artifacts to your organization's business capabilities and business applications.
- Secure access and view reports on the dashboards using the new enhanced report_view access control lists (ACLs).

See [Application Portfolio Management](#) for more information.

Important information for upgrading Application Portfolio Management to Tokyo

Application Portfolio Management report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).


New in the Tokyo release

Technology Reference Model

As an Enterprise Architect, define the software products standards in your organization using the Technology Reference Model (TRM). Software standards can be defined in these levels:

- Software Products: Defines the authorized software products.
- Software Product Versions: Defines phases and effective dates for software versions.

As an Application Owner, search the SAM catalog and request to add new software to the TRM, or to adjust a software phase. Requests are reviewed by Enterprise Architects.

The TRM module helps you to understand if any of your business applications are using software that is not part of the TRM. Discover a software version that is not permitted for use in the production. For more information, see [Technology Reference Model in Application Portfolio Management](#) .

Architectural Artifacts


As an Enterprise Architect, use the Architectural Artifacts module to perform the following tasks:

- Store and keep track of versions of the architectural documents.
- Review and approve architectural artifacts that are submitted by other business stake holders in your company, for example Application Owners.
- Associate architectural documents to the existing elements in the ServiceNow[®] platform, such as business capabilities and business applications.


For more information, see [Architectural Artifacts in Application Portfolio Management](#) .

Lucidchart Integration

As an Enterprise Architect, create the Lucidchart diagrams for Business Application hierarchy and Business Capability maps.

Sync the Business Application and Business Capability diagrams to Lucidchart and customize the shapes and colors of the entities how they appear in the chart. For more information, see [Application Portfolio Management \(APM\) integration with Lucidchart](#) .

Lucidchart diagramming spoke

Integrate Application Portfolio Management instance with Lucidchart account to access your Lucid account and create architectural diagrams. For more information, see [Lucidchart diagramming spoke](#) .

Exporting Application Portfolio Management data to Microsoft PowerPoint

As an Enterprise Architect, export the APM data to Microsoft PowerPoint to share it with other stakeholders.

You can export the following APM data to Microsoft PowerPoint:

- Insights on all business applications.
- Insights on the assessment scores for business capabilities.

For more information, see [Exporting Application Portfolio Management data to Microsoft PowerPoint](#) .

Application Portfolio Management (APM) Cloud Assessment

The Cloud Assessment scoring profile in Application Portfolio Management helps you to assess which business applications to migrate to the cloud. This scoring profile leverages the indicators to evaluate cloud readiness of a business application.

You can use the **Group Analysis** page in Application Portfolio Management to see a bubble chart to plot the indicator scores of the applications in X (Cloud

Readiness) and Y (Business Impact) axis. For more information, see [Application Portfolio Management \(APM\) Cloud Assessment](#).

UI changes

APM homepage changes

The Technology Reference Model link is added in the Technology Portfolio pane. For details, see [Application Portfolio Management portal](#).

TPM home page changes

The Show TRM Lifecycle toggle button is added on the TPM home page to explore your business applications and discover unapproved software. For details, see [Technology Portfolio Management](#).

Activation information

Application Portfolio Management is a Now Platform feature that is available with activation of the Application Portfolio Management (com.snc.apm). For details, see [Activate Application Portfolio Management](#).

Related ServiceNow applications and features

[Software Asset Management](#)

The Technology Portfolio Management TPM function of APM integrates with ServiceNow® Software Asset Management to retrieve the technology information of a software product. You must install the Software Asset Management Professional (com.snc.samp) plugin to access the product classification view in the TPM timeline.

Goal Framework release notes

The ServiceNow® Goal Framework application helps you create goals, set targets for them, and evaluate the progress of the goals and targets to accomplish your organizational plans and drive business outcomes. Goal Framework was enhanced and updated in the Tokyo release.

Goal Framework highlights for the Tokyo release

- Import your existing goals and targets data from a spreadsheet to the Goal Framework tables.
- (For ServiceNow® Alignment Planner Workspace users) Define goals for your portfolio plans and manage them to accomplish your organizational plans and drive business outcomes.

See [Goal Framework](#) for more information.

Important: Goal Framework is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

[Import goals and targets data from a spreadsheet](#)

Import your existing goals and targets data (that are defined outside Goal Framework) from a spreadsheet to the Goal Framework tables. When you import data from a spreadsheet, the goals and targets data is imported to the Goal [sn_gf_goal] and Target [sn_gf_goal_target] tables, respectively.

Changed in this release

Target form [↗](#)

- The **Check in frequency** field has been renamed to **Review frequency** on the [Target form](#) [↗](#).
- The **Review due date** field has been added to the [Target form](#) [↗](#).

Removed in this release

Planning Organization field

(For Alignment Planner Workspace users) The **Planning Organization** field has been removed from the [Goal](#) [↗](#), [Strategic Plan](#) [↗](#), and [Strategic Priority](#) [↗](#) forms.

Activation information

Install Goal Framework by requesting it from the ServiceNow Store. 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](#) [↗](#).

Related ServiceNow applications and features

Goal management in Alignment Planner Workspace [↗](#)

Use the Goal Framework application in the Alignment Planner Workspace (APW) application to create goals, set targets for them, and evaluate the progress of the goals and targets to accomplish your organizational plans and drive business outcomes.

Advanced Goal Framework [↗](#)

Use the ServiceNow[®] Advanced Goal Framework application to automate the actual value of your targets for the goals that are defined using Goal Framework. The Advanced Goal Framework application is an extension to the Goal Framework application.

Project Portfolio Management [↗](#)

Activate the ServiceNow[®] Project Portfolio Management plugin so that you can create a goal relationship with work items (Project and Demand) and strategic item (Program) to identify and associate your current or future work and achieve your goals.

Agile Development 2.0 [↗](#)

Activate the ServiceNow[®] Agile Development 2.0 plugin so that you can create a goal relationship with work items (Scrum Feature and Scrum Epic) to identify and associate your current or future work and achieve your goals.

Scaled Agile Framework (SAFe) [↗](#)

Activate the ServiceNow[®] Scaled Agile Framework (SAFe) plugin so that you can create a goal relationship with the work item, SAFe Epic, to identify and associate your current or future work and achieve your goals.

Investment Funding release notes

The ServiceNow® Investment Funding application enables you to plan and manage investments by allocating funds to investment entities, such as business units, products, teams, and so on. Investment Funding was enhanced and updated in the Tokyo release.

Investment Funding highlights for the Tokyo release

- Manage your investments easily by adding co-owners.

See [Investment Funding](#) for more information.

i Important: Investment Funding is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Co-owners for an investment

As an investment co-owner, you can request and allocate funds, view the status of funds, and delete unfunded investments on your behalf. There is no maximum limit for the number of co-owners for an investment.

UI changes

Accessing investments

Users can view the ownership indicator for an investment from the My Funds or Top level Investments modules within the application.

Co-owner field

The **Co-Owner** field is added to the **Details** tab of the Investment form.

Activation information

Install Investment Funding by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

Project Portfolio Management

ServiceNow® Project Portfolio Management provides a simplified, team-oriented approach to Project Portfolio Management and IT development by combining several individual applications.

Project Portfolio Management release notes

ServiceNow® Project Portfolio Management (PPM) enables you to create and manage a wide range of projects ranging from a few small tasks to large portfolios of projects. Project Portfolio Management was enhanced and updated in the Tokyo release.

Project Portfolio Management highlights for the Tokyo release

- Securely access and view your reports on the various dashboards using the enhanced report_view access control lists (ACLs).
- Integrate ServiceNow® Scenario Planning for PPM with the ServiceNow® Investment Funding ServiceNow Store application to synchronize the data between the two ServiceNow Store applications.
- View actual costs, budget, variance, and forecasting metrics (EAC and ETC) by fiscal periods on the Overview tab to better manage your project financial forecasting.
- Export a project from Project Workspace or project status report as a Microsoft PowerPoint file using the ServiceNow® Export to PowerPoint for Strategic Portfolio Management application.

See [Project Portfolio Management](#) for more information.

Important information for upgrading Project Portfolio Management to Tokyo

Project Portfolio Management report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see [Report_view access control](#).

When you upgrade Scenario Planning for PPM to version 2.3.0 or later, you must upgrade the legacy Investment Funding application to the ServiceNow Store for the integration to work. For detailed instructions on upgrading from the legacy Investment Funding application to the ServiceNow Store application, see [upgrade instructions](#).

New in the Tokyo release

Project Management

[View the project costs and financial breakdown summary of a project](#) for the selected fiscal year from the Overview list. This view shows the financial summary for Planned Cost, Actual Cost, Variance (Planned vs Actual cost), Estimate At Completion, and Estimate To Completion.

Quick start tests for Project Portfolio Management

After upgrading and deploying the new applications, run quick start tests to verify that Project Portfolio Management still works.

Export to PowerPoint for Strategic Portfolio Management

- The Export to PowerPoint for Strategic Portfolio Management add-in helps you generate and download project status reports from your instance as a Microsoft PowerPoint file.
- Using the ServiceNow® Project Workspace application, [export project to a Microsoft PowerPoint](#) file.

Changed in this release

Scenario Planning for PPM

When you install Scenario Planning for PPM version 2.3.0 or later, you must upgrade the legacy Investment Funding application to the ServiceNow Store application for the integration to work. For detailed instructions on upgrading from the legacy Investment Funding application to the ServiceNow Store application, see [upgrade instructions](#).

Activation information

Project Portfolio Management is available with activation of the PPM Standard (com.snc.financial_planning_pmo) plugin. For details, see [Activate Project Portfolio Management](#).

Install Scenario Planning for PPM by requesting it from the ServiceNow Store. 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](#).

Project Workspace release notes

The ServiceNow® Project Workspace application provides a new user experience with interactive UI elements that enables project managers to plan and manage their projects. Project Workspace was enhanced and updated in the Tokyo release.

Project Workspace highlights for the Tokyo release

- Improve visibility into task dependencies by adding external dependencies to the project.
- Save time by nesting multiple project tasks as child tasks or deleting multiple project tasks at once.
- Use Export to PowerPoint for Strategic Portfolio Management add-in to export your project as Microsoft PowerPoint file.

For more information, see [Project workspace](#).

Important: Project Workspace is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

New in the Tokyo release

Add external project dependencies

Add dependencies between tasks of your project and tasks of a different project directly from the grid view. External dependencies help show the impact of changes in project schedules when a predecessor task changes.

Perform row context actions on multiple tasks together

Performing bulk actions on the project tasks in less time. When you select multiple project task rows, the row context menu of the project tasks in the grid view now includes options to indent, unindent, and delete these rows at once.

Confirm updating project start date

When you change the start date of a task to a date before the project start date, a confirmation dialog box notifies you that the project start date will be changed automatically to the new start date of the task.

Search to fill in reference field information

While filling in reference fields such as **Project manager**, **Assigned to**, or **Assignment group**, you can now look up the record you need to use the search option.

Dark theme compatibility

Next Experience dark theme is supported for Project Workspace. For more information on dark theme compatibility, see [Exploring themes in Next Experience](#).

Export Project to PowerPoint from Project Workspace

Export your project as a Microsoft PowerPoint file from the Project Workspace application. Use this file to provide project updates to external stakeholders or a wider audience. For more information, see [Export Project to PowerPoint from Project Workspace](#).

RIDAC in Project Workspace

- Navigate to the risk, issue, decision, action, and request change (RIDAC) page or classic project workspace on a single click from new project workspace interface.
- Access, modify and manage your RIDAC records from a central location (RIDAC page) in Project Workspace.
- Convert one RIDAC record to another for a project in the Project Workspace. For more information, see [Convert one RIDAC \(Risk, Issue, Decision, Action, and Request Changes\) record to another for a project in Project Workspace](#).
- Associate existing RIDAC records for a project to convert them to other RIDAC entities. For more information, see [Associate existing RIDAC records for a Project in Project Workspace](#).
- Quickly access and update RIDAC records using side panels for individual records.
- Customize the data on the RIDAC page to add, update, and manage the RIDAC records.

UI changes

RIDAC records in Project Workspace

- Create and manage RIDAC records on one central location (RIDAC page) in Project Workspace.
- Navigate to the RIDAC or classic project workspace from project workspace page.

Export Project to Microsoft PowerPoint from Project Workspace

- Export and download a project as a Microsoft PowerPoint file using **Export Project** from Microsoft PowerPoint.

Activation information

Install Project Workspace by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[Project Portfolio Management](#)

Project Portfolio Management provides a simplified, team-oriented approach to Project Portfolio Management and IT development by combining several individual applications.

Scaled Agile Framework (SAFe) release notes

The ServiceNow® Scaled Agile Framework (SAFe) application helps you manage strategic and operational work all in one place by using lean and agile principles. SAFe was enhanced and updated in the Tokyo release.

SAFe highlights for the Tokyo release

Experience the ServiceNow SAFe applications in a modernized UI.

See [Scaled Agile Framework \(SAFe\)](#) for more information.

UI changes

New look for the planning pages in Scaled Agile Framework (SAFe)

The following pages of SAFe Board now have a new, modernized look and feel.

- Portfolio level
 - Backlog
 - Planning
- ART level
 - Backlog
 - Planning
- Team level
 - Backlog

Note: Portfolio level is available only with Portfolio SAFe application.

For more information on the new UI, see [Next Experience UI](#).

Activation information

ServiceNow provides plugins that support two different configurations of SAFe:

- Essential SAFe is available with activation of the Essential SAFe plugin (com.snc.sdmc.safe). For details, see [Activate Essential SAFe](#).
- Essential SAFe and Portfolio SAFe are available with activation of the Portfolio SAFe plugin (com.snc.sdmc.portfolio_safe). For details, see [Activate Portfolio SAFe](#).

Related ServiceNow applications and features

[SAFe — Unified Backlog](#)

ServiceNow® SAFe — Unified Backlog helps you maintain a centralized backlog that contains records of different task types such as defects, problems, incident tasks, and stories. You can prioritize and reorder different task type records in one location without converting records to stories.

[Microsoft Azure DevOps Integration for Agile Development](#)

Enable bidirectional synchronization of work items between Microsoft Azure DevOps with ServiceNow® SAFe applications by integrating the two applications.

[Atlassian Jira Integration for Agile Development](#)

Enable bidirectional synchronization of work items between Atlassian Jira and ServiceNow® SAFe applications.

[Performance Analytics Content Pack for Essential SAFe](#)

Improve your SAFe processes and practices by using the Performance Analytics Content Pack for Essential SAFe that provides preconfigured dashboards with data visualizations.

SPM Benchmarks release notes

The ServiceNow® SPM Benchmarks application gives you instant visibility into your key performance indicators (KPIs) by comparing your data with the industry averages. SPM Benchmarks is a new application in the Tokyo release.

SPM Benchmarks highlights for the Tokyo release

- Increase efficiency by viewing a comparative insight relative to the industry averages of your peers.
- Track your KPIs and compare them against benchmarks to evaluate your performance for continuous improvement.
- Instant visibility into your KPIs.

See [SPM Benchmarking](#) for more information.

i Important: SPM Benchmarks is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.

SPM Benchmarks features

[SPM Benchmarking KPIs](#)

Provide leaders with clear visibility into key performance indicators and trends, giving you comparative insights relative to the industry averages of your peers.

[Choose your KPIs](#)

Enable users to choose the KPIs based on their respective organizational demands.

Activation information

Install SPM Benchmarks by requesting it from the ServiceNow Store. 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](#).

Related ServiceNow applications and features

[Benchmarks](#)

View the ServiceNow® IT Service Management (ITSM) KPIs for comparative insights relative to the industry averages of your peers.

Release notes summaries for Tokyo features

Consolidated release notes information for new and updated Tokyo features.

Learn about specific themes for multiple Tokyo products




In the Tokyo family, ServiceNow® features and products were introduced or updated. Every new or updated feature and product has its own individual release notes topic, which includes information such as upgrade tasks, new features, changed features, browser requirements, and other specifications. These product-specific release notes are listed in [Features and changes by product](#).

To help users look over different classes of information at a glance, each release notes section has its own summary topic. For example, the [Browser requirements for all Tokyo features and products](#) aggregates all browser requirements for features that were introduced or updated in Tokyo.

Highlights for all Tokyo features and products




Cumulative release notes summary on highlights of Tokyo features and products.

Review the product highlights to learn what's new in Tokyo.

Application or feature	Details
AI Search	<ul style="list-style-type: none"> • Expand multilingual search capabilities with Simplified Chinese and Traditional Chinese search. • Guide users to the best search result matches with search-based auto-complete suggestions. • View the best matching results first with improved machine learning relevancy. <p>See AI Search  for more information.</p>
API	<ul style="list-style-type: none"> • Use server-side JavaScript APIs in scripts to change application functionality. • Run client APIs whenever a client-based event occurs, such as when a form loads, a form is submitted, or a field value changes. • Use inbound REST APIs to interact with various ServiceNow functionalities within your application. <p>See APIs and scripts  for more information.</p>
Admin Center	<ul style="list-style-type: none"> • Discover what applications are included in your license and how they can be implemented to achieve your business goal. • Implement the suggested solutions with the installation of recommended applications to work toward your business outcome. <p>See Admin Center  for more information.</p>

Application or feature	Details
Advanced Goal Framework	<ul style="list-style-type: none"> Automate the actual value of your targets for the goals by collecting the actuals from benefit plans, cost plans, survey assessments, and PA Indicators. Use different types of target sources - such as Assessments/ Surveys, PA Indicator, or Custom scripts - for automating the actual value of your targets. Use the predefined script for benefit plans to automate the actual value of your targets when you select Benefit Plans as your target source. <p>See Advanced Goal Framework for more information.</p>
Advanced Risk	<ul style="list-style-type: none"> Configure and enable multi-level approval workflow for advanced risk assessments. Analyze your risk posture with the enhanced heatmap workbench. Assess controls based on a group factor consisting of manual or automated factors or a combination of both. Simulate a risk assessment to verify whether the Risk Assessment Methodology (RAM) is configured correctly. Evaluate similar risk events recommendations to reduce duplicate efforts. <p>See Advanced Risk Assessment for more information.</p>
Advanced Work Assignment	<ul style="list-style-type: none"> Assign work tasks automatically. Enable the AWA Inbox API. <p>See Advanced Work Assignment for more information.</p>
Agile Development 2.0	<p>Experience the ServiceNow Agile Development 2.0 application in a modernized UI.</p> <p>See Agile Development 2.0 for more information.</p>
Alignment Planner Workspace	<ul style="list-style-type: none"> Support different planning structures in the company using lens with the enhanced data model. Align relevant work to strategy and drive shared outcomes using the prioritization and roadmap features of portfolio plans. Automate the actual value of your targets for the goals by collecting the actuals from the tables such as benefit plans, cost plans, survey assessments, and PA Indicators. Visualize and manage your goals and their targets from the Overview tab in the Goals module.

Application or feature	Details
	<ul style="list-style-type: none"> • Enable bi-directional synchronization of planning items between Alignment Planner Workspace and other execution applications such as ServiceNow® Project Portfolio Management (PPM), Agile 2.0, or ServiceNow® SAFe. <p>See Alignment Planner Workspace for more information.</p>
App Engine Studio	<ul style="list-style-type: none"> • Build low-code apps quickly, with more creators collaborating and less complexity. • Design with guidance and templates within a holistic low-code development experience. • Unite business aims and IT implementations with collaboration, reuse, and guardrails for enterprise-class support. <p>See App Engine Studio for more information.</p>
Application Management	<ul style="list-style-type: none"> • Use the Continuous Integration (CI)/Continuous Delivery (CD) API to request application installation, plugin activation, rollback, and operations in your queue. • Prevent CI/CD pipelines from timing out if a request is rejected when another operation is in-progress. <p>See Application Management for more information.</p>
Application Portfolio Management	<ul style="list-style-type: none"> • Define the software standards for your organization by using the Technology Reference Model (TRM) module. • Discover the unapproved software that is part of your business application and avoid high security risks to your organization. • Add and manage new software in the TRM library, by selecting software from the ServiceNow® Software Asset Management (SAM) catalog. • Create and manage your architectural artifacts using the Architectural Artifacts module. • Associate your architectural artifacts to your organization's business capabilities and business applications. • Secure access and view reports on the dashboards using the new enhanced report_view access control lists (ACLs). <p>See Application Portfolio Management for more information.</p>

Application or feature	Details
Assessments and Surveys	<ul style="list-style-type: none"> • View each survey instance result in a separate row. Each survey question appears in the column heading with the answer to the question displayed in that column. • Take advantage of a redesigned assessment-taking experience on the ServiceNow® Service Portal and the ServiceNow® Now Mobile app. • Let your users start the survey from the same page where they left off in the previous session. <p>See Assessments and Surveys  for more information.</p>
Authentication	<ul style="list-style-type: none"> • Customize SCIM protocols for your identity management with the System for Cross-domain Identity Management (SCIM) custom attribute. • Perform provisioning and updates on identity resources through CRUD operations on the external system by using the new SCIM Client module. • Use instance access using mobile apps from outside the network perimeter in an IP access control enabled instance. • Use OAuth scope for auth scope or REST API scope. • Access end user-specific information with OAuth tokens. <p>For more information, see Identity and Authentication .</p>
Automated Test Framework	<ul style="list-style-type: none"> • Reduce upgrade and development time by replacing manual testing with automated testing. • Design tests once and reuse them in different contexts and with different test data sets. • Keep test instances clean by rolling back test data and changes made after each test run. • Create and schedule test suites to organize and run tests in batches. • Reduce test design time by copying quick start tests and test suites. You can also create custom test steps to expand test coverage. <p>See Automated Test Framework (ATF)  for more information.</p>
Benchmarks	<ul style="list-style-type: none"> • Measure the Virtual Agent customer satisfaction scores, how many conversations were handed off to an agent, and the number of monthly unique users by using the Conversational Interfaces KPIs. • Track the number of deflected incidents and the incidents that were auto-resolved with ITSM Virtual Agent KPIs.

Application or feature	Details
	<p>See Benchmarks for more information.</p>
<p>Business Continuity Management</p>	<ul style="list-style-type: none"> • Use role-based licensing to include BCM operator and BCM lite operator user roles. • Enable your users to view tasks in real time with visual indications of the current plan, sub-plans, upcoming plans, and related tasks. • Use the updated demo data to support events that are scoped to multiple purposes or coverage areas. • Use the BCM event-scoping recovery task logic and subset options that assist your program managers and planners. <p>See Governance, Risk, and Compliance for more information.</p>
<p>Change Management</p>	<ul style="list-style-type: none"> • Visually monitor the Change process health for a change model or change type. The process health is used as a parameter for the Risk Scoring Capability. • Improve precision and drive additional change automation in your existing change process by implementing next-generation risk functionality.
<p>Cloud Provisioning and Governance</p>	<ul style="list-style-type: none"> • Get the latest quality and security fixes for various core Open-Source libraries. <p>See Cloud Provisioning and Governance for more information.</p>
<p>Commercial Lines Claims</p>	<ul style="list-style-type: none"> • Use the strong claims data model to build any claims service • Manage claims workflows using cases within a dedicated application and centralized visualization of all claim records for a customer • Use dedicated playbooks and workspaces built for various claim personas • Monitor key statistics and track performance with ServiceNow® Performance Analytics and ServiceNow® Process Optimization • Follow a baseline workflow for first notice of loss to claim settlement for commercial auto <p>See Commercial Lines Claims for more information.</p>
<p>Configuration Compliance</p>	<ul style="list-style-type: none"> • Support to declaratively add additional filters to the data being ingested, by using API-level filters. • Track the number of times a remediation task is deferred using a scheduled job. • Cancel an approval workflow with a closed test result group.






Application or feature	Details
	<ul style="list-style-type: none"> • Remove yourself from being assigned to test result records as a remediation owner, if you determine they are not your responsibility. • Use the Configuration Compliance [PA] dashboard to view data in Next Experience framework. • Starting from version 18.0 of Vulnerability Response, use Configuration Compliance in Vulnerability Manager Workspace. <p>See About Configuration Compliance for more information.</p>
<p>Configuration Management Database (CMDB)</p>	<ul style="list-style-type: none"> • Use CI Attestation in CMDB Workspace to verify the existence of actual IT infrastructure and applications that you own, systematically and in bulk. • Use Intelligent Search for CMDB in the CMDB Workspace, to use everyday natural language query (NLQ) in a search string to query for a set of CIs in the CMDB. • Use new indicators and new drill-down Performance Analytics (PA) widgets in almost all indicators in the CMDB Data Foundations dashboard (2.0) store app. • Use enhancements in IntegrationHub ETL (3.0.1) that provide new functionality and greater flexibility, such as: <ul style="list-style-type: none"> ◦ Create a condition that is based on a data branch that is not within the top-level object, when creating a conditional class. ◦ Open an integration in read-only mode to examine its configuration and settings. ◦ Select one of the Robust import set transformer properties as an option when adding an attribute in a mapping. • Create a query in Multisource Report Builder that compares multiple attribute values across more than two data sources to find discrepancies. Also, use Reporting to create a report that runs on a recurring schedule. • Cascade-retire dependent CIs when you retire a CI. Also, perform a one-time cascade-cleanup of orphan dependent CIs that were left behind from previous delete or archive operations. • In identification rules, add filter conditions to regular identifier entries, to further narrow Identification and Reconciliation Engine (IRE) searches. <p>See Configuration Management Database for more information.</p>
<p>Conversational Interfaces Home</p>	<ul style="list-style-type: none"> • View how your bot is performing through the Analytics dashboard. • Install and configure Agent Chat and Virtual Agent and track your progress using the progress bar







Application or feature	Details
	<ul style="list-style-type: none"> • Enhanced chat administration experience. • Collaborate to resolve issues. <p>See Conversational Interfaces for more information.</p>
Core Now Platform	<ul style="list-style-type: none"> • Migrate your IP addresses that are stored as string fields to the new IP address type. • Restrict application logs modifications by installing the Protected Tables plugin. • Bulk update or delete records without using scripts. Roll back bulk updates or deletes if necessary. <p>See Now Platform Administration for more information.</p>
Customer Service Management (CSM)	<ul style="list-style-type: none"> • Enable agents to place orders faster, improving efficiency and customer satisfaction, with Order Management for Customer Service Management. • Enable agents to evaluate, prioritize, and resolve cases more quickly with Task Intelligence for Customer Service features, including multi-lingual case categorization, attachment-based case categorization, sentiment analysis, and document intelligence. • Unify operations across internal and external business locations within a brand. • Proactively serve customers on third-party sites or mobile apps with Engagement Messenger. • Display Recommended Actions based on case context and enable agents to perform these actions with a single click. <p>See Exploring Customer Service Management for more information.</p>
Dashboards	<ul style="list-style-type: none"> • Provide visual overviews of your processes for specified users. • Use multiple tabs to provide layers of meaning for different audiences. • Add filters to limit the information in your data visualizations. <p>See Dashboards for more information.</p>
Decision Builder	<ul style="list-style-type: none"> • Added the ability to export decision tables to Microsoft Excel. Excel can be used to manage decision rows and users can import changes back into Decision Builder. • Added more support for localization in the Decision Builder UI.

Application or feature	Details
	<ul style="list-style-type: none"> • Added UI support for Change Approval Policies through the new Change Approval Policy Builder module. • Added the ability to open all decision rows in Decision rule view to enable complex rules. Decision tables with complex rules do not support the Edit in Excel feature. • Added two new roles: <code>decision_rule_author</code> and <code>decision_rule_editor</code>. <p>See Decision Builder for more information.</p>
DevOps Change Velocity	<ul style="list-style-type: none"> • Set up your coding, planning, and orchestration tools more quickly. • Make use of orchestration capabilities for GitHub Actions. • Import historical data for Microsoft Azure DevOps artifacts. The imported data provides insights into root causes for complete change traceability. • Use the default change automation and approval policy to enable auto-reject, auto-approve, or defer for manual approval for change requests. • Generate DevOps scripted pipeline steps with the Jenkins snippet generator. <p>See DevOps DevOps Change for more information.</p>
DevOps Config	<ul style="list-style-type: none"> • Manage and secure all configuration data in a consolidated model with role-based access control as the single source of truth. • Automatically validate configuration data before deployments to prevent non-compliant changes in production, and ensure adherence to policy frameworks. • Integrate common DevOps tools and processes in your environment with DevOps Config. <p>See DevOps Config for more information.</p>
Digital Portfolio Management	<ul style="list-style-type: none"> • Updated the Digital Portfolio Management (DPM) KPI groups to improve reporting: <ul style="list-style-type: none"> ◦ Added visual spark lines to key performance indicators (KPI) and record views as another way to present data. ◦ Added two new indicators to the Performance Snapshot KPI group. ◦ Added the Availability insights KPI group to track application services.

Application or feature	Details
	<ul style="list-style-type: none"> ◦ Added the subscriber count to the headers of portfolios, taxonomies, and nodes. ◦ Updated service offerings to show incidents, problems, changes, and outages (some conditions apply). • Added ServiceNow® DevOps flow metrics to the business applications Plan tab. • Added service offerings to the service portfolio Info tab. • Added a Contacts tab for nodes in relationship maps. <p>See Digital Portfolio Management for more information.</p>
Document Intelligence	<ul style="list-style-type: none"> • Accelerate extraction of structured and semi-structured documents such as forms, IDs, and more. • Automate intelligently with responsible, feedback-driven AI for continual learning. • Seamlessly integrate document processing steps into workflows. • No code required. <p>See Document Intelligence for more information.</p>
Document Services	<ul style="list-style-type: none"> • Upload and view documents linked to cases from Agent Workspace using document management. • Add, view, and attach documents using the Documents widget in Service Portal. • View the attached documents in the activity stream of the parent record. • Integrate with Microsoft OneDrive for file storage and collaboration. • Control user access to content with domain separation support. • Ensure that Document Services is accessible to all users through accessibility features. <p>See Document Services for more information.</p>
Dynamic Translation	<ul style="list-style-type: none"> • Translate HTML fields on the platform forms using Dynamic Translation. • Translate email notifications to the recipient's preferred language at run time. • Translate virtual agents chat to the recipient's preferred language at run time. • Configure a link for Dynamic Translation in the activity stream to enable users to quickly and easily translate content.

Application or feature	Details
	See Dynamic Translation for more information.
Employee Center	<ul style="list-style-type: none"> • Improve performance using scoped caching for HR criteria optionally to save the evaluation results. • Access the Preferences page, now available under the user avatar when you opt in to Employee Profile. • Configure two new topic-level controls, Topic manager and Topic contributor, to use decentralized topic management. <p>See Employee Center for more information.</p>
Employee Journey Management	Employee Journey Management enables your organization to create and implement employee journeys in a consistent and easy process.
Encryption Key Management	<ul style="list-style-type: none"> • Use regex within ServiceNow® Edge Encryption to validate IPv6 deny lists. IPv6 addresses and net masks can now be included in the deny list. • Use the Infrastructure security pages to define versions, TLS certifications, and establish custom URLs. • Use multi-module field encryption for attachments. When configured, a dialog window appears at upload time to select a module for encrypting attachments. <p>See Encryption and Key Management for more information.</p>
Enterprise Asset Management	<ul style="list-style-type: none"> • Improve productivity by using multi-component models and multi-component assets. • Eliminate manual processes by using intuitive workflows to transfer, dispose, request, and refresh your assets. • Use streamlined workflows to remediate defective or recalled enterprise assets and to manage expiring lease contracts.
Environmental, Social, and Governance Management	<ul style="list-style-type: none"> • Provide the data for ESG metrics by using a modern and intuitive user interface that resembles a spreadsheet. • Use calculated metrics, formerly known as composite metrics, with an enhanced aggregation and calculation logic to handle advanced use cases for ESG metrics. • Calculate greenhouse (GHG) emissions by using various emission factors and the enhanced metrics calculation engine. • Convert the metric data collection unit into another, preferred reporting unit. <p>See ESG Management for more information.</p>

Application or feature	Details
Event Management	<ul style="list-style-type: none"> • Monitor alerts using a modernized look and feel with the Service Operations Workspace. • Better visualize the impact of an alert on service offerings, and business and technical services by using enhancements to the Service Operations Workspace UI. • Take advantage of enhancements to the efficiency and accuracy of metrics you receive in Metric Intelligence. <p>See Event Management  for more information.</p>
Field Service Management	<ul style="list-style-type: none"> • Inventory management: Field service agents can request and source multiple parts. Agents receive mobile notifications when part requests are raised by their peers and accordingly approve or reject requests. • Territory planning: Territory planners can create, manage, and visualize territories. • Crew operations: Field Service dispatchers can create crews and add recommended agents to crews within Dispatcher Workspace. • Capacity-based appointments: Dynamic rules for a single appointment service catalog enable customer service agents and customers to book appointments based on defined capacity even before agents are assigned. <p>See Field Service Management  for more information.</p>
Financial Services Business Deposit Operations	<ul style="list-style-type: none"> • Version 2.2.0: View cases assigned to a location manager's branches with Branch operations support. <p>See Financial Services Deposit Operations  for more information.</p>
Financial Services Business Lifecycle	<ul style="list-style-type: none"> • Version 2.2.0: View cases assigned to a manager's branches with Branch operations support. <p>See Financial Services Business Lifecycle  for more information.</p>
Financial Services Business Loan Operations	<ul style="list-style-type: none"> • Version 2.1.0: View cases assigned to a manager's branches with Branch operations support. <p>See Financial Services Loan Operations  for more information.</p>





Application or feature	Details
Financial Services Card Operations	<ul style="list-style-type: none"> • Enable customers and agents to create disputes for financial accounts, such as credit card accounts. • Provide baseline and configurable business rules for auto-decisioning of dispute cases. Auto-decisioning examples include denials of a dispute, providing provisional or final credit, and routing a dispute for manual investigation. • Provide trigger fraud reporting tasks from a dispute to a card network. <p>See Financial Services Card Operations  for more information.</p>
Financial Services Client Lifecycle	<ul style="list-style-type: none"> • Version 2.2.0- View cases assigned to a manager's branches with Branch operations support. <p>See Financial Services Client Lifecycle  for more information.</p>
Financial Services Complaint Management	<ul style="list-style-type: none"> • Version 1.3.0- Branch operations support enables various roles to view cases assigned to a manager's branches and the branch locations associated with cases. <p>See Financial Services Complaint Management  for more information.</p>
Financial Services Credit Operations	<ul style="list-style-type: none"> • Version 2.1.0 - Branch operations support enables various roles to view cases assigned to a manager's branches and the branch locations associated with cases. <p>See Financial Services Credit Operations  for more information.</p>
Financial Services Operations Core	<ul style="list-style-type: none"> • Version 1.9.0 - Branch operations support is provided with the following feature set components: Location manager contributor role with personalized workspace and dashboard for viewing metrics and managing cases. <p>See Financial Services Operations Core  for more information.</p>
Financial Services Payment Operations	<ul style="list-style-type: none"> • Version 1.4.0- Branch operations support enables various roles to view cases assigned to a manager's branches and the branch locations associated with cases. <p>See Financial Services Payment Operations  for more information.</p>
Financial Services Personal Deposit Operations	<ul style="list-style-type: none"> • Version 2.2.0 - View cases assigned to a location manager's branches with Branch operations support.

Application or feature	Details
	See Financial Services Deposit Operations for more information.
Financial Services Personal Loan Operations	<ul style="list-style-type: none"> • Version 2.1.0- Branch operations support enables various roles to view cases assigned to a manager's branches and the branch locations associated with cases. <p>See Financial Services Loan Operations for more information.</p>
Financial Services Treasury Operations	<ul style="list-style-type: none"> • Version 2.2.0 - Branch operations support enables various roles to view cases assigned to a manager's branches and the branch locations associated with cases. <p>See Financial Services Treasury Operations for more information.</p>
Financial Services integration with Jack Henry Associates jXchange	<ul style="list-style-type: none"> • Integrate your customer's information and financial account data with your deposit and loan accounts so that your fulfillers can create and manage cases easier. • Look up the information about your customers and financial accounts with a unique identifier when you integrate the JHA jXchange spoke with the Financial Services Operations. • Use the pre-built subflows that use the Jack Henry Associates jXchange spoke actions: <ul style="list-style-type: none"> ◦ Look up Customers Information Stream ◦ Look up Customer Information by ID ◦ Look up Financial Accounts Stream ◦ Look up Financial Account by Account Details • Learn how the subflows automatically store the action responses into the correct Product model, Financial, Account, Contact, and Consumer tables, which can then be used for any service request or case. <p>For more information, see Exploring Financial Services integration with Jack Henry Associates jXchange.</p>
Financial Services integration with Socure	<ul style="list-style-type: none"> • Verify applicant identity and eligibility with plugin dependency on Financial Services Know Your Customer (KYC). • Improve customer risk determination with sub-flow executions that look up customer fraud scores. <p>See Integrating Financial Services Operations with Socure for more information.</p>

Application or feature	Details
Flow Designer	<ul style="list-style-type: none"> • Add Flow Designer content when building a table from App Engine Studio. • Limit access to Flow Designer content with read only roles. • Use the ScriptableFlowRunner API to run flows with specific roles or as a user when running with the <i>quick()</i> method. <p>See Flow Designer for more information.</p>
Goal Framework	<ul style="list-style-type: none"> • Import your existing goals and targets data from a spreadsheet to the Goal Framework tables. • (For ServiceNow® Alignment Planner Workspace users) Define goals for your portfolio plans and manage them to accomplish your organizational plans and drive business outcomes. <p>See Goal Framework for more information.</p>
Governance, Risk, and Compliance	<ul style="list-style-type: none"> • Use the new user Interface (UI) that supports the confidentiality configuration on GRC tables. • View the directly related records on the related list in the entity form with the new UX buttons that were introduced. • Synchronize the risk and control owner with the entity owner. • Configure multiple classes for the same table with the enhancement to the Entity class rule filter. <p>See Governance, Risk, and Compliance for more information.</p>
Group Life Servicing	<ul style="list-style-type: none"> • Manage group life and disability insurance workflows using cases within a dedicated application. • Avoid redundancy and complete workflows with confidence using dedicated playbooks and workspaces designed specifically for individual roles. • Coordinate effort across departments and collaborate to achieve case resolution promptly and more efficiently. • Monitor key statistics and track performance with ServiceNow® Performance Analytics and ServiceNow® Process Optimization. • Use baseline service flows. <p>See Group Life Servicing for more information.</p>

Application or feature	Details
<p>HR Service Delivery Case and Knowledge Management</p>	<ul style="list-style-type: none"> • Collaborate with multiple participants and sign ServiceNow - generated documents with Document Template integration with DocuSign and Document Template integration with AdobeSign. • Empower your HR agents to work on and manage employee relations cases by pulling them from NAVEX EthicsPoint directly into a ServiceNow instance with Employee Relations integration with Navex Ethicspoint. • Enhance the working experience of your people managers with Manager Hub, which is a self-service interface for your people managers to proactively engage with their teams. <p>See HR Service Delivery for more information.</p>
<p>Hardware Asset Management 5.0</p>	<ul style="list-style-type: none"> • Seamlessly navigate to multiple views in the Hardware Asset Workspace and use data visibility, notifications, and actionable alerts to optimize costs and mitigate compliance risks. • Plan the roll-out of Hardware Asset Management and perform the basic configuration by using the HAM Guided Setup in Hardware Asset Workspace. • Automatically identify# and track hardware asset locations by integrating your Zebra technology RFID system with your ServiceNow instance. • Maintain contract history and save time and effort by copying hardware asset information from an old contract to a new one. • Efficiently manage your sourcing through the Asset operations view and contract details through the Contract management view. <p>See Hardware Asset Management for more information.</p>
<p>Health Log Analytics</p>	<ul style="list-style-type: none"> • View Health Log Analytics system health alerts on the Event Management service map • Use enhanced log data streaming capabilities <p>See Health Log Analytics for more information.</p>
<p>Healthcare and Life Sciences Service Management Core</p>	<ul style="list-style-type: none"> • Role-based access to healthcare cases, tasks, and data • Domain separation support in Healthcare and Life Sciences Service Management Core • Account and contact support in Healthcare and Life Sciences Service Management Core <p>See Healthcare and Life Sciences Service Management Core for more information.</p>





Application or feature	Details
ITOM Cloud Accelerate	<ul style="list-style-type: none"> • Plan, organize, and track the migration of the enterprise IT resources and workloads of your organization to the cloud. • Remediate the missing and incorrect cloud resource tags. • Check the cloud resources of your organization for configuration policy violations and fix them. • Build custom workflows to interact with the cloud resources of your organization. <p>See ITOM Governance for more information.</p>
ITOM Health	<ul style="list-style-type: none"> • Monitor alerts using a modernized look and feel with the Service Operations Workspace. • Utilize enhancements to the Service Operations Workspace UI to better visualize the impact of an alert on service offerings, and business and technical services. <p>See ITOM Health for more information.</p>
ITOM Optimization	<ul style="list-style-type: none"> • Get the latest quality and security fixes for various core Open-Source libraries used in the product. <p>See ITOM Optimization for more information.</p>
ITOM Visibility	<ul style="list-style-type: none"> • Manage the cloud operations of your organization with ServiceNow Cloud Operations Workspace. • Take advantage of support for Google Cloud Platform (GCP) resources in the Performance Analytics Content Pack for Cloud Resources. • Assess the readiness for performing mapping based on machine-learning using the Application service readiness dashboard. <p>See the ITOM Visibility landing page for more information.</p>
Import and Export	<ul style="list-style-type: none"> • Use scripts in your ETL definitions to run custom logic, ignore incoming data, or write messages to the import log. • Override a connection alias when you schedule an import. • View details about import set runs, processed records, and errors all from the import set view. <p>See Import sets and Export sets for more information.</p>
Incident Management	<p>Secure access and view the reports in the dashboards using the new improved report_view access control lists (ACLs).</p>




Application or feature	Details
	<p>See Incident Management  for more information.</p>
<p>Individual Life Servicing</p>	<ul style="list-style-type: none"> • Manage individual life and disability insurance workflows using cases within a dedicated application. • Avoid redundancy and complete workflows with confidence using dedicated playbooks and workspaces designed specifically for individual roles. • Coordinate effort across departments and collaborate to achieve case resolution promptly and more efficiently. • Monitor key statistics and track performance with ServiceNow® Performance Analytics and ServiceNow® Process Optimization. • Use baseline service flows. <p>See Individual Life Servicing  for more information.</p>
<p>Instance Data Replication</p>	<ul style="list-style-type: none"> • Replicate data from your producer instance to one or more consumer instances across different departments and business units and keep data synchronized. • Maintain consistent data across different organizations in your company. • Easily update records that have different sys_ids on the producer and consumer instances. <p>See Instance Data Replication  for more information.</p>
<p>Instance Scan</p>	<ul style="list-style-type: none"> • Scan your instance, update set, scoped application, or specific record using specified checks. • Run custom checks against your existing configurations. • Use as a tool in your development operations, release management, as well as pre- and post-upgrades. <p>See Instance Scan  for more information.</p>
<p>Integration Hub</p>	<ul style="list-style-type: none"> • Send REST requests with an updated REST step that supports dynamic base URLs, duplicate headers, and enhanced configuration options for multipart requests. • Use the logging utility module to add log levels to your PowerShell scripts for improved logging and debugging. • Import data with an updated Integration Hub - Import that supports connection override, Data Stream actions with dynamic outputs, and reference field specification in the target table. • Specify a MID cluster in integration steps. View details about the selected MID cluster in the operations view in Flow Designer.




Application or feature	Details
	See Integration Hub for more information.
Intelligent Service Delivery	<ul style="list-style-type: none"> • Have an enhanced employee experience when using Virtual Agent to complete common self-service HR tasks. • Enable employees to obtain near real-time responses to their queries through Issue Auto Resolution via their preferred channels. • Display 'Learning recommendations' to the employees when creating a journey for them, enabling them to see the relevant learning courses that they can take.
Investment Funding	See Investment Funding for more information.
Knowledge Management	<ul style="list-style-type: none"> • Set up 301 and 404 redirects for retired articles to improve search relevancy. • Initiate bulk translations of knowledge articles in multiple languages. <p>See Knowledge Management for more information.</p>
Legal Service Delivery	<ul style="list-style-type: none"> • Streamline the process for requesting and managing complaints by using the Legal Investigations application. • Provide a seamless user experience to your employees by using Universal Request to request services from the legal department. • Simplify legal document storage and retrieval by integrating with cloud storage providers to store legal matter documents. <p>See Legal Service Delivery for more information.</p>
Localization Framework	<ul style="list-style-type: none"> • Apply Localization Framework to surveys to reduce the time required for localization. • Translate knowledge base articles in bulk by adding Localization Framework support. • Increase user engagement by using email notification templates with Localization Framework. • Reduce the time and effort required to process your localization effort by auto-creating localization projects. <p>See Localization Framework for more information.</p>

Application or feature	Details
MID Server	<ul style="list-style-type: none"> • The MID Server can be configured for IPv6 to connect to the instance and use Discovery over IPv6 for specific addresses. • The MID Server has improved back-ups for the keystore, especially using custom keypairs, and can be quickly restored if it becomes corrupted or deleted. • You can now change the URL to check for install packages when upgrading or changing the MID Server. <p>See MID Server for more information.</p>
Manufacturing Process Manager	<ul style="list-style-type: none"> • Create, manage, and attach schedules with equipment model entities if you're a factory floor maintenance schedule planner. • Understand the relationships between your OT assets and equipment model entities when viewing the CI form in Workspace. • Automatically map your OT assets to the equipment model entities. <p>See Manufacturing Process Manager for more information.</p>
Mobile	<ul style="list-style-type: none"> • Manage workflows more efficiently in online and offline mode for Field Service Management experiences. • Locate and reserve indoor site assets, such as a desk or meeting room with the new ServiceNow[®] Indoor Mapping application that supports wayfinding. • Simplify your ServiceNow mobile app configuration with Mobile App Builder, which enables you to configure your apps with one unified tool. • Enable mobile app users with enhanced notifications and adaptive authentication, which makes it possible to connect to any IP-restricted environment. <p>See ServiceNow Mobile for more information.</p>
Natural Language Query	<ul style="list-style-type: none"> • Quickly find data and meta data by entering plain-language requests into the user interface. • Filter lists and tables with plain-language requests, removing the need to use the condition builder. • Query data in other ServiceNow features and applications, such as Configuration Management Database (CMDB) and Analytics Q&A. • Receive suggestions and provide feedback to queries to help improve NLQ on your instance.



Application or feature	Details
	<p>See Natural Language Query for more information.</p>
<p>Natural Language Understanding</p>	<ul style="list-style-type: none"> • Manage your intents and utterances more efficiently with improved guidance in the tool. • Review your Virtual Agent (VA) chat log feedback in the Expert Feedback Loop. • Publish your NLU models and corresponding Virtual Agent topics from within the Virtual Agent Designer application. <p>See Natural Language Understanding for more information.</p>
<p>Next Experience Components</p>	<ul style="list-style-type: none"> • Build rich UI experiences with pre-built base system or custom components. To view the full Next Experience Components API reference, usage guidance, and UI Builder setup documentation, visit the Developer site. • Use common web component patterns and principles, such as a JavaScript framework, immutable data, and simple action handlers. • Reuse components across multiple user interfaces to create a cohesive experience for your end users. • Use preset property values to configure properties and event handlers automatically for a component, making the component ready to work when you add it to a page. Presets connect to a controller that acts as a data resource for the component. For more information, see Component presets in UI Builder and Controllers.
<p>Next Experience user interface</p>	<ul style="list-style-type: none"> • Enable your users to locate search results more efficiently. • Provide your users with fewer clicks to access the items that they need to get working when they use the Next Experience user interface. • Improve communication and encourage collaboration between your agents and users. <p>See Next Experience UI for more information.</p>
<p>Notifications</p>	<ul style="list-style-type: none"> • Send and manage email notifications in different languages. • Support for authentication using client ID, client secret, and certificates via Microsoft Graph endpoints for inbound emails. • Decrypt and verify signs for inbound emails, and encrypt and sign outbound emails using S/MIME (Secure/Multipurpose Internet Mail Extensions). • Send and receive acknowledgment messages via messaging and chat channels.

Application or feature	Details
	<p>See Notifications  for more information.</p>
<p>Operational Resilience</p>	<ul style="list-style-type: none"> • Monitor the status of your business services, service incidents, outages, and open issues to see if they align with your supporting pillars (categories that are used to organize your risk data). • Assess the importance and the duration of the impact tolerance of your business services. • Review the status of risks, controls, and priority issues that are related to the supporting pillars that support your business services. • Analyze multiple failure scenarios to identify a single point of failure. <p>See Operational Resilience  for more information.</p>
<p>Operational Technology Incident Management v2</p>	<ul style="list-style-type: none"> • The Operational Technology Incident Management v2 application enables manufacturers to manage OT asset incidents from open to closure with these key features: <ul style="list-style-type: none"> ◦ Separate OT and IT incident data. ◦ Separate OT and IT incident processes. ◦ Assign a separate role for OT Incident Fulfiller. ◦ Configure OT-specific properties. ◦ Collaborate to resolve OT incidents via email notifications. ◦ Choose from the new Safety, Productivity, and Quality incident categories that are tailored for industries. ◦ Migrate incidents from v1 to v2 with a scheduled job. ◦ Migrate old OT user roles to new OT user roles with a scheduled job. ◦ Learn and find solutions for your site with read-only visibility for incidents reported at other sites. ◦ New workspace OT incident list menu items. ◦ New OT incident form look and feel. <p>See Operational Technology Incident Management  for more information.</p>
<p>Operational Technology Manager</p>	<ul style="list-style-type: none"> • Automatically map OT assets to the equipment model entities. • Effortlessly import OT assets via a Microsoft Excel spreadsheet validation tool. • Configuration Management Database (CMDB) OT class model updates and UI enhancements. <p>See Operational Technology Manager  for more information.</p>

Application or feature	Details
Operational Technology Vulnerability Response	<ul style="list-style-type: none"> • Set a start time for an OT remediation task. • Calculate the risk score at every entity level in an equipment model. • Roll up the overall risk score to the entity of the parent equipment model entity. <p>See Operational Technology Vulnerability Response  for more information.</p>
Order Management for Customer Service Management	<ul style="list-style-type: none"> • Enable cloud-based order creation and an order system. • Use a data model that works with external Configure, Price, Quote (CPQ) systems. • Let your agents manage all aspects of the order process. • Select configurable product offerings that have recurring pricing and customizable product arrangements. • Enable your customers to create and track orders from the user-friendly Customer Service Portal. • Capture your orders for all types of product configurations. <p>See Exploring Order Management  for more information.</p>
Order Management for Telecommunications, Media, and Technology	<ul style="list-style-type: none"> • Capture change and disconnect multi-site, multi-product customer and service orders using Order Capture UI. • Create and manage multiple versions of catalog entities such as, product offerings, product specifications, service specifications, and resource specifications using Catalog versioning feature. • Visualize the complete hierarchy of a product or service order with the statuses of order line items, decomposed orders, and order tasks on a single UI. • Access enhanced open APIs that are fully conformant with TMF. • Create and manage compatibility rules to define horizontal relationships among products, services, and resources specifications. <p>See Order Management for Telecommunications, Media, and Technology  for more information.</p> <ul style="list-style-type: none"> • Capture your changes and disconnect multi-site and multi-product customer and service orders by using the Order Capture user interface (UI). • Create and manage multiple versions of your catalog entities, such as the product offerings, product specifications, service specifications, and resource specifications, by using catalog versioning.






Application or feature	Details
	<ul style="list-style-type: none"> • Visualize the complete hierarchy of a product or service order by using a single UI to look at the status of your order line items, decomposed orders, and order tasks. • Access enhanced open APIs that fully conform with the Telemangement Forum (TMF). • Create and manage the compatibility rules so that you can define the horizontal relationships among your products, services, and resources specifications. <p>See Order Management for Telecommunications, Media, and Technology  for more information.</p>
Password Reset	<ul style="list-style-type: none"> • Get the experience of a new configuration that lets the Password Reset application integrate with credential stores that do not provide an API to reset passwords using ServiceNow[®] Robotic Process Automation. • Experience improved security to address user enumeration attacks on the password reset process. • Verify users with two new topic blocks in ServiceNow[®] Virtual Agent: Soft PIN and Short Message Service (SMS). • Let users create multiple credential store connections and map these connections to a password reset credential store during configuration so that it can be consumed during the run time. • Set a password reset history value in the <code>password_reset.history.limit</code> property. This property checks the history of previous passwords based on the specified value. • Configure the third-party credential stores to set the password reset, password change, and account unlock actions independent of each other. <p>See Password Reset  for more information.</p>
Patient Support Services	<ul style="list-style-type: none"> • Agent connectors and contributors for enrollment cases • Domain separation support in Patient Support Services <p>See Patient Support Services  for more information.</p>
Performance Analytics	<ul style="list-style-type: none"> • Track critical process metrics and trends. • Measure process health and behavior against organizational targets. • Identify process patterns and potential bottlenecks before they occur. • Continually visualize historical and real-time process statistics in role-based dashboards. The dashboards enable individual stakeholders to make informed decisions.


Application or feature	Details
	<p>See the Performance Analytics landing page for more information.</p>
<p>Personal Lines Claims</p>	<ul style="list-style-type: none"> • Use the strong claims data model to build any claims service. • Manage claims workflows using cases within a dedicated application and centralized visualization of all claim records for a customer. • Use dedicated playbooks and workspaces built for various claim personas. • Monitor key statistics and track performance with ServiceNow® Performance Analytics and ServiceNow® Process Optimization. • Follow a base system workflow for first notice of loss to claim closure for personal auto claims. <p>See Personal Lines Claims for more information.</p>
<p>Platform Analytics Workspace</p>	<ul style="list-style-type: none"> • Build data visualizations for any data source in a single place. • Create and consume configurable workspace dashboards, with a unified filter and flexible configuration. • Easily share configurable workspace dashboards and visualizations. • View all configurable workspace dashboards from any workspace in a single location. <p>See Performance Analytics and Reporting for Workspace for more information about using this workspace in runtime.</p> <p>See the Next Experience Components reference in the ServiceNow® Developer Site for information about configuring the reusable components in this workspace.</p>
<p>Platform Security</p>	<ul style="list-style-type: none"> • Use data privacy for data anonymization to protect sensitive user data so that it is no longer considered regulated private information. • Use data filtration to deny access to tables and records based on subject conditions when performing read queries. • Security Center is a new app that will replace the Instance Security Center in the future. There is new functionality and user experience that will continuously maintain the highest level of security posture and easily monitor for insecure events and behaviors. <p>See Platform Security for more information.</p>

Application or feature	Details
<p>Policy and Compliance Management</p>	<ul style="list-style-type: none"> • Use the IT compliance workspace to manage your organization's IT related compliance activities. • Evaluate the compliance status of DevOps policies and GRC control objectives integrating with Policy as a Code Engine (PaCE). • Take advantage of Advanced Risk Assessment to enhance risk assessment in policy exceptions. • Set access control imitations at the record level to allow only certain users to securely access the record. • Monitor and revise your organization's policies periodically to avoid audit and compliance risks. <p>See Policy and Compliance Management  for more information.</p>
<p>Pre-Visit Management</p>	<ul style="list-style-type: none"> • Agent connectors and contributors for procedure request cases • Domain separation support in Pre-Visit Management <p>See Pre-Visit Management  for more information.</p>
<p>Proactive Service Experience Workflows</p>	<ul style="list-style-type: none"> • The Decision Table has been upgraded to the Decision Builder and the Assignment Group on an incident record is now dynamically updated. • Added new functionalities to the Incident Management application: <ul style="list-style-type: none"> ◦ The Needs Attention flag is turned on when an incident is created or an escalation is raised on an incident. ◦ The Needs Attention flag is turned off when an incident is updated by an assigned user or a user from the assigned group. ◦ Auto-closure of the related cases when an incident is set to Resolved. ◦ Synchronization of additional comments between the cases and incidents. • Enhanced functionalities on the Service Operations Workspace are: <ul style="list-style-type: none"> ◦ A New Affected Accounts impact card with the following related action: <ul style="list-style-type: none"> ▪ Identify Affected Accounts: Refreshes the impacted services and identifies the impacted customers. ◦ A New Cases impact card with the following related list of actions:

Application or feature	Details
	<ul style="list-style-type: none"> ▪ Generate Proactive Cases: Creates or updates the cases for the affected accounts. ▪ Notify Customers: Enables Network Operations Center (NOC) agents to communicate with the affected customers through proactive cases. <p>See Proactive Service Experience Workflows for more information.</p>
<p>Process Automation Designer</p>	<ul style="list-style-type: none"> • Duplicate an existing process to copy its trigger, lanes, activities, and experience configuration. • Use reference qualifiers to view only what you want to see in reference fields. • Navigate better organized Activity properties in General, Automation, and Experience tabs. • Configure Activity properties without needing to leave Process Automation Designer to find action and flow outputs. • Go directly to an activity's source flow in Flow Designer in Activity properties. <p>See Process Automation Designer for more information.</p>
<p>Process Optimization</p>	<ul style="list-style-type: none"> • Mine multiple interconnected processes in one model so that it is easier to visualize and optimize connected workflows. • Use Process Optimization for Employee workflow (On boarding, Core HR Services) and App Engine workflows. • Provide managers visibility and understanding of how support teams are working by using Integrate Process Optimization with Workforce Optimization. <p>See Process Optimization for more information.</p>
<p>Procurement Service Management</p>	<ul style="list-style-type: none"> • Manage a catalog of goods and services that your employees can use to order items that they need for their jobs. • Simplify and streamline the way employees request help in sourcing or procuring goods and services. • Provide transparency into the procurement process with regular updates. • Automate the end-to-end procurement process workflows, from sourcing through requisitioning, to order fulfillment, receipt, and payment. • Enable Procurement Specialists to source, negotiate, procure goods and services for an organization, and work on procurement tasks.





Application or feature	Details
	<p>See Procurement Service Management Sourcing and Procurement Operations for more information.</p>
Project Portfolio Management	<ul style="list-style-type: none"> Securely access and view your reports on the various dashboards using the enhanced report_view access control lists (ACLs). Integrate ServiceNow® Scenario Planning for PPM with the ServiceNow® Investment Funding ServiceNow Store application to synchronize the data between the two ServiceNow Store applications. View actual costs, budget, variance, and forecasting metrics (EAC and ETC) by fiscal periods on the Overview tab to better manage your project financial forecasting. Export a project from Project Workspace or project status report as a Microsoft PowerPoint file using the ServiceNow® Export to PowerPoint for Strategic Portfolio Management application. <p>See Project Portfolio Management for more information.</p>
Project Workspace	<ul style="list-style-type: none"> Improve visibility into task dependencies by adding external dependencies to the project. Save time by nesting multiple project tasks as child tasks or deleting multiple project tasks at once. Use Export to PowerPoint for Strategic Portfolio Management add-in to export your project as Microsoft PowerPoint file. <p>For more information, see Project workspace.</p>
Public Sector Digital Services	<ul style="list-style-type: none"> Provide digital services tailored for constituent businesses such as small businesses, non-profit or for-profit organizations, and educational institutions. Improve efficiency by implementing a shared service model that supports government agencies, citizens, businesses, and visitors. Resolve non-emergency service requests quickly, consistently, and efficiently by providing a Service Request Playbook to agents that automates the process for handling those requests. <p>See Public Sector Digital Services for more information.</p>
Redox Inbound Integration	<ul style="list-style-type: none"> Enables electronic medical records (EMR) and electronic health records (EHR) healthcare systems to integrate with the ServiceNow® Healthcare and Life Sciences data model. This data model is based on the Health Insurance Portability



Application or feature	Details
	<p>and Accountability Act (HIPAA) and the Health Level Seven International (HL7) industry standards.</p> <ul style="list-style-type: none"> • Avoids the cost and complexity of implementing point-to-point integrations by enabling bidirectional integration between multiple EMR systems and a ServiceNow instance. <p>See Redox Inbound Integration  for more information.</p>
SPM Benchmarks	<ul style="list-style-type: none"> • Increase efficiency by viewing a comparative insight relative to the industry averages of your peers. • Track your KPIs and compare them against benchmarks to evaluate your performance for continuous improvement. • Instant visibility into your KPIs. <p>See SPM Benchmarking  for more information.</p>
Scaled Agile Framework (SAFe)	<p>Experience the ServiceNow SAFe applications in a modernized UI.</p> <p>See Scaled Agile Framework (SAFe)  for more information.</p>
Security Incident Response	<p>Security Incident Response Workspace</p> <ul style="list-style-type: none"> • DLP Incident Response integration with Microsoft <ul style="list-style-type: none"> ◦ Integrate with Microsoft to import Data Loss Prevention (DLP) incidents from multiple sources such as Microsoft purview apps (Microsoft Teams, Exchange Online, SharePoint Online, OneDrive for Business) and endpoint devices. <p>See Data Loss Prevention Incident Response with Microsoft </p> • Splunk OAuth Authentication <p>Splunk Enterprise base Add-on is enhanced to support OAuth authentication.</p> <ul style="list-style-type: none"> • See Set up the ServiceNow Security Operations add-on for Splunk  • Link and unlink additional records from the Major Security Incident Management workspace for the Security incidents and Remediation tasks (VR). With the sn_msi.workspace_manager role, you can use the new roll-up framework capability model to configure your linked records that roll up the information from your additional records to the Major Security Incident workspace. • Proactively inspect, analyze, and contain the known or unknown threats on any endpoint by using the Microsoft Defender for Endpoint integration.

Application or feature	Details
	<ul style="list-style-type: none"> • Review and manage a remediation workflow of Data Loss Prevention (DLP) incidents from multiple sources, such as an endpoint, network, email, or cloud by using the Data Loss Prevention Incident Response Incident Response application. • Enable API integration with Symantec so that your organization can import Data Loss Prevention Incident Response (DLP) incidents for endpoint, network, and email into the Now Platform. With this integration, you can enable an incident remediation workflow that involves your end users or employees, managers, and DLP analysts. • Integrate with Proofpoint to provide an incident response workflow for email, endpoint, and cloud DLP IR. • Integrate with Netskope to provide an incident response workflow for cloud DLP IR. <p>See Security Incident Response  for more information. Security Incident Response is available in the ServiceNow Store.</p>
Service Bridge (Technology)	<ul style="list-style-type: none"> • Provide your users with the required access to create requests and orders from the published items in the service catalog on the customer's instance. • Resolve and fulfill multiple customer tasks, such as incidents, cases, and service requests, between ServiceNow instances. • Enable a customer to read the choice list for a catalog reference field directly from the provider's ServiceNow instance. • Enable a provider or a customer to transform the inbound and outbound data for remote tasks.
Service Bridge (Telecommunications)	<ul style="list-style-type: none"> • Provide your users with the required access to create requests and orders from the published items in the service catalog on the customer's instance. • Resolve and fulfill multiple customer tasks, such as incidents, cases, and service requests, between ServiceNow instances. • Enable a customer to read the choice list for a catalog reference field directly from the provider's ServiceNow instance. • Enable a provider or a customer to transform the inbound and outbound data for remote tasks.
Service Catalog	<ul style="list-style-type: none"> • Configure the Catalog Builder experience for catalog item editors. • Transfer catalog items published through Catalog Builder easily using exclusive update sets. • Monitor aggregated catalog item data using the Service Catalog Overview dashboard.

Application or feature	Details
	<ul style="list-style-type: none"> Request catalog items from Virtual Agent in Service Portal in a more efficient way. Configure the default value for a question in Catalog Builder. <p>See Service Catalog for more information.</p>
<p>Service Graph Connector Integration for Claroty CTD</p>	<ul style="list-style-type: none"> Import Claroty CTD sites (sensor appliances) and take advantage of metadata assignment capabilities. Import baselines (connections between OT assets). Import Installed Programs (software). Restrict users access to detected OT assets on a per-industrial site basis. Import OT assets detected by Claroty CTD sites with validated records automatically and assign them localized, contextual metadata (like location and support groups). Support the import of OT-specific attributes, including zone and Purdue Level, to define different levels of critical infrastructure. Create embedded OT Control Modules with relationships to the parent OT Control System, which can also be used to understand the context. Reconcile data from additional sources like ServiceNow[®] Discovery in the Multisource CMDB. <p>See Service Graph Connector Integration for Claroty CTD for more information.</p>
<p>Service Operations Workspace for ITSM</p>	<ul style="list-style-type: none"> Prioritize issues for tier-2 agents through an overview of outages, service announcements, and assignments. Improve the incident resolution time by investigating it using the metrics data collected from Agent Client Collector (ACC). Starting in version 1.3, experience Unified Navigation searches using AI search in Service Operations Workspace. <p>See Service Operations Workspace for ITSM for more information.</p>
<p>Service Portal</p>	<ul style="list-style-type: none"> Track user experience analytics for authenticated users by default to better understand the Service Portal user experience and identify how to improve it. Provide portal content in the languages or locales both guest and authenticated users prefer with a locale selector or language URL query parameter. <p>See Service Portal for more information.</p>

Application or feature	Details
Service Portfolio Management	<ul style="list-style-type: none"> • View availability results. • Convert services in bulk. <p>See Service Portfolio Management for more information.</p>
Sitemap Generator	<ul style="list-style-type: none"> • Create XML sitemaps for web crawlers to index your public portal pages and improve SEO for your portals. • Sitemaps automatically regenerate daily based on all active sitemap definitions. <p>See Sitemap Generator for more information.</p>
Software Asset Management	<ul style="list-style-type: none"> • Elevate your user experience by using the Contract renewal workflow to renew your software contracts, the Asset Management Executive dashboard to get visibility into IT Asset Management key performance indicators (KPIs), and the Success portal to track the progress of your Software Asset Management goals. • Streamline the integration of your SaaS applications through the SaaS playbook and optimize your SaaS spend by managing licenses for Workday applications. • Track and optimize your perpetual software licenses by using unlimited licensing support and publisher-based enhancements for IBM, Oracle, and Microsoft. • Evaluate the costs of migrating your on-premise resources to public cloud platforms with the Cloud Insights and Cloud Migration Assessment applications. <p>See Software Asset Management for more information.</p>
Studio	<ul style="list-style-type: none"> • Reduce the flags in your commit operations. • Convert your company-owned applications that are installed from the Studio application repository from a published application back to the in-development mode state. <p>See ServiceNow Studio for more information.</p>
Subscription Management	<ul style="list-style-type: none"> • Give your users the access they need by granting licenses to ServiceNow subscriptions and applications. • Oversee the installation and use of applications, plugins, and tables on your instances. • Track subscriptions, users, and custom resources to stay within compliance and help you make decisions about your subscription purchases.



Application or feature	Details
	<p>See Subscription Management  for more information.</p>
<p>Supplier Lifecycle Management</p>	<ul style="list-style-type: none"> • Manage supplier data, contacts, and performance to boost productivity of teams who engage with suppliers. • Resolve supplier inquiries and requests using services that orchestrate complex, cross-functional workflows, thus increasing team productivity. • Compare suppliers and establish corrective action plans for poor performers to mitigate risks. • Streamlined process to orchestrate supplier onboarding activities. • Automate supplier activation across disparate systems. • Consolidate supplier data with processes that drive ongoing updates and compliance across your supplier network. <p>See Supplier Lifecycle Management Supplier Lifecycle Operations  for more information.</p>
<p>Table Builder</p>	<ul style="list-style-type: none"> • The application name was changed from “AES Table Builder” to “Table Builder” in the ServiceNow Store. • Make fields on a form inactive and prevent them from appearing in the available list of fields in the form editor. Inactive fields may be reactivated from the Table tab. • Access a new forms list view through an additional actions menu on the Forms tab in Table Builder. • Find specific field columns using search keywords or filtering with the improved navigation on the Table tab. <p>See Table Builder  for more information.</p>
<p>Table Builder for App Engine</p>	<ul style="list-style-type: none"> • This application includes all features and changes in the standard Table Builder release notes (see Table Builder release notes). • Build custom flows that run when records on a selected table are created and updated. • Create data tables for your application from existing PDF forms in App Engine Studio when you have Table Builder for App Engine installed. <p>See Table Builder  for more information.</p>
<p>Technology Provider Service Management</p>	<ul style="list-style-type: none"> • Enable your users to have the required access to create requests and orders from the published items in the service catalog on the customer's instance. • Resolve and fulfill multiple customer tasks, such as incidents, cases, and service requests, between ServiceNow instances.

Application or feature	Details
	<p>See Technology Provider Service Management  for more information.</p>
<p>Telecommunications Network Inventory</p>	<ul style="list-style-type: none"> • Define a catalog of inventory functions and subflows to execute the network inventory design and assign activities via user-defined flows/subflows. • Initiate change requests in the Telecommunications Network Inventory application for the order tasks of Order Management for Telecommunications and Media application with the help of OMT - TNI integration. • Create various CI inventory group of and apply actions to the group of CIs using inventory group in workspace. • Define managed network functions to manage and track your network functions that are delivered through Virtual Network Functions(VNF) and Cloud-native Network Functions (CNF). • Define your servers, virtual machines, kubernetes cluster, and kubernetes pod to track and manage their CIs. Install Discovery and Service Mapping Patterns (com.sn_itom_pattern) plugin from ServiceNow Store to see kubernetes cluster and pod CIs in your instance. • Define the IP addresses from network inventory workspace to help you track and manage all IP addresses. • Define the inventory models from network inventory workspace to help you track the technical information from the manufacturer about the equipment, including compatibility and physical characteristics. • Define the network inventory templates and their relationships to each other for use in the equipment instantiation process. • Instantiate your network inventory assets by using templates, the Change model process, and the Template API. • Design and assign your network inventory resources to build a digital representation of your networks. • View the network inventory data that is associated with the sites, inventory resources, and assets by using the User Interface Builder-based Network Inventory Workspace. <p>See Telecommunications Network Inventory  for more information.</p>

Application or feature	Details
<p>UI Builder</p>	<ul style="list-style-type: none"> • Simplify how your users can create a page. Your users can create record pages faster with the new Standard Record page template and blank record page template. • Enable preset auto-configure components for your users. • Reduce the cost of ownership and provide easier page maintenance for your users. • Provide upgrade-safe templates for your users. <p>See UI Builder for more information.</p>
<p>Universal Request</p>	<ul style="list-style-type: none"> • Use the ability to create a Universal Request record through any channel to provide a seamless employee experience. • Create associated tickets for universal request and enable multiple departments work simultaneously. <p>For more information, see Universal Request.</p>
<p>Upgrade Center</p>	<ul style="list-style-type: none"> • Explore the different release versions available to you in the Upgrade Preview module. • Gain insights about the upgrade experience without actually upgrading your instance. • Monitor the status of any ongoing upgrade and view the summary of your latest upgrade in the Upgrade Monitor module. • View all your past upgrades in the Upgrade History module. • Accelerate your upgrades using the Upgrade Plan feature. <p>See Upgrade Center for more information.</p>
<p>User Experience Analytics</p>	<ul style="list-style-type: none"> • Add User Experience Analytics as a data source into the data visualization components of the UI Builder. • Automatic activate the User Experience Analytics tracking capability for Service Portals. • View a new and modernized look to the UI. <p>See User Experience Analytics for more information.</p>
<p>Vaccine Administration Management</p>	<ul style="list-style-type: none"> • Scoped caching is supported to increase application performance and efficiency. • Domain separation support in Vaccine Administration Management. <p>See Vaccine Administration Management for more information.</p>

Application or feature	Details
Vendor Management Workspace	<ul style="list-style-type: none"> • Clone and then configure the Vendor Management Workspace pages by using the Next Experience UI Builder . • Access context-sensitive help by using the Help panel in every Vendor Management Workspace screen. You can edit the content and personalize it to fit your needs. <p>See Vendor Management Workspace for more information.</p>
Virtual Agent	<ul style="list-style-type: none"> • Enable dynamic language detection and machine translation in Virtual Agent conversations, using services such as Google Translate or Microsoft Translator. • Create topics in the Virtual Agent Designer simplified interface, including improved yes/no handling and support for variations in bot response. • Specify Google Dialogflow Essentials (ES) as the NLU provider for Virtual Agent, in addition to existing providers, such as IBM Watson or Microsoft LUIS. • Configure branding for your Slack application and accelerate the conversational experience with Virtual Agent. • Introduction of end-user friendly channel names and destination types for the third-party applications integrated with Virtual Agent. <p>See Virtual Agent for more information.</p> <p>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.</p>
Visual Task Boards	<ul style="list-style-type: none"> • View and update multiple task records, which appear as cards that can be moved between lanes. • Track updates and edit records directly from the board. • Use a graphic-rich environment for managing and collaborating on records. <p>See Visual Task Boards for more information.</p>
Vulnerability Response	<ul style="list-style-type: none"> • Starting with version 19.0 of Vulnerability Response, view the dashboards in the Vulnerability Response Workspaces. • Starting with version 19.0, assess the exposure of your assets to zero-day vulnerabilities by using the Vulnerability Analyst Workspace. <p>See About the Vulnerability Response application for more information.</p>

Application or feature	Details
<p>Vulnerability Response Integration with Microsoft Defender for IoT</p>	<ul style="list-style-type: none"> • Import the vulnerabilities from detected OT assets already imported using the ServiceNow® Service Graph Connector Integration with Microsoft Defender for IoT into the ServiceNow® Operational Technology Vulnerability Response application to take risk-based action with the production process context. • Imports the detected vulnerabilities automatically on your own schedule. • Automatically routes the vulnerable items for remediation to local site-based teams to take risk-based action. <p>See Operational Technology Vulnerability Response for more information.</p>
<p>Vulnerability Response integrations</p>	<ul style="list-style-type: none"> • Use the# Vulnerability Response# integration with the CISA Known Exploited Vulnerabilities (KEVs) catalog to ingest data to help you effectively prioritize and remediate vulnerabilities. • Starting with version 2.2, Microsoft Azure Security Center is renamed to Microsoft Defender for Cloud Integration for Security Operations. • Introduced the base system CI lookup rules, Name and S3 Bucket for Microsoft Azure Security Center and Palo Alto Prisma Cloud. <p>See Vulnerability Response integrations for more information.</p>
<p>Walk-up Experience</p>	<ul style="list-style-type: none"> • Optimize the efficiency of a Walk-up location by accepting appointment bookings based on the reason for the visit. • Configure variable time slots based on the reason selected. • Enhance the check-in experience of requesters at a location with improved badge reader integration. <p>See Exploring Walk-up Experience for more information.</p>
<p>Workforce Optimization for Customer Service</p>	<ul style="list-style-type: none"> • Use Demand Forecast to enable managers to view their agent staffing forecast at 15-, 30-, and 60-minute intervals. <p>See Exploring Workforce Optimization for Customer Service for more information.</p>
<p>Workforce Optimization for ITSM</p>	<ul style="list-style-type: none"> • Assign any type of work item that is based on your teams' skills and available capacity by using the calendar in . • Empower your teams to sign up for shifts that are based on their availability and preference. • Enable your agents to assess their skill proficiency that is based on your request in Service Operations Workspace. You can approve

Application or feature	Details
	<p>or reject skills. Agents can also request the review of new skills that they have been using to be added to their profile.</p> <ul style="list-style-type: none"> • Capture and analyze feedback by using surveys. • Monitor improvement opportunities in Workforce Optimization for ITSM by using Process Optimization. • Create learning paths and monitor the progress that your teams have made to learn new content. You can also provide your teams with a guided path so that your teams can achieve advanced skills and competencies. <p>See Workforce Optimization for ITSM  for more information.</p>
Workspace	<ul style="list-style-type: none"> • Improvements to enhance usability by streamlining searches and providing larger previews of results for images in the activity stream. • Ability to filter records even if the column you want to use as a filter is not currently on screen. <p>See Workspace UI  for more information.</p>

Upgrade information for all Tokyo features and products

Cumulative release notes summary on upgrade information for Tokyo features and products.









Before you upgrade to Tokyo, review the upgrade information for any products you may have. Some products require you to complete specific tasks before you upgrade.

Application or feature	Details
AI Search	<p>When you upgrade to Tokyo from a previous release, AI Search automatically reindexes content and metadata from the indexed sources for the Catalog Item [sc_cat_item] and Knowledge [kb_knowledge] tables. This one-time reindexing process is required to enable search experience improvements in this release.</p> <p>When you view or edit search application configurations after upgrading to Tokyo from a previous release, the system may display a warning message telling you to reindex one or more indexed sources. This reindexing process (a one-time process for each indexed source listed) is required to populate search-based auto-complete suggestions correctly.</p> <p>After you upgrade to Tokyo from a previous release, the default relevancy scores for your search results may change. Relevancy models trained in the previous release should continue to produce the same result ordering. Models trained more than one release ago may revert to the default relevancy model.</p> <p>AI Search report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by</p>

Application or feature	Details
	default in the Tokyo release. For more information, see Report_view access control .
Admin Center	The latest version of the Admin Center application is available in the ServiceNow Store.
Application Portfolio Management	Application Portfolio Management report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control .
Assessments and Surveys	When you upgrade to Tokyo from a previous release, Assessments and Surveys is activated by default on Service Portal and the Now Mobile app.
Authentication	Authentication report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control .
Automated Test Framework	<p>Copy and customize quick start tests provided by the Now Platform® to validate that your instance works after you make any configuration changes. For example, if you apply an upgrade or develop an application.</p> <p>The tests can produce a pass result only when you run them on a base system without any customizations and with the default demo data that is provided with the application or feature plugin. To apply a quick start test to your instance-specific data, copy the quick start test and add your custom data. For more information, see Available quick start tests by application or feature.</p>
Cloud Provisioning and Governance	Cloud Provisioning and Governance report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control .
Configuration Compliance	<ul style="list-style-type: none"> • Due to a data model change in the Configuration Compliance application, upgrading might take noticeably longer than previous upgrades. For more information, see KB0856498. • If you have previously downloaded the application from the ServiceNow Store and a new version is available, you can update it in your Now Platform instance. • For more information about released versions of the Configuration Compliance application, as well as third-party and ServiceNow applications that are compatible with Tokyo, see the Vulnerability

Application or feature	Details				
	<p>Response Compatibility Matrix and Release Schema Changes [KB0856498] ↗ article in the HI Knowledge Base.</p> <ul style="list-style-type: none"> For information about updates to third-party applications that are supported by Vulnerability Response and Configuration Compliance, see Vulnerability Response integrations release notes. <p>Upgrade information for Configuration Compliance to Tokyo</p> <table border="1" data-bbox="517 478 1385 695"> <thead> <tr> <th data-bbox="517 478 679 525">Version</th> <th data-bbox="679 478 1385 525">Upgrade description</th> </tr> </thead> <tbody> <tr> <td data-bbox="517 525 679 695">14.3</td> <td data-bbox="679 525 1385 695"> <p>Certified for Tokyo in the ServiceNow Store.</p> <p>See the following section called "New in the Tokyo release" for more information.</p> </td> </tr> </tbody> </table>	Version	Upgrade description	14.3	<p>Certified for Tokyo in the ServiceNow Store.</p> <p>See the following section called "New in the Tokyo release" for more information.</p>
Version	Upgrade description				
14.3	<p>Certified for Tokyo in the ServiceNow Store.</p> <p>See the following section called "New in the Tokyo release" for more information.</p>				
Conversational Interfaces Home	<p>Conversational Interfaces Home is included with the Tokyo release, so existing customers don't need to install it. However, it is also available as an app from the ServiceNow Store, and subsequent updates should be installed from there.</p>				
Core Now Platform	<p>To opt in to log protection, install the Protected Tables plugin (com.glide.protected_tables) that enables the platform to restrict update and delete operations on certain system log tables. Admins can customize the log table protection rules for each table in the Log Protection Admin panel.</p> <p>Core Now Platform report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control ↗.</p>				
Customer Service Management (CSM)	<p>Customer Service Management report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control ↗.</p>				
Employee Journey Management	<p>HR Service Delivery report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control ↗.</p>				
Encryption Key Management	<p>Encryption contexts will automatically convert to Column Level Encryption field encryption modules and corresponding module access policies on the upgrade beginning with the San Diego release. A guided tour explaining this enhancement is available from the dashboard.</p> <p>Encryption Key Management report_view access control lists (ACLs) that govern who can see reports in dashboards and</p>				

Application or feature	Details
	<p>elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control.</p>
Flow Designer	<p>Flow Designer report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control.</p> <p>You can allow instances upgraded from San Diego and earlier releases to generate restricted caller access privilege requests for flows and actions. For more information about enabling access privileges for flows and actions, see Upgrade restricted caller access privileges for flows and actions.</p> <div style="background-color: #ffffcc; padding: 10px;"> <p>⚠ Warning: Upgrading restricted caller access privileges to track flows and actions can cause service disruptions on instances that previously tracked cross-scope access from script includes or business rules. After upgrade, all flows and actions that attempt to access restricted resources will be blocked from running and instead generate their own restricted caller access privilege requests for approval. Someone must approve the access privilege requests before cross-scope flows and actions can run. Customers who already allowed indirect tracking of flows and actions using script calls may want to skip this task and continue calling flows and actions from scripts. Customers who want to replace their existing access privileges with the new Flow and Flow Action source types may want to schedule an outage to generate and approve the new access privilege requests.</p> </div>
Governance, Risk, and Compliance	<p>Starting with Governance, Risk, and Compliance version 14.0, the business user (sn_grc.business_user) role is removed from the GRC Reader (sn_grc.reader) role and added to GRC user (sn_grc.user) role. For more information, see KB1123608.</p>
HR Service Delivery Case and Knowledge Management	<p>HR Service Delivery report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control.</p>
Health Log Analytics	<p>If your Health Log Analytics version is earlier than February 2022, contact Now Support or your ServiceNow sales representative to request an upgrade for the Health Log Analytics application core components.</p>
ITOM Visibility	<p>ITOM Visibility report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control.</p> <p>After upgrading to Tokyo, the install status is automatically set to “Installed” (“1”) for all discovered infrastructure CIs. If your</p>

Application or feature	Details
	<p>organization uses the install status, test Tokyo on your test instance before upgrading the production instance.</p> <p>Use the CSDM lifecycle status for tracking life cycle stages and stage statuses for CIs. For more info, see:</p> <p>To resolve issues related to the install status after upgrading to Tokyo, see KB1213467 .</p>
Import and Export	<p>Import and Export report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control .</p>
Incident Management	<p>Incident Management report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control .</p>
Instance Data Replication	<p>Instance Data Replication report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control .</p>
Instance Scan	<p>Instance Scan report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control .</p>
Integration Hub	<p>Integration Hub report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control .</p>
Intelligent Service Delivery	<p>HR Service Delivery report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control .</p>
Knowledge Management	<ul style="list-style-type: none"> • Knowledge Management report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control . • Starting from the Tokyo release, the upgraded version Angular JS 1.5.11 is available with the base system.
Legal Service Delivery	<p>Before upgrading Legal Service Delivery to Tokyo, you must set the value of the <code>glide.rollback.blacklist.TableParentChange.change</code> system</p>

Application or feature	Details
	<p>property to false. If this property doesn't exist in the System Property [sys_properties] table, add the property and set its value to false.</p> <p>After the upgrade, some tables installed with Legal Request Management, Legal Digital Forensics, and Legal Simple Contracts applications extend the Application File [sys_metadata] table to enable seamless migration of Practice Areas, Intake Forms, Contract configurations, and Forensic configurations into update sets.</p> <p>If you upgrade to the Tokyo version without updating the system property value, the tables will not extend the Application File table. To manually update the table changes, see the Manual upgrade steps for reparenting table changes in Tokyo [KB1163388] article in the Now Support Knowledge Base.</p>
MID Server	<p>For the latest MID Server system requirements, see MID Server system requirements. The following Java Runtime Environment (JRE) versions are supported:</p> <ul style="list-style-type: none"> • JRE11: Beginning with version 11.0.15 • JRE8: Beginning with version 1.8.0_275 <p>If you have installed your own JRE, the upgrade process takes the following actions to ensure that the MID Server uses a supported JRE:</p> <ul style="list-style-type: none"> • If a MID Server is using an unsupported version of the JRE when it upgrades, the upgrade process replaces that JRE with the OpenJDK bundled with the MID Server installer. • If a supported JRE is running on the MID Server host, the upgraded MID Server uses that version. <p>All MID Server host machines require access to the download site at install.service-now.com to enable auto-upgrades. For additional details, read how the system manages MID Server upgrades.</p> <p>Only one Windows MID Server service is permitted per executable path. Upgraded Windows MID Servers that have multiple services pointing to the same installation folder cannot start. See MID Server fails to start for more information.</p> <p>For more information about MID Server upgrades, see the following topics:</p> <ul style="list-style-type: none"> • MID Server pre-upgrade check: Describes how the AutoUpgrade monitor tests the MID Server's ability to upgrade on your system before the actual upgrade. • Upgrade the MID Server manually: Describes how to upgrade your MID Servers manually.
Mobile	<p>Migrate from the ServiceNow Classic mobile app to the ServiceNow Mobile Platform to take advantage of features such as rapid development, offline capability, and integration with native mobile</p>

Application or feature	Details
	<p>device features. For details on migrating to the ServiceNow Mobile Platform, see Migrate from the ServiceNow Classic mobile app to the ServiceNow Mobile Platform.</p> <p>ServiceNow Mobile Platform report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control.</p>
Operational Technology Incident Management v2	<p>If you're an Operational Technology Incident Management user on previous releases, you must assign new Operational Technology Incident Management v2 roles to users originally assigned the OT Incident User (ot_incident_user) role. For more information, see Assign new Operational Technology Incident Management roles.</p>
Password Reset	<p>Password Reset report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control.</p>
Project Portfolio Management	<p>Project Portfolio Management report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control.</p> <p>When you upgrade Scenario Planning for PPM to version 2.3.0 or later, you must upgrade the legacy Investment Funding application to the ServiceNow Store for the integration to work. For detailed instructions on upgrading from the legacy Investment Funding application to the ServiceNow Store application, see upgrade instructions.</p>
Service Bridge (Technology)	<p>To upgrade to the Tokyo version of the Service Bridge applications, see the Service Bridge- Upgrade steps for San Diego store release to Tokyo store release [KB1120583] article in the Now Support Knowledge Base.</p>
Service Bridge (Telecommunications)	<p>To upgrade to the Tokyo version of the Service Bridge applications, see the Service Bridge- Upgrade steps for San Diego store release to Tokyo store release [KB1120583] article in the Now Support Knowledge Base.</p>
Service Portal	<p>Report_view ACLs enabled with upgrade</p> <p>Service Portal report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control.</p> <p>Report_view ACLs were previously enabled for new (zBoot) instances.</p>

Application or feature	Details
	<p>Note:</p> <p>For a list of Service Portal report_view access control lists (ACLs), navigate to All > System Security > Access Control (ACL) and use the condition builder to add the following filter: [Operation] [is] [report_view] AND [Package] [contains] [service portal] AND [Package] [is not] [Service Portal - Standard Ticket].</p> <p>User Experience Analytics tracking enabled by default</p> <p>The Service Portal Analytics plugin (com.glide.service-portal.analytics) is activated by default, and User Experience Analytics tracking for portals is on by default.</p> <p>For upgrade customers who previously enabled User Experience Analytics tracking for some portals but not others, tracking settings for portals will not change after upgrading.</p> <p>TinyMCE 5 upgrade</p> <p>The TinyMCE HTML editor has been upgraded to version 5.10.2. If you have a customized TinyMCE implementation using Angular Providers in Service Portal, see Changes in TinyMCE 5 for information about upgrading your customized version.</p>
Software Asset Management	For information about upgrading from the Software Asset Management Foundation plugin (com.snc.sams), see Revert Software Asset Management customizations .
Subscription Management	Subscription Management report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control .
Upgrade Center	Upgrade Center report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control .
User Experience Analytics	User Experience Analytics report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control .
Vendor Management Workspace	Vendor Management Workspace report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control .

Application or feature	Details
Virtual Agent	<ul style="list-style-type: none"> • New Portable Virtual Agent Web Client, a Seismic component, simplifies adding Virtual Agent to a third-party website. The legacy method of embedding Virtual Agent in a third-party web page will continue to work. • In previous releases, Virtual Agent Designer topic blocks and custom controls were published in the Global scope. In this release, topic blocks and custom controls are now included in the scope of the calling topic.
Visual Task Boards	<p>Visual Task Boards <code>report_view</code> access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control.</p>
Vulnerability Response	<p>When you upgrade the Vulnerability Response application from older versions to version 15.x, the default remediation task rule in the base system is deactivated. For more information, see Vulnerability Response Workspaces and updates to remediation task and remediation task rules.</p> <p>Vulnerability Response <code>report_view</code> access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control.</p> <ul style="list-style-type: none"> • When you upgrade to a new version of the Vulnerability Response application, your new version is available on your instance and ready for installation. Updates to Vulnerability Response are available in the ServiceNow® Store. • For more information about released versions of the Vulnerability Response application, compatibility with Tokyo, and schema changes, see the Vulnerability Response compatibility Matrix and Release Schema Changes [KB0856498] article in the HI Knowledge Base. <p>When you upgrade to version 18.0 of the Vulnerability Response on Rome, Vulnerability Manager Workspace is not supported.</p>
Vulnerability Response integrations	<ul style="list-style-type: none"> • For more information about the released versions of the Vulnerability Response application, as well as third-party and ServiceNow applications that are compatible with Tokyo, see the Vulnerability Response Compatibility Matrix and Release Schema Changes [KB0856498] article in the HI Knowledge Base. • For information about the new features for Vulnerability Response, see Vulnerability Response release notes.
Workforce Optimization for ITSM	<p>Improved forecasting methods: Demand Forecast uses improved forecasting methods to forecast data. The naive methods for forecasting indicator scores have been upgraded to linear regression methods. Where the older naive methods used only</p>



Application or feature	Details
	<p>the first and last scores of the most recent season, the upgraded methods use all the available scores over the evaluation period. In addition, the older Linear and Drift methods have been replaced with a single Linear method, and the calculation of the 95% prediction interval has been improved. When you upgrade, the following updates are made to the forecast algorithm that is used in Demand Forecast:</p> <ul style="list-style-type: none"> • The Naive Seasonal algorithm is renamed to Seasonal. • The Naive Seasonal Drift algorithm is renamed to Seasonal Trend. • The Drift algorithm is removed. <p>Enabling text indexing for schedule plans and shift plans: When you upgrade to Workforce Optimization for ITSM version 1.1.1, you must enable text indexing for the following tables:</p> <ul style="list-style-type: none"> • Schedule [sn_shift_planning_schedule_plan] • Shift plan [sn_shift_planning_shift_plan] • Shift [cmn_rota] <p>If you don't perform the text indexing after your upgrade, you can't search the schedule plans and shift plans by keywords. You can only search by the name of the schedule and shift plans.</p> <p>Workforce Optimization for ITSM Report View ACLs: report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the Tokyo release. For more information, see Report_view access control.</p> <p>Coaching with Learning: When you upgrade to the Workforce Optimization for ITSM Tokyo release, the following updates are automatically made:</p> <ul style="list-style-type: none"> • The Learning Catalog is renamed to the Learning Library. All courses within the learning catalog are moved to the learning libraries. • As a manager, when you create a course item or a learning path, you must associate that course or path with a course catalog. Depending on the security constraints that are enforced for each catalog, users can access the courses or paths within the catalog. <p>Note: All existing courses are migrated to the Default Course Catalog.</p> <p>After you upgrade to the ITSM Shift Planning Host v 5.3.0 application from the ServiceNow Store:</p> <ul style="list-style-type: none"> • To enable the agents to sign up for shifts, you must set the <code>sn_shift_planning.enable_agent_signup</code> property to true. • The following label changes to the filters for schedules are automatically made:

Application or feature	Details
	<ul style="list-style-type: none"> ◦ State is renamed to Schedule plan state. ◦ Dates is renamed to Schedule plan dates.

New features and products in Tokyo

Cumulative release notes summary on new Tokyo features and products.

New products were introduced in Tokyo, and additional features were added to existing products.





Application or feature	Details				
AI Search	<p>Internationalization support for AI Search </p> <p>Expand multilingual search capabilities with Chinese-language search. AI Search identifies both Simplified Chinese and Traditional Chinese when indexing content and metadata for search. Chinese support includes configuration of stop words and synonyms.</p> <p>Auto-complete suggestions in AI Search applications </p> <p>Display titles and tables for search results as auto-complete suggestions. AI Search generates these search-based suggestions as you enter terms into the search query field. Select a search-based suggestion to navigate directly to the record, bypassing the search results page.</p>				
API	<p>New scoped classes and additional methods to existing scoped classes</p> <table border="1"> <thead> <tr> <th>Class</th> <th>Methods</th> </tr> </thead> <tbody> <tr> <td>ChangeSuccess</td> <td> <ul style="list-style-type: none"> • <code>getEntryLevelTeamScore()</code> • <code>getMaximumPermittedTeamScore()</code> • <code>getMinimumPermittedTeamScore()</code> • <code>getModelScoreForChange()</code> • <code>getModelScoreForModelId()</code> • <code>getScoresForChange()</code> • <code>getTeamScoreForChange()</code> • <code>getTeamScoreForGroupId()</code> • <code>getTypeScoreForChange()</code> • <code>getTypeScoreForType()</code> • <code>withIndicatorScores()</code> • <code>withModelScore()</code> • <code>withSecurity()</code> </td> </tr> </tbody> </table>	Class	Methods	ChangeSuccess	<ul style="list-style-type: none"> • <code>getEntryLevelTeamScore()</code> • <code>getMaximumPermittedTeamScore()</code> • <code>getMinimumPermittedTeamScore()</code> • <code>getModelScoreForChange()</code> • <code>getModelScoreForModelId()</code> • <code>getScoresForChange()</code> • <code>getTeamScoreForChange()</code> • <code>getTeamScoreForGroupId()</code> • <code>getTypeScoreForChange()</code> • <code>getTypeScoreForType()</code> • <code>withIndicatorScores()</code> • <code>withModelScore()</code> • <code>withSecurity()</code>
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Application or feature	Details	
	Class	Methods
		<ul style="list-style-type: none"> • withTeamScore() • withTeamScoreRatings() • withTypeScore()
	FlowAPI - Scoped, Global	getErrorMessage()
	GeniusResultContext	getMatchingDocuments()
	GlideAggregate	setAggregateWindow()
	IPAddress	<p>The global version of this API is also available, only the scoped version was added in this release.</p> <ul style="list-style-type: none"> • canonicalize() • getExpanded() • executeGetById() • IPAddress() • isLinkLocal() • isLocalHost() • isMulticast() • isPublic() • isReserved() • isRoutable() • isSameVersionAs() • isUnicast() • isV4() • isV6() • isValid() • toExpanded()
	RFETransformer	<ul style="list-style-type: none"> • RTETransformer() • transform()
	SCIM2Client	<ul style="list-style-type: none"> • executeDelete() • executeGet() • executeGetById()

Application or feature	Details											
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Admin Center	<p data-bbox="533 1520 820 1554">Adoption Blueprints</p> <p data-bbox="584 1568 1294 1730">Identify the Adoption Blueprints that are used to measure your organizational needs for achieving business growth. Each blueprint focuses on a strategic priority. It suggests applications and plugins best suited for your business goal.</p> <p data-bbox="533 1747 1118 1780">Recommended and optional applications</p> <p data-bbox="584 1795 1302 1955">The list of recommended and optional applications are in an ideal order based on your current scenario for a selected adoption blueprint. View the progress of the number of recommended applications installed on the adoption blueprint cards.</p>										

Application or feature	Details
	<p>Maturity levels of applications</p> <p>Explore the different maturity levels of the recommended and optional applications on the Adoption Blueprints details page. The maturity levels are categorized as Build a foundation, Enhance the experience, Optimize the functionality, and Add advanced features.</p> <p>Next Up card</p> <p>Explore the information about the next recommended application installation by clicking See details on the Next Up card.</p> <p>Sharing Adoption Blueprint details</p> <p>Share the information about the recommended applications and features with another admin by clicking Copy link on the Adoption Blueprints details page.</p>
Advanced Goal Framework	<p>Target automation</p> <p>Automate the actual value of your targets by configuring the target sources for the targets. After the Actual value field on the Target form is auto-updated, the progress of the target is updated, and then the target's progress is rolled up to its goal.</p> <p>The following target source types are supported for automating the actual value of a target.</p> <ul style="list-style-type: none"> • PA Indicator • Assessment/Survey • Custom script <p>Note: With the Custom script option, any table that is present on the Now Platform can be configured as a target source.</p>
Advanced Risk	<p>Multi-level approval workflow for advanced risk assessments</p> <p>Configure and enable a multi-level approval workflow for risk assessments to review and escalate risks to relevant stakeholders. The no-code configuration setup helps you to define multiple approvers based on factors such as RAM and risk ratings. You can also delegate the approver privilege to others who can approve or reject the risk assessments on your behalf.</p> <p>Enhanced heatmap workbench</p> <p>Use the enhanced heatmap workbench to visualize, analyze, and report the risk posture more effectively. The heatmap workbench enables you to do the following:</p>

Application or feature	Details
	<ul style="list-style-type: none"> • View the risk movement from inherent to residual risk. • View the risk trend for the last five assessments on a particular risk. • Gain risk insights and compare the risk performance to initiate actions. • Locate the risk on the heatmap more effectively. • Use the dynamic filter to personalize the heatmap by entities and top risks. <p>Assess a control using group factor </p> <p>Assess a control based on multiple factors such as design and operational effectiveness using the group factor functionality. Group factors include manual or automated factors or a combination of both. This feature enables you to perform a detailed assessment of controls to strengthen the control environment and manage your risk better.</p> <p>Simulate a risk assessment </p> <p>Simulate a risk assessment to verify the associated RAM configuration in the draft state. This feature helps risk admins validate a factor, scoring logic, and the workflow and make necessary changes to the RAM before it is published. The simulated risk assessments are not used for risk aggregation and are deleted after the RAM is published.</p> <p>Similar risk events recommendations </p> <p>Train and use the similarity solution definition for similar risk events recommendations. Managing a risk event is easy when you identify similar risk events and associate them to capture and analyze the actual impact of the risk event. This capability reduces the manual effort in managing similar risk events and improves overall organizational efficiency.</p> <p>Metrics integration with risk workspace </p> <p>Monitor your key risks and controls closely and continuously with GRC: Metrics and define thresholds indicating alerts for the changing risk and control performance. Operational Risk managers, IT Risk managers, and Business Op Risk managers can define, manage, and monitor these metrics to strengthen their IT and operational risks. Use GRC: Metrics to do the following:</p> <ul style="list-style-type: none"> • Identify KRIs and KCIs that breached the thresholds. • Analyze the breach trend to assess risk impact and likelihood. • Track overdue KRI and KCI tasks.

Application or feature	Details
	<ul style="list-style-type: none"> • Create metric definition to monitor risk performance. • Analyze the root cause of the breached metrics and track the action plan.
<p>Advanced Work Assignment</p>	<p>AWA Inbox API</p> <p>Enable internal and external applications to handle incoming and ongoing work items by API.</p> <p>Auto assignment in AWA </p> <p>Configure AWA to assign work tasks automatically.</p>
<p>Alignment Planner Workspace</p>	<p>Lens and portfolio plans </p> <p>Use pre-defined lenses in APW to build a personalized portfolio of work. For example, you can plan work from the perspective of a delivery organization, strategic investments, or products.</p> <p>Portfolio plans are flexible, user-defined portfolios that are built using a lens. Use portfolio plans to do the following:</p> <ul style="list-style-type: none"> • Enable focused planning of work in the desired perspective. • Improve alignment of work to business strategy. • Reduce time spent on aligning execution teams to the right work. <p>Prioritization </p> <p>Determine the right work to invest in using the Prioritization tab for your portfolio plan.</p> <ul style="list-style-type: none"> • Understand the work backlog for your portfolio from a consolidated grid view. • Evaluate, rank, and prioritize work items using data points such as planned cost, benefit, and associated goals. <p>Guided setup </p> <p>After installing APW, you can use the guided setup to help you with the required core configuration. This guidance includes steps to do the following:</p> <ul style="list-style-type: none"> • Configure lens setup. • Integrate APW with PPM, Agile 2.0, or SAFe. • Configure ServiceNow[®] Goal Framework. <p>Alignment Planner Workspace with PPM, Agile 2.0, and SAFe </p> <p>Integrate APW with PPM, Agile 2.0, and SAFe to enable import, export, and bidirectional synchronization of</p>







Application or feature	Details
	<p>planning items between APW and PPM, Agile2.0, or SAFe.</p> <p>Goal management in APW</p> <ul style="list-style-type: none"> • Visualize and manage your goals from the Overview tab: The Overview tab provides a summary of all your goals in a particular portfolio plan. The tab has multiple widgets that help you drill down in the goals and targets, see their details, and manage them. • Goal management in APW using Goal Framework: The Goal Framework helps you create and align your goals according to your organization's portfolio plans. <p>Goal relationship with planning and strategic items: Create goal relationships with planning and strategic items. When a goal relationship is created with a planning item (Project, Demand, or Epic), the record appears in the Planning items related list on the Goal form. When a goal relationship is created with a strategic item (Program or Initiative), the record appears in the Other items related list on the Goal form.</p> <ul style="list-style-type: none"> • Goal management in APW using Advanced Goal Framework: The Advanced Goal Framework in APW enables you to automate the actual value of your targets for the goals that are defined using Goal Framework. <p>Automate the progress of your targets by automating the Actual value field on the Target form. You can automate the actual value of your targets by configuring target sources for the targets.</p> <p>The following types of target sources are supported for automating the actual value of a target.</p> <ul style="list-style-type: none"> ◦ PA Indicator ◦ Assessment/Survey ◦ Custom script <p>Note: With the Custom script option, any table that is present on the Now Platform can be configured as a target source.</p> <p>Note: Defining and managing goals using the goal management features in the workspace requires a ServiceNow® Strategic Portfolio Management (SPM), formerly ServiceNow® IT Business Management (ITBM), Pro license.</p>
App Engine Studio	App Template Admin role








Application or feature	Details
	<p>Control who has access to create new applications from templates, to share all templates, and to activate or deactivate templates through the app_template_admin role.</p> <p>Control template access </p> <p>Control who can see and use templates you create. Share templates with users or groups for collaboration purposes.</p> <p>Create custom workspaces quickly with Workspace Builder </p> <p>As of November 2022, you can empower users of all skill sets to customize workspaces in a no-code environment with Workspace Builder. With this builder, you can quickly configure a workspace layout, lists, and record pages, and enable analytics.</p> <p>Load more apps faster </p> <p>As of November 2022, a new Load more apps button on the home page and My apps tab lets you selectively view more apps, enabling faster load time.</p> <p>Manage Applications in AEMC </p> <p>View charts and graphs illustrating the status of your active applications in the App Engine Management Center (AEMC). A list of all custom apps in development or production in an active deployment are included. You can view deployment history and collaborator details for individual apps. As of November 2022, you can also see usage data for all apps in production instances.</p> <p>Manage Developers in AEMC </p> <p>View charts and graphs illustrating total and active developers in the App Engine Management Center (AEMC). You can view details for individual developers, including the apps for which they are collaborators and request history.</p>
<p>Application Portfolio Management</p>	<p>Technology Reference Model </p> <p>As an Enterprise Architect, define the software products standards in your organization using the Technology Reference Model (TRM). Software standards can be defined in these levels:</p> <ul style="list-style-type: none"> • Software Products: Defines the authorized software products. • Software Product Versions: Defines phases and effective dates for software versions. <p>As an Application Owner, search the SAM catalog and request to add new software to the TRM, or to adjust a</p>






Application or feature	Details
	<p>software phase. Requests are reviewed by Enterprise Architects.</p> <p>The TRM module helps you to understand if any of your business applications are using software that is not part of the TRM. Discover a software version that is not permitted for use in the production. For more information, see Technology Reference Model in Application Portfolio Management.</p> <p>Architectural Artifacts</p> <p>As an Enterprise Architect, use the Architectural Artifacts module to perform the following tasks:</p> <ul style="list-style-type: none"> • Store and keep track of versions of the architectural documents. • Review and approve architectural artifacts that are submitted by other business stake holders in your company, for example Application Owners. • Associate architectural documents to the existing elements in the ServiceNow® platform, such as business capabilities and business applications. <p>For more information, see Architectural Artifacts in Application Portfolio Management.</p> <p>Lucidchart Integration</p> <p>As an Enterprise Architect, create the Lucidchart diagrams for Business Application hierarchy and Business Capability maps.</p> <p>Sync the Business Application and Business Capability diagrams to Lucidchart and customize the shapes and colors of the entities how they appear in the chart. For more information, see Application Portfolio Management (APM) integration with Lucidchart.</p> <p>Lucidchart diagramming spoke</p> <p>Integrate Application Portfolio Management instance with Lucidchart account to access your Lucid account and create architectural diagrams. For more information, see Lucidchart diagramming spoke.</p> <p>Exporting Application Portfolio Management data to Microsoft PowerPoint</p> <p>As an Enterprise Architect, export the APM data to Microsoft PowerPoint to share it with other stakeholders.</p> <p>You can export the following APM data to Microsoft PowerPoint:</p> <ul style="list-style-type: none"> • Insights on all business applications. • Insights on the assessment scores for business capabilities.





Application or feature	Details
	<p>For more information, see Exporting Application Portfolio Management data to Microsoft PowerPoint.</p> <p>Application Portfolio Management (APM) Cloud Assessment</p> <p>The Cloud Assessment scoring profile in Application Portfolio Management helps you to assess which business applications to migrate to the cloud. This scoring profile leverages the indicators to evaluate cloud readiness of a business application.</p> <p>You can use the Group Analysis page in Application Portfolio Management to see a bubble chart to plot the indicator scores of the applications in X (Cloud Readiness) and Y (Business Impact) axis. For more information, see Application Portfolio Management (APM) Cloud Assessment.</p>
<p>Assessments and Surveys</p>	<p>Survey results in a single row</p> <p>View each survey instance result in a separate row. Each survey question appears in the column heading with the answer to the question displayed in that column. This arrangement makes it easier for your users to view, analyze, and if needed, export the survey results. Click the new View Responses in Rows link on the survey page to view the survey results in rows with each column as a question in the survey.</p> <p>New assessment experience</p> <p>Take advantage of a redesigned assessment-taking experience on Service Portal and the Now Mobile app. Your users can use a modern, competitive, and inclusive UI to complete the assessments assigned to them.</p> <p>When you upgrade Assessments and Surveys to Tokyo, the new assessment feature, enabled by default, provides users with a refreshed experience. They can use the new My Assessments and Surveys widget to land on the assessments pages from Service Portal. The widget styles reflect the theme that has been selected for the relevant Service Portal. The assessment pages show a newly added progress bar (with the completion status in percentage) and pagination text.</p> <p>Users can take the assessments on the Now Mobile app using a widget. Activate push notifications by setting the <code>glide.sg.universal_links.enabled</code> property to true. When an email notification is sent to users, a mobile push notification is also sent on mobile devices. Clicking the notification opens an assessment in the Now Mobile app.</p> <p>New survey experience</p> <p>Your users can resume the survey from the same page where they left off in the previous session.</p>




Application or feature	Details
	<p>Quick start tests for Assessments and Surveys</p> <p>After upgrades and deployments of new applications or integrations, run quick start tests to verify that Assessments and Surveys works as expected. If you customized Assessments and Surveys, copy the quick start tests and configure them for your customizations.</p> <p>For more information, see Quick start tests for Assessments and Surveys.</p>
Authentication	<p>SCIM customization</p> <p>Use SCIM custom attributes to support custom fields on the sys_user and sys_user_group tables through dynamic extension schema generation and override default SCIM mappings.</p> <p>SCIM Client</p> <p>Use the SCIM Client to provision and update the identity resources through CRUD operations exposed by the SCIM endpoint on an external system.</p> <p>Adaptive Authentication for Trusted Mobile Apps</p> <p>Support instance access using mobile apps from outside the network perimeter in an IP access control-enabled instance.</p>
Automated Test Framework	<p>Cloud runner browser option</p> <p>Use the new Cloud Runner browser option to run a test in the ATF Test Generator and Cloud Runner store app. The option is visible even if you don't have the application installed.</p>
Benchmarks	<p>Benchmarks Conversational Interfaces KPIs</p> <p>Use Conversational Interfaces KPIs to measure the Virtual Agent customer satisfaction scores, how many conversations were handed off to an agent, and the number of monthly users.</p> <p>Benchmarks ITSM Virtual Agent KPIs</p> <p>Use Benchmarks ITSM Virtual Agent KPIs to measure metrics such as call deflections and auto-resolved incidents.</p> <p>Benchmarks Success Dashboard KPIs</p> <p>As a member of the leadership team or a process owner, use the Success Dashboard KPIs to gain insights into the metrics. For example, you can see how often calls were deflected or resolved without agent intervention.</p> <p>Benchmarks Strategic Portfolio Management KPIs</p> <p>Use the Strategic Portfolio Management KPIs to gain insights into the industry averages of your peers.</p>








Application or feature	Details
	<p>You can compare the relative performance of your portfolio with global benchmarks that are based on the industry, size, or region.</p> <p>Linking Benchmarks KPIs to Performance Analytics KPIs </p> <p>Link Benchmarks Virtual Agent KPIs to Performance Analytics KPIs so that you can analyze KPI breakdowns and drill down into the data.</p>
<p>Business Continuity Management</p>	<p>BCM Operator and Operator Lite </p> <p>Use role-based licensing to distinguish between the BCM operator and BCM lite operator roles. These roles offer flexible licensing terms that are based on whether your operator has a read-only access or can complete certain types of tasks.</p> <p>BCM event scoping enhancement</p> <p>Create forms to track your related assets and related plans. These forms can help identify your related assets during event scoping and your related plans during an exercise.</p> <p>Use the updated dependency field for your recovery tasks, regardless of the scope.</p> <p>Create a primary plan with multiple dependent plans.</p> <p>Use the updated Business Impact Analysis (BIA) plan form interface so that you can include the dependencies and prerequisites that are related to identifying related asset dependencies in the CMDB and BIA.</p> <p>Restrict which users can write to BIA.</p>
<p>Change Management</p>	<p>Change Model Success </p> <p>Change Model Success (CMS) indicates on landing page cards how successful each Change Model or Type is. It includes a Performance Analytics (PA) dashboard for drilling down into the various models for breakdowns by category.</p> <p>Next Generation Risk - Success Probability module </p> <p>Include evaluations of success probability in risk evaluations through a new Success Probability module. This new data-driven approach to risk evaluations uses a combination of success probability and impact to derive risk along with existing capabilities such as risk assessment, risk conditions, and risk intelligence.</p> <p>Advanced Security for Change Models </p> <p>Locate the right change model by using both role-based access controls and user criteria to tailor Change creation landing page views.</p> <p>Change Models - Declare Execution State </p>

Application or feature	Details
	<p>Declare the execution state of a change when using models.</p>
<p>Cloud Provisioning and Governance</p>	<p>Quick start tests for Cloud Provisioning and Governance </p> <p>After upgrades and deployments of new applications or integrations, run quick start tests to verify that Cloud Provisioning and Governance works. If you customized Cloud Provisioning and Governance, copy the quick start tests and configure them for your customizations.</p>
<p>Commercial Lines Claims</p>	<p>Commercial Lines Claims application</p> <p>Coordinate efforts with the associated departments, such as adjuster and special investigation unit departments required to manage tasks related to a claim.</p> <p>Customized playbook experience </p> <p>Complete claims workflows using dedicated playbooks and workspaces designed for each role. Playbooks provide step-by-step guidance through tasks to ensure that every step gets completed at the right stage of the process.</p> <p>Performance Analytics  and Process Optimization </p> <p>Use Performance Analytics and Process Optimization dashboards to gain insight into how your team and service flows are performing.</p> <p>Claims data model </p> <p>Gain the benefit of claims tables from the Insurance Claims data model to build any claims flow.</p>
<p>Configuration Compliance</p>	<p>Access Test Results in Vulnerability Manager Workspace</p> <p>Starting from version 18.0 of Vulnerability Response, Vulnerability Manager Workspace supports Configuration Compliance.</p> <p>Configure risk score to risk rating mapping for Configuration Compliance </p> <p>Starting with version 14.5 of Configuration Compliance (CC), you can modify the existing or configure more than five risk ratings through the Risk Score Weights table.</p> <p>Persist deferral date for manual exceptions for test result groups even after exception expiry </p> <p>Starting with version 14.5 of Configuration Compliance (CC), if a deferred test result group is reopened by a scanner before the exception window expires, the state of the test result group changes from Open to Deferred. Additionally, the deferred until date persists even after the test result group reopens after the expiration date.</p>




Application or feature	Details
	<p data-bbox="533 155 1209 220">Performance Analytics Dashboard for Configuration Compliance </p> <p data-bbox="587 237 1307 430">Install and use the Configuration Compliance [PA] dashboard to view data in Next Experience framework. It provides a comprehensive view of compliance trends, configuration issues, remediation trends, and exception management for easy management and remediation.</p> <p data-bbox="533 449 1075 480">Calculating the remediation target rule </p> <p data-bbox="587 495 1310 594">Starting from Configuration Compliance V14.5, you can calculate the remediation targets using the Target from (date).</p> <p data-bbox="587 623 1299 722">The Target from (date) is a new field specifying the date or the date and time from which the remediation target rule must be applied.</p> <p data-bbox="533 737 1158 768">New Qualys integrations to retrieve test results </p> <p data-bbox="587 783 1299 913">Qualys has introduced new APIs to resolve the issues in the existing ones. The following integrations have been created for the new APIs, to retrieve the host IDs for each policy:</p> <ul data-bbox="592 932 1074 1010" style="list-style-type: none"> • Qualys PCRS Policy Host Integration • Qualys PCRS Test Results Integration <p data-bbox="587 1047 1299 1113">The new APIs do not support some of the filters that the earlier APIs supported, such as tags.</p> <p data-bbox="533 1127 1307 1192">Manage exception requests using Vulnerability Response or GRC in Configuration Compliance </p> <p data-bbox="587 1207 1294 1373">Manage vulnerability exception requests for configuration issues using either Vulnerability Response or GRC: Policy and Compliance Management integration. Based on the module selected, the flow is managed by either Vulnerability Response or GRC.</p> <p data-bbox="533 1388 1129 1419">Remove assignments from test result groups </p> <p data-bbox="587 1434 1310 1629">Remediation owners can remove themselves from assignments from test result group records that they determine are not their responsibility. The Unassign UI action clears the Assigned to and Assignment group fields and sends a daily digest to vulnerability managers when records are modified.</p> <ul data-bbox="592 1648 1299 1938" style="list-style-type: none"> • This feature is available on test result group (CRG) records. • The Unassign UI action clears the Assigned to and Assignment group fields and sends notifications to administrators that records are not assigned. • A default approval work flow is introduced for unassign feature. An approval request is sent to the approver that the request is raised for the removal of








Application or feature	Details
	<p>assignment group for a test result group. Vulnerability admins can disable the approval process if needed.</p> <ul style="list-style-type: none"> • A link is included to the Unassigned Module in the daily digest that is sent to vulnerability managers. • Updated Records are displayed in the Unassigned module for Configuration Compliance. • A daily scheduled job counts the records that are updated with this feature and aggregates them by the assignment rules that initially assigned them. You can use the counts that are displayed for each rule to help you monitor how effective your assignment rules are. <p>Track deferral counts for test results and test result groups </p> <p>Track the test result or test results groups that are deferred multiple times in the Multiple deferrals module. A scheduled job, <i>set deferral counts</i>, runs daily to post counts in the Deferral count column for records that are deferred more than one time.</p> <p>Quick start tests for Configuration Compliance </p> <p>After upgrades and deployments of new applications or integrations, run quick start tests to verify that Configuration Compliance works as expected. If you customized Configuration Compliance, copy the quick start tests and configure them for your customizations.</p>
<p>Configuration Management Database (CMDB)</p>	<p>Intelligent Search for CMDB in CMDB Workspace </p> <p>Use Intelligent Search for the CMDB in the CMDB Workspace , instead of CMDB Search, to construct search strings using everyday natural query language (NLQ). Intelligent Search queries can span multiple CMDB classes and involve many CIs that are connected by different relationships. Create custom synonyms and Implicit CMDB Relationships to fine-tune the search to your environment.</p> <p>Intelligent Search parses the NLQ query as you type and provides a dynamic list of relevant suggestions that match single words or part phrases in your query. Then, Intelligent Search resolves any ambiguities in table names or relationship types and converts your natural language search string into a valid CMDB query that you can run. Complex search strings open fully constructed on a canvas of CMDB Query Builder where you can continue and refine or run the query.</p> <p>Intelligent Search for CMDB functionality is integrated with CMDB Query Builder, letting you find CIs and their relationships using basic NLQ functions. The CMDB query is constructed dynamically as you type into a search field.</p>









Application or feature	Details
	<p data-bbox="533 155 1015 186">CI attestation in CMDB Workspace </p> <p data-bbox="587 218 1291 411">Verify the existence of actual IT infrastructure and applications that you own, systematically and in bulk. As CIs are continuously ingested into the CMDB from various data sources, ensure the integrity of the CMDB by removing any stale CIs that are associated with IT infrastructure or applications that no longer exist.</p> <p data-bbox="587 443 1310 701">Use the CMDB Data Manager to create an Attestation policy, specifying CIs that need to be attested and the attestation frequency. Assign attestation tasks to users that are familiar with or that manage the CIs, and who can attest or reject the IT infrastructure or applications that those CIs represent. Rejected CIs that are no longer needed can then be retired, archived, or deleted.</p> <p data-bbox="587 732 1291 863">Users can see their assigned attestation tasks in the Attestation view when they log in to the CMDB Workspace, and review and process those attestation tasks.</p> <p data-bbox="533 882 967 913">Cascade-retire dependent CIs </p> <p data-bbox="587 942 1278 1201">When dependent CIs management is enabled, the system manages dependent CIs whenever CIs are deleted or archived, and now, also when CIs are retired. When a CI is retired, the system checks all the relationship records for that CI. For any relationship that is with a dependent CI, the system adds the dependent CI to the [cmdb_dependent_ci_ledger] table and sets the CI as ready to retire.</p> <p data-bbox="587 1232 1310 1362">The system then generates a CMDB Data Manager retire policy for the set of dependent CIs and leverages the Data Manager to manage the review the retirement process.</p> <p data-bbox="533 1381 1090 1413">Cleanup existing orphan dependent CIs </p> <p data-bbox="587 1442 1310 1734">Apply processes of dependent CIs management to orphan dependent CIs from previous delete or archive operations. When enabling dependent CIs management, cascade-cleanup operations apply only from when the feature is enabled. You can improve the overall performance and data integrity of the CMDB by applying the same cascade-cleanup operations to orphan dependent CIs that existed in the CMDB before the feature was enabled.</p> <p data-bbox="587 1766 1310 1921">Enable dependent CIs management to ensure future cascade-cleanup of any orphan dependent CIs and also activate the Cleanup Orphan CIs scheduled job to perform a one-time cascade-cleanup of dependent CIs that were previously orphaned.</p>












Application or feature	Details
	<p>Quick start tests for Configuration Management Database (CMDB) </p> <p>After upgrades and deployments of new applications or integrations, run quick start tests to verify that CMDB works as expected. If you customized CMDB, copy the quick start tests and configure them for your customizations.</p>
<p>Conversational Interfaces Home</p>	<p>More interactive and proactive configuration cards </p> <p>Use new and enhanced cards to set up and maintain your chat environment, such as Brand your bot, Set up your NLU, and Create your bot's greeting. This feature also provides intelligence, letting you know what has not been configured yet, as well as if an app is out of date.</p> <p>Progress bar </p> <p>Use cards to quickly check the features that you've configured and determine which features to implement in your bot.</p> <p>Quick view of Virtual Agent usage through the admin dashboard </p> <p>Monitor Virtual Agent usage and performance metrics to understand, measure, and proactively manage Virtual Agent adoption in your organization. Review the number of active Virtual Agent users and successful conversations, or discover the least-used topics, incomplete topics, or topics that were transferred to a live agent.</p> <p>Sidebar </p> <p>Improve collaboration between agents and subject matter experts to resolve issues through the new real-time record-based collaborative chat platform within Next Experience.</p> <p>Set up conversation history </p> <p>View previous history within a conversation panel.</p> <p>Chat attachments transferred to interaction records</p> <p>Requester attachments and images are automatically attached to their corresponding interaction record.</p> <p>Drag and drop attachments</p> <p>Drag files from the desktop into a conversation panel to easily send files to a requester.</p> <p>Chat quick action to search for knowledge articles</p> <p>Search knowledge articles based on the requester's knowledge access.</p> <p>Turn off auto-logging on interaction_related_record table </p> <p>Ability to turn off automatic logging of related records while working on an interaction.</p>




Application or feature	Details
Core Now Platform	<p>Data migration to new IP address type</p> <p>Provide support for migrating IP addresses that are stored as string fields to the new IP Address(Validated IPV4,IPV6) type. The new IP address type accepts only a valid IP address, pertaining to the new accepted type.</p> <p>Fallback language for system localization</p> <p>Set a language to fall back to when a translation is not available for the preferred language. If a translation is also not available in the fallback language selected, then the instance session uses English.</p> <p>Delete records safely</p> <p>Bulk delete data safely without using scripts. You can now preview a delete job to view affected records before you execute or schedule the job. You can also roll back a delete job to restore deleted records.</p> <p>Update records safely</p> <p>Bulk update data safely without using scripts. You can now preview an update job to view affected records before you execute or schedule the job. You can also roll back an update job to undo an update.</p> <p>Limiting ability to edit system log tables</p> <p>Configure system log table protection rules to limit the scope of modification and deletion of application log records. The rules enable you to determine the logging of changes or attempts to make changes in these tables.</p> <p>Scoped caches for faster access</p> <p>Use scoped caches to store custom data in memory for faster access, and define when it becomes invalidated.</p>
Customer Service Management (CSM)	<p>Task Intelligence for Customer Service</p> <p>Use the Task Intelligence capabilities, powered by AI, to automate some of the routine aspects of the task life cycle such as task creation, routing, and resolution, and to increase agent productivity.</p> <p>Task Intelligence: Sentiment analysis</p> <p>Detect and display the initial and ongoing sentiment of customer service cases. Help agents gauge customer emotions and better prioritize their work while enabling them to provide more empathetic and compassionate customer experiences.</p> <p>Task Intelligence: Case categorization</p>




Application or feature	Details
	<ul style="list-style-type: none"> • Multi-lingual case categorization: Use an AI model pre-trained in multiple languages to understand text in emails and cases created in different languages and to predict and automatically populate fields on the case form. Display the predictions as recommendations until you gain confidence in the model. • Attachment-based case categorization: Use an AI model to parse email and case attachments and to auto-populate the Case form based on signals contained in the attachment text. <p>Task Intelligence: Document Intelligence </p> <p>Extract relevant information from PDF and image files, such as credit card numbers, vendor names, or customer addresses, and add that information to fields on the Case form.</p> <p>Task Intelligence: Language detection</p> <p>Identify the language used to create customer service cases. Add the language to the Language field on the case record and/or add the language to the case as a skill. Cases can then be routed to agents with the necessary language skills.</p> <p>Task Intelligence Admin Console </p> <p>Use the Admin Console to rapidly deploy AI solutions and measure business impact. Set up predictive models, track model performance, and preview the agent experience.</p> <p>CSM Configurable Workspace record pages </p> <p>Use the CSM default record page and the CSM Interaction record page to display record information in CSM Configurable Workspace. These pages, available with the CSM Configurable Workspace v23.0.5 store app, are built with UI Builder constructs such as presets and controllers.</p> <p>If you install the CSM Configurable Workspace v23.0.5 store app and you want to use any of the following features, you must also upgrade to the corresponding store apps:</p> <ul style="list-style-type: none"> • Recommended Actions for Customer Service v24.0.0 • Playbooks for Customer Service Management v2.1.0 • Case Playbook for Onboarding v4.1.0 • Case Playbook for Complaints v4.1.0 • FSM Configurable Dispatcher Workspace v23.2.3 <p>For the following functionality, it is recommended that you use the existing Record Default page and the Interaction Record Page:</p>

Application or feature	Details
	<ul style="list-style-type: none"> • Creating or editing knowledge articles from a record. • Displaying custom tabs on a record. • Composing messages from an interaction record. <p>Recommended Actions: Enhanced Call to Action </p> <p>Quickly launch a call to action (CTA) within a guidance. Agents can access recommended actions in the contextual side panel in CSM Configurable Workspace and execute a guidance with a single click.</p> <p>Recommended Actions: Guidances and Resource Generators </p> <p>Use configured guidances, resource generators, and demo data to launch the recommended actions quickly.</p> <p>Support for external business locations </p> <ul style="list-style-type: none"> • Enhance the industry data model to unify operations across internal and external business locations (EBL). • Support the day-to-day operations of service organizations with a self-service portal. • Extend the service organization staff data model to capture relationships between staff and service organizations. <p>Service organization install base </p> <p>Extend proactive customer support to the industry data model, by tracking products and services installed at service organizations.</p> <p>Enhanced address data model for accounts </p> <p>Define addresses once and reuse them within an account hierarchy, or across account hierarchies. The enhanced address data model makes it possible to link a location with multiple accounts without creating multiple location records.</p> <p>Enable language selection for guest users </p> <p>Enable unauthenticated users to choose a locale from the self-service portal header and view content in the chosen locale.</p> <p>Unauthenticated users will be able to choose a locale and view content in their chosen locale on a portal.</p> <p>Authenticated users will be able to easily choose a language from the widget on the portal header.</p> <p>Quick start tests for Customer Service Management </p> <p>After upgrades and deployments of new applications or integrations, run quick start tests to verify that</p>









Application or feature	Details
	<p>Customer Service Management works as expected. If you customized Customer Service Management, copy the quick start tests and configure them for your customizations.</p>
<p>Dashboards</p>	<p>Homepage deprecation help tool </p> <p>Homepages are being phased out. Use the Homepage deprecation help tool to convert homepages to dashboards, retire homepages, and restore retired homepages as dashboards.</p> <p>Platform Analytics Workspace</p> <p>Create and view Next Experience dashboards in the new Platform Analytics Workspace, available in the ServiceNow Store. The Dashboard in-line editor included in this workspace greatly simplifies Next Experience dashboard creation. For more information, see Platform Analytics Workspace release notes.</p> <p>Quick start tests for Dashboards </p> <p>Run quick start tests to verify that Dashboards works as expected after upgrades and deployments of new applications or integrations. If you customized Dashboards, copy the quick start tests and configure them for your customizations.</p>
<p>Decision Builder</p>	<p>Edit in Excel </p> <p>Export your decision tables to Microsoft Excel for editing. Excel can then be used to simplify editing decision rows. You can import your changes in Excel back into Decision Builder.</p> <p>Decision rule view </p> <p>Open decision rows in Decision rule view to enable the management of complex rules.</p> <p>Note: Decision tables with complex rules do not support the Edit in Excel feature.</p> <p>Change approval policies </p> <p>Added UI support for creating a change approval policy using Decision Builder functionality.</p> <p>User roles and permissions </p> <p>Control access to features and capabilities by assigning the <code>decision_rule_author</code> and <code>decision_rule_editor</code> roles in Decision Builder.</p>
<p>DevOps Change Velocity</p>	<p>Import Azure DevOps artifacts </p> <p>Import Azure DevOps artifacts to enhance traceability.</p> <p>JFrog integration with DevOps </p>





Application or feature	Details
	<p>The JFrog integration enables you to track artifacts published to JFrog from Jenkins builds.</p> <p>Accelerating DevOps Change </p> <p>The Change automation and approval policy enables the auto-rejection, auto-approval, or deferral for manual approval for change requests for metrics on commits, code coverage, test results, sonar scan results, risk inputs, and more. To help users to quickly take corrective action, reasons for rejection are captured in work notes.</p> <p>Jira integration with DevOps </p> <p>Integrate the Jira planning tool with DevOps.</p> <p>GitHub integration with DevOps </p> <p>Integrate GitHub with DevOps.</p> <p>SonarQube integration with DevOps </p> <p>The SonarQube integration enables code quality checks on your DevOps pipelines.</p> <p>Managing pull request pipelines from DevOps </p> <p>Manage Jenkins pipeline's pull requests for GitHub and BitBucket coding sources from ServiceNow DevOps. You can enable the change approval process on your pull request to control pull request merge approvals from ServiceNow DevOps and monitor pull request details associated with the change request.</p> <p>Monitor SonarQube new code metrics </p> <p>Monitor SonarQube new code metrics configured on your GitHub Actions, Jenkins, or Azure DevOps pipelines in ServiceNow DevOps. New code metrics helps you focus on the most relevant changes in your project.</p> <p>Importing existing GitLab pipelines and repositories </p> <p>Import existing GitLab pipeline and repository data into ServiceNow DevOps to view and manage GitLab data.</p> <p>Split tool integration with DevOps </p> <p>Integrate the Split tool with ServiceNow DevOps to manage feature flag requests from ServiceNow DevOps.</p> <p>Rally integration with DevOps </p> <p>Integrate the Rally planning tool with DevOps to import projects, user stories, and defects from the Rally tool into DevOps to enable change acceleration.</p> <p>Argo CD integration with DevOps Change Velocity </p> <p>Integrate Argo CD with DevOps Change Velocity to automate the deployment of applications from GitHub repositories.</p> <p>Veracode integration with DevOps Change Velocity </p>







Application or feature	Details
	<p>Connect Veracode that is integrated with your CI/CD pipelines to DevOps Change Velocity to retrieve security scan results. This helps you determine how vulnerable your code is.</p>
<p>DevOps Config</p>	<p>DevOps Config Insights dashboard </p> <p>Use the DevOps Config Insights dashboard to identify opportunities for managing your configuration data.</p> <p>Starting with DevOps Config v2.1.0, the DevOps Config Insights store app is rolled into the DevOps Config store app. Therefore, it's no longer necessary to install DevOps Config Insights separately, and it can be uninstalled from your instance after installing DevOps Config v2.1.0.</p> <p>Microsoft Azure DevOps and Jenkins orchestration tool integration </p> <p>Integrate Microsoft Azure DevOps and Jenkins orchestration tools to manage configuration data within DevOps Config.</p> <p>Starting with DevOps Config v3.0.0:</p> <ul style="list-style-type: none"> • Combine your application code and config data in a single Jenkins or Microsoft Azure DevOps pipeline. The pipeline no longer fails on non-config related changes when getting a snapshot. • View policy validation results as test results (instead of just passed snapshots) on the ADO build tests results page when getting a snapshot for an Azure DevOps pipeline. • View results that are compliant with exception in the test results file when getting a snapshot for a Jenkins or Azure DevOps pipeline so that you can take action. • Upload configuration data to a collection, or to a variable folder for a Jenkins or Azure DevOps pipeline. <p>Default set of DevOps Config policies </p> <p>Use the optional DevOps Config Policy content pack to achieve faster time to value, or to customize a policy based on the needs of your environment.</p> <p>Starting with DevOps Config v2.1.0, use these data model focused policies added to DevOps Config Policy content pack (v1.2.0) to validate your configuration data:</p> <ul style="list-style-type: none"> • correctHostRegex • differentKeyNamesSameValues










Application or feature	Details
	<ul style="list-style-type: none"> • keyNamingConvention • keyPathValidator • listComparator • nodesKeyComparator • nodesValueComparator <p>Starting with DevOps Config v3.0.0, use these data model advanced policies added to DevOps Config Policy content pack (v1.3.0) to validate your configuration data:</p> <ul style="list-style-type: none"> • duplicateValues • keyValueSubstringCheck <p>Default set of DevOps Config exporters </p> <p>Use the optional DevOps Config Exporter content pack to achieve faster time to value, or to customize an exporter based on the needs of your environment.</p> <p>Starting with DevOps Config v2.1.0, use multiple keys as an input for the <code>returnValueForUniqueKeyName</code> exporter in DevOps Config Exporter pack (v2.1.0).</p> <p>Application synchronization with the DevOps Change Velocity application </p> <p>Leverage application model objects created between DevOps Config and DevOps Change Velocity applications.</p> <p>DevOps Config API</p> <p>Starting with DevOps Config v2.1.0, programmatically manage your applications using the DevOps Config REST API.</p> <p>Component libraries and shared components </p> <p>Starting with Configuration Data Management v4.1:</p> <ul style="list-style-type: none"> • Create and manage component libraries to organize shared components which can be used across various applications. • Submit requests to add application components to a component library so that they can be shared across multiple applications. • Use the Config Data Analyzer tool to compare and identify the similarities and differences in:





Application or feature	Details
	<ul style="list-style-type: none"> ◦ Latest config data for the same or different applications ◦ Snapshots of any deployables from the same or different applications ◦ Committed changesets of the same or different applications <p>You can also compare two snapshots of the same deployable to identify the changes between them.</p>
<p>Digital Portfolio Management</p>	<p>KPI groups in Digital Portfolio Management</p> <ul style="list-style-type: none"> • View graphical representations (spark lines) of KPI data to see how each KPI is performing. • View details of the added indicators to the Performance Snapshot KPI group: mean time to resolve and new requests. • View the total subscriber number on each enterprise technology portfolio including nodes, services, service offerings, business applications, and application services. The subscriber indicator is now meta data so it's no longer part of the Performance Snapshot KPI group. • Track availability data of application services with the provided Availability insights KPI Group. • If an offering is in the Affected CIs list or the Impacted Services/CI list of an incident, problem, change, or outage, then you can see that record on the service offering in DPM. <p>Digital Portfolio Management life-cycle management</p> <p>On the Plan tab of business applications, view flow metrics data to see the average flow time for epics and features and the average number and distribution of bugs and stories.</p> <p>View relationship maps</p> <p>For a selected solution in the relationship map, view its summary, current issues, and now, information about the teams and team members on the Contacts tab.</p>
<p>Document Intelligence</p>	<p>Processing Documents</p> <p>Upload single or multi-page documents in JPEG, PNG, or PDF formats to start extracting data and text.</p> <p>Create definitions and keys to tell the system exactly what to parse and pull from the documents.</p> <p>Receive suggestions for data extracted from your documents.</p>


Application or feature	Details
	<p>View, analyze, and measure your extraction usage and effectiveness using the Document Intelligence dashboard.</p>
<p>Document Services</p>	<p>Multi-Provider documents framework </p> <p>Integrate with third-party applications for file storage and collaboration.</p> <p>Documents widget </p> <p>Upload and link documents to other records on the platform using the Documents widget in Service Portal.</p> <p>Activity stream for documents </p> <p>Configure and track document actions like uploading and deleting in the activity stream of parent records linked to the document.</p> <p>Document Management in Configurable Workspace</p> <p>Upload and link documents to other records on the platform. Access documents, metadata, and document versions.</p>
<p>Dynamic Translation</p>	<p>Add translate link to activity streams </p> <p>Provide a link on the activity stream for a single table or multiple tables (such as incident, case, task and so on) that enables users to easily and quickly translate the content.</p>
<p>Employee Center</p>	<p>Audiences </p> <p>Add a scoped cache for HR criteria to optionally save the evaluation results in the cache. This optional feature is available by passing a Boolean value of true as the <i>useCache</i> parameter. You can also define how long to retain the cached information via the <i>sn_hr_core.cache.hrcriteria.ttl</i> system property.</p> <p>Content Governance </p> <p>Provides the ability for employees to request content to be created, reviewed, and approved by content managers, and then published or distributed.</p> <p>Language support for Content Experiences and Content Publishing </p> <p>Content Experiences and Content Publishing supports integration with Localization Framework. This allows language translation fulfillers to provide translations faster and efficiently.</p> <p>When creating content from the Content Library in Content Publishing, users have an option to select a different language to view in a session similar to changing a language at login.</p> <p>Configure additional permission levels for topic management </p>





Application or feature	Details
	<p>Enable decentralized management of topics by introducing two new topic-level controls, Topic manager and Topic contributor.</p> <p>Quick start tests for Employee Center and Employee Center Pro </p> <p>After upgrades and deployments of new applications or integrations, run quick start tests to verify that Employee Center works as expected. If you customized Employee Center, copy the quick start tests and configure them for your customizations.</p>
Employee Journey Management	<p>Journey Designer </p> <p>Enable employees, managers, and the organization to initiate and manage journeys to drive employee engagement and productivity:</p> <ul style="list-style-type: none"> • Journey designer combines the employee experience of Lifecycle Events and Journey Accelerator, so that managers and employees have a single interface to manage all their journeys. • When using the Manager Hub app, managers can create, access, and track journeys for their team members. • Managers can create and monitor journeys, and access and view team analytics for journeys. When using Listening Posts with Journey designer, team satisfaction scores are available. • Managers and mentors can send personalized messages to employees. • Managers can add new tasks and milestones, and include quick links for their employees. • When used with Learning posts, administrators and managers can include recommended learning courses with recommendations powered by machine learning. • Add a Journeys widget to the Employee Center home page to access and monitor active journeys. <div data-bbox="587 1570 1310 1675" style="background-color: #e0f2f7; padding: 10px; border: 1px solid #ccc;"> <p> Important: Journey designer is available in the ServiceNow Store. For details, see the "Activation information" section of these release notes.</p> </div> <p>Learning Core </p> <ul style="list-style-type: none"> • Enable advanced security and access controls with course catalogs in Learning Core. Provide advanced security, life-cycle management, approval process







Application or feature	Details
	<p>management, multiple course state managements, and course progress.</p> <ul style="list-style-type: none"> Group courses into collections to drive specific learning objectives and outcomes.
<p>Encryption Key Management</p>	<p>Edge Encryption updates for IPv6 </p> <p>Use regex within ServiceNow® Edge Encryption to validate IPv6 deny lists. IPv6 addresses and net masks can now be included in the deny list.</p> <p>Infrastructure Security </p> <p>Use the Infrastructure security pages to define versions, TLS certifications, and establish custom URLs.</p> <p>Column level encryption for attachments </p> <p>Use multi-module field encryption for attachments. When configured, a dialog window appears at upload time to select a module for encrypting attachments.</p> <p>Windows Server 2019 Support for Edge Encryption </p> <p>Use Windows Server 2019 as a proxy server running the Edge Encryption application.</p> <p>Cloud Encryption </p> <p>Use Cloud Encryption for block encryption of the full database host along with enhanced key management. Cloud Encryption is available with the ServiceNow Platform Encryption subscription bundle.</p> <p>Administrators can transition from a customer managed key to a ServiceNow managed key. Moving back to a ServiceNow managed key does not require downtime, and does not affect the operation of Cloud Encryption.</p> <p>Use signature generation and verification to prevent unauthorized admin users from editing key management properties, approval records, and quorum approver groups for better security of these sensitive operations.</p>
<p>Enterprise Asset Management</p>	<p>Track assets and their hierarchical relationships using multi-component models and multi-component assets </p> <p>Use multi-component models and multi-component assets to track and maximize how your assets are used. You can associate more than one component to a model to create a multi-component model. To increase granularity, multi-component models and assets are further subdivided into pre-assembled and user-assembled models and assets. Also, you can add child assets to existing multi-component assets and replace and retire any asset in the multi-component asset.</p>

Application or feature	Details
	<p>Create disposal orders for your assets </p> <p>Create disposal orders for your assets that have reached their end of life cycle or are no longer functional. The disposal order workflow guides you through the entire order process for asset disposal.</p> <p>Request loaner assets to keep your organization running smoothly </p> <p>Request a temporary or loaner asset and use it for a specified period of time. You can prepare, deploy, and reclaim loaner assets. You can submit a loaner order even if the product is not currently available in the location that you choose.</p> <p>Create transfer orders for your assets </p> <p>Create a transfer order so that you can transfer assets from one location to the other. A transfer order can contain one or more transfer order lines. A transfer order line can involve one non-consumable asset or multiple quantities of a consumable asset.</p> <p>Create a request for enterprise catalog items from the Service Catalog application </p> <p>Use an enterprise asset request flow to request, source, and deploy catalog items from the Service Catalog application. You can also associate the catalog item with the Standard Enterprise Asset Request flow to trigger the flow.</p> <p>Request an asset refresh </p> <p>Use the Enterprise Asset Refresh flow so that you can track the assets that are nearing the end of their life cycles and replace them with new assets.</p> <p>Audit your asset inventory </p> <p>Audit your asset inventory to learn where your assets are and what their current status is.</p> <p>Use heat risks maps to assess risks for models and assets </p> <p>Run reports to calculate a risk score against models and assets that are based on two risk vectors: likelihood and impact.</p> <p>Access the Enterprise Asset Workspace via licensed roles </p> <p>Use licensed roles to manage your work in the Enterprise Asset Workspace. The <code>enterprise_asset_manager</code> role grants you complete access to the Enterprise Asset Workspace. To perform tasks, use the <code>enterprise_asset_technician</code> role.</p> <p>Manage expiring contracts for leased enterprise assets </p> <p>Get notified and take action on leased enterprise assets that are nearing the end of their contracts. You can choose to return your leased asset, buy out your leased asset, or extend your lease contract.</p>

Application or feature	Details
	<p data-bbox="533 155 1342 222">Manage the Return Merchandise Authorization (RMA) process for your defective enterprise assets </p> <p data-bbox="585 237 1302 564">Use Return Merchandise Authorization (RMA) orders to track and manage the process of repairing or replacing enterprise assets that are defective. You can submit RMA orders for serialized enterprise assets that either arrived defective or became defective within the specified warranty period. Based on your service or warranty contract with the asset vendor, you can choose to repair the defective enterprise asset on-site or ship the defective enterprise asset to the asset vendor for off-site repair or replacement.</p> <p data-bbox="533 581 1126 613">Manage the enterprise asset recall process </p> <p data-bbox="585 630 1289 890">Use recall orders to manage the process of identifying and remediating all enterprise assets that have been recalled by the asset manufacturer or regulator. Supported remediation actions include the replacement, repair, or retirement of your recalled enterprise assets. You can also choose to provide your users with additional instructions on how to operate your recalled enterprise assets.</p> <p data-bbox="533 907 1342 974">Extend Configuration Management Database (CMDB) classes for your enterprise assets and models </p> <p data-bbox="585 991 1310 1446">Use the Expanded Model and Asset Classes application to add enterprise model and asset classes that extend out-of-the-box product model and asset classes within the CMDB class hierarchy. You can also use this application to create model categories that associate these enterprise model and asset classes with CMDB configuration item (CI) classes. Based on these classes and model categories, the Enterprise Asset Management application creates asset and model records that you can use to track and manage your enterprise assets. Discovery tools, such as the ServiceNow® Discovery application, can also use these classes and model categories to create asset and model records for discovered CIs.</p> <p data-bbox="533 1463 1302 1530">Classify medical device-based enterprise models within the Configuration Management Database (CMDB) </p> <p data-bbox="585 1547 1278 1971">Starting with version 1.2.0 of the Expanded Model and Asset Classes application, use the Medical Device model [sn_ent_medical_device_model] child class of the Enterprise good model [sn_ent_model] class to classify medical device-based enterprise models within the Configuration Management Database (CMDB). The application also updates the existing Medical device model category to associate with the new Medical Device model [sn_ent_medical_device_model] class, enabling you to create corresponding asset and model records for tracking and managing your medical device-based enterprise assets.</p>










Application or feature	Details
<p>Environmental, Social, and Governance Management</p>	<p>Create a material topic</p> <p>Create material topics for your organization so that you can identify the areas where you want to make an ESG impact. Material topics are topics that reflect the organization's most significant impacts on the society, environment, and people.</p> <p>Create an ESG goal</p> <p>Establish and track the progress of your organization's ESG goals. Some examples are as follows:</p> <ul style="list-style-type: none"> • Use renewable energy by the end of the year 2035. • Increase diversity in the workplace by 50 percent. <p>Create an ESG target</p> <p>Create ESG targets to track the progress of the ESG goals that you set for your organization. By creating a target, you can use the target to see how well your organization is meeting these goals.</p> <p>Collect metrics</p> <p>Gather metrics to track the effectiveness and performance of your ESG initiatives. For example, you can define a metric to measure the greenhouse gas (GHG) emissions for the business entities in your organization.</p> <p>Convert metric data from any unit to the reporting unit</p> <p>Enter your raw data in a metric data task and then convert the metric data into a different unit of measurement for disclosures and reporting. For example, let's say that you enter data about water usage in liters but your organization needs the report in US gallons and the metric definition unit is set to US gallons. By using this feature, liters are converted to US gallons.</p> <p>Provide responses for multiple metrics at once</p> <p>Use the metric tasks module  to provide the data for multiple metric data tasks. By using filters, you can select the metric group that you want to provide data for, and view the responses that you've entered and submitted. You can also track overdue metrics.</p> <p>Create your emission factor library</p> <p>Create emission activities and emission factors to maintain your emission factor library. An emission factor is a representative value that relates the quantity of a pollutant released to the atmosphere with the activity that is associated with the release of that pollutant. You can choose to associate a factor with an activity.</p> <p>Specify a formula for metric definition score</p>

Application or feature	Details
	<p>Specify a formula that helps you to calculate a metric definition score. You can either use the predefined functions or you can create your own custom formula. You can also specify how frequently you want to collect the data and the level at which the data must be aggregated.</p> <p>Create a disclosure </p> <p>Create an ESG disclosure for your organization. A disclosure refers to the reporting of data that relates to an organization's environmental, social, and governance performance. Disclosures enable investors to make informed decisions by identifying companies that may pose a risk.</p> <p>Integrate ESG Management with Watershed </p> <p>Import data from the Watershed tool to enable your organizations to measure carbon emissions, renewable energy, and what their impact is to the environment. With this data, your organization can reduce emissions and report on the progress that is being made to reduce your carbon footprint.</p> <p>Integrate ESG Management with Urjanet </p> <p>Starting with version 15.0.2, use the Urjanet ESG integration and get your utilities data automatically from Urjanet and avoid manual data entry from your various facilities or office owners.</p> <p>Use the metric data table for data collection </p> <p>Starting with version 15.0.2, use the metric data table for data to provide data for multiple metrics. The metric data table provides an easy to use interface like a spreadsheet with a task management workflow. As a data owner, you can access the metric data table and complete the tasks assigned to you. The metric data table provides the following benefits:</p> <ul style="list-style-type: none"> • Maintains an audit trail of all changes to the data and the users who made the changes. • Enables you to view the metrics segregated by entities. • Gives additional information to the data owner for reference such as instructions to follow while providing the data. • Provides the ability for the users to attach files in the Contextual side panel and attach the relevant documents and links. • Enables ESG program managers and metrics managers to view the data submitted by the data owners and approve or reject the data with comments. • Allows data owners to view the rejection comments in the Activity tab.









Application or feature	Details
	<ul style="list-style-type: none"> • Helps you to view how the past data is trending. • Provides a filter to see metric groups that have open tasks and displays the number of open tasks in parentheses. <p>Aggregate metric definition data at the entity level </p> <p>Starting with version 15.0.2, aggregate the calculated metric definition data at the entity level to get an overall score at the metric definition level.</p> <p>Use the ESG admin role to manage and configure the set up for ESG integrations </p> <p>Starting with version 15.0.2, as an ESG administrator, with the role sn_esg.admin, you can manage all the items within the ESG Management application and configure the set up for all the ESG integrations.</p>
Event Management	<p>Service Operations Workspace for ITOM </p> <p>Use Service Operations Workspace with its configurable workspace that provides a modernized look and feel for triage and remediation of alerts, monitoring services, and integrating with ITSM. Service Operations Workspace provides the following features:</p> <ul style="list-style-type: none"> • Personalized landing page for the operator that displays assigned work and work priority. • Remediation tasks using the Playbook, as well as insights and recommendations to more efficiently triage and remediate alerts. • Extensive configuration and customization options. <p>Note that the legacy Operator Workspace is still supported in this release.</p> <p>Service Operations Workspace enhancements to align with CSDM </p> <p>The following Service Operations Workspace enhancements align with the Common Service Data Model (CSDM):</p> <ul style="list-style-type: none"> • Service dashboard tiles grouped according to a selected service portfolio, which enables you to view services by service offering • An alert form table that displays the service offerings that are impacted by an alert <p>Update the expiration date for active metrics </p> <p>Continue receiving data when a metric's expiration date arrives by extending the metric's expiration date.</p> <p>MID Server throttling mechanism for Metric Intelligence </p>









Application or feature	Details
	<p>Configure your MID Server to protect against data bursts that might overload the instance while ensuring that you do not lose any data.</p> <p>Disable anomaly detection for Metric Intelligence</p> <p>Disable detection of Metric Intelligence anomalies during system maintenance because anomalies detected while maintenance is in progress are likely to be irrelevant.</p> <p>New statistical model for Metric Intelligence</p> <p>Decipher data collected by the skewed noisy classifier with approximately 30% greater efficiency by using the Median Absolute Deviation (MAD) statistical model.</p> <p>Event field mapping filter</p> <p>Configure event field mapping based either on the event monitoring source or on a custom filter condition for event field mapping, or both.</p>
Field Service Management	<p>Appointment Booking and Capacity Enhancements</p> <p>Enhancements to appointment booking configuration</p> <ul style="list-style-type: none"> • Create varying duration appointment schedules: Maintain a single catalog item with different appointment booking rules to enable varying durations of appointments. • Book appointments based on capacity: Ensure that the right amount of appointments are available to customers based on the available capacity while booking appointments. Customer Service agents can book appointments for customers or customers can book appointments on their own. <p>Crew Operations Enhancements for dispatcher</p> <p>Enhancements to crew operations capability:</p> <ul style="list-style-type: none"> • Recommend the most eligible agents for a crew task based on the required skills, availability, and location of the task. • View the period for which the agent is a member of the crew. • Create task-specific crews and add agents to the crew while viewing the recommended agent schedule and availability in Dispatcher Workspace. <p>Territory Planning</p> <p>View, create, and manage service territories and allocate resources to them to ensure that work order tasks are scheduled only to agents or crews belonging to the same territory. This helps reduce the travel time and travel costs for an agent or a crew.</p> <p>Dynamic mapping of work order templates to work orders</p>







Application or feature	Details
	<ul style="list-style-type: none"> • Dynamically identify the appropriate work order task templates to create work order tasks. • Inherit attribute values dynamically from source records such as cases, incidents, or CIs to work order records. <p>Manage your inventory using the Now Mobile Agent application</p> <ul style="list-style-type: none"> • Request multiple parts: Create part requests from My work and Inventory screens with the required quantity, either directly or by fetching them from an existing part requirement. <ul style="list-style-type: none"> ◦ Push notifications: Field service agents receive mobile notifications when their peers request parts and can approve or reject the requests. Notifications are sent to the requesting agent when the part requests are cancelled. ◦ View transfer orders: If a part request is accepted, the parts are moved between field agent stockrooms. A transfer order is created when the part request is accepted and the parts are sourced. • Improved search experience for parts: View stockrooms with available parts relative to an agent's location. Agents can set up a preferred stockroom that maps with assignment groups. Agents can also view the last known location of their peers' stockrooms if they have enabled the geolocation option to track their locations. • Request parts for personal stockroom: Create a requirement to request parts for a personal stockroom without the context of work order task. <p>Mobile experience for Field Service Management enhancements</p> <p>Enhance the on-shift and off-shift process and optimize ways to access questionnaires. Update estimated task end-time. Improve card actions and card sizes. Improve the workflows in the offline mode.</p> <p>Install Base Integration with Work Order</p> <p>Vendors can offer field support for sold products and convert cases into work orders quickly.</p> <p>Quick start tests for Field Service Management</p> <p>After upgrades and deployments of new applications or integrations, run quick start tests to verify that Field Service Management works as expected. If you customized Field Service Management, copy the quick start tests and configure them for your customizations.</p>





Application or feature	Details
	<p>Now Mobile experience for Field Service Contractor </p> <p>Field Service Contractor in ServiceNow Agent mobile application provides flexibility to manage work order tasks on-the-go. You can manage work order tasks, create incidentals, reassign task, view details of an agent, and update parts usage directly from the ServiceNow Agent agent application.</p>
<p>Financial Services Business Deposit Operations</p>	<p>Version 2.2.0: View location manager branch locations for cases </p> <p>The Branch location field is added to all case tables and case forms. Various roles can access the case list view to see cases assigned to a manager's branch. To view the branch location that a case is assigned to, select a case from the list to view the branch location on the case record.</p> <p>Version 2.2.0: Use demo data for branches </p> <p>Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate use of branch operations features.</p>
<p>Financial Services Business Lifecycle</p>	<p>Version 2.2.0: View location manager branch locations for cases </p> <p>The Branch location field is added to all case tables and case forms. Various roles can access the case list view to see cases assigned to a manager's branch. To view the branch location that a case is assigned to, select a case from the list to view the branch location on the case record.</p> <p>Version 2.2.0: Use demo data for branches </p> <p>Use sample customer, account, and report items from demonstration data for FSO branch operations.</p>
<p>Financial Services Business Loan Operations</p>	<p>Version 2.1.0: View location manager branch locations for cases </p> <p>The Branch location field has been added to all case tables and case forms so the branch location assigned to a case is visible in case records.</p> <p>Version 2.1.0: Use demo data for branches </p> <p>Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate the use of branch operations features.</p>
<p>Financial Services Card Operations</p>	<p>Version 2.1.0: View location manager branch locations for cases </p> <p>The Branch location field has been added to all case tables and case forms so the branch location assigned to a case is visible in case records.</p> <p>Version 2.1.0: Use demo data for branches </p>






Application or feature	Details
	<p>Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate the use of branch operations features.</p> <p>Manage dispute service requests</p> <p>Initiate and manage cases for dispute requests. Each case triggers a specific workflow that is designed for dispute requests. Assignment rules route the workflow tasks to the appropriate back-office agents, such as card dispute agents, who work on the tasks to fulfill the dispute request. You can use a case playbook to handle card dispute operation processes. A case playbook includes activities and tasks for end-to-end guidance from the time that a case is initiated to the fulfillment of the request.</p>
Financial Services Client Lifecycle	<p>Version 2.2.0- View branch manager locations for cases</p> <p>The Branch location field is added to all case tables and case forms. Various roles can access the case list view to see cases assigned to a manager's branch. To view the branch location that a case is assigned to, select a case from the list to view the branch location on the case record.</p> <p>Version 2.2.0- Use demo data for branches</p> <p>Use sample customer, account, and report items from demonstration data for FSO branch operations.</p>
Financial Services Complaint Management	<p>Version 1.3.0- View branch manager locations for cases</p> <p>The Branch location field has been added to all case tables and case forms so the branch location assigned to a case is visible in the case record.</p> <p>Version 1.3.0 - Use demo data for branches</p> <p>Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate use of the branch operations features.</p>
Financial Services Credit Operations	<p>Version 2.1.0: View location manager branch locations for cases</p> <p>The Branch location field has been added to all case tables and case forms so the branch location assigned to a case is visible in case records.</p> <p>Version 2.1.0: Use demo data for branches</p> <p>Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate the use of branch operations features.</p>
Financial Services Operations Core	<p>Version 1.9.0- Location manager contributor role and workspace</p> <p>The Location manager contributor role has been added, enabling users assigned the role to use a</p>



Application or feature	Details
	<p>workspace and landing page from which to see case overviews across branches that they manage.</p> <p>Version 1.9.0 - View performance metrics for branches </p> <p>Location managers can view branch performance metrics on the workspace's Branch Performance Metrics page, such as service level agreement (SLA) breaches for locations that they manage.</p> <p>Version 1.9.0 - Create cases for a branch </p> <p>Location managers can create customer cases for branches they manage from the link to the create case form on the role's workspace landing page.</p> <p>Version 1.9.0 - View and assign branch locations to cases </p> <p>See cases assigned to a managed branch by accessing the case list view. View the branch location that a case is assigned to or assign a case to a branch.</p> <p>Version 1.9.0- FNOL representative landing page</p> <p>A landing page for the first-notice-of-loss (FNOL) representative persona has been added. From the landing page, FNOL representatives can view tasks and metrics to see their performance and how to prioritize their work.</p> <p>Version 1.9.0- Claim approval engine </p> <p>Monitor and check the accuracy of reserve and payment amount requests through the claim approval engine that has been added for claim reserve and claim payment components.</p>
Financial Services Payment Operations	<p>Version 1.4.0- View location manager branch locations for cases </p> <p>The Branch location field is added to all case tables and case forms. Various roles can access the case list view to see cases assigned to a manager's branch. To view the branch location that a case is assigned to, select a case from the list to view branch location on the case record.</p> <p>Version 1.4.0- Use demo data for branches </p> <p>Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate use of branch operations features.</p>
Financial Services Personal Deposit Operations	<p>Version 2.2.0-View location manager branch locations for cases </p> <p>The Branch location field has been added to all case tables and case forms so that the branch location assigned to a case is visible in the case record.</p> <p>Version 2.2.0- Use demo data for branches </p>







Application or feature	Details
	<p>Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate use of the branch operations features.</p>
<p>Financial Services Personal Loan Operations</p>	<p>Version 2.1.0: View location manager branch locations for cases </p> <p>The Branch location field has been added to all case tables and case forms so the branch location assigned to a case is visible in case records.</p> <p>Version 2.1.0: Use demo data for branches </p> <p>Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate the use of branch operations features.</p>
<p>Financial Services Treasury Operations</p>	<p>Version 2.2.0- View branch manager locations for cases </p> <p>The Branch location field has been added to all case tables and case forms so that the branch location assigned to a case is visible in the case record.</p> <p>Version 2.2.0- Use demo data for branches </p> <p>Use sample customer, account, and report items from demonstration data for FSO branch operations to illustrate use of the branch operations features.</p>
<p>Financial Services integration with Jack Henry Associates jXchange</p>	<p>Includes subflows in the middle layer to consume Jack Henry Associates jXchange spoke actions </p> <p>Learn how the Financial Services middle layer helps to integrate with the Financial Services Operations application and stores the information to the data model. This layer includes subflows that consume the actions in the JHA spoke. Each action has both individual subflows and combined subflows to call all the actions together. The subflows can be called from the flow by passing the financial account and account type as an input to look up customer details and financial account details.</p> <p>New mapping tables to store responses from API </p> <p>No new tables were created for storing the data during integration. However, five mapping tables were created for JHA integration.</p>
<p>Flow Designer</p>	<p>Add flows from Table Builder in App Engine Studio </p> <p>Create flows for a table directly from the App Engine Studio version of Table Builder.</p> <p>Perform archive operations with Zip steps </p> <p>Perform archive operations to manage the attachments in a record by using Zip steps. Reduce the file size of attachments and also unzip specific attachments in a zipped file. View the attachments in a zipped file before unzipping.</p>






Application or feature	Details
	<p>Limit Flow Designer access with read only roles </p> <p>Allow Flow Designer users to view configuration details but prevent them from creating or changing content. Grant users a general read-only role when you want to limit access to all Flow Designer content. Grant users a specific read-only role when you only want to limit access to specific features such as flows, actions, or execution details.</p> <p>Use the ScriptableFlowRunner API to run a flow with roles</p> <p>Use the <code>withRoles()</code> method with the <code>quick()</code> method to run a flow or subflow using the roles specified in its properties.</p> <p>Use the ScriptableFlowRunner API to run a flow as a user</p> <p>Use the <code>asUser()</code> method with the <code>quick()</code> method to run a flow or subflow as the user who triggered the flow.</p>
Goal Framework	<p>Import goals and targets data from a spreadsheet </p> <p>Import your existing goals and targets data (that are defined outside Goal Framework) from a spreadsheet to the Goal Framework tables. When you import data from a spreadsheet, the goals and targets data is imported to the Goal [sn_gf_goal] and Target [sn_gf_goal_target] tables, respectively.</p>
Governance, Risk, and Compliance	<p>Configure confidentiality on GRC tables </p> <p>Create confidential records in your Governance, Risk, and Compliance table. A new table, confidentiality configuration, is added so that you can enable confidentiality in your GRC tables. For more information, see Configure confidentiality in GRC tables </p> <p>Miscellaneous entity related enhancements </p> <p>Enhancements include:</p> <ul style="list-style-type: none"> • Use the Sync with entity owner feature to ensure that the risk owner and control owner are always in sync with the entity owner without making any manual updates. • Two new buttons were added in the seven related lists of the entity form. One button shows the records that are directly related to the entity and the other button removes the additional filter to show all the upstream and downstream records. • Use the Entity class rule filter to configure multiple classes in the same table. The entities that are created from that table automatically pick the class that matches the condition that is defined in the class rule filter. <p>360° view enhancements </p>

Application or feature	Details
	<p>Enhancements include:</p> <ul style="list-style-type: none"> • A new Order field is added in the relationship registries to change the position of the field in the pie chart. • For upgrading customers, the order value was changed from null to 0.
<p>Group Life Servicing</p>	<p>Group Life Servicing application </p> <p>Manage group life and disability insurance policies. Coordinate efforts with the associated departments and offices required to manage tasks related to life insurance policy changes. Use a baseline service flow to change member information.</p> <p>Customized playbook experience </p> <p>Initiate and complete insurance workflows using dedicated playbooks and workspaces designed for each role. Playbooks provide step-by-step guidance through tasks to ensure that every step gets completed at the right stage of the process. Use or enhance baseline service flows for Group Life Servicing.</p> <p>Performance Analytics and Process Optimization dashboards</p> <p>Use Performance Analytics and Process Optimization dashboards to gain insight into how your team and the service flows are performing.</p> <p>Data model for servicing life insurance</p> <p>Gain the benefit of tables from the Now Platform and the ServiceNow® Customer Service Management (CSM) application with the ServiceNow® Financial Services Operations Core data model for life insurance.</p>
<p>HR Service Delivery Case and Knowledge Management</p>	<p>Document Template integration with DocuSign </p> <p>Enable the use of the DocuSign application for signing documents that are generated from ServiceNow Document Templates.</p> <ul style="list-style-type: none"> • Allow multiple participants to collaboratively work on a single document. • Choose a signing type, select a signing partner, and sign with a mobile device or from any portal. <p>Document Template Integration with AdobeSign </p> <p>Enable the use of Adobe Sign application for signing documents that are generated from ServiceNow Document Templates.</p> <ul style="list-style-type: none"> • Allow multiple participants to collaboratively work on a single document. • Choose a signing type, select a signing partner, and sign with a mobile device or from any portal.

Application or feature	Details
	<p data-bbox="533 155 1270 186">Employee Relations integration with NAVEX EthicsPoint </p> <p data-bbox="585 205 1292 365">Use the power of Now Platform workflows to empower your HR agents. You can pull employee relation cases from NAVEX EthicsPoint into Now Platform, which enables an HR agent to work on employee relation cases from a ServiceNow instance.</p> <p data-bbox="533 384 750 415">Manager Hub </p> <p data-bbox="585 432 1291 625">Increase your people managers' proactive engagement with their teams by providing insights and recommended actions for what's most urgent and important to drive team success. You can enable your people managers to grow as leaders through knowledge resources.</p> <p data-bbox="533 644 1090 676">HR Service Delivery Process Optimization </p> <ul data-bbox="592 705 1297 1016" style="list-style-type: none"> <li data-bbox="592 705 1297 804">• Enable your company to analyze and improve service delivery processes by leveraging ServiceNow platform Process Optimization capabilities. <li data-bbox="592 823 1297 1016">• Access a best practice content pack for HR Service Delivery containing preconfigured process optimization models that help analysts and process owners understand the effectiveness of their processes and spot opportunities to improve performance. <p data-bbox="533 1056 866 1087">HR Case Management </p> <ul data-bbox="592 1117 1302 1297" style="list-style-type: none"> <li data-bbox="592 1117 1302 1215">• Provide your administrators with the options to configure search parameters so that your agents get better search results for their cases. <li data-bbox="592 1234 1302 1297">• Provide your agents with the flexibility to add approvals to a case that is part of an HR service. <p data-bbox="533 1337 1149 1369">Agent Workspace for HR Case Management </p> <ul data-bbox="592 1398 1302 1980" style="list-style-type: none"> <li data-bbox="592 1398 1302 1528">• Enable your administrators to configure adhoc approvals at each HR service level. You can provide your agents with the flexibility to add approvals to a case that is part of an HR service. <li data-bbox="592 1547 1302 1646">• Enable attachment transfers from an interaction to a case so that your HR agents get the entire history of an interaction. <li data-bbox="592 1665 1302 1764">• Enable your agents to get a better understanding of a case by reviewing the approval history and work notes in the activity stream. <li data-bbox="592 1782 1302 1881">• Customize the tab labels for HR cases. Your agents can gain better insights into a case by hovering their mouse devices over the case number. <li data-bbox="592 1900 1302 1980">• Update the profile information for an employee in the At a Glance panel based on the change in the Subject person field. Your agents can verify that








Application or feature	Details
	<p>the information is correct even before saving the change.</p> <ul style="list-style-type: none"> • Enable your agents to access the checklist as a separate tab from the contextual side panel, independent of the fulfillment instructions in an HR case. • Enable your agents to use the Sign document button on an HR task to easily authenticate the documents and send them to the appropriate requesters. • Enable your agents to preview and edit the HTML-type documents that are attached to an HR case by using Document Templates. • Enable your agents to send communication that is related to a case by using the Send email feature in HR Workforce Administration cases and in HTML type documents in Document Templates. • Enable your agents to minimize errors while typing an email. In HR Workforce Administration Cases, the To field in Compose email (Send email) is automatically populated with the email address of the Subject person. • Enable your agents to add special handling notes for special instructions to be highlighted in an employee relations case. • Enable your agents to block other agents from accessing a particular ER case by using the Restrict form action. • Enable your administrators to configure search parameters to have better search results for cases. • Enable agents in the Agent Workspace to create document tasks from HTML Doc Templates. • Enable participants to sign the document tasks created from HTML Doc Templates in Agent Workspace. <p>HR document templates </p> <ul style="list-style-type: none"> • Configure participants in the Document template using advanced scripting. • Mark the participants in the Document template optional via the Optional field so that if the participant is empty the document task is not created for this participant. <p>Performance Improvement Plan (PIP) service </p> <p>Manage employee performance issues within Employee Relations, using the Performance improvement plan (PIP) service. Organisations handle employee performance issues in close co-ordination with HR teams, Employee Relations teams, and/or</p>

Application or feature	Details
	<p>Legal teams. Proper processes must be followed, and appropriate documentation and communication must be maintained. With this feature, a manager can:</p> <ul style="list-style-type: none"> • Initiate a PIP case for an employee and involve the Employee Relations advisory to handle and support the PIP case more efficiently. • Track the progress of tasks and take the necessary action — Structured workflow (with a lifecycle event) auto-initiates tasks for a manager, an employee, and an Employee Relations agent. <p>Quick start tests for HR Service Delivery </p> <p>After upgrades and deployments of new applications or integrations, run quick start tests to verify that HR Service Delivery Case and Knowledge Management works as expected. If you customized HR Service Delivery Case and Knowledge Management, copy the quick start tests and configure them for your customizations.</p>
<p>Hardware Asset Management 5.0</p>	<p>Configure Hardware Asset Management applications through Guided Setup </p> <p>Configure the Hardware Asset Management applications on your ServiceNow instance through the Hardware Asset Management Guided Setup, which provides a sequence of tasks to be performed and organizes configuration activities into various categories.</p> <p>View hardware products and models on the Content lookup portal page </p> <p>Find the details of all the hardware products and model numbers within the content library via an intuitive user interface. The Content lookup portal has been expanded to include the hardware, product, and model content libraries.</p> <p>Renew hardware contracts through Contract renewal workflow </p> <p>Notify contract owners of an upcoming contract expiration and enable them to renew the contract record by using the Contract Renewal workflow. This workflow maintains the contract history during updating assets, terms, and conditions for a new contract.</p> <p>Identify and track your asset locations automatically with RFID </p> <p>View the RFID Tag information like zone group, zone, and locations mapped with assets by integrating your Zebra technology RFID system with your ServiceNow instance.</p> <p>Source hardware requests in the Asset operations view </p>








Application or feature	Details
	<p>See local stock, create transfer orders, and place purchase orders by using the Sourcing task in the Asset operations view.</p> <p>Visualize and work on contract details </p> <p>Visualize, renew, and manage details of contracts such as the contract number, contract start and end dates, and terms and conditions statements by using the Contract management view.</p> <p>Get visibility into critical IT Asset Management KPIs using the Asset Management Executive dashboard </p> <p>Gain actionable insights into IT Asset Management KPIs by using the Asset Management Executive dashboard to view KPIs such as total spend, potential savings, and expiring contracts. The Asset Management Executive dashboard is available if either the Software Asset Management application or the Hardware Asset Management application is installed on your ServiceNow instance.</p> <p>Quick start tests for Hardware Asset Management </p> <p>After upgrades and deployments of new applications or integrations, run quick start tests to verify that Hardware Asset Management Hardware Asset Management still works. If you customized Hardware Asset Management, copy the quick start tests and configure them for your customizations.</p> <p>Updated Mobile section on the Asset form </p> <p>Manage your mobile devices more effectively by specifying enrollment, platform, and ownership details of your mobile device in the relevant fields of the Mobile section on the Asset form.</p>
Health Log Analytics	<p>View Health Log Analytics system health alerts on the Event Management service map </p> <p>View system health alerts for Health Log Analytics on the ServiceNow® Event Management application service map. When the Health Log Analytics self-health checks that monitor the health of its components discover a system health issue, a notification triggers an alert. The service map helps you to better understand the source of the alert. It enables you to visualize the impact of the issue on the service through a visual representation of the data on the configuration items (CIs) that comprise the Health Log Analytics application and the relationships between these CIs.</p> <p>Use enhanced log data streaming capabilities</p> <p>Work with improved Health Log Analytics log data streaming capabilities that provide clear, actionable recommendations for resolving log streaming issues.</p>

Application or feature	Details
<p>Healthcare and Life Sciences Service Management Core</p>	<p>Improvements in role-based access to healthcare cases, tasks, and data</p> <p>Assign the following roles for managing base-level access to healthcare cases, tasks, and data:</p> <ul style="list-style-type: none"> • sn_hcls.case_task_viewer • sn_hcls.case_viewer • sn_hcls.consumer_agent • sn_hcls.data_access_user • sn_hcls.employee_patient • sn_hcls.customerservice_agent <p>Domain separation support in Healthcare and Life Sciences Service Management Core</p> <p>Use domain separation at the basic support level in Healthcare and Life Sciences Service Management Core.</p> <p>Enable B2B2C for use with Healthcare and Life Sciences Service Management Core</p> <p>Enable the business-to-business-to-consumer (B2B2C) model in Healthcare and Life Sciences Service Management Core by configuring the Customer Data Models for B2B2C application.</p> <p>Healthcare and Life Sciences data model enhancements</p> <p>Use the Clinical device install base item [sn_hcls_clinical_device_install_base_item] table added to the data model for storing the details of clinical devices.</p>
<p>ITOM Cloud Accelerate</p>	<p>Tag Governance</p> <p>Use the Tag Governance application in a production instance to update the resource tags in the cloud. To use this feature, you need the ITOM Cloud Accelerate entitlement.</p> <p>Cloud Migration Assessment</p> <p>Use the ServiceNow® Cloud Migration Assessment application to plan, organize, and track the process of relocating your enterprise IT resources and workloads to cloud platforms. Analyze the IT resources using dashboards that visualize and summarize information on resources by different categories.</p> <p>Cloud Configuration Governance</p> <p>Use the ServiceNow® Cloud Configuration Governance application to check the configuration settings of cloud resources in your organization against a set of policies to identify violations. After identifying the violation, use remediation workflows to mitigate them.</p>







Application or feature	Details
	<p>Cloud Action Library ↗</p> <p>Use the ready-to-use actions and subflows of the ServiceNow® Cloud Action Library application to interact with the cloud resources of the organization. ServiceNow® ITOM Cloud Accelerate features, such as Cloud Configuration Governance, use these actions to operate.</p>
ITOM Health	<p>Event Management ↗</p> <p>Identify health issues across your organization's IT infrastructure on a single management console. Get alert aggregations for discovered services, application services, and automated alert groups.</p> <p>Health Log Analytics ↗</p> <p>Predict IT issues before they impact users. Solve issues faster by ingesting, analyzing, and correlating machine-generated log data in real time.</p>
ITOM Visibility	<p>Application service readiness dashboard in configurable workspace ↗</p> <p>Ensure that you are ready to discover and map application services based on machine learning (ML) by reviewing information on the Application service readiness dashboard. Service Mapping uses data processed by Predictive Intelligence to generate suggestions for traffic-based connections.</p> <p>Support for IPv6 devices</p> <p>IPv6 supports the following for Discovery via Discovery schedules and Quick Discovery.</p> <ul style="list-style-type: none"> • Systems: <ul style="list-style-type: none"> ◦ Linux and Windows discovery patterns for horizontal discovery ◦ Application Dependency Mapping (ADM) ◦ Installed software ◦ Application patterns • vCenter • SNMP devices • Certificate Inventory and Management <p>IPv6 also supports Debug Mode in Pattern Designer.</p> <p>IPv6 does not currently support the following:</p>








Application or feature	Details
	<ul style="list-style-type: none"> • MID Server auto-selection • Service Mapping • Cloud Discovery or Cloud Provisioning and Governance <p>Cloud Operations Workspace </p> <p>Use the Cloud Operations Workspace to slice and drill down into all your cloud resources by various dimensions such as region, accounts, and CI class types, as well as experiencing the new dark theme mode in the Next Experience UI. You can manage your cloud viewing preferences, set up cloud discovery schedules, and examine the trend of cloud resource growth.</p> <p>Application CI life cycles </p> <p>Control if application CIs should be updated based on running process status by setting the Discovery property <code>glide.discovery.adm.update.applications</code> to true. For existing customers upgrading to Tokyo, manually set this property to true.</p> <p>SCP and SFTP file transfer method choice </p> <p>Select the method to use for Probes and patterns to transfer files, SCP and SFTP, by setting the MID Server property <code>mid.discovery.file_transfer_protocol</code>. The default value is SCP.</p> <p>Visibility Content application </p> <p>Use the updated version of the patterns that were part of the family releases prior to the Tokyo release by installing the Visibility Content (<code>sn_pattern_design</code>) application. You can install the latest available version of this application from the ServiceNow Store or install it as a plugin on your ServiceNow instance.</p> <p>Quick start tests for Service Mapping </p> <p>After upgrades and deployments of new applications or integrations, run quick start tests to verify that Service Mapping works as expected. If you customized Service Mapping, copy the quick start tests and configure them for your customizations.</p>
Import and Export	<p>Use an updated load-by-script experience for custom data sources </p> <p>Access the data source and import logs directly in the data loader script.</p> <p>Override a connection alias when you schedule an import </p> <p>For data sources that use a connection alias, use the default parent alias or override it with a child alias. Connection override is available on the Scheduled</p>

Application or feature	Details
	<p>Data Import form, so you can select an alias without needing to write a script.</p> <p>Specify a column when mapping data to a reference field ↗</p> <p>For reference fields, you can select a particular column to map data to in the target table.</p> <p>View detailed import statistics all in one place ↗</p> <p>View information about the import set run, processed records, individual import set rows, errors, and log messages all through the import set view.</p> <p>ETL definition enhancements ↗</p> <ul style="list-style-type: none"> • Use an <code>on before</code> script to ignore records, log messages, or run custom logic before inserting or updating data. • Use an <code>on after</code> script to log messages or run custom logic after inserting or updating data. • Specify what to do if incoming data has a field with an empty value. Copy the empty value or ignore it and keep the existing value.
<p>Incident Management</p>	<p>Report View Access Control List (ACL) - Incident Management</p> <p>Report_view access control lists (ACLs) are now active for both new and upgrade customers starting with the Tokyo release. This feature is added for the incidents and incident tasks to enable users to have a safer and more secure access to the reports available on the dashboards.</p>
<p>Individual Life Servicing</p>	<p>Individual Life Servicing application ↗</p> <p>Manage individual life and disability insurance policies. Coordinate efforts with the associated departments and offices required to manage tasks related to life insurance policy changes.</p> <p>Customized playbook experience ↗</p> <p>Initiate and complete insurance workflows using dedicated playbooks and workspaces designed for each role. Playbooks provide step-by-step guidance through tasks to ensure that every step gets completed at the right stage of the process. Use or enhance baseline service flows for Individual Life Servicing.</p> <p>Performance Analytics and Process Optimization dashboards</p> <p>Use the Performance Analytics and Process Optimization dashboards to gain insight into how your team and the service flows are performing.</p> <p>Data model for servicing life insurance</p> <p>Gain the benefit of tables from the Now Platform and the Customer Service Management (CSM) application</p>

Application or feature	Details
	<p>with the ServiceNow® Financial Services Operations Core data model for life insurance.</p>
<p>Integration Hub</p>	<p>REST step enhancements </p> <ul style="list-style-type: none"> • Dynamically set the base URL for a connection when using a connection alias. • Configure the file name and content type for each part of a multipart request. Use the file name and content type from an attachment or enter your own. • Send REST requests that contain duplicate request headers. If you create a REST request with duplicate headers, the headers are sent in the same order that you define them. <p>Configure logging for the PowerShell step </p> <p>Add log messages to your PowerShell scripts. Use log levels for improved logging and debugging.</p> <p>Integration Hub - Import enhancements </p> <ul style="list-style-type: none"> • Override the connection for an integration. For Data Stream actions that use a connection alias, you can use the default connection alias, or replace it with a child alias. • Use Data Stream actions with dynamic outputs as data sources. • For choice and reference fields in the target table, specify the column to map data to in the target table. Use the default display column or select your own. <p>Pre-populate custom fields in a configuration template </p> <p>Pre-populate the custom fields in a connection configuration template by using a pre-edited script. Map the custom fields to records in tables that are outside the connection. Use this capability to view the current values associated to the custom fields while editing a connection.</p> <p>Test a credential for the PowerShell step </p> <p>Test a configured credential directly from the PowerShell step. Confirm that the credential works before you use it.</p> <p>Use a MID Cluster in Integration Hub steps and connections </p> <p>Specify a MID Cluster in integration steps or when configuring a connection. View the MID Server that the step ran on in the Flow execution details.</p> <p>Run a flow with a personal OAuth token </p>





Application or feature	Details
	<p>Enable a personal (non-admin) user to create an OAuth token and use that token to run an action or flow.</p>
<p>Intelligent Service Delivery</p>	<p>HR Service Delivery Virtual Agent</p> <p>Complete common self-service HR tasks using predefined Virtual Agent topics (chatbot conversations) added to the HR Service Delivery Virtual Agent.</p> <ul style="list-style-type: none"> • Download Payslip Request (Template) • Enrol new Beneficiary Request (Template) • Change in Benefits Inquiry (Template) • Tuition Reimbursement Request (Template) • HR Account Access (Template) • Employment Verification Letter Request (Template) • 401k Benefits inquiry (Template) • HSA Inquiry (Template) • Check Case status (Template) <p>Note that the corresponding NLU intents are available only in the English language.</p> <p>Installing and activating the HR VA plugin will automatically activate the AI Search fallback as the default fallback greeting experience for Employee Service Center and other chat channels like Microsoft Teams, SMS, Slack, Workplace, Mobile web and Mobile app.</p> <p>Improve engagement for employees and managers working with Journey/Lifecycle events by sending Actionable Notifications on various channels as nudges. Employees can also complete the action by interacting with the action buttons on the Virtual Agent.</p> <p>Machine learning solutions for HR Service Delivery</p> <p>When creating a journey for an employee, managers can provide 'Learning recommendations' for employees to recommend relevant learning courses. The recommendations are based on the courses taken by similar employees during their specific journey.</p> <p>Issue Auto Resolution for HR Service Delivery</p> <p>Enable your employees to ask for help through the channels that they prefer and receive a near real-time response in the channels where they are at. IAR provides automatic resolution to the high-volume routine HR cases, resulting in cost savings and a better employee experience.</p>

Application or feature	Details
	<p>To use SMS as a response channel, Twilio plugin must be installed. After the plugin installation, customers can use the default templates provided by ServiceNow or their own templates for SMS notifications.</p> <p>Omni-channel universal request creation </p> <p>Auto-create a universal request for every HR case that is created.</p> <p>This feature enables organizations to create a universal request for every HR case that is created, using any channel. It extends the unified ticket experience that Universal Request provides for all the HR cases, irrespective of the channels they are created from.</p> <p>Associate tickets </p> <p>From an HR case that is the primary ticket of a universal request, you can create tickets for another department and associate them to the same universal request as the HR case. This feature enables agents to collaborate, and it enables organizations to trace back efforts against a single universal request.</p>
Investment Funding	<p>Co-owners for an investment </p> <p>As an investment co-owner, you can request and allocate funds, view the status of funds, and delete unfunded investments on your behalf. There is no maximum limit for the number of co-owners for an investment.</p>
Knowledge Management	<p>Ability to set up 301 and 404 redirects for retired articles </p> <p>Indicate a replacement article while retiring a knowledge article to which users will automatically be redirected with a 301 redirect response. If a replacement article is not available, the page displays the message Knowledge record not found as a 404 response.</p> <p>Bulk translation for knowledge articles </p> <p>Translate multiple knowledge articles in different languages at once by using the Bulk Translation feature, which supports the localization framework. You can only initiate a translation for a language added in the Localization settings.</p>
Legal Service Delivery	<p>ServiceNow[®] Legal Investigations application </p> <p>ServiceNow[®] Legal Investigations is a Legal Practice app included with Legal Service Delivery that enables the Legal department in your organization to accept complaints through a simple intake process.</p> <p>Employees can file complaints either by name through Legal Service Portal or Employee Center</p>

Application or feature	Details
	<p>portal, or anonymously through the Anonymous Report Center portal. The legal team can conduct legal investigations, including conducting interviews, gathering evidence, and preparing final reports with recommended actions to address these complaints.</p> <p>Better together: Legal Investigations and HR Service Delivery Employee Relations </p> <p>Integrate Legal Investigations with ServiceNow® HR Service Delivery Employee Relations to provide a seamless experience for employees to submit complaints via universal requests and for legal counsels to work on them, transferring them between Legal and HR departments.</p> <p>Enable external storage to store documents attached to legal matters </p> <p>Enable documents attached to legal matters to be stored on an external storage system. You can configure multiple external cloud storage providers to store these documents. Control access permissions for these documents in real time to different users who can view legal matters via a scheduled job or on-demand while adhering to document retention policies.</p> <p>Provide seamless legal services through Universal </p> <p>Enable integration of legal services with Universal Request to provide a single point of reference for employees to make requests to any department, including Legal. Routing agents can route universal requests to appropriate legal teams to seek legal support. The legal team can transfer requests for more action from Legal to other departments while keeping employees informed throughout.</p> <p>Customizable Legal Service Delivery properties </p> <p>Configure system properties to administer features that affect how Legal Service Delivery apps work, like integrations with external storage and schema overrides.</p> <p>Create an intake workflow to request legal support for legal contracts </p> <p>Create a legal contract intake workflow by creating a record producer and configuring base system settings so that employees can request the legal department's guidance on legal contracts.</p> <p>Track updates on existing Conflict of Interest requests </p> <p>Review and validate changes requested to existing Conflict of Interest requests before approving or rejecting them.</p> <p>Define response templates for quick communication </p> <p>Define response templates with reusable text that legal fulfillers can use in the work notes, comments, emails, or</p>

Application or feature	Details
	<p>chats to send users consistent messages quickly while working on legal requests.</p> <p>Integrate with Microsoft SharePoint for storing legal request and legal matter documents</p> <p>Integrate with Microsoft SharePoint to store documents in legal requests and legal matters in the Microsoft SharePoint storage system.</p> <p>Get insight into the complaints-related metrics in the Legal Executive dashboard</p> <p>Use the complaints-related indicators on the Legal Executive dashboard to gain insight into the complaints data and make informed decisions.</p> <p>Use Catalog Builder to manage record producers for legal services</p> <p>Create an intake form for legal services in Catalog Builder by using the base system catalog templates for legal request and legal matter.</p>
<p>Localization Framework</p>	<p>Auto-create localization projects</p> <p>Minimize the time required for localization processes by enabling the auto-creation of localization projects. When you enable auto-creation and request an artifact translation, the corresponding localization requested items are added to the project and the project starts automatically.</p> <p>Apply Localization Framework to surveys</p> <p>Survey authors can request translations of a survey into multiple languages.</p> <p>Translate knowledge base articles in bulk</p> <p>Facilitate the translation of knowledge base articles in bulk using Localization Framework.</p> <p>Support email notifications</p> <p>Notification admins can request translations of notification templates into multiple languages.</p>
<p>MID Server</p>	<p>Support for IP-based Discovery over IPv6</p> <p>A MID Server configured for IPv6 can connect to the instance and use Discovery over IPv6 for specific addresses. A pure IPv6 MID Server connects to IPv6 by default, and the ecc_agent is automatically populated with IPv6. Contact Customer Service and Support to verify that your instance is IPv6 enabled. Cloud Discovery and Cloud Provisioning and Governance do not support IPV6-based discovery.</p> <p>Configure the MID Server Installation Package URL</p> <p>You can now change the URL to check for install packages when upgrading or changing the MID Server so the MID Server can update through specific</p>




Application or feature	Details
	<p>customer URLs within their environment. Note that this update does not work for regulated environments where different domain suffixes and addresses are used.</p> <p>MID Server Keystore Backup</p> <p>The MID Server has improved backups for the keystore, especially using custom keypairs. The keystore can be quickly restored if it becomes corrupted or is accidentally deleted. Previously, restoring a keystore with many custom keypairs would be time consuming.</p> <p>MID Server Logging Improvements</p> <p>The MID Server logs have been improved with the timezone of the MID Server included on timestamps, Java class names and line numbers for log entries, and improved log levels and warnings. The new formatter is used when writing to the <code>.../agent/logs/agent0.log.<number></code> logs. All other log formats for the MID Server remain unchanged.</p>
<p>Manufacturing Process Manager</p>	<p>Managing equipment model entity schedules</p> <p>Manage equipment entity schedules with the <code>sn_isa_schedules_admin</code> role and the Planned Downtime module, and create maintenance schedules as needed.</p> <p>A dedicated role to manage ISA maintenance schedules</p> <p>As a user who has the admin role, assign the <code>sn_isa_schedules_admin</code> role to the user in charge of maintaining the ISA schedules. Without the <code>sn_isa_schedules_admin</code> role, ISA editor, ISA viewer, ISA admin users get read-only access to the ISA schedules.</p> <p>Planned Downtime module</p> <p>Shows the association of equipment model entities with their downtime schedules.</p> <p>New role for across the sites visibility of equipment model entity hierarchy</p> <p>Helps the OT incident admin to administer OT incidents across sites without being added as site users.</p> <p>Automatically map OT assets to an equipment model entity</p> <p>Automatically map your OT assets to equipment model entities that are based on an assigned site and IP address when you have an ISA editor role. If you have an admin role, you can upload OT subnet records via a spreadsheet. An ISA editor can also manually enter OT subnet records and then assign them to ISA equipment model entities. This feature is available when the Manufacturing Process Manager is installed with Operational Technology Manager.</p> <p>View sites assigned to users</p>









Application or feature	Details
	<p>See which sites are assigned to a user and change a user's site assignments and ISA role for any assigned sites by using the Site Users related list.</p>
<p>Mobile</p>	<p>Offline mode enhancements </p> <p>Use the offline mode capability when working in an area without internet access. Updated offline mode features and capabilities include the following updates:</p> <ul style="list-style-type: none"> • Supports the creation of new records and editing of existing records in offline mode. Agents no longer need to synchronize and go online to view these edits. • Define which reference field records are cached in offline mode, giving control to admins to display relevant information. • Enable agents to view and select reference fields, giving the option to access additional data while in offline mode. <p>Indoor wayfinding and reservations support </p> <p>Use the Indoor Mapping application to configure indoor wayfinding and map reservations for the Now Mobile app. Using this feature, employees can locate indoor site features, such as desks or meeting rooms, and then reserve them. The feature also provides directions to site features so employees can find them.</p> <p>Connect to any IP-restricted environment without a VPN application </p> <p>Connect to IP-restricted environments without needing to install a VPN application. With this feature, mobile app users can download a single app to connect to these environments.</p> <p>Map screen enhancements </p> <p>Use maps screens to display an area with highlighted locations associated with records. The updated map screen experience includes the following enhancements:</p> <ul style="list-style-type: none"> • An initial zoomed-out map view showing highlighted points of interest, as well as the location of the user. This map overview helps users visualize the geographical context of numerous points of interest within a map. • Option to view points of interest data in a list view, helping users easily understand the information displayed on a map. Users can quickly switch between the map view and list view.











Application or feature	Details
	<ul style="list-style-type: none"> Updated UX design when tapping a pin that contains multiple points of interest. Users are navigated to a list view containing all the points of interests in a clear tabular outlay. <p>Input form screen enhancements</p> <p>Use input form screens to streamline users' tasks with the following features:</p> <ul style="list-style-type: none"> Users can submit the input form screen and then stay on it to create repeated actions, such as creating multiple part requirements. New screen input type that enables admins to generate data from a list screen or a parent list screen. Ability to search on reference inputs that do not support Zing search. Mobile UI rules are now supported for reference lists and screen input.
<p>Natural Language Query</p>	<p>Performance feedback</p> <p>Provide feedback on your queries to continuously improve NLQ. Feedback options are available in List View, Analytics Center, and Report Designer.</p> <p>CMDB multi-source support</p> <p>Use natural language to query CMDB multi-source reports. Obtain information about CIs discovered by various sources.</p>
<p>Natural Language Understanding</p>	<p>Expanded language support</p> <p>NLU now supports the Portuguese language for both intents and entities. Entity support (simple, mapped and open ended) is also extended to the Brazilian Portuguese and French Canadian languages. All languages now support fast (synchronous) training where training of a model can now be completed within 2~3 minutes.</p> <p>If a model has more than 4500 utterances or 300 intents, it is automatically switched to slower (asynchronous) training that takes anywhere from 30 minutes to a couple of hours to complete depending on server bandwidth. Utterances for all languages are case insensitive during intent prediction.</p> <p>Usability improvements for model management</p> <p>Build and test your models with improved workbench screens and functionality. Build model content using improved guidance on vocabulary and more easily</p>










Application or feature	Details														
	<p>access model settings. You can also export or delete models on the model list page.</p> <p>Multi-select utterances ↗</p> <p>Select multiple utterances while working in your intent. Delete multiple utterances at once to quickly build your model.</p> <p>Virtual Agent and Natural Language Understanding authoring ↗</p> <p>NLU administrators can now use a seamless Virtual Agent (VA) and NLU authoring experience to publish their NLU model and its mapped VA topic through one Publish button.</p> <p>Optional view for the NLU Expert Feedback Loop ↗</p> <p>See each utterance framed in a card by clicking the card icon in the Expert Feedback Loop. These cards appear on the page in groups of five.</p>														
<p>Next Experience Components</p>	<p>Components</p> <table border="1"> <thead> <tr> <th data-bbox="517 846 794 898">Component</th> <th data-bbox="810 846 1378 898">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="517 919 794 1035">Condition builder</td> <td data-bbox="810 919 1378 1035">Added to the toolbox in UI Builder for the first time as a selectable component. The previous functionality hasn't changed.</td> </tr> <tr> <td data-bbox="517 1056 794 1171">DocIntel</td> <td data-bbox="810 1056 1378 1171">A container that enables users to perform tasks related to documents such as verification and new document creation.</td> </tr> <tr> <td data-bbox="517 1192 794 1308">Email Composer (mini)</td> <td data-bbox="810 1192 1378 1308">Renders the email composer in smaller spaces and within another component, such as in a side panel on a record page.</td> </tr> <tr> <td data-bbox="517 1329 794 1780">Form record presence</td> <td data-bbox="810 1329 1378 1780"> <p>Adds an avatar when another user is viewing the record at the same time. If two other users are viewing the record, their avatars are both displayed. If more than two users are present, the first two user avatars are displayed with a third overflow trigger "avatar."</p> <p>This component offers the Record presence preset, which displays other users who are viewing the record concurrently. Record presence is used with the Form component.</p> </td> </tr> <tr> <td data-bbox="517 1801 794 1885">Gantt</td> <td data-bbox="810 1801 1378 1885">A planning tool that enables users to track project tasks and objectives.</td> </tr> <tr> <td data-bbox="517 1906 794 1938">Image</td> <td data-bbox="810 1906 1378 1938">Displays a static image.</td> </tr> </tbody> </table>	Component	Description	Condition builder	Added to the toolbox in UI Builder for the first time as a selectable component. The previous functionality hasn't changed.	DocIntel	A container that enables users to perform tasks related to documents such as verification and new document creation.	Email Composer (mini)	Renders the email composer in smaller spaces and within another component, such as in a side panel on a record page.	Form record presence	<p>Adds an avatar when another user is viewing the record at the same time. If two other users are viewing the record, their avatars are both displayed. If more than two users are present, the first two user avatars are displayed with a third overflow trigger "avatar."</p> <p>This component offers the Record presence preset, which displays other users who are viewing the record concurrently. Record presence is used with the Form component.</p>	Gantt	A planning tool that enables users to track project tasks and objectives.	Image	Displays a static image.
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Application or feature	Details	
	Component	Description
	<p>This component offers the Record header image preset, which defines the title of a record dynamically from the header image field for the table configured in the form header record.</p> <p>Note: The Image component requires the <code>com.servicenow_now_image</code> plugin.</p>	
	<p>Link set group</p>	<p>A group of link sets that enables users to navigate to different resources.</p>
	<p>Mini calendar</p>	<p>A calendar component used on a page that enables a user to select a date from a calendar. Users can also select a specific time in the calendar if the optional time field is configured.</p>
	<p>Modal</p>	<p>Overlay window that requires the user to complete an action or provide information to return to the main application. The different types display critical information, enable users to confirm an action, or provide user input.</p>
	<p>Stackable Side by Side Panel</p>	<p>Container used to display two components side-by-side (50%/50%) or stacked (100%/100%).</p> <p>This component offers the Record stackable side by side panel for activity stream combo preset when the component is used as a container for the Activity Stream and Activity Stream Compose components. This preset is inherited from the UI Controller Record Page controller.</p>
	<p>Stylized Text</p>	<p>Text that can be styled with CSS.</p> <p>This component offers the Record subheading preset, which defines the title of a record dynamically from the subheading field for the table configured in the form header record.</p> <p>Note: The Stylized Text component requires the <code>com.servicenow_now_stylized_text</code> plugin.</p>

Application or feature	Details												
	<p>Data visualization charts</p> <table border="1"> <thead> <tr> <th data-bbox="512 222 794 275">Chart</th> <th data-bbox="794 222 1380 275">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="512 275 794 558">Dial</td> <td data-bbox="794 275 1380 558">Speedometer chart that displays a single data measure against a semi-circular dial used to represent linear, preferably progressive, values. The semi-circular dial represents the "whole" against which the data measure, as a portion of the whole, is represented by a filled color.</td> </tr> <tr> <td data-bbox="512 558 794 926">Pivot table</td> <td data-bbox="794 558 1380 926"> <p>Presents aggregate data broken down by multiple dimensions in a single table. A pivot table can automatically sort, count, and sum up data stored in tables and display the summarized data.</p> <p>Users can use keyboard interactions to access data by moving focus through the UI elements, and trigger actions on interactive elements.</p> </td> </tr> <tr> <td data-bbox="512 926 794 1062">Saved data</td> <td data-bbox="794 926 1380 1062">Invisible container that holds any saved data visualizations and enables users to reuse these visualizations.</td> </tr> </tbody> </table> <p>Modals</p> <table border="1"> <thead> <tr> <th data-bbox="512 1157 794 1209">Modal</th> <th data-bbox="794 1157 1380 1209">Description</th> </tr> </thead> <tbody> <tr> <td data-bbox="512 1209 794 1524">Custom Modal Container</td> <td data-bbox="794 1209 1380 1524"> <p>Use to create a custom overlay window that display a variety of information that requires the user to complete an action or provide information to return to the main application.</p> <p>Usage guidelines are now provided for this modal.</p> </td> </tr> </tbody> </table>	Chart	Description	Dial	Speedometer chart that displays a single data measure against a semi-circular dial used to represent linear, preferably progressive, values. The semi-circular dial represents the "whole" against which the data measure, as a portion of the whole, is represented by a filled color.	Pivot table	<p>Presents aggregate data broken down by multiple dimensions in a single table. A pivot table can automatically sort, count, and sum up data stored in tables and display the summarized data.</p> <p>Users can use keyboard interactions to access data by moving focus through the UI elements, and trigger actions on interactive elements.</p>	Saved data	Invisible container that holds any saved data visualizations and enables users to reuse these visualizations.	Modal	Description	Custom Modal Container	<p>Use to create a custom overlay window that display a variety of information that requires the user to complete an action or provide information to return to the main application.</p> <p>Usage guidelines are now provided for this modal.</p>
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Next Experience user interface	<p>Sidebar overview </p> <p>Enable your agents to create, open, and search for discussions about their work with other agents.</p> <p>Configuring a custom menu </p> <p>Enable your administrators to add custom menus with items that are most useful for them to complete their work.</p> <p>Next Experience Readiness Checker </p>												










Application or feature	Details
	<p>Enable administrators to examine your instance for usage of applications that are not compatible with Next Experience.</p>
<p>Notifications</p>	<p>Multilingual support for emails </p> <ul style="list-style-type: none"> • Create multilingual email templates and layouts. • Send email notifications in the language selected in the recipient's profile. <p>Support for client certificate email authentication </p> <p>Read email via Microsoft Graph endpoints. Supports authentication using client ID and client secret as well as a certificate for inbound email.</p> <p>Support for S/MIME for inbound and outbound mails </p> <p>Enable or disable S/MIME for inbound and outbound emails and email notifications.</p>
<p>Operational Resilience</p>	<p>Business services and related lists </p> <p>Add business services into your Operational Resilience application and monitor their status on the dashboard. View the service dependencies and issues that are related to the processes, importance and impact assessments, scenario analysis, and so on.</p> <p>Perform a scenario analysis for your business service </p> <p>Perform a scenario analysis for your business services by analyzing the scenarios and events. Determine if any service was breached. After completing the evaluation, approve the analysis.</p> <p>Analyze the importance and impact tolerance of your business services </p> <p>Analyze the importance rating and impact tolerance duration of your business services by selecting a questionnaire template in the Importance and Impact Tolerance assessment. Review the rating that is generated based on the questionnaire response. After completion of the analysis, approve the assessment.</p> <p>Self-attest your business services </p> <p>Verify the status of your business services and determine if any service was breached. After the verification is complete, self-attest the status of the business services by signing and generating the self-attestation report. You can upload the PDF of the self-attestation report in the application.</p>
<p>Operational Technology Incident Management v2</p>	<p>Assign new Operational Technology Incident Management roles </p>




Application or feature	Details
	<p>Quickly assign new Operational Technology Incident Management v2 roles to users with the deprecated ot_incident_user role through a scheduled job.</p> <p>Migrate Operational Technology Incidents </p> <p>Quickly migrate OT incidents from the old incident table to the new OT incident table with a scheduled job.</p> <p>OT incident categories and subcategories </p> <p>Categorize OT incidents to assign incidents to the right team and shorten the time that it takes to troubleshoot issues.</p> <p>Visibility of OT incidents across sites </p> <p>Find solutions for your site with read-only visibility of OT incidents across sites.</p> <p>Define priority lookup rules for OT incidents </p> <p>Define priority lookup rules for an OT incident to calculate its priority. The calculated priority then helps organize and prioritize work.</p> <p>OT incident email notifications </p> <p>Provide context about changes made to an OT incident through email notifications, which result in better collaboration for its resolution.</p> <p>Configure OT incident state models </p> <p>Use state models for OT incident sites to practice site-specific incident workflow through the life cycle of an incident.</p> <p>Configure an OT incident task </p> <p>Create a set of OT incident tasks to fulfill and resolve the incident in steps.</p> <p>Configure OT-specific assignment groups </p> <p>Configure OT-specific assignment groups to view only OT type assignment groups in the incident record.</p> <p>OT Incident Management system properties </p> <p>Configure child OT incidents creation, OT incident task closure, fields copied over to OT incident task from OT incident, and OT incident activity formatter.</p>
Operational Technology Manager	<p>Automatically map OT assets to an equipment model </p> <p>Use the Automated Mapping across the Zone-based IP Network Groups (AMAZING) feature so that an ISA editor role user can automatically map OT assets to equipment model entities based on the assigned site and IP address. If you have an admin role, you can upload OT subnet records via a spreadsheet. An ISA editor can also manually enter OT subnet records and then assign them to ISA equipment model entities. This feature is available when the ServiceNow[®]</p>



Application or feature	Details
	<p>Manufacturing Process Manager is installed with Operational Technology Manager.</p> <p>Create an OT asset for the 3D printer or Network gear classes </p> <p>Create an OT asset for the 3D printer or Network gear classes manually by adding industrial 3D printer and Network gear classes to an interceptor.</p> <p>Add and view OT control modules </p> <p>View related control modules from the OT Control Module related list on the OT Control System form, and add an OT control module to a control system.</p>
Operational Technology Vulnerability Response	<p>Select a start time for an OT remediation task </p> <p>Set an expected start time for an OT remediation task using the time slots calculated from the equipment model entity schedules.</p>
Order Management for Customer Service Management	<p>Groups products into bundles </p> <p>Group products into product bundles:</p> <ul style="list-style-type: none"> • Add Attribute Adjustment Pricing - Add attribute adjustment pricing to product offerings. • Create product catalogs  - Create an Order Management product catalog for basic products, configurable products, and bundle products. <p>Order capture for all product offerings</p> <p>Capture orders for all product offerings.</p> <p>Configurable product offerings </p> <p>Create configurable product offerings.</p>
Order Management for Telecommunications, Media, and Technology	<p>Change and disconnect an order (product) </p> <p>Enable your agents to change and disconnect customer (product) orders directly in the Now Platform by using the Order Capture UI. Your agents can now create change or cancel orders on behalf of the customers. For example, your agents can modify or cancel the customer's product inventory directly in the Now Platform.</p> <p>Change and disconnect an order (service) </p> <p>Enable your agents to change and disconnect customer service orders directly in the Now Platform by using the Order Capture UI. Your agents can now create change or disconnect service orders on behalf of the customers. For example, your agents can modify or cancel the customer's service inventory directly in the Now Platform.</p> <p>Catalog versioning </p>

Application or feature	Details
	<p>Create and launch new versions of an existing product offering, product specification, service specification, or resource specification with the required changes. You can easily accommodate the changes in your product offerings in different catalog versions and modify the already published entities.</p> <p>Orchestration Plan UI for order agents </p> <p>Visualize an order that has all the domain orders, order tasks, and their current states on one UI page. Your agents don't have to go to multiple UI lists to know the current state of an order and they can also easily identify and resolve any delay or fallout in the order fulfillment process.</p> <p>TMF APIs conformance</p> <p>Achieve seamless integration of Telecommunications Service Management (TSM) solutions with the order management systems and other systems.</p> <p>The following open APIs include the enhancements that conform with TMF:</p> <ul style="list-style-type: none"> • Trouble ticket management API (TMF 621) • Product order API (TMF 622) • Product inventory API (TMF 637) • Alarm management API (TMF 642) <p>Horizontal relationships among products, services, and resources </p> <p>Enable your product catalog managers to define the compatibility rules for establishing horizontal relationships among the product, service, and resource order specifications. Also, you can use an enhanced product inventory module to capture and manage the details of the related product and service inventories after the order fulfillment process is complete.</p> <p> Note: The current version of the compatibility rules supports only the creation and fulfillment of new product and service orders.</p>
Password Reset	<p>New configuration for the Robotic Process Automation credential store</p> <p>Get the experience of a new configuration that lets the Password Reset application integrate with credential stores that do not provide an API to reset passwords using Robotic Process Automation.</p> <p>When a Robotic Process Automation user requests a password reset, a new password is generated automatically and sent to the user. Also, Robotic Process Automation uses asynchronous activity while</p>








Application or feature	Details
	<p>resetting a password. For example, when a user requests a password reset, the password doesn't get reset immediately. The user receives a message that the request has been submitted successfully. After the process is completed, the user receives an appropriate message based on the success or failure of the password reset action.</p> <p>More secure password reset process</p> <p>Experience the security improvement for the password reset process. The reset process is enhanced to handle Denial of Service (DOS) attacks and user enumeration attacks. The valid user experience has changed. For example, suppose that a valid user is resetting a password using an incorrect method. The user is notified by an email or other notification channels instead of any communication on the UI.</p> <p>New topic blocks in Virtual Agent: Soft PIN and SMS</p> <p>Verify users with two new topic blocks in Virtual Agent: Soft PIN and SMS. Users enrolled in password reset can use the verification in Soft PIN and SMS.</p> <p>Multiple credential store connections</p> <p>Let users create multiple credential store connections and map these connections to a password reset credential store during configuration so that it can be consumed during the run time. This enhancement supports multiple Active Directory server credentials in Flow Designer in password reset flows.</p> <p>Value for the password_reset.history.limit property</p> <p>Set a password reset history value in the <code>password_reset.history.limit</code> property. This property checks the history of previous passwords based on the specified value. The earlier limit was 10 by default. Administrators can now set it based on organizational needs.</p> <p>New configuration for the credential stores</p> <p>Let your users experience using the password reset, password change, and account unlock actions independently for all the third-party credential stores. You can use subflows in the Flow Configuration to configure these settings.</p>
<p>Patient Support Services</p>	<p>Agent connectors and contributors for enrollment cases</p> <p>Determine who can act as an agent connector or contributor for enrollment cases by assigning the following roles:</p> <ul style="list-style-type: none"> • sn_patientservice.agent_connector • sn_patientservice.contributor <p>Enrollment case contributors</p>







Application or feature	Details
	<p>Users with a contributor profile associated with a service portal can create enrollment cases for patients.</p> <p>Domain separation support in Patient Support Services </p> <p>Use domain separation at the basic support level in Patient Support Services.</p>
<p>Performance Analytics</p>	<p>New data collector </p> <p>Reduce the time, memory, and CPU usage for processing large data sets. The new, optimized data collector provides the following enhancements:</p> <ul style="list-style-type: none"> • Ability to handle over 10 million records without adverse impact to performance. • Support for at least 10 breakdowns with breakdown matrix enabled. • Support for additional conditions on indicators and breakdowns. • Optimizations for Count Distinct aggregation. <div data-bbox="587 894 1310 1100" style="background-color: #e0f2f7; padding: 10px; border: 1px solid #ccc;"> <p> Important: In optimized collection, there is no limit to the number of elements in a breakdown source for that breakdown source to be collected. New properties allow you to set limits if necessary. For more information, see Performance Analytics properties .</p> </div> <p>Autoregressive forecasting model </p> <p>Use a linear combination of a trend, seasonal dummies, and past values to forecast future indicator values.</p>
<p>Personal Lines Claims</p>	<p>Personal Lines Claims application</p> <p>Coordinate efforts with the associated departments, such as adjuster and special investigation unit departments required to manage tasks related to a claim.</p> <p>Customized playbook experience </p> <p>Complete claims workflows using dedicated playbooks and workspaces designed for each role. Playbooks provide step-by-step guidance through tasks to ensure that every step gets completed at the right stage of the process.</p> <p>Performance Analytics  and Process Optimization  dashboards</p> <p>Use Performance Analytics and Process Optimization dashboards to gain insight into how your team and service flows are performing.</p> <p>Claims data model </p>





Application or feature	Details
	<p>Gain the benefit of claims tables from the Insurance Claims data model to build any claims flow.</p>
<p>Platform Analytics Workspace</p>	<p>Create, edit, and configure configurable workspace dashboards </p> <p>Use an inline editor to quickly and easily create and edit configurable workspace dashboards. Users with a role can use this editor to work on their dashboards in runtime. This inline editor is included in the Dashboard page template. More technical users also have a powerful and feature-rich technical editor that brings dashboard construction functionality into the UI Builder.</p> <p>Configure visualizations </p> <p>If you cannot find the visualization you want, configure a new data visualization. You now have an inline visualization editor to quickly and easily create and edit data visualizations. You can even seamlessly create these new visualizations while editing a dashboard. Any user with a role can use this editor. With the right roles, you can save your visualization to the shared library.</p> <p>Dashboard, Visualization, and KPI libraries</p> <p>You have a unified experience for searching and viewing reusable configurable workspace dashboards, visualizations, or indicators. Search and view reusable visualizations for multiple workspaces or dashboards. Bookmark visualizations or filter on those shared with or created by you. Only in Platform Analytics Workspace can you browse the dashboards from every configurable workspace.</p> <p>Certify configurable workspace dashboards and visualizations </p> <p>Administrators can mark selected configurable workspace dashboards and data visualizations as certified for use across a department or organization. You can filter on certification when browsing through dashboards or visualizations.</p> <p>Export data visualizations</p> <p>From the Visualization Designer, you can export a data visualization as a PDF, a PNG, or a JPEG file. Use this feature to build presentations, to share the report with users off the instance, or to keep old reports on different versions to track progress.</p> <p>Limitations:</p> <ul style="list-style-type: none"> • Scheduling is not available. • Pivot, calendar, and indicator scorecard visualizations cannot be exported. • You can only export visualizations from the visualization designer, not from dashboards.








Application or feature	Details
	<p>This feature is available in update 1.1, from the ServiceNow Store.</p> <p>See data visualization usage </p> <p>Use the data visualization details pane to view all dashboards that contain the visualization. Furthermore, when you save or delete a visualization, you are warned of which dashboards contain the visualization and prompted to confirm your action.</p> <p>This feature is available in update 1.1, from the ServiceNow Store.</p> <p>Configure dashboards and visualizations more easily</p> <p>Benefit from the following improvements to the user experience:</p> <ul style="list-style-type: none"> • Lazy loading on dashboards • Can copy link URL • Can share in editing mode • Can edit visualization titles inline <p>These improvements are available in update 1.1 on the ServiceNow Store.</p> <p>Include this workspace's features in your configurable workspaces </p> <p>In the UI Builder, use the Analytics Center page template to include the features of the Platform Analytics Workspace in your own configurable workspace. You can also create a workspace with these features in the App Engine Studio. However, only the Platform Analytics Workspace lets you view dashboards in all the other workspaces.</p>
Platform Security	<p>Security Center</p> <p>Use the larger set of Instance Security Hardening Setting recommendations with individual weights.</p> <p>New Instance Security Hardening Setting Compliance scoring algorithm.</p> <p>Compare and analyze changes across historical scores with the new Instance Security Hardening Setting Compliance data.</p> <p>Explore the new security metrics and analytics user experience.</p> <p>Create your own scan checks, suites, and scan schedules with the security scanner.</p> <p>Access the learning page as a single destination to quickly find links to all the important security</p>

Application or feature	Details
	<p>resources available to you to secure your ServiceNow deployments.</p> <p>Data privacy ↗</p> <p>Remove personally identifiable information (PII) from user data when it is migrated from a production instance to a non-production instance.</p> <p>De-identify users and apply anonymization per the GDPR (general data protection regulation) right to be forgotten, in which data (tables or columns) are de-identified when associated with a user.</p> <p>Data filtration ↗</p> <p>Use data filtration as a separate form of access control designed to work along with the existing access control list (ACL) rules on your instance. Data filtration denies access to tables and records that don't match subject attributes defined by a security administrator.</p> <p>Make auditing, reporting, and denying access to data easier with data filtration than using an ACL. ACLs are evaluated after data filtration runs. ACLs work on the remaining rows that were not filtered out by data filtration.</p> <p>Add exclusion tables to prevent those tables from being used to create data filtration rules.</p> <p>Access potential performance enhancements by not relying on scripting and improve auditing ability with declarative authorization controls.</p> <p>Use table hierarchy support in data filtration rules. Use the new authorization mechanism to prevent search operations on protected fields.</p> <p>Use data filtration enforcement to be aware of script versus java calls.</p> <p>Use field query roles as the new authorization mechanism to prevent search operations on protected fields, as designated by the dictionary attribute.</p> <p>Script Includes</p> <p>Enforce role-based access control to be auto created when new client-callable script includes (CCSI) are included. See access controls as a related list directly from the CCSI form.</p> <p>IP Address Access Control ↗</p> <p>IP Address Access Control added IPv6 support.</p> <p>Avoid log tampering ↗</p> <p>Use protected tables to lock down and log any attempts to update or delete records in the system</p>








Application or feature	Details
	<p>log tables as a system administrator. Specify separate controls for each system log table to identify update actions versus delete actions.</p> <p>Antivirus Scanning </p> <p>Use the support for HTTPS communication protocol for enhanced security and protection.</p> <p>Other settings and security resources </p> <p>Existing administrators can control access to older versions of AngularJS and JQuery usages and libraries. zBoot configurations do not have access, by default.</p>
<p>Policy and Compliance Management</p>	<p>IT Compliance Workspace </p> <p>Provide a current view of IT compliance aspects around various business applications, business services, business processes, servers, assets, and CMDB CIs used in the enterprise after configuring IT-related data. As an IT compliance manager, you can view only the IT-related risk and compliance data in the IT Compliance Home page of the Compliance Workspace. This workspace highlights:</p> <ul style="list-style-type: none"> • Compliance impact of entities in use • State of compliance activities • State of remediation and exception activities • Audit activity and status <p>DevOps Accelerator </p> <p>Allow customers to evaluate compliance for DevOps policies and control objectives using Policy as a Code Engine (PaCE) integration. This accelerator provides pre-mapping between control objectives from regulations, standards, frameworks such as CIS controls, NIST 800-53, ISO 27002, and PCI DSS and DevOps policies from the DevOps Config Policy Content pack.</p> <p>Policy exception enhancements </p> <p>Allow multiple policy exceptions on the same control and multiple extensions to the policy exception. You can withdraw or cancel an exception request before it is approved.</p> <p>Using Advanced risk assessment to assess risk in policy exception </p> <p>Facilitate the ability of the compliance user or risk user to take the risk assessment in the Advanced Risk Assessment application to evaluate the risk rating in policy exceptions.</p> <p>Reusing existing evidence from audit and compliance related items </p> <p>Inform the audit and compliance user about the evidences that already exist for the related items of</p>

Application or feature	Details
	<p>an engagement. If evidences exist, then the Request Evidence pop-up displays a message that there are existing evidences that you might want to add.</p> <p>A compliance and audit user can also add existing evidences from its related items to a compliance or audit object if the evidence is in the Closed state or has been approved within six months of the due date of the evidence response.</p>
<p>Pre-Visit Management</p>	<p>Agent connectors and contributors for procedure request cases </p> <p>Determine who can act as an agent connector or contributor for procedure request cases by assigning the following roles:</p> <ul style="list-style-type: none"> • sn_previsit.agent_connector • sn_previsit.contributor <p>Procedure request case contributors </p> <p>Users with a contributor profile associated with a service portal can create procedure request cases for patients.</p> <p>Domain separation support in Pre-Visit Management </p> <p>Use domain separation at the basic support level in Pre-Visit Management.</p>
<p>Proactive Service Experience Workflows</p>	<p>New affected accounts and cases impact cards </p> <p>Identify the affected accounts and generate proactive cases by using the new Affected Accounts and Cases impact cards.</p> <p>Escalate an incident </p> <p>Resolve an incident by escalating it to the higher level of the network operations' groups and users.</p>
<p>Process Automation Designer</p>	<p>Duplicate a process </p> <p>Make a copy of an existing process with the same trigger, lanes, activities, and experience configurations as the original. Edit the duplicated process to quickly create a working variation.</p>
<p>Process Optimization</p>	<p>Multidimensional mining</p> <p>Support analyzing business processes that expand multiple sub processes in one view. For example, you can analyze your HR onboarding process including all facilitating processes such as IT, facilities, and finance.</p> <p>Integration with Workforce optimization</p> <p>Provide team leads and managers with full insight into the performance of their team or processes. Pre-</p>

Application or feature	Details
	<p>defined improvement opportunities immediately show where performance can be improved.</p> <p>HR and App engine</p> <p>Enable users to apply multi-dimensional mining on multiple tables.</p> <p>Improved finding definition condition</p> <p>Include a wild card when configuring the insight rule that enables you to create start and stop conditions based on multiple values. In addition to the process level-based insights rules, you can define Now Platform specific insights for projects.</p> <p>Related list conditions in an analyst workbench condition</p> <p>Expand the condition builder in the analyst workbench to support related list conditions. You can filter and ultimately analyze cases with a bad customer satisfaction survey score.</p> <p>Process graph improvements</p> <p>Enable users to distinguish incoming versus outgoing node connections. Additional improvements are reorder connections for better readability, centralized outline of model, node design, and showing route variance as a pop-up.</p>
<p>Procurement Service Management</p>	<p>Agent assist in Procurement Workspace Source-to-Pay Workspace </p> <p>Help procurement specialists triage requests by attaching knowledge articles to the requests, or create catalog service requests on behalf of requesters.</p> <p>Email composer with quick messages and response templates in Procurement Workspace Source-to-Pay Workspace </p> <p>Better track conversations between procurement specialists and requesters by directly sending emails from workspace with the ability to apply templated responses.</p> <p>Playbook: Process a return request </p> <ul style="list-style-type: none"> • As shoppers or employees, submit a return request for a purchase that they have already received. • As procurement specialists or fulfillers, access the eligibility of the return and initiate the return with the supplier. • View SLAs that are defined for the new return goods service catalog item. <p>Create cases within a case</p> <p>Help procurement specialists create sub-cases within a procurement case record.</p> <p>Procurement Strategy & Ops Dashboard </p>

Application or feature	Details
	<p>View Service Level Agreements (SLAs) for the procurement organization, with visualizations for:</p> <ul style="list-style-type: none"> • Cycle times for purchase requisitions, sourcing requests, negotiations, and cases • SLA breach times versus allotted times • Overall SLA performance of the procurement team <p>Approve a request from Employee Center </p> <ul style="list-style-type: none"> • Approvers can now directly complete approval to-dos for purchase requisitions and sourcing requests in Employee Center. • Customers can now activate a sourcing request approval workflow within their sourcing process. • Enhanced the flexibility for system administrators to configure approval rules for objects other than purchase requisitions (such as sourcing requests, purchase orders, and invoices) and create flexible approval trigger conditions. <p>Raise a general inquiry for procurement </p> <p>Help procurement teams better triage general procurement related requests from employees, with the General Inquiry workflow.</p> <p>NLU support for Procurement Service Management Virtual Agent </p> <p>Activate the Natural Language Understanding (NLU) content pack for Shopping Hub, which enhances the Virtual Agent experience for the employees. Ensure all dependencies are activated before enabling this plugin.</p>
Project Portfolio Management	<p>Project Management </p> <p>View the project costs and financial breakdown summary of a project  for the selected fiscal year from the Overview list. This view shows the financial summary for Planned Cost, Actual Cost, Variance (Planned vs Actual cost), Estimate At Completion, and Estimate To Completion.</p> <p>Quick start tests for Project Portfolio Management </p> <p>After upgrading and deploying the new applications, run quick start tests to verify that Project Portfolio Management still works.</p> <p>Export to PowerPoint for Strategic Portfolio Management </p>








Application or feature	Details
	<ul style="list-style-type: none"> The Export to PowerPoint for Strategic Portfolio Management add-in helps you generate and download project status reports from your instance as a Microsoft PowerPoint file. Using the ServiceNow® Project Workspace application, export project to a Microsoft PowerPoint file.
Project Workspace	<p>Add external project dependencies</p> <p>Add dependencies between tasks of your project and tasks of a different project directly from the grid view. External dependencies help show the impact of changes in project schedules when a predecessor task changes.</p> <p>Perform row context actions on multiple tasks together</p> <p>Performing bulk actions on the project tasks in less time. When you select multiple project task rows, the row context menu of the project tasks in the grid view now includes options to indent, unindent, and delete these rows at once.</p> <p>Confirm updating project start date</p> <p>When you change the start date of a task to a date before the project start date, a confirmation dialog box notifies you that the project start date will be changed automatically to the new start date of the task.</p> <p>Search to fill in reference field information</p> <p>While filling in reference fields such as Project manager, Assigned to, or Assignment group, you can now look up the record you need to use the search option.</p> <p>Dark theme compatibility</p> <p>Next Experience dark theme is supported for Project Workspace. For more information on dark theme compatibility, see Exploring themes in Next Experience.</p> <p>Export Project to PowerPoint from Project Workspace</p> <p>Export your project as a Microsoft PowerPoint file from the Project Workspace application. Use this file to provide project updates to external stakeholders or a wider audience. For more information, see Export Project to PowerPoint from Project Workspace.</p> <p>RIDAC in Project Workspace</p> <ul style="list-style-type: none"> Navigate to the risk, issue, decision, action, and request change (RIDAC) page or classic project workspace on a single click from new project workspace interface.








Application or feature	Details
	<ul style="list-style-type: none"> • Access, modify and manage your RIDAC records from a central location (RIDAC page) in Project Workspace. • Convert one RIDAC record to another for a project in the Project Workspace. For more information, see Convert one RIDAC (Risk, Issue, Decision, Action, and Request Changes) record to another for a project in Project Workspace  • Associate existing RIDAC records for a project to convert them to other RIDAC entities. For more information, see Associate existing RIDAC records for a Project in Project Workspace  • Quickly access and update RIDAC records using side panels for individual records. • Customize the data on the RIDAC page to add, update, and manage the RIDAC records.
<p>Public Sector Digital Services</p>	<p>Business services support model </p> <p>Enable business owners to request services and submit cases for new business or product registrations.</p> <p>Agency support model </p> <p>Enable agencies and agency members to share relevant cases and information in their configurable workspaces, provide services to constituents and businesses, and submit agency cases.</p> <p>Service Request Playbook application </p> <p>Implement an end-to-end workflow for handling and resolving non-emergency service requests submitted by the public, for example 311 or 211 service requests for government agencies in the United States through the Service Request Playbook application. Enable constituents to select non-emergency requests from a service catalog on the Government Service Portal. Help agents resolve these requests quickly and efficiently by providing predefined resolution processes.</p> <p>Submit non-emergency service requests using Virtual Agent </p> <p>Enable constituents and business owners to easily submit non-emergency service requests using a pre-built Virtual Agent Service Request conversation topic that runs in supported chat and messaging channels, including Engagement Messenger.</p> <p>Integration with Field Service Management </p> <p>Enable government agents and field service technicians to create work orders for tasks such as inspections on reported issues and fixing reported issues through the CSM Integration with the Field Service Management application.</p>







Application or feature	Details
Redox Inbound Integration	<p>Exchange real-time healthcare data with Redox Inbound integration</p> <p>Receive and update healthcare data from external healthcare systems into a ServiceNow instance to easily integrate scheduling, medication, provider, claim, and patient administration information and view patient clinical summaries, without depending on the different ways that individual healthcare systems store and transmit healthcare data.</p>
SPM Benchmarks	<p>SPM Benchmarking KPIs</p> <p>Provide leaders with clear visibility into key performance indicators and trends, giving you comparative insights relative to the industry averages of your peers.</p> <p>Choose your KPIs</p> <p>Enable users to choose the KPIs based on their respective organizational demands.</p>
Security Incident Response	<p>Security Incident Response</p> <p>SIR Workspace provides next gen user experience for the security analysts and SOC managers. Using this workspace the security analysts can manage the life cycle of security incidents from an initial analysis to containment, eradication, and recovery.</p> <p>Data Loss Prevention Incident Response with Microsoft</p> <p>The Data Loss Prevention Incident Response with Microsoft provides a core framework to import Data Loss Prevention (DLP) incidents from multiple sources such as Microsoft purview apps (Microsoft Teams, Exchange Online, SharePoint Online, OneDrive for Business) and endpoint devices enable remediation workflow involving end users, managers, and # DLP # operations team with automated incident assignment and escalations.</p>
Service Bridge (Technology)	<p>Global transform in Service Bridge for providers</p> <p>Enables providers to create a default transform definition that can be applied globally to all customer instances that match the configuration.</p> <p>Support for glide_list fields in remote task definition</p> <p><code>glide_list</code> type fields can be used while defining the inbound and outbound fields for a remote task definition. With <code>glide_list</code> type fields, you can sync multiple records between the provider and customer tables.</p> <p>Service Bridge authorized users</p>






Application or feature	Details
	<p>Provide your users with the required access to create the requests and orders from the published items in the service catalog on the customer's instance. The customer can also manage the list of users within the provider's criteria from the provider's own instance.</p> <p>Service Bridge remote task</p> <p>Resolve and fulfill multiple customer tasks, such as incidents, cases, and service requests, between the provider and customer instances. The Remote Task Outbound Assignment enables the sender to provide more relevant information for tasks, such as incidents, cases, and requests and the receiver to act on these tasks.</p> <p>Service Bridge remote choice fields</p> <p>Enable a provider's customer, in their own instance, to read the choice list of a Remote Choice field directly from the provider's instance. Remote Choice fields are available in the remote record producers. You no longer have to replicate and maintain the data between the ServiceNow instances of the provider and their customers.</p> <p>Service Bridge Transform Framework</p> <p>With the Transform Framework, the provider can transform the inbound and outbound data for remote tasks between their ServiceNow instance and the customer's instance.</p>
<p>Service Bridge (Telecommunications)</p>	<p>Global transform in Service Bridge for providers</p> <p>Enables providers to create a default transform definition that can be applied globally to all customer instances that match the configuration.</p> <p>Support for glide_list fields in remote task definition</p> <p><code>glide_list</code> type fields can be used while defining the inbound and outbound fields for a remote task definition. With <code>glide_list</code> type fields, you can sync multiple records between the provider and customer tables.</p> <p>Service Bridge authorized users</p> <p>Provide your users with the required access to create the requests and orders from the published items in the service catalog on the customer's instance. The customer can also manage the list of users within the provider's criteria from the provider's own instance.</p> <p>Service Bridge remote task</p> <p>Resolve and fulfill multiple customer tasks, such as incidents, cases, and service requests, between the provider and customer instances. The Remote Task Outbound Assignment enables the sender to provide more relevant information for tasks, such as incidents,</p>








Application or feature	Details
	<p>cases, and requests and the receiver to act on these tasks.</p> <p>Service Bridge remote choice fields ↗</p> <p>Enable a provider's customer, in their own instance, to read the choice list of a Remote Choice field directly from the provider's instance. Remote Choice fields are available in the remote record producers. You no longer have to replicate and maintain the data between the ServiceNow instances of the provider and their customers.</p> <p>Service Bridge Transform Framework ↗</p> <p>With the Transform Framework, the provider can transform the inbound and outbound data for remote tasks between their ServiceNow instance and the customer's instance.</p>
Service Catalog	<p>Configurable Catalog Builder ↗</p> <p>Configure the Catalog Builder so catalog item editors can enter custom details.</p> <p>Exclusive update sets for catalog items ↗</p> <p>Transfer catalog items published through Catalog Builder from one instance to another easily by using update sets that are automatically and exclusively created for the catalog item. You can transfer catalog items created by a business user from a non-production to production instance.</p> <p>Service Catalog Overview dashboard ↗</p> <p>Monitor aggregated catalog item data like fulfillment automation coverage, translation coverage, conversational coverage, and so on using the Service Catalog Overview dashboard.</p> <p>Default value configuration in Catalog Builder ↗</p> <p>Configure the default value for a question in Catalog Builder so it is set when users open a catalog item form.</p> <p>Catalog item request experience from Virtual Agent in Service Portal ↗</p> <ul style="list-style-type: none"> • Request catalog items from Virtual Agent in a pop-up without navigating to a different tab. • Request catalog items with rich text labels through Virtual Agent. • View the default value for a question of a catalog item in Virtual Agent. • View the value set by catalog data lookup for a catalog item in Virtual Agent. • Search for a record in the reference, multiple choice, numeric scale, select box, lookup select box, or lookup multiple choice fields in Virtual Agent.








Application or feature	Details
<p>Service Graph Connector Integration for Claroty CTD</p>	<p>Service Graph Connector Integration for Claroty CTD </p> <p>Use the Service Graph Connector Integration for Claroty CTD application with the ServiceNow® Operational Technology Manager application to import detected OT assets and baselines (connections).</p>
<p>Service Operations Workspace for ITSM</p>	<p>Service Operations Workspace for ITSM landing page for tier-2 agents </p> <p>Prioritize work for tier-2 agents by evaluating an overview of assignments, outages, and service announcements.</p> <p>Shift schedule of a tier-1 agent on Service Operations Workspace for ITSM landing page </p> <p>When the Shift Planning for Configurable Workspace application (sn_uib_agent_sp) is installed, view the shift schedule of a tier-1 agent.</p> <p>Investigate experience for an incident </p> <p>Streamline investigation and accelerate resolution of an incident by retrieving and capturing metrics data for affected CIs. This metrics data is collected from various servers and computers using Agent Client Collector (ACC).</p> <p>User presence in Microsoft Teams </p> <p>View the availability of a user on Microsoft Teams before reaching out to the user via chat.</p> <p>Interactions in Service Operations Workspace </p> <ul style="list-style-type: none"> • Reduce the interaction request queue in an agent's inbox by enabling automatic assignment of interactions using Advanced Work Assignment (AWA) assignment rules. • Starting in version 1.3, an agent can perform any of the following tasks while working on an interaction. <ul style="list-style-type: none"> ◦ Complete an interaction ◦ Abandon an interaction when a user does not respond ◦ Search for KB articles using Agent Assist <p>AI Search in Service Operations Workspace </p> <p>Quickly find the required search results using intelligent query features. Search multiple record types at once using global search from the Next Experience Unified Navigation search field. You can switch between global search results and results from workspace applications that you have access to.</p>







Application or feature	Details
Service Portal	<p>Enable language selection for guest users </p> <p>Unauthenticated users can choose a locale and view content in their chosen locale.</p> <p>Authenticated users can choose a locale from the widget on the portal header without having to select it in their profile.</p> <p>Pass language as a query parameter in page URLs </p> <p>Pass the language for the content of a page using a query parameter in the page URL (<code>lang=<language></code>). The page returns in the language requested if the language is active on the instance and if the user accessing the page is a guest user or an authenticated user without a language preference set.</p>
Sitemap Generator	<p>Define and generate sitemaps </p> <p>Use static XML or a script to define a sitemap that automatically regenerates daily.</p> <p>Deactivate a sitemap configuration to test a configuration before you make it active.</p> <p>Regenerate the sitemap on demand.</p> <p>Access sitemap files </p> <p>Access the sitemap by URL or downloadable files. You can provide the URL in Google Search Console or in your robots.txt file for web crawlers to use.</p> <p>Review sitemap generation logs </p> <p>Check sitemap generation logs to troubleshoot any issues.</p>
Software Asset Management	<p>Simulate the cost of migrating on-premise resources to the cloud </p> <p>Get an estimate before moving to Microsoft Azure or AWS cloud by simulating the cost of migrating your on-premise resources to the cloud. You also receive recommendations on End of Life for hardware and software, as well as resource utilization. The recommendation also differentiates the cost of various cloud providers with or without the cost of Bring Your Own License. When you decide on the cloud provider, you can create a change request to perform the migration.</p> <p>Track the success of your Software Asset Management application via the Success portal </p> <p>Create success goals and activities to assess the performance of the Software Asset Management application in your environment. You can use the</p>

Application or feature	Details
	<p>Success portal dashboard to view your open and completed goals and activities, as well as your projected and actual savings.</p> <p>Perform health check scans on the configurations in your Software Asset Management application </p> <p>Run health check scans on your ServiceNow instance to determine the health of your Software Asset Management configurations. If configuration errors are detected, you get suggestions for correcting those errors. You can use the Health check dashboard to view the results of the health scan and gain a better understanding of your configurations.</p> <p>Get visibility into critical IT Asset Management KPIs using the Asset Management Executive dashboard </p> <p>Enable the executives in your organization to gain actionable insights into IT Asset Management KPIs. Your executives can use the Asset Management Executive dashboard to view KPIs such as the total spend, potential savings, and expiring contracts. You can access the Asset Management Executive dashboard if either the Software Asset Management application or the Hardware Asset Management application is installed in your ServiceNow instance.</p> <p>Create entitlements with unlimited allocations and unlimited rights </p> <p>Create entitlements for Per User, Per Device, and User Subscription metrics that support unlimited allocations and unlimited rights to license any number of software installations without incurring a true-up cost.</p> <p>Allow for advance reporting by associating software installations to software models </p> <p>Update normalized discovery models automatically with a matching software model reference. The association of software installations, discovery models, and software models enables you to use advanced reporting for licensable and non-licensable products.</p> <p>Use host affinity rules on Microsoft Windows Server licensing on an on-premise cluster </p> <p>Use host affinity rules that are configured for Windows Server Standard while calculating license consumption. You can optimize and significantly reduce the number of licenses that are required, which results in cost savings for your organization.</p> <p>Integrate Salesforce CRM application through Playbook </p> <p>Use the SaaS Playbook to guide you through the entire process of integrating the Salesforce CRM application. The Playbook helps you verify each action and provides context throughout each step of the integration process. You can also navigate to the complete documentation through the Playbook.</p>

Application or feature	Details
	<p data-bbox="533 155 1230 186">Integrate with Workday applications out-of-the-box </p> <p data-bbox="587 218 1299 411">Use the ServiceNow SaaS License Management application to integrate with the Workday applications such as Workday Human Capital Management and Workday Financial Management introduced in version 10.0.2 of Software Asset Management - SaaS License Management.</p> <p data-bbox="533 432 1374 464">Renew software contracts through Contract renewal workflow </p> <p data-bbox="587 491 1283 684">Use the Contract Renewal workflow to notify contract owners when a contract is about to expire or already expired and allow them to renew or expire the contract record. This workflow maintains the contract history while updating software licenses, terms, and conditions to a new contract.</p> <p data-bbox="533 705 991 737">Manage user-based IBM licenses </p> <p data-bbox="587 764 1303 861">Use the Software Asset Management publisher pack for IBM to manage the following user-based licenses for your IBM products:</p> <ul data-bbox="592 879 1054 1056" style="list-style-type: none"> <li data-bbox="592 879 815 911">• Authorized User <li data-bbox="592 926 1054 957">• Authorized User Value Unit (AUVU) <li data-bbox="592 972 1011 1003">• External User Value Unit (XUVU) <li data-bbox="592 1018 1038 1050">• Employee User Value Unit (EUVU) <p data-bbox="587 1094 1278 1190">Create entitlements and software models so that you can measure the compliance of these licenses and better optimize your IBM licensing costs.</p> <p data-bbox="533 1205 1310 1268">Optimize licensing on Microsoft SQL Server clusters based on total cost </p> <p data-bbox="587 1287 1303 1646">Optimize the licensing on your Microsoft SQL Server clusters by assigning licenses to the physical hosts and virtual machines (VMs) within each cluster based on total cost. With cost-based licensing, you can license a combination of physical hosts and VMs within each Microsoft SQL Server cluster, which enables you to automatically implement the most cost-effective licensing solution for each cluster. Cost-based licensing also considers any Microsoft Software Assurance (SA) benefits that are available for your Microsoft SQL Server software.</p> <p data-bbox="533 1667 1326 1764">Analyze infrastructure details for physical hosts and virtual machines (VMs) that are running Microsoft Windows Server or Microsoft SQL Server across hybrid environments </p> <p data-bbox="587 1782 1272 1969">Use the Windows and SQL Server Infrastructure report to view and analyze infrastructure details for the physical hosts and VMs that are running Microsoft Windows Server or Microsoft SQL Server across both on-premise and public cloud environments. With this report, you can view the consolidated infrastructure</p>

Application or feature	Details
	<p>details for these hosts and VMs without having to locate and select each resource individually in the License usage view (Software Asset Workspace) or License Workbench (Software Asset Management classic application).</p> <p>Discover and report on Oracle Fusion Middleware products using the Oracle-verified Discovery and Software Asset Management applications </p> <p>Save time when discovering and reporting on data for your Oracle Fusion Middleware products by using the Oracle-verified Discovery and Software Asset Management applications. With the verification and enrollment of ServiceNow in the Oracle Third-Party Tool Vendor (3PTV) Program, both applications are verified to collect and report on the installation and usage data for your Oracle products without requiring any Oracle measurement tools.</p>
Subscription Management	<p>Increased transparency for capacity-based products </p> <p>View how allocation totals are computed for table queries and scripted definitions in capacity-based products. View the definition record for each product in the Subscription details page and execute the definition to view the latest results on demand.</p>
Supplier Lifecycle Management	<p>Supplier Management Workspace Supplier Manager Workspace </p> <p>View all of your assigned cases and tasks at a glance, create and manage supplier cases, assign supplier tasks to contacts, manage supplier contacts, answer supplier queries, and collaborate with suppliers.</p> <p>Supplier Collaboration Portal </p> <p>Provide a single, one-stop experience for suppliers to get self-service, complete tasks and make requests into an organization.</p> <p>Supplier Lifecycle Management Supplier Lifecycle Operations integration with Craft </p> <p>Provide a pre-configured integration with Craft.io. Craft.io is a supplier intelligence platform that offers validated and comprehensive information about suppliers with which a company engages.</p> <p>Configuring a custom API to dynamically fetch supplier news </p> <p>Retrieve recent news and other articles from preferred news channels. There is a pre-configured integration with Microsoft Bing available with this application.</p> <p>Supplier Information tab </p> <p>Provide a 360-degree view of suppliers and contacts for a supplier case record. The Supplier Information tab shows details about the supplier and the supplier</p>









Application or feature	Details
	<p>contact, a summary of all the open and overdue cases, and a list of all the cases by their priority.</p> <p>Managing supplier contacts from the Supplier Management Workspace Supplier Manager Workspace </p> <p>Supplier owners can do the following:</p> <ul style="list-style-type: none"> • Remove supplier contacts and delegate their tasks before removing the contacts. • Elevate or restrict access to supplier contacts. <p>Managing supplier contacts from the Supplier Collaboration Portal </p> <p>Primary supplier contacts and supplier admin can do the following:</p> <ul style="list-style-type: none"> • Remove supplier contacts and delegate their tasks before removing the contacts. • Elevate or restrict access to supplier contacts. <p>Supplier Management Workspace Supplier Manager Workspace Details page </p> <ul style="list-style-type: none"> • View information about suppliers and supplier contacts on the Supplier overview and Supplier contacts contextual side panels respectively, in the supplier case details and supplier case record pages. This allows you to quickly view supplier information without navigating away from these pages. • If a supplier has more than 5 contacts, the Supplier Contacts widget displays links that show a list of contacts that have been registered and a list of supplier cases for contacts that are pending registration. This widget also shows an Admin label next to the contact's name, which indicates that the contact is a primary contact. <p>Manage documents from the Supplier Management Workspace Supplier Manager Workspace </p> <p>Enable supplier administrators to create supplier document configurations that allow suppliers to upload prerequisite documents.</p>
Table Builder	<p>Table Builder </p> <p>This application now displays as "Table Builder" in the ServiceNow Store instead of "AES Table Builder."</p> <p>Formula Builder </p> <p>Configure calculated values when configuring field column information without needing to write a script.</p> <p>All form views list </p>






Application or feature	Details
	<p>Starting in Table Builder 23.0.1, access a filterable list of form views when working with forms in App Engine Studio. This navigational menu also allows you to quickly navigate to a different form view, create a form view, duplicate a form view, or configure a related list or UI action.</p> <p>Table field column search and filtering </p> <p>Starting in Table Builder 23.0.1, filter the list of available table fields for a selected table using keywords or select an option to filter inactive or extended fields on the Table tab in App Engine Studio.</p>
<p>Table Builder for App Engine</p>	<p>Table Builder</p> <p>This application includes all new features and changes from the standard Table Builder release notes (see Table Builder release notes) in addition to those features listed here.</p> <p>Flows </p> <p>Build custom flows that run when records on a selected table are created and updated.</p> <p>Create tables from PDF forms </p> <p>Beginning with Table Builder 23.0.1, you can quickly create data tables for your application from existing PDF forms in App Engine Studio when you have Table Builder for App Engine installed. After you have imported a PDF, the PDF extractor lets you select text in the displayed form and then configure a new field from it, enabling you to build out your data model faster.</p>
<p>Technology Provider Service Management</p>	<p>Service Bridge </p> <p>The ServiceNow[®] Service Bridge and Service Bridge Providers applications enable providers and customers to connect and track services directly between instances without the need to configure and maintain custom integrations.</p> <p>Proactive Service Experience Workflows </p> <p>The Telecommunications, Media and Technology Assurance Workflows application has been renamed to Proactive Service Assurance Workflows in the November 2022 Store release.</p>
<p>Telecommunications Network Inventory</p>	<p>By using the Telecommunications Network Inventory function catalog, you can access the functions that help you to automate the network inventory's Design and Assign process. You can use these functions and subflows to create, update, and retrieve a configuration item (CI) while you are performing the Design and Assign process.</p> <p>Network Inventory Design and Assign </p>









Application or feature	Details
	<p>Design and reserve the network inventory resources that are required for you to build a digital representation of your networks. The Design and Assign functionality is a set of inventory tasks that you can perform sequentially, or in parallel, to enable you to accurately, efficiently, and consistently build the network service topologies and capacity for your customers or for your own network service.</p> <p>Network Inventory model definition</p> <p>Create the inventory models to help you track the technical information from the manufacturer about an equipment model, its associated equipment holders, network interfaces, interface cards, and logical and physical connections. An inventory model contains the metadata about its physical characteristics, including the dimensions, compatibilities, and configurations.</p> <p>Network Inventory template definition</p> <p>Define the network inventory templates and their relationships to each other. A template includes the rules on how the equipment configurations should be generated and are based on the specific operating requirements from the manufacturer.</p> <p>Network Inventory Workspace</p> <p>View the network inventory data that is associated with your network sites, telco equipment, equipment holders, interface cards, network interface cards, and logical and physical connections. The Network Inventory Workspace enables a network inventory manager to search and explore the existing network inventory and to examine the health and recent activity of the CMDB Network Inventory classes, to effectively plan, design, build, and manage a network inventory.</p> <p>Note: The Network Inventory Workspace landing page is only compatible with the Tokyo release and above.</p>
UI Builder	<p>Presets</p> <p>Select a preset to apply a pre-defined configuration to certain components. Presets simplify the configuration of component properties and event handlers. You can also override preset values to customize components or disable presets.</p> <p>Controllers</p> <p>Use the new Record Controller to encapsulate the business logic that is related to record pages and to simplify component configuration. Controllers can bind to data, similar to data resources, and also include state parameters and scripting. Presets use the data in a controller to auto-configure a component.</p>








Application or feature	Details
	<p>Standard Record Page template</p> <p>Use the new Standard Record page template that includes the default presets for components and the Record Controller that wires components to data and automatically applies test values. This template reduces the time to create record pages and can be customized while being upgrade-safe. A blank record page template that includes only the Record Controller is also available.</p> <p>Preset-defined event mappings</p> <p>Use a preset to apply event mappings automatically for certain components. You can also override event mappings that are configured by presets or disable presets.</p>
<p>Universal Request</p>	<p>Automatically create universal request for requests submitted from all available channels</p> <p>Attach a universal request for a record creation through the channels to provide a seamless experience to employees. UR is auto-created from any of the following channels:</p> <ul style="list-style-type: none"> • Now Platform • Workspace • Virtual Agent • Email • Interaction • Self-service <p>Simultaneously work on multiple department tickets using the associated ticket creation capability</p> <p>Create an associated cross-department ticket and assign it to the relevant department to be worked on. The UR is automatically attached to the new associated ticket and can be tracked.</p>
<p>Upgrade Center</p>	<p>Building and applying your upgrade plan</p> <p>Accelerate your upgrades by packaging your customizations into applications in an upgrade plan. You can also preview your upgrade plan before implementing it to your upgrades.</p>
<p>User Experience Analytics</p>	<p>User Experience Analytics for Service Portal</p> <p>You no longer need to manually install plugins and the tracking capability for individual Service Portals. The base system includes User Experience Analytics and enables its tracking capabilities for all available Service Portals on an instance.</p>






Application or feature	Details
	<p>Note: If you have existing Service Portals on your instance, the following conditions apply:</p> <ul style="list-style-type: none"> • If some of the Service Portals have tracking enabled prior to the upgrade, the remaining Service Portals that are not enabled are not tracked by default. These untracked Service Portals require a manual configuration. • If none of the existing Service Portals have tracking enabled prior to the upgrade, then User Experience Analytics tracking is enabled by default for all the Service Portals. <p>Importing User Experience Analytics data into UI Builder</p> <p>Import User Experience Analytics data through the UI Builder, helping to provide an alternative method to visualize data for analysis. The following User Experience Analytics KPIs and trend graphs are available within the UI Builder: active users, new users, sessions, events count, and event property breakdown.</p>
<p>Vaccine Administration Management</p>	<p>Configure VAM property to enable scoped cache</p> <p>Use scoped caching to improve application speed and efficiency. Existing users using a global cache can configure a system property to enable scoped caching.</p> <p>Domain separation and Vaccine Administration Management</p> <p>Use domain separation at the basic support level in Vaccine Administration Management.</p>
<p>Vendor Management Workspace</p>	<p>Cloning and configuring a Vendor Management Workspace page using Next Experience UI Builder</p> <p>Clone the read-only Vendor Management Workspace pages so that you can customize them to fit your needs by using the UI Builder.</p>
<p>Virtual Agent</p>	<p>Support for Google Dialogflow ES as an NLU service provider</p> <p>Configure Virtual Agent to use the intents, entities, and utterances that you define in a Google Dialogflow ES agent.</p> <p>Dynamic language detection and machine translation for Virtual Agent</p> <p>Support some languages at a lower cost than professional translation. Admins can enable Dynamic Translation in conversations and determine which languages will be translated dynamically by machine, instead of using professional platform translations. In bot conversations, Virtual Agent detects the user language based on the initial user utterance and gives the user</p>




Application or feature	Details
	<p>the option to continue in the detected language. User utterances can be translated as well.</p> <p>Locale and custom language support for topic discovery </p> <p>If a user's language code is unsupported or locale-specific, NLU topic discovery returns results from the primary language in the model by default. For a better user experience, designate a fallback language for custom or locale-specific languages. For example, configure Mexican Spanish (es-mx) to use Spanish (es) as the fallback language.</p> <p>Chat transcript download </p> <p>Download a chat transcript. The chat transcript CSV file includes various data elements related to user input, Virtual Agent response, NLU performance, and so on, that help Virtual Agent administrators to troubleshoot individual conversations.</p> <p>Chat branding enhancements </p> <p>Customize the default icons used in the chat window, including Start/End Conversation, Send, Attachment, Search, and so forth.</p> <p>Web client enhancements </p> <ul style="list-style-type: none"> • Support for Smart links  which lets you customize how links open from the chat client. As an admin, you can use regular expressions to configure where and how chat links open: in a new window, in the chat window, or in a pop-up window. For this release, smart links are available only for the web client channel. • The web client pop-up window displays information when a user clicks links for KB articles, forms, and catalog items. <p>Mobile web client enhancements for iOS and Android </p> <ul style="list-style-type: none"> • Displaying the wait time countdown when transferred to a live agent. • Support for native maps to show location (Apple Maps and Google Maps). • Support for viewing text and links as Virtual Agent menu options. <p>Microsoft Teams enhancements </p> <ul style="list-style-type: none"> • Enable Microsoft Teams integration in ServiceNow Protected Platform (SPP) : When installing Conversational Integration with Microsoft Teams, the Now Platform dynamically determines the bot type. For example, it determines whether to install a commercial bot or a regulated market bot.

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	<ul style="list-style-type: none"> • Configure promoted topics for the Microsoft Teams channel. • Provision to turn on or turn off the confirmation banner when a user sends a response to Virtual Agent in Microsoft Teams conversations. • Order a Catalog item during a conversation in Microsoft Teams through the Task Module. <p>Slack enhancements </p> <ul style="list-style-type: none"> • Branding for Slack : Customize the Conversational Integration with Slack application to improve the setup and conversational experiences, and to reduce the configuration time. • Configure promoted topics for the Slack channel. <p>Omni-channel deflection for Issue Auto Resolution </p> <ul style="list-style-type: none"> • Fall back to AI Search results when no matching Virtual Agent topic is found. • Support email and SMS as response channels with Issue Auto Resolution for HR. • Follow up with the user at preset intervals, through all supported channels, when the user has not acted on the notification. • Replace the existing SLA with the Task SLA engine.
<p>Vulnerability Response</p>	<p>CI lookup rules module has moved </p> <p>Starting with version 19.0, you can find the CI Lookup Rules module in your instance at Security Operations > CMDB > CI > Lookup Rules.</p> <p>Remediate application vulnerable items, container vulnerable items, and configuration issues in Vulnerability Manager Workspace</p> <p>Starting with version 18.0, Vulnerability Manager Workspace supports Application Vulnerability Response, Container Vulnerability Response, and Configuration Compliance. Therefore, you can create watch topics in the Vulnerability Manager Workspace for Application Vulnerable Items, and Container Vulnerable Items, and Configuration Issues.</p> <p>Transfer remediation task when transferring records to a remediation effort </p> <p>Starting with version 18.0, when you transfer Vulnerable items (VIs) of a remediation effort to a new remediation effort in the same watch topic, then the Remediation Task associated with these VIs is also transferred to the new remediation effort.</p>





Application or feature	Details
	<p>View Remediation Tasks from classic UI in the Vulnerability Manager Workspace </p> <p>Starting with version 18.0, you can view and work on the Remediation Tasks that belong to classic UI in the Vulnerability Manager Workspace.</p> <p>View vulnerability libraries </p> <p>Starting with version 18.0, you can view details of the Common Vulnerability and Exposures (CVEs), Third-Party Entries (TPEs), Common Weakness Enumeration (CWEs), App Vulnerabilities, Policies and Tests under Libraries on the List page.</p> <p>Provide additional information in Request Exception form in Vulnerability Manager Workspace  Request exceptions for remediation tasks and records from the Vulnerability Manager Workspace </p> <p>You can provide additional information by answering the questionnaire in the Request Exception form for host vulnerable items (VITs), application vulnerable items (AVITs), container vulnerable items (CVITs) and Remediation Tasks in Vulnerability Manager Workspace.</p> <p>Provide additional information in the Mark False Positive form in Vulnerability Manager Workspace </p> <p>You can provide additional information by answering the questionnaire in the Mark False Positive form for host VITs AVITs, CVITs and Remediation Tasks in Vulnerability Manager Workspace.</p> <p>Request GRC Policy Exception from Vulnerability Manager Workspace </p> <p>You can request GRC Policy Exception for host VITs, AVITs and Remediation Tasks from Vulnerability Manager Workspace.</p> <p>Explore the Vulnerability Analyst workspace </p> <p>The Vulnerability Emergency Response application is used by vulnerability analysts to address zero-day or critical vulnerabilities. By identifying the affected configuration items (CIs), vulnerability analysts can respond by generating vulnerable items and assigning them to the remediation team for analysis. Some key features are:</p> <ul style="list-style-type: none"> • Automatic assessments of CISA KEV CVE or CPE-based assessment • Software-based assessment for zero-day vulnerabilities • Assess the exposure of your assets to zero-day vulnerabilities with Exposure assessment  in the workspace.

Application or feature	Details
	<p>Configure risk score to risk rating mapping for Vulnerability Response </p> <p>Starting with version 18.0 of Vulnerability Response (VR), you can modify the existing or configure more than five risk ratings through the Risk Score Weights table.</p> <p>Configure risk score to risk rating mapping for Application Vulnerability Response </p> <p>Starting with version 18.0 of Application Vulnerability Response (AVR), you can modify the existing or configure more than five risk ratings through the Risk Score Weights table.</p> <p>Configure risk score to risk rating mapping for Container Vulnerability Response </p> <p>Starting with version 1.2 of Container Vulnerability Response, you can modify the existing or configure more than five risk ratings through the Risk Score Weights table.</p> <p>Persist deferral date for manual exceptions even after exception expiry </p> <p>Starting with version 18.0 of Vulnerability Response (VR), if a deferred vulnerable item (VIT) is reopened by a scanner before the exception window expires, the state of the vulnerable item changes from Open to Deferred. Additionally, the deferred until date persists even after the vulnerable item reopens after the expiration date.</p> <p>Persist deferral date for manual exceptions of application vulnerable items even after exception expiry </p> <p>Starting with version 18.0 of Application Vulnerability Response (AVR), if a deferred application vulnerable item (AVIT) is reopened by a scanner before the exception window expires, the state of the AVIT changes from Open to Deferred. Additionally, the deferred until date persists even after the AVIT reopens after the expiration date.</p> <p>Persist deferral date for manual exceptions of container vulnerable items even after exception expiry </p> <p>Starting with version 1.2 of Container Vulnerability Response, if a deferred container vulnerable item (CVIT) is reopened by a scanner before the exception window expires, the state of the CVIT changes from Open to Deferred. Additionally, the deferred until date persists even after the CVIT reopens after the expiration date.</p> <p>Manage exception requests using Container Vulnerability Response or GRC </p> <p>Manage vulnerability exception requests for container vulnerabilities using either the Exception management module in Container Vulnerability Response or GRC: Policy and Compliance Management integration.</p>






Application or feature	Details
	<p>Based on the module selected, the flow is managed by either Container Vulnerability Response or Governance, Risk, and Compliance (GRC).</p> <p>Automating workflows for duplicate vulnerabilities </p> <p>When an asset is scanned with multiple scanners, there's a chance of identifying the same vulnerability as duplicates by the different scanners. Starting from Vulnerability Response and Application Vulnerability Response v17.1, you can automatically resolve these duplicate vulnerable items.</p> <p>For example, if the Qualys or Tenable or Rapid7 and Microsoft scanners identify the same vulnerability, you can choose to automatically resolve the duplicate vulnerabilities.</p> <p>Adding proof to Rapid7 vulnerable item keys </p> <p>Starting from Vulnerability Response V17.1, you can add proof as a vulnerable item (VI) key for the Rapid7 VIs. Including the proof for specific vulnerabilities enables the Rapid7 scanner integration to create VIs for each proof received from Rapid7.</p> <p>Splitting detections into different VIs based on proof creates multiple VIs that enable you to assign the vulnerabilities to the appropriate remediation owners.</p> <p>Calculating the remediation target rule for VR and AVR </p> <p>Starting from V17.1, you can calculate the remediation targets using the Target from (date).</p> <p>The Target from (date) is a new field specifying the date from which the remediation target rule must be applied.</p> <p>Manage exception requests using Vulnerability Response or GRC in Application Vulnerability Response </p> <p>Manage vulnerability exception requests for application vulnerabilities using either Vulnerability Response or GRC: Policy and Compliance Management integration. Based on the module selected, the flow is managed by either Vulnerability Response or GRC.</p> <p>Reevaluate and regroup vulnerable items automatically </p> <p>If the assignment group on a VI changes on reapplication of assignment rules, you can automatically re-evaluate and regroup the vulnerable items by enabling the business rule Link to Remediation Tasks and system property <code>sn_vul.rerun_task_rules</code>. On assignment group change, the business rule moves the vulnerable items to the relevant group or creates a new group if they can't be grouped under any existing group. The system property <code>sn_vul.rerun_task_rules</code> unlinks the</p>

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	<p>vulnerable items from the remediation tasks where the condition no longer matches, and reapplies the remediation task rules.</p> <p>Vulnerability Response Workspaces </p> <p>This version of the Vulnerability Response application supports the Vulnerability Manager and IT Remediation workspaces.</p> <p>Remove assignments from vulnerable items and remediation tasks </p> <p>Remediation owners can remove themselves from assignment from vulnerable item records that they determine are not their responsibility. The Unassign UI action clears the Assigned to and Assignment group fields and sends a daily digest to vulnerability managers when records are modified. You can modify the Assigned to and Assignment group fields on vulnerable item records in Vulnerability Response and Application Vulnerability Response that are incorrectly assigned to you or to your groups. This feature is available on the following records:</p> <ul style="list-style-type: none"> • Remediation tasks (VUL) in both the classic environment and the Vulnerability Response Workspaces. • Vulnerable items (VIT) in both the classic environment and the Vulnerability Response Workspaces. • Application vulnerable items (AVIT). • Container vulnerable items (CVIT). • A default approval work flow is introduced for unassign feature. An approval request is sent to the approver that the request is raised for the removal of assignment group for VI or remediation task. Vulnerability admins can disable the approval process if needed. • Updated records are displayed in Unassigned modules for Vulnerability Response and Application Vulnerability Response. • A link is included to the Unassigned Modules in the daily digest that is sent to vulnerability managers. • A daily scheduled job counts the records that are updated with this feature and aggregates them by the assignment rules that initially assigned them. You can use the counts that are displayed for each assignment rule to help you monitor how effective your assignment rules are. <p>Track deferral counts for vulnerable items and remediation tasks </p> <p>Track the number of times a vulnerable item (VI), application vulnerable item (AVIT), container</p>

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	<p>vulnerable item CVIT), or a remediation task (VUL) is deferred. A scheduled job, <i>set deferral counts</i>, runs daily to post the counts for the records that are deferred more than one time in the Deferral count column in the Multiple deferrals modules for VR, AVR, and CVR.</p> <p>Quick start tests for Vulnerability Response ↗</p> <p>After upgrades and deployments of new applications or integrations, run quick start tests to verify that Vulnerability Response works as expected. If you customized Vulnerability Response, copy the quick start tests and configure them for your customizations.</p> <p>Identifying potential duplicate VIs from different scanners ↗</p> <p>If you are using multiple scanners on the same asset to detect vulnerabilities, multiple vulnerable items (VIs) might be created. Starting from Vulnerability Response v16.5, you can identify the potential duplicate VIs to ensure that the potential duplicate vulnerabilities are not assigned to the remediation owners.</p>
<p>Vulnerability Response Integration with Microsoft Defender for IoT</p>	<p>Vulnerability Response integration with Microsoft Defender for IoT ↗</p> <p>Use the Vulnerability Response Integration with Microsoft Defender for IoT application with the Operational Technology Vulnerability Response application to track, prioritize, and resolve vulnerabilities on assets used in the production process.</p>
<p>Vulnerability Response integrations</p>	<p>Ingest additional metadata for cloud assets ↗</p> <p>Qualys, Tenable for Vulnerability Response and Rapid7 scanners can now receive additional metadata for cloud assets such as Cloud Account Name, Cloud Account ID, Region, Provider, Cloud Tags and so on. A new CI Lookup Rule, 'Cloud Resource ID', has been introduced to match the cloud CIs based on the cloud metadata. You can use this information to identify the target teams responsible for patching vulnerabilities.</p> <p>Tenable.io ↗, Qualys ↗, and Rapid7 InsightVM ↗ Vulnerability Integrations</p> <p>Customize the filtering parameters for your scheduled queries with the third-party scanners that are supported by Vulnerability Response. From your Now Platform instance, without coding or adding additional queries, further refine your imported vulnerability data with parameters that are provided by the scanner products. All Qualys integrations support filtering using Qualys query parameters. The following integrations support filtering by providing JSON content in the request body:</p> <ul style="list-style-type: none"> • Tenable.io Assets Integration • Tenable.io Fixed Vulnerabilities Integration

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	<ul style="list-style-type: none"> • Tenable.io Open Vulnerabilities Integration • Rapid7 InsightVM Vulnerable Item Integration API • Rapid7 InsightVM Vulnerability Integration API • Rapid7 InsightVM Asset List Integration API • A new Qualys parameter, <i>include_only_confirmed</i>, allows you to filter only for vulnerabilities of the type, <i>confirmed</i>. Activate this parameter from the Qualys integration instance parameters. It is inactive by default. <p>Manual ingestion of vulnerabilities </p> <p>To effectively protect the assets against unknown threats, such as zero day exploits, you can use manual ingestion to import a set of vulnerabilities and CI data into Vulnerability Response. You can proactively ingest the vulnerabilities and remediate them instead of waiting for scanners to report the assets, which are at risk.</p> <p>CISA Known Exploit Vulnerability bulletin integration </p> <p>The Vulnerability Response integration with CISA ingests data from the Cybersecurity & Infrastructure Security Agency (CISA) to help you determine and prioritize the remediation of actively exploited vulnerabilities.</p> <ul style="list-style-type: none"> • The ingested Known Exploited Vulnerability (KEVs) in the ServiceNow Vulnerability Response enrich the existing CVEs and roll up to the Third-Party Vulnerability Entries table. • The KEVs include vulnerabilities from infrastructure, container, and cloud applications. <p>Quick start tests for Vulnerability Response </p> <p>After upgrades and deployments of new applications or integrations, run quick start tests to verify that Vulnerability Response and integrations work as expected. If you customized Vulnerability Response, copy the quick start tests and configure them for your customizations.</p>
Walk-up Experience	<p>Badge reader integration </p> <p>The new badge reader integration provides an improved on-site check-in experience for a requester to access a location. The enhancements include the following:</p> <ul style="list-style-type: none"> • A new user badge configuration enables you to manually create or add other configuration (tables) from where the user ID and badge ID-mapping information can be retrieved. Based on this, the user ID is retrieved from the badge ID and the requester

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	<p>can scan the badge to access and check in to the location.</p> <ul style="list-style-type: none"> The check-in reason (issue or request) can also be configured for each badge reader. This enables auto population of the check-in reason based on the badge reader. If the check-in reason is not configured for a badge reader, then the reason that is configured for the location is considered. <p>Auto-population of Reason</p> <p>The check-in reason is now auto populated based on the location (on-site) and also the badge reader if the badge reader is configured with a check-in reason.</p> <p>Variable time slots (work duration and date) for appointments</p> <p>Variable time slots (work duration and date) for appointments can be configured and booked based on the check-in reason (issue or request) for a location. This feature helps to provide information to the customers about the availability of the agents for a location and also manage the walk-up locations more effectively and efficiently.</p> <p>Select the Enable advance configuration check box in Appointment Configuration to create and configure variable time slots. This feature enables you to create multiple configuration rules for a location. Each rule can have multiple advanced configuration for time slots (work duration and date) without any time or date overlap. You can link the rule to a check-in reason and book variable time slots and dates based on the selected check-in reason for a location.</p>
<p>Workforce Optimization for Customer Service</p>	<p>Demand Forecast for managers at 15-, 30-, and 60-minute intervals</p> <p>As a manager, view the staffing forecast at 15-, 30-, and 60-minute intervals in the team calendar using the Demand Forecast application.</p>
<p>Workforce Optimization for ITSM</p>	<p>Work scheduler</p> <p>As a manager, assign work for your agents more effectively by their skills and availability.</p> <p>Surveys in Workforce Optimization for ITSM</p> <ul style="list-style-type: none"> As a manager, you can create surveys and publish them. You can then assign the published surveys to an agent or a group. You can also share the survey with other teams by adding the managers of those teams as the owners of the survey. As an agent, you can complete surveys that are assigned to you in Service Operations Workspace.

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	<p>When a survey is published, you can receive notifications for surveys that are assigned to any group that you belong to.</p> <p>Requesting a skill assessment </p> <ul style="list-style-type: none"> • As a manager, you can request your teams or team members to review their existing skill proficiencies and update them. You can also request that they add new skills that they have been using that are not in their skill profile yet. • As an agent, you can evaluate the skill level for an existing skill or add a new skill and request approval to update those skills in your profile in Service Operations Workspace. You can also get notified when your manager requests a skill review. <p>Learning path </p> <ul style="list-style-type: none"> • As a manager, you can create a learning path, add relevant skills and course items, and publish the path. When your agents complete the path, any skills that are associated with the path are automatically added to the agent's profile. • As an agent, you can enhance your skills set by completing learning tasks from internal or external learning content in Service Operations Workspace. <p>Agent shift sign-ups </p> <ul style="list-style-type: none"> • As a manager, empower your teams to sign up for shifts that are based on their availability and preference. • As a team member, you can sign up for work shifts that are assigned to a schedule plan in your assignment group in Service Operations Workspace. <p>Analyzing skill trends </p> <p>As a manager, you can analyze trends for the top five skills that are in demand.</p> <p>Roles added for Workforce Optimization for ITSM </p> <p>The following roles have been added in Workforce Optimization for ITSM:</p> <ul style="list-style-type: none"> • <code>sn_wfo_work_sched.manager</code>: This role is inherited by the <code>sn_wfo_cfg_itsm.manager</code> role. • <code>sn_wfo_skillreview.user</code>: This role is inherited by the <code>sn_wfo_cfg_itsm.employee</code> role. • <code>sn_wfo_skillreview.manager</code>: This role is inherited by the <code>sn_wfo_cfg_ws.manager</code> role.


Application or feature	Details
	<p>Cloning and configuring a Workforce Optimization for ITSM page using Next Experience UI Builder</p> <p>The Workforce Optimization for ITSM application pages are read-only. To configure the pages, you must first clone an existing page and customize the page for your needs by using the UI Builder.</p> <p>Integrating Workforce Optimization for ITSM with Process Optimization</p> <p>As a manager, you can get insights into the processes of your workforce and find potential areas that you could optimize.</p> <p>Scheduling enhancements</p> <ul style="list-style-type: none"> • Use pagination to scroll through your agents' schedules. • Use pagination to scroll through shifts. Use the <code>sn_shift_planning.shift_calendar.page_size</code> system property to set the maximum calendar page size to enable pagination. • Use the <code>sn_shift_planning.shift_calendar.agent_count_max</code> system property to set the maximum number of agents that the logged-in manager manages. When the number of agents exceed this value, the shift plan pop-up for a shift displays the agent count.
Workspace	<p>Context specific actions in Workspace</p> <p>Ability to access form configuration options and direct navigation through right-clicking in the header bar of a tab to display a context menu.</p>

Changes to Tokyo features and products

Cumulative release notes summary on changes to Tokyo features and products.




Existing products were updated and changed in Tokyo. This includes the renaming of certain buttons or features.

Application or feature	Details
AI Search	<p>Stop words and Synonyms</p> <p>AI Search does not remove stop words from synonym expansions of search query terms. For instance, suppose you define <code>laptop</code> and <code>notebook computer</code> as synonyms and define <code>computer</code> as a stop word. If a user searches for <code>laptop</code>, AI Search expands the search query to match <code>laptop OR "notebook computer"</code> instead of matching <code>laptop OR notebook</code>.</p> <p>Synonyms</p>

Application or feature	Details												
	<p>When search query terms match a multi-term synonym, AI Search treats those terms as a quoted phrase. For example, if you define <code>401k</code> and <code>retirement account</code> as synonyms and a user searches for the unquoted terms <code>retirement account</code>, AI Search returns results that match the quoted phrase "retirement account".</p> <p>Machine learning relevancy in AI Search </p> <p>AI Search improves relevancy for Catalog Items by indexing search keywords from the Meta field. Machine learning relevancy assesses Meta keyword matches and tag matches when computing relevancy scores for Catalog Items and Knowledge articles.</p>												
API	<h3>Changed scoped classes</h3> <table border="1" data-bbox="507 722 1385 1129"> <thead> <tr> <th data-bbox="512 726 751 779">Class</th> <th data-bbox="751 726 1380 779">Methods</th> </tr> </thead> <tbody> <tr> <td data-bbox="512 779 751 1125">GlideAggregate</td> <td data-bbox="751 779 1380 1125"> <p>Added new aggregate functions: <code>GROUP_CONCAT</code> and <code>GROUP_CONCAT_DISTINCT</code>.</p> <p>Affected methods:</p> <ul style="list-style-type: none"> • <code>addAggregate()</code> • <code>getAggregate()</code> • <code>orderByAggregate()</code> </td> </tr> </tbody> </table> <h3>Changed global classes</h3> <table border="1" data-bbox="507 1222 1385 1629"> <thead> <tr> <th data-bbox="512 1226 751 1278">Class</th> <th data-bbox="751 1226 1380 1278">Methods</th> </tr> </thead> <tbody> <tr> <td data-bbox="512 1278 751 1619">GlideAggregate</td> <td data-bbox="751 1278 1380 1619"> <p>Added new aggregate functions: <code>GROUP_CONCAT</code> and <code>GROUP_CONCAT_DISTINCT</code>.</p> <p>Affected methods:</p> <ul style="list-style-type: none"> • <code>addAggregate()</code> • <code>getAggregate()</code> • <code>orderByAggregate()</code> </td> </tr> </tbody> </table> <h3>Changed REST APIs</h3> <table border="1" data-bbox="507 1722 1385 1833"> <thead> <tr> <th data-bbox="512 1726 895 1778">Class</th> <th data-bbox="895 1726 1380 1778">Methods</th> </tr> </thead> <tbody> <tr> <td data-bbox="512 1778 895 1829">AWA Agent API</td> <td data-bbox="895 1778 1380 1829">Added new endpoints:</td> </tr> </tbody> </table>	Class	Methods	GlideAggregate	<p>Added new aggregate functions: <code>GROUP_CONCAT</code> and <code>GROUP_CONCAT_DISTINCT</code>.</p> <p>Affected methods:</p> <ul style="list-style-type: none"> • <code>addAggregate()</code> • <code>getAggregate()</code> • <code>orderByAggregate()</code> 	Class	Methods	GlideAggregate	<p>Added new aggregate functions: <code>GROUP_CONCAT</code> and <code>GROUP_CONCAT_DISTINCT</code>.</p> <p>Affected methods:</p> <ul style="list-style-type: none"> • <code>addAggregate()</code> • <code>getAggregate()</code> • <code>orderByAggregate()</code> 	Class	Methods	AWA Agent API	Added new endpoints:
Class	Methods												
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Class	Methods												
AWA Agent API	Added new endpoints:												







Application or feature	Details	
	Class	Methods
		<ul style="list-style-type: none"> • GET /awa/agents/<user_id>/capacities • GET /awa/agents/{user_id}/presence_states • PUT /awa/agents/{user_id}/capacities <p>Added 403 (forbidden) error code. Possible reasons:</p> <ul style="list-style-type: none"> • The user does not have the awa_integration_user role. • The value of the glide.awa.enabled property is not true.
	<p>Product Catalog Open API</p>	<p>Added version support for product specifications and product offerings.</p> <p>Affected endpoints:</p> <ul style="list-style-type: none"> • GET /productoffering • GET /productoffering/{offeringId} • GET /productspecification • GET /productspecification/{specificationId} • POST /productoffering • POST /productspecification
	<p>Product Inventory Open API</p>	<p>Added version support for product specifications and product offerings.</p> <p>Affected endpoints:</p> <ul style="list-style-type: none"> • GET /sn_prd_invnt/product • GET /sn_prd_invnt/product/{id} • POST /sn_prd_invnt/product
<p>Product Order Open API</p>	<p>Added version support for product specifications and product offerings.</p> <p>Affected endpoints:</p>	





Application or feature	Details					
	<table border="1"> <thead> <tr> <th data-bbox="517 159 890 207">Class</th> <th data-bbox="916 159 1378 207">Methods</th> </tr> </thead> <tbody> <tr> <td data-bbox="517 207 890 554"></td> <td data-bbox="916 207 1378 554"> <ul style="list-style-type: none"> • GET /sn_ind_tmt_orm/order/productOrder • GET /sn_ind_tmt_orm/order/productOrder/{id} • PATCH /sn_ind_tmt_orm/order/productOrder/{id} • POST /sn_ind_tmt_orm/order/productOrder </td> </tr> </tbody> </table>	Class	Methods		<ul style="list-style-type: none"> • GET /sn_ind_tmt_orm/order/productOrder • GET /sn_ind_tmt_orm/order/productOrder/{id} • PATCH /sn_ind_tmt_orm/order/productOrder/{id} • POST /sn_ind_tmt_orm/order/productOrder 	
Class	Methods					
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	<p>System for Cross-domain Identity Management (SCIM) API</p>	<p>Added support for Group ServiceNow extension schema.</p> <ul style="list-style-type: none"> • GET /scim/Groups • GET /scim/Groups/{group_id} • PATCH /scim/Groups/{group_id} • POST /scim/Groups • PUT /scim/Groups/{group_id} 				
	<p>Service Catalog Open API</p>	<p>Added version support for service specifications.</p> <p>Affected endpoints:</p> <ul style="list-style-type: none"> • GET /servicespecification • GET /servicespecification/{specificationId} • POST /servicespecification 				
	<p>Service Order Open API</p>	<p>Added version support for service specifications.</p> <p>Affected endpoints:</p> <ul style="list-style-type: none"> • GET /sn_ind_tmt_orm/serviceorder • GET /sn_ind_tmt_orm/serviceorder/{id} • POST /sn_ind_tmt_orm/serviceorder 				
<p>Advanced Risk</p>	<p>Role hierarchy changes</p> <p>The GRC Business User [sn_grc.business_user] role has been removed from the contains role of GRC Reader [sn_grc.reader] and added to GRC user [sn_grc.user]. Changes have been made in the Advanced Risk application to match the new hierarchy.</p>					

Application or feature	Details
	<p>Access control lists (ACL) changes</p> <p>The following changes have been made to the ACLs:</p> <ul style="list-style-type: none"> • The Risk relevance field on the risk form can be edited by a user with the risk user [sn_risk.user] role. • The Risk Event Task form can be edited by a user with the GRC business user [sn_grc.business_user] role. • The Additional comments field on the Risk Event Task form can be edited only by a user with the GRC business user [sn_grc.business_user] role. <p>Role changes for risk event task</p> <p>Role changes have been made for the following action buttons on the Risk Event Task form:</p> <ul style="list-style-type: none"> • Back to Draft: Accessible to risk event owner • Work in Progress: Accessible to the assigned user • Request Review: Accessible to the assigned user • Close: Accessible to the risk event owner • Cancel: Accessible to the risk event owner <p>A user with the GRC business user [sn_grc.business_user] role can access All Open Tasks, All Tasks, and My Open Tasks in risk events.</p> <p>Risk event tasks can be assigned only to a user with the GRC business user [sn_grc.business_user] role. Users with the risk reader [sn_risk.reader] role can no longer be assigned with the risk event tasks.</p>
<p>Advanced Work Assignment</p>	<p>Auto-assigned work items added to Advanced Work Assignment dashboards </p> <p>The AWA dashboards now include advanced analytics information for auto-assigned work items.</p> <p>Universal capacity information added to Advanced Work Assignment dashboards </p> <p>The AWA dashboards now include universal capacity information.</p>
<p>Alignment Planner Workspace</p>	<p>Plugin dependencies</p> <p>The Alignment Planner Workspace integrations for PPM and Agile 2.0 application is renamed as Alignment Planner Workspace with PPM, Agile 2.0, and SAFE. This application is now a dependency and is installed automatically with Alignment Planner Workspace.</p>
<p>App Engine Studio</p>	<p>Preserve data tables and custom templates when cloning an instance </p>






Application or feature	Details
	<p>As of November 2022, when you use the System Clone tool to copy production instances, the following tables are no longer preserved:</p> <ul style="list-style-type: none"> • Pipeline • Environment • Pipeline Environment Order • Pipeline Types <p>Template management</p> <p>In the San Diego release, templates could be shared with and used by everyone or no one. In the Tokyo release, only users with the app_template_admin role can review, activate and deactivate, and assign sharing permissions for all templates. Users with the app_template_author role can only assign sharing permissions for templates they create. Template admins can deactivate any custom template that is not necessary.</p>
<p>Application Management</p>	<p>Continuous Integration/Continuous Delivery (CI/CD) API</p> <p>By using the CI/CD API, your CI/CD requests for application installation, plugin activation, rollback, and operations are now queued. Also, CI/CD pipelines are prevented from timing out if a request is rejected when another operation is in-progress.</p>
<p>Authentication</p>	<p>IPv6 as an IP Filter Criteria</p> <p>Use IPv6 as an IP filter criteria to filter users based on IP addresses. You can configure an authentication policy to allow or deny access to a particular address or range of addresses.</p> <p>Support of multiple IdP's with Custom URL's</p> <p>Enable your ServiceNow instance to be accessible from a company-branded or custom URL with multiple IdP support.</p> <p>OAuth scope to support auth scope or REST API scope</p> <p>Link the OAuth entity with auth scopes to manage the token issued by the OAuth entity only to access the REST APIs that are linked with the correct auth scope or REST API scope.</p> <p>Updates to the OAuth Framework to support end-user</p> <p>Invoke the API of a third party with an OAuth request that generates an OAuth token, which is user-specific. Any information that is related to the user can only be accessed with user-specific OAuth tokens.</p> <p>SAML2 Bearer Grant type support for outbound OAuth</p> <p>Use the SAML2 Bearer Grant type support for outbound OAuth grant type SAML2. For example, you can use the</p>








Application or feature	Details
	<p>SAML2 Bearer Grant for the outbound authentication to SuccessFactors spoke.</p>
<p>Change Management</p>	<p>Statistics for standard change</p> <p>The data for the successful implementation of standard changes is now calculated via a scheduled job once a day by default to improve the system performance. You can modify the frequency of the scheduled job to calculate the successful implementation of the change for a standard change template.</p>
<p>Cloud Provisioning and Governance</p>	<p>Cloud Resource (cmdb_ci_cmp_resource) class scope change</p> <p>In the Tokyo release, the Cloud Resource (cmdb_ci_cmp_resource) class is moved from the CPG scope to Global scope as part of the core CMDB class models. This change is only applicable for the new customers who have onboarded with the Tokyo release.</p>
<p>Configuration Compliance</p>	<p>Roll up test result values to test result group</p> <p>The Rollup test result values to test result group and configuration test scheduled job runs every hour and updates the status of a test rest group based on the status of its test results.</p> <p>Fixed:</p> <p>Fixed work notes issue in the Unassign UI action.</p>
<p>Configuration Management Database (CMDB)</p>	<p>CMDB Health metric rule tests are applied only to CIs in the local domain</p> <p>CIs in the global domain are now evaluated only against CMDB Health metric tests specified in the global domain. Subdomains can override the metric tests propagated from the global domain. In these subdomains, local tests are applied only to the CIs in that subdomain and are not applied to the global domain CIs. Global domain CIs are visible in the subdomain and health results for those CIs that appear in subdomains. Health results in subdomains with local metric tests reflect this new behavior.</p> <p>When CIs are failing metric tests, this new behavior saves data duplication and improves performance.</p> <p>The score for the overall health metric is no longer stored in the CMDB Health Scorecard [cmdb_health_scorecard] table. Instead, the overall metric is calculated in real time when you access the CMDB Health view. The scores of all other sub-metrics, including the correctness, completeness, and</p>









Application or feature	Details
	<p>correctness Key Performance Indicators (KPIs), continue to be stored in the table as before.</p> <p>Query capabilities in Multisource Report Builder </p> <p>You can now create a query in Multisource Report Builder that does the following:</p> <ul style="list-style-type: none"> • Compares attribute values across more than two discovery sources to find discrepancies and to manage the trustworthiness of various data sources. • Compares multiple attributes across the specified data sources, including the CMDB. <p>ServiceWatch Suite</p> <p>Create a single query to find, for example:</p> <ul style="list-style-type: none"> • All Linux Servers where the CPU count and serial number are different for records reported by the ServiceNow platform and System Center Configuration Manager (SCCM). • All Windows Servers where CPU count is reported differently across the ServiceNow platform, ServiceWatch Suite, SCCM, and Tivoli data sources. <p>After creating, saving, and running a query, you can now create a schedule for Multisource CMDB queries and then leverage Reporting  to generate reports for the underlying Multisource CMDB data store.</p> <p>Also, you can now use the new <code>cmdb_ms_user</code>, <code>cmdb_ms_editor</code>, and <code>cmdb_ms_admin</code> Multisource CMDB user roles  to control access to Multisource CMDB functionality.</p> <p>UI access to Multisource CMDB properties </p> <p>Use the MultiSource Properties page to view and modify system properties that drive Multisource CMDB behavior without adding the property to the system first.</p> <p>Configure regular identifier entries in identification rules with filter conditions </p> <p>Advanced options let you add filter conditions to regular identifier entries in identification rules to further narrow the set of CIs that IRE searches for matches.</p> <p>Add and set the <code>glide.identification_engine.enable_identifier_optional_conditions</code> system property to true to enable these advanced options for regular identifier entries in identification rules.</p> <p>Delete stale records in related tables using the CMDB Data Manager </p>











Application or feature	Details
	<p>Use the Delete CMDB Related Entry policy type in CMDB Data Manager to delete orphan, stale, or otherwise irrelevant records in non-CMDB related tables. The non-CMDB related tables in the Related Entry [cmdb_related_entry] table have references to CMDB tables. A CI in a related table can, for example, become orphan if the referenced CI in the CMDB is deleted. Remove those CIs, which are no longer needed to maintain the integrity of the system.</p> <p>CMDB Data Manager requirement for setting up the CSDM life cycle standards </p> <p>The CMDB Data Manager requirement that the ServiceNow® Common Service Data Model (CSDM) life cycle standards are set up, applies now at the CMDB Data Manager policy level, and applies to most but not all policy types. For the Attestation policy type, for example, this requirement does not apply.</p> <p>If you attempt to use a policy type that requires the CSDM life cycle standards and that requirement isn't met, an error message appears and the operation fails.</p> <p>For information about the life cycle standard requirement, see Configure the environment for CMDB Data Manager .</p> <p>CMDB Data Foundations dashboard (2.0) store app </p> <p>The CSDM and the CMDB Data Foundations dashboards Version 2.0 contains 11 new indicators and new drill-down Performance Analytics (PA) widgets in almost all indicators on the CMDB Data Foundations dashboard.</p> <p>The CMDB indicators are now grouped by function and purpose under 4 tabs such as the Customization and the ITSM Processes tab. Use the CMDB Data Foundations Dashboard for insights into key foundational indicators of your CMDB. Each metric also has a linked KB article that provides further guidance to ensure that the CMDB is properly configured for optimal usage and to mitigate any potential risks.</p> <p>IntegrationHub ETL (3.0.1) </p> <p>IntegrationHub ETL 3.0.1 is enhanced as follows:</p> <ul style="list-style-type: none"> • When generating entities for a nested payload, new entities are created only for the top-level object and any arrays nested within the data. Entities are no longer generated for data within a flat object which is instead associated to the nearest collection or to the top-level object through dot walking.











Application or feature	Details
	<p>In the next example, you can map from 'name' and then from 'general' without copying data because both are associated with the same source entity:</p> <pre data-bbox="630 268 1307 772"> { "name": "foo", "general": { "location": "California", "owner": "Fred Luddy" }, "disks": [{ "name": "fooDisk", "type": "storage" }] } </pre> <ul data-bbox="592 808 1307 1892" style="list-style-type: none"> • When creating a conditional class, you can now create a condition that is based on a data branch that is not within the top-level object. • When IntegrationHub ETL isn't detecting any incoming data from the data source for a Service Graph connector, the integration is available but in read-only mode. In read-only mode you can examine the details of the integration even though it isn't populated with actual data. However, you can't make any updates. Read-only mode is useful for studying an existing connection for the purpose of creating a new connection that is similar to the read-only connection. Using read-only mode can also assist in troubleshooting issues with the connection. • When IntegrationHub ETL detects validation errors in an ETL transform map, it no longer automatically deletes the invalid mappings. Instead, you are prompted to either confirm the deletion or keep the invalid mappings. You can use the <code>sn_int_studio.validation.enabled</code> system property to enable or disable the validation process. • You can now modify the import data source of an ETL transform map. However, be cautious as this change can result in substantial changes to the data integration. Aligning to the import set table of the new data source might require the removal of columns and associated transforms, or the addition of new columns. • You can now select one of the Robust import set transformer properties <input checked="" type="checkbox"/> as an option when adding an attribute in a mapping.












Application or feature	Details
	<ul style="list-style-type: none"> When mapping a lookup rule (such as the 'Serial Number Lookup 1' rule), you can add lookup filters which are attribute or plugin conditions that must be met for data to be mapped to the specified classes.
<p>Conversational Interfaces Home</p>	<p>Dynamic language detection and machine translation for Agent Chat </p> <p>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 chose to switch when prompted, then the live agent will see the conversation in the user's chosen language. Because this switch might cause some confusion for both the agent and the customer, consider turning on Dynamic Translation for Agent Chat as well.</p>
<p>Core Now Platform</p>	<p>System localization support </p> <p>Improved performance and speed of installing or updating a supported language plugin.</p> <p>Restored edit rights for admin users in the Languages [sys_language] table. Users can activate or deactivate custom languages in the Languages table.</p> <p>Updated translated choice records to be active by default only if they have a corresponding English choice record.</p> <p>JavaScript engine on the platform </p> <p>Updated the JavaScript engine to support the ECMAScript 2021 standard with a new ECMAScript 2021 (ES12) JavaScript mode that can be enabled for new or existing scoped applications. Review all server-side scripts and perform regression testing for any scoped applications that you update to use ECMAScript 2021 (ES12). Server-side scripts include access controls, scheduled jobs, script includes, and more. For more information about server-side scripts, see Server-side scripting .</p> <p>Support for function fields in database views </p> <p>Database views now support function fields. If a table in the database view contains a function field, you can now see the function field's data in lists and reports based on the database view.</p>
<p>Customer Service Management (CSM)</p>	<p>Applications moved to the ServiceNow Store</p> <p>The following applications are available on the ServiceNow Store, providing customers with access to new features and enhancements in between releases.</p>









Application or feature	Details
	<ul style="list-style-type: none"> • CSM Configurable Workspace • Guided Decisions • Recommended Actions <p>Recommended Actions </p> <ul style="list-style-type: none"> • The Next Best Actions feature has been renamed as Recommended Actions. • Get notified when the guidance or guided decision tree encounters an error. • Use the CSM default record page and the CSM Interaction record page to display field recommendations in CSM Configurable Workspace. <p>Playbooks for Customer Service Management </p> <p>The Playbooks for Customer Service Management v2.1.0 store release supports the CSM default record page and the CSM Interaction record page introduced in the CSM Configurable Workspace v23.0.5 store app.</p>
Dashboards	<p>Fix for dashboards migrated from the Dashboard Viewport to Advanced Dashboards</p> <p>Many dashboards that were created in releases prior to San Diego using the Dashboard Viewport component did not migrate properly to Advanced Dashboards. The fix to this issue is documented in KB1223780 .</p>
DevOps Change Velocity	<p>New DevOps Insights workspace experience</p> <p>The new DevOps Insights workspace provides a more efficient, modernized way for you to work. For more information, see DevOps Insights reports and Pipeline UI . Standard dashboard is still supported in this release.</p> <p>Monitor Sonar scans as non-admin user </p> <p>Monitor Sonar scans configured on your GitHub Actions, Jenkins, or Azure DevOps pipelines in ServiceNow DevOps as a non-admin Sonar user.</p> <p>DevOps Demo Validate Subflow </p> <p>Copy the DevOps Demo Validate Subflow subflow to resolve the tool connection error for custom tool integrations when the validate subflow is not configured, and an integration capability record with the same subflow name does not exist for the associated tool integration.</p> <p>Associate services to GitHub Actions pipeline steps </p> <p>Map services to GitHub Actions pipeline steps and identify the type of each step to define where the services will be deployed in the pipeline.</p>






Application or feature	Details
	<p>Change request ID in Jenkins pipeline </p> <p>When you trigger a scripted Jenkins pipeline and a change request is created as part of the pipeline execution stage in ServiceNow DevOps, you can retrieve the change request number in the Jenkins pipeline by running the <code>snDevOpsGetChangeNumber</code> script after the change request is approved in ServiceNow DevOps.</p> <p>Azure build artifact changes </p> <ul style="list-style-type: none"> • Build artifacts created using the Publish Build Artifacts task will be part of the artifact repository whose name will be defaulted to the build pipeline name. • If two artifacts with the same name, belonging to the same repository, and having different versions are used as release triggers for a release pipeline, then the related lists (like work items, commits, test summaries, etc) will include DevOps data related to both the artifact versions when a change exists in the release pipeline. <p>Permission check for GitHub tool </p> <p>Check the permission requirements of the GitHub tool before connecting from the workspace to prevent any errors when you discover, import, or configure the tool. You can perform the permission check only when OAuth 2.0 is selected as the authentication type, and the OAuth is created using GitHub apps.</p> <p>OAuth 2.0 credentials for GitHub Apps - JWT </p> <p>Authenticate connection requests from ServiceNow DevOps to GitHub by setting up OAuth 2.0 credentials for GitHub Apps - Json Web Token (JWT).</p> <p>Delete standalone connection and credential aliases </p> <p>Free up space on your system by running a background script to delete connection and credential aliases that don't label any connection or credential records.</p> <p>Retrieve and update change request details from a pipeline </p> <p>Retrieve and update change request details associated with a Jenkins pipeline by running the <code>snDevOpsGetChangeNumber</code> and <code>snDevOpsUpdateChangeInfo</code> scripts respectively in the pipeline.</p> <p>Cancel change request when a pipeline step is canceled </p> <p>Cancel a change request when the associated stage in the pipeline fails or is canceled by setting the <code>sn_devops.cancel_change_on_pipeline_cancel</code> property to true.</p> <p>Jenkins folder depth </p>

Application or feature	Details
	<p>Retrieve only those orchestration tasks and pipelines that are in folders whose nesting level in Jenkins is less than or equal to the number specified in the <code>sn_devops.discover.folder.depth</code> property. For example, if you want to discover orchestration tasks and pipelines for a folder structure that is nested two times in your Jenkins environment, you must enter 2 as the value for this property.</p> <p>Permission checks for connected tools </p> <p>Perform permission checks on connected tools at any time, to verify if the existing credentials have necessary permissions.</p> <p>Update tool credentials </p> <p>Update the tool credentials for connected tools with credentials that have sufficient permissions for seamless discovery and import of data from your tool.</p> <p>DevOps auto discover tool associations scheduled job </p> <p>Automatically discover new pipelines, plans, and repositories for all connected tools by running the DevOps auto discover tool associations scheduled job.</p> <p>Set up system accounts from DevOps Change workspace </p> <p>Enable DevOps admins to connect with external tools by setting up system accounts.</p> <p>Azure DevOps connection at organizational level </p> <p>Connect with your Azure DevOps instance at the organization level or at a project level.</p> <p>Tool owner role </p> <p>New Tool owner role to enable users to create tools and perform tool related actions.</p> <p>Application access control </p> <p>Control user access to applications through user groups. Users with DevOps App Owner role can edit and associate objects with the application.</p> <p>Tool access control </p> <p>Control user access to a tool through user groups, with the option to allow all app owners to view and associate the tool's objects to applications.</p> <p>Notifications on tool credential expiration </p> <p>Configure notifications to be sent to tool users on expiration of tool credentials or when credentials are about to expire to alert them and prevent any loss of data.</p> <p>Last event received alert </p> <p>Alert DevOps admins when events were being last received to caution them about any possible issues that might occur with their tool connection.</p>







Application or feature	Details
	<p>Change request state in Jenkins or GitHub Actions pipeline logs </p> <p>Configure how and when the change state must be displayed in the Jenkins or GitHub Actions pipeline logs. This enables developers to view the status of the change in the console logs of the pipeline itself.</p> <p>Enable change control automatically for Jenkins pipeline </p> <p>Enable change control automatically for declarative or scripted pipelines in Jenkins by running the pipeline if you have used the <code>snDevOpsChange</code> script.</p> <p>DevOps API </p> <p>The <code>app()</code> and <code>tool()</code> methods have been updated to enable the Azure DevOps tool connection at the organization level.</p> <p>DevOps multi-model change </p> <p>Use change models in DevOps Change Velocity that enables better flexibility in defining change models or processes to reflect modern development practices.</p> <p>Secure token authentication for integration user </p> <p>Configure Azure DevOps, Jenkins, and GitHub Actions using token-based authentication for the integration user for better security.</p> <p>ServiceNow DevOps change request state in Azure DevOps pipeline logs </p> <p>View the change request state and the corresponding policy conditions in the Azure DevOps (ADO) pipeline console logs whenever the state of a change request is updated without having to navigate to ServiceNow[®] DevOps Change Velocity.</p> <p>Get and update change request details </p> <p>Retrieve and update change request details associated with an Azure DevOps pipeline and the GitHub Actions workflow by using the ServiceNow[®] DevOps extensions available in the Azure DevOps and GitHub Actions marketplace.</p> <p>Configure webhooks manually </p> <p>As a tool owner or DevOps admin, access the token and <code>sys_id</code> for webhooks by configuring webhooks manually in your third-party tool rather than configuring them automatically from ServiceNow[®] DevOps Change Velocity.</p> <p>GitHub Actions deployment gates </p> <p>Enforce quality gates on every deployment environment in GitHub Actions and retrieve the change details from within the Deployment Protection Rule console logs of GitHub Actions.</p> <p>Simplified setup </p>

Application or feature	Details
	<p>Spend less time in the initial setup of ServiceNow® DevOps Change Velocity thanks to the removal of the CreateDevOpsTool connection setup activity.</p> <p>Validate ServiceNow DevOps extension in Azure DevOps </p> <p>Validate the installation of ServiceNow DevOps extension in Azure DevOps with a playbook activity.</p> <p>Configure webhooks automatically in Rally </p> <p>Configure webhooks automatically as part of the playbook while connecting to the Rally tool.</p> <p>Assign services to the pipeline steps </p> <p>While associating pipelines with an application, for each selected pipeline, all steps or stages are imported from the last successful execution.</p>
Document Services	<p>Domain separation support for Document Management </p> <p>Maintain the security of your documents by establishing defined domains.</p> <p>Notes for document versions </p> <p>Add context to document versions through the new Notes field.</p> <p>Extend tables in Document Management </p> <p>Add custom fields through extended tables in Document Management.</p>
Employee Center	<p>Preferences widget for Employee Profile </p> <p>User preferences can be accessed as a separate Preferences widget for customers who have opted in to Employee Profile.</p>
Encryption Key Management	<p>Edge Encryption support for instance configuration of Service Catalog variables </p> <p>Administrators can encrypt Service Catalog variables using a centralized configuration rather than using customized encryption rules for each record producer and its variables.</p>
Event Management	<p>Run multiple event rules sequentially </p> <p>Execute multiple event rules in sequence rather than only the first matching event rule.</p> <p>Improved log performance </p> <p>Debug and logPayloadForDebug parameters have been added for selected connectors, providing enhanced debugging information for the connectors.</p> <p>Retain alert field values when updating an alert </p> <p>When updating an alert, empty values do not override values that exist in the event.</p>

Application or feature	Details
	<p>Anomaly alert events </p> <p>Configure all events relevant to an anomaly alert to appear in the work notes of the alert.</p> <p>Anomaly detection level </p> <p>When working with metric to CI binding, the anomaly detection level appears automatically on the Metric to CI Mappings table.</p> <p>Event field mapping enhancement </p> <p>The Copy Field mapping type value copies the exact value of a field to the specified mapped field.</p>
<p>Financial Services integration with Socure</p>	<p>Financial Services integration with Socure dependency on Financial Services Know Your Customer</p> <p>The Financial Services Know Your Customer (com.sn_bom_kyc) dependency plugin is automatically installed when you install the Financial Services Operations integration with Socure plugin.</p> <p>Customer fraud score lookup</p> <p>When the Socure – Perform KYC for consumer sub-flow and the Socure – Perform KYC for contact sub-flow are executed, the customer's fraud score is looked up.</p> <p>Application name change</p> <p>The Financial Services Operations integration with Socure application name changed to Financial Services integration with Socure in the Tokyo release. All pages using the Financial Services integration with Socure application will be updated with the new name.</p>
<p>Flow Designer</p>	<p>Flow diagramming view improvements </p> <p>The Flow Diagramming view supports more triggers and flow logic.</p> <p>Flow execution detail retention improvements </p> <p>Changed the tables used to store and retain context records, execution details, input values, output values, process plans, and snapshots.</p>
<p>Goal Framework</p>	<p>Target form </p> <ul style="list-style-type: none"> • The Check in frequency field has been renamed to Review frequency on the Target form . • The Review due date field has been added to the Target form .
<p>Governance, Risk, and Compliance</p>	<p>Role changes for risk response task</p> <p>Role changes have been made for the following action buttons on the risk response task form:</p>

Application or feature	Details
	<ul style="list-style-type: none"> • Back to Draft: Accessible to risk owner • Work in Progress: Accessible to assigned user • Request Review: Accessible to assigned user • Close: Accessible to risk owner • Cancel: Accessible to risk event owner <p>Role changes for risk acceptance task</p> <p>Role changes have been made for the following action buttons on the risk acceptance task form:</p> <ul style="list-style-type: none"> • Request Approval: Accessible to assigned user • Request More Information: Accessible to the risk owner
<p>Hardware Asset Management 5.0</p>	<p>New workflow to renew contracts </p> <p>The new Contract renewal workflow is a streamlined and managed process that enables you to renew contracts that are nearing their expiration date or have already expired. You can create a contract record referencing the original contract and manage related entities.</p> <p>Ability to look up hardware model by model number </p> <p>You can now look up the model number of hardware models through the <code>MakeAndModelJS</code> script. This capability is turned on by default in the Tokyo release. The <code>glide.cmdb.makeandmodel.use_model_number_lookup</code> property is set to true by default in the Tokyo version.</p> <p>i Note: This property isn't available if you are upgrading to Tokyo from a previous version. You must manually add this system property and set it to true.</p>
<p>Health Log Analytics</p>	<p>New Service Operations Workspace experience</p> <p>The new Service Operations Workspace provides a more efficient, modernized way for you to work.</p> <p>i Note: In the Tokyo release, Service Operations Workspace is supported only when operated together with the Health Log Analytics application June 2022 version. Operator Workspace is still supported in the Tokyo release.</p>
<p>ITOM Visibility</p>	<p>Enhanced discovery patterns</p> <ul style="list-style-type: none"> • GCP Global or Regional resources and DB services  • Extended Docker Image for Kubernetes  and Docker Virtualization 

Application or feature	Details
	<ul style="list-style-type: none"> • MSSQL components of the MSSQL server • HPE BladeSystem Enclosure • Couchbase Database • Kubernetes on GCP <p>Agent Client Collector for Visibility</p> <p>Agent Client Collector for Visibility (ACC-V) now includes the following support:</p> <ul style="list-style-type: none"> • SAM Basic metering supports MAC. • ACC-V supports data collection for Intel vPro Platform. • Retrieves edition information for Adobe Acrobat and MS SQL Server with SAM installed. • Detects portable applications, such as Firefox, VLC, Notepad++ etc, for Windows. • Uses push-based Discovery to discover DNS names. • Windows 11 Professional and Enterprise Editions, Windows 2022, macOS Monterey (x86), CentOS Stream 8 and 9, and RHEL 9. <p>Certificate Inventory and Management</p> <p>Certificate Inventory and Management now supports Entrust CA Gateway.</p> <p>Analytics and Reporting for Cloud Resources</p> <ul style="list-style-type: none"> • Performance Analytics Content Pack for Cloud Resources now supports GCP in the cloud analytics tables. Use the Cloud Operations Workspace application to view and drill down into details of Google Cloud resources. • The default timeout for the scheduled job that fetches and populates the CI data in the analytics table has increased from 120 minutes to 360 minutes. You can use the <code>sn_disco_cd.scheduled_job_time_out_in_mins</code> property to change the default job timeout value. <p>SNMP support for Discovery</p> <p>The default behavior for SNMP discovery is ALL for consistent behavior with Quick Discovery and Scheduled Discovery.</p>
Knowledge Management	<p>Feedback control at knowledge base level</p>

Application or feature	Details
	<ul style="list-style-type: none"> • Enable or disable the ability to rate articles for a particular knowledge base. • Enable or disable the ability to mark articles as helpful for a particular knowledge base. <p>Article template preview </p> <p>Configure the sample text for a knowledge article template field that appears when you create a knowledge article.</p> <p>Knowledge Management Overview dashboard </p> <p>Starting from the Tokyo release, use the navigation path Knowledge > Administration > Overview to access the Knowledge Management Overview dashboard.</p>
Legal Service Delivery	<p>Legal Request Management </p> <ul style="list-style-type: none"> • When the Universal Request option is enabled for legal services, email notifications for legal requests are updated to include universal request-related exceptions when notifying requesters. • When the request fulfiller assigned to a legal request is changed, both the previous and new request fulfillers are notified via email. • Access to attachments of legal requests or legal matters is restricted for the system admins who are not scoped admins. • Access to all email notifications related to legal requests or legal matters is restricted for the system admins who are not scoped admins. • Task Configurations  associated with the tables of Legal Service Delivery apps replace the existing To-dos Widget Mapping settings for legal items' approvals through Employee Center. <p>Legal Matter Management </p> <ul style="list-style-type: none"> • When a legal matter is created from a legal request, all the attachments in the legal request are referenced in a new artifact of the legal matter and are listed in the Documents tab. • When the Universal Request option is enabled for legal services, email notifications for legal matters are updated to include universal request-related exceptions when notifying requesters. • When the matter owner assigned to a legal matter is changed, both the current and new matter owners are notified via email.
MID Server	<p>MID Server JRE Update </p>



Application or feature	Details
	<p>New installations of MID Server and upgraded MID Servers provide and support the latest version of Java 11.</p>
<p>Manufacturing Process Manager</p>	<p>View OT assets and equipment model entities services relationships</p> <p>The Services Relationship section on the OT asset form in the Manufacturing workspace enables an OT engineer to understand the relationships between OT assets and equipment model entities for all OT class and expected IT class records.</p> <p>View sites associated with a user from guided setup</p> <p>Access a related list view of sites that are assigned to a user. From the Manage the Equipment Model section of the guided setup, select Configure on the Assign Users tab to access the view of user-assigned sites.</p>
<p>Mobile</p>	<p>Mobile notifications enhancements</p> <p>Read notifications on your mobile apps as they occur so that you're enabled to respond effectively and in a timely way to push notifications from your ServiceNow instance.</p> <p>Multiple multimedia posts in activity stream</p> <p>Users can post multiple videos and images directly within a single activity stream flow, saving them time and effort. After selecting multimedia files an upload screen opens, detailing the upload progress of the selected files. In cases where files fail to upload, users are presented with information detailing the reason for the unsuccessful post.</p>
<p>Natural Language Understanding</p>	<p>ServiceNow NLU update</p> <p>The <code>com.glide.cs.intent_confidence_threshold</code> system property has been updated to 0 and should not be changed to a different value for ServiceNow NLU. The property is applicable only if you are using a different NLU provider for Virtual Agent.</p> <p>Model Performance chart improvements</p> <p>View the performance for a specific model and also for models in a specific language by using language and model filters in the Model Performance application. Model performance tracking has also been improved by incorporating feedback captured from end users in Virtual Agent.</p> <p>Naming and navigation changes</p> <p>Batch Testing has been renamed to Multi-model Batch Testing. Conflict Review has been renamed to Cross-model Conflict Review. Both features are available under the NLU Advanced Features module in the application navigator. Batch testing and conflict</p>

Application or feature	Details																		
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<p>Next Experience Components</p>	<p>Components</p> <table border="1"> <thead> <tr> <th data-bbox="512 331 794 394">Component</th> <th data-bbox="794 331 1375 394">Enhancement</th> </tr> </thead> <tbody> <tr> <td data-bbox="512 405 794 594">Action bar</td> <td data-bbox="794 405 1375 594">Offers the Record actions preset, which provides actions for a user to manage the record (e.g. Save). Buttons in the component are defined by the default UI actions for the selected table.</td> </tr> <tr> <td data-bbox="512 604 794 867">Activity Stream</td> <td data-bbox="794 604 1375 867">Offers the Record activity stream preset, which displays the activity for the record, including communications and record updates or changes. Activity stream is often used with the Compose component and can be contained in the Stackable Side by Side Panel component.</td> </tr> <tr> <td data-bbox="512 877 794 1098">Activity Stream Compose</td> <td data-bbox="794 877 1375 1098">Offers the Record compose preset, which composes messages, such as emails, work notes, and customer-facing comments, related to the record. Messages are tracked in the Activity Stream component.</td> </tr> <tr> <td data-bbox="512 1108 794 1224">Agent assist</td> <td data-bbox="794 1108 1375 1224">Offers the Record agent assist preset, which provides information to help agents resolve issues.</td> </tr> <tr> <td data-bbox="512 1234 794 1329">Appointment calendar</td> <td data-bbox="794 1234 1375 1329">Enables users to book an appointment slot that is available but has a conflict.</td> </tr> <tr> <td data-bbox="512 1339 794 1476">Attachments</td> <td data-bbox="794 1339 1375 1476">Offers the Record attachments preset, which enables the upload and management of attachments to a record.</td> </tr> <tr> <td data-bbox="512 1486 794 1570">Avatar</td> <td data-bbox="794 1486 1375 1570">Provides an extra-small size avatar for you to use with a small pill.</td> </tr> <tr> <td data-bbox="512 1581 794 1940">Calendar</td> <td data-bbox="794 1581 1375 1940"> <p>The following functionality was added:</p> <ul style="list-style-type: none"> • Extended time line view with new column definitions. You can build calendars that have flexibility to show multi-week view, multi-month, multi-quarter view, and more. • A new column header design for various states that scales the calendar views to extended time line views to allow for longer text. </td> </tr> </tbody> </table>	Component	Enhancement	Action bar	Offers the Record actions preset, which provides actions for a user to manage the record (e.g. Save). Buttons in the component are defined by the default UI actions for the selected table.	Activity Stream	Offers the Record activity stream preset, which displays the activity for the record, including communications and record updates or changes. Activity stream is often used with the Compose component and can be contained in the Stackable Side by Side Panel component.	Activity Stream Compose	Offers the Record compose preset, which composes messages, such as emails, work notes, and customer-facing comments, related to the record. Messages are tracked in the Activity Stream component.	Agent assist	Offers the Record agent assist preset, which provides information to help agents resolve issues.	Appointment calendar	Enables users to book an appointment slot that is available but has a conflict.	Attachments	Offers the Record attachments preset, which enables the upload and management of attachments to a record.	Avatar	Provides an extra-small size avatar for you to use with a small pill.	Calendar	<p>The following functionality was added:</p> <ul style="list-style-type: none"> • Extended time line view with new column definitions. You can build calendars that have flexibility to show multi-week view, multi-month, multi-quarter view, and more. • A new column header design for various states that scales the calendar views to extended time line views to allow for longer text.
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Application or feature	Details	
	Component	Enhancement
		<ul style="list-style-type: none"> • Ability for the user to scroll horizontally within a view. Users can shift the columns and scroll horizontally to see events that spill into next columns. • Right-click capabilities on calendar events, enabling users to take actions without having to open an event first.
	Checkbox	Option of a small or medium size check box.
	Checklist	Can be configured to enable end users to edit the list by reordering, adding, or removing items. Editing rights also include the ability to add and delete links in a checklist or to specify link text for a particular link address.
	Container	Allows separate configuration of inner and outer layer CSS. New controls in the UI Builder Styles tab enable a designer to set CSS properties of layers independently to avoid display issues in special use cases.
	Content tree	<p>Expands user keyboard interactions. You can configure the following for a node or selection of nodes:</p> <ul style="list-style-type: none"> • Enable to drag as a copy (default) or move. • Enable a component to accept a drop above, below, or on an item to create a parent/child relationship.
	Display value block	<p>If the <code>hideLabels</code> property is set to true, the <code>displayInline</code> property is hidden.</p> <p>This component offers the Record secondary values preset. This preset defines the title of a record dynamically from the secondary values related list for the table configured in the form header record.</p>
	Email Composer	The following functionality was added to Email composer:







Application or feature	Details	
	Component	Enhancement
		<ul style="list-style-type: none"> • Configuration properties that provide the following capabilities: <ul style="list-style-type: none"> ◦ Render the email composer in compact mode ◦ Configure the ratio of the resizable panes and the minimum width of the right pane ◦ Define the default position of the pane's divider ◦ Disable the user's ability to resize panes by dragging the divider ◦ Save the user's preference for pane sizes • A new event that is dispatched when the user changes the ratio of the resizable panes.
	Form	Offers the Record form preset, which provides a form for a user to view or edit the selected record. The form fields and sections that are displayed are defined by the default view based on the table selected.
	Form Templates	Offers the Record form template preset, which enable selection of a predefined form template or creation of a new template that populates specific fields on the record. Form templates are used with the form component.
	Heading	Offers the Record title preset, which defines the title of a record dynamically from the primary field for the table configured in the form header record.
	Node map	Designers can now do the following: <ul style="list-style-type: none"> • Use another map layout that displays grouped nodes in layered containers. • Enable users to search for nodes by name. • Select from more status icons and node colors.

Application or feature	Details	
	Component	Enhancement
		<ul style="list-style-type: none"> • Reduce spacing between nodes. • Merge edges to make the node map cleaner.
	Radio buttons	Provides the option of a small or medium size check box.
	Record tags	Offers the Record tags preset, which enables creating and maintaining additional attributes and information related to a record.
	Resizable panes	<p>Designers can now do the following:</p> <ul style="list-style-type: none"> • Resize panes vertically. • Define the pane position. • Select the default pane to display. • Define the width of the top and left panes. <p>This component offers the Record resizable panes preset, which enables a user to control spacing and pane visibility.</p>
	Ribbon	Offers the Record ribbon preset, which helps users quickly scan important information about the record, including the record overview and time line. Configuration properties can be used to optimize screen real estate.
	Tabs	Offers an option for tabs to be displayed vertically. Tabs replaces the Record Tabs component in the Record page template. This component was named Tab Set in previous versions.
	Tab Set	Renamed in this release to Tabs and enhanced.
	Timeline	Enables a popover that displays details for a point on the time line and select a macroponent to display in this popover. The contents of the slot in the popover can be any component or macroponent, that can include action items.
	Typeahead multi	Keeps the drop-down panel open for selection until dismissed by pressing the

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Next Experience user interface	<p data-bbox="528 940 991 972">Simplified Next Experience Setup </p> <p data-bbox="584 989 1171 1052">Your administrators can now turn on the Next Experience user interface with one click.</p> <p data-bbox="528 1066 839 1098">Personalized Start Page</p> <p data-bbox="584 1115 1289 1209">Your users have a new user preference that enables them to specify the page that appears when they log in to the Next Experience user interface.</p> <p data-bbox="528 1224 660 1255">AI Search</p> <p data-bbox="584 1272 1307 1402">Your administrators can now configure AI Search as the search engine for Unified Navigation searches in the Next Experience user interface. Your users can now do a global search and a configurable workspace search.</p> <p data-bbox="528 1417 703 1449">Admin menu</p> <p data-bbox="584 1465 1297 1661">Your administrators can use the newly added Admin menu within the Unified Navigation to provide them access to the default landing page. If they have installed the Admin Center store app on their instance, they can also access Admin Center from the Admin menu.</p> <p data-bbox="528 1675 863 1707">Record page experience</p> <p data-bbox="584 1724 1272 1818">When a user opens a record page from the Next Experience landing page, the system now opens the record in the last experience the user worked in.</p>								
Notifications	<p data-bbox="528 1871 1129 1902">Acknowledgment message for flow actions </p> <p data-bbox="584 1919 1286 1982">Send and receive acknowledgment messages for the actions taken from messaging and chat channels.</p>								








Application or feature	Details
<p>Operational Technology Incident Management v2</p>	<p>New OT incident user roles</p> <p>The new OT incident user roles installed with Operational Technology Incident Management v2 help separate IT and OT incident data.</p> <p>Create OT incident tasks</p> <p>Now site, equipment model entity, and OT asset context from an OT incident are available on the OT incident task as well.</p> <p>Access control for OT incidents</p> <p>The <code>ot_change_user</code> role is deprecated and the new <code>sn_ot_incident_read</code>, <code>sn_ot_incident_write</code>, and <code>sn_ot_incident_admin</code> roles have been added.</p>
<p>Operational Technology Manager</p>	<p>CMDB OT class model updates</p> <p>These updates to the CMDB OT class model enhance the OT user experience or enable you to make additional configurations:</p> <ul style="list-style-type: none"> • An ICS security analyst or OT engineer can view the programmable logic controller (PLC) switch state to determine potential risks. • A Network Intrusion Detection System (NIDS) admin can monitor the changes to NIDS sensors from an activity stream to validate and perform corrective action. <p>Pre-import OT Worksheet Entry Review (POWER) tool</p> <p>Use distributed Microsoft Excel spreadsheets to import OT assets for better manageability.</p> <ul style="list-style-type: none"> • Select Run Validations in the list view to trigger validation across all records. • View the record import state. • Select Set to Valid to manually set a record to valid. • Added system properties: <ul style="list-style-type: none"> ◦ The <code>sn_otism_sgc.excel.nested.column.delimiter</code> system property enables a user to provide a delimiter to use for a transformed name. ◦ The <code>sn_otism_sgc.excel.fields.for.transformed.name</code> system property enables a user to provide the fields (comma-separated value) to construct the transformed name. <p>Related entry for CMDB Key Value V2 Table</p> <p>A related entry associated to the hardware class is added to the CMDB Key Value V2 [cmdb_key_value_v2] table. This related entry association of the non-CMDB class CMDB Key Value</p>




Application or feature	Details
	<p>V2 table with the hardware class [cmdb_ci_hardware] enables CMDB class mappings and data to populate.</p> <p>Discovery Source URL fields for Service Graph Connector integration</p> <p>Navigate to third-party discovery source systems from an OT configuration item to a device so that you can see more contextual detail about the configuration item.</p>
Operational Technology Vulnerability Response	<p>Configure risk rollup calculator </p> <p>Use the risk rollup calculator to calculate the risk score of the OT assets at each level for the equipment model entity. The overall risk score is rolled up to the parent equipment model entity.</p>
Order Management for Telecommunications, Media, and Technology	<p>Enhanced UI Builder page for Order Capture</p> <p>Starting with this Tokyo release, a new UI Builder page for the Order Capture has been introduced in the Order Management for Telecommunications, Media, and Technology application to improve the user experience, scalability, and performance. The previous UI Builder record page variant (Order Creation Record Page) has been deleted to support this new page.</p> <p>The Telemangement Forum (TMF) APIs have been modified, and new APIs have been added in the Tokyo release. To learn more about how to use these APIs to integrate your applications with the Now Platform, see the Developer guides.</p> <p>Order currency for Product order</p> <p>To learn more about the updates for order currency starting from this Tokyo release, see the Order currency for Product order [KB1122859]  article in the Now Support Knowledge Base.</p> <p>External ID columns for Account (customer_account), Contact (customer_contact) and Location (cmn_location) tables</p> <p>Starting with the Tokyo release, the Order Management for Telecommunications, Media, and Technology application (version: 3.0.1), introduces a new field, sn_tmt_core_external_id for the External ID. The existing sn_ind_tsm_core_external_id and sn_ind_tmt_orm_external_id fields for the external ID have been deprecated. To learn more, see Telecommunications, Media, and Technology plugin [KB1121711] .</p>
Performance Analytics	<p>Application admin role required to access scoped application data on Performance Analytics tables</p> <p>When running scripts on the pa_scores_I1, pa_scores_I2, pa_scores, or pa_snapshots table, the platform admin and pa_admin roles no longer grant access to scoped</p>




Application or feature	Details
	<p>application data. An admin role for the scoped application is now necessary. For example, to access scores and snapshots that belong to the HR scoped app via a background script, you need an HR scoped app admin role.</p> <p>Improvements to scores forecasting </p> <ul style="list-style-type: none"> • Random Forest forecasts use a more precise trend formula. This improved formula allows for asymmetric confidence intervals (+ and - not the same size) when the data indicates them. • Random Forest lag calculation improved. • Random Forest now uses 199 instead of 99 trees, to give a more precise forecast. • Seasonal Trend Loess uses a Seasonal Trend formula, whose results are combined with the forecast to calculate confidence intervals.
Platform Analytics Workspace	<p>ACL Assessment for Reports  compares reports against all report_view ACLs</p> <p>Earlier versions of the ACL Assessment for Reports evaluated reports against a limited number of report_view ACLs. The latest version of the ACL assessment tool evaluates against all active report_view ACLs on the instance.</p> <p>READ ACL support in the ACL Assessment for Reports </p> <p>A report is affected if a user has seen the report who would not be able to see it based on a report_view ACL or blocking READ ACL, in the case of reports based on tables without report_view ACLs.</p>
Policy and Compliance Management	<p>Role hierarchy change </p> <p>The Business User (sn_grc.business_user) role has been removed from the contains role of GRC Reader (sn_grc.reader) and added to GRC user (sn_grc.user) role. Accordingly, changes have been made in Policy and Compliance Management application to match this new hierarchy.</p>
Proactive Service Experience Workflows	<p>Application renamed to Proactive Experience Workflows </p> <p>The Telecommunications, Media, and Technology Assurance Workflows application has been renamed to Proactive Service Experience Workflows in the November 2022 Store release.</p>
Process Automation Designer	<p>Reference qualifiers added </p> <p>Process Automation Designer now supports reference qualifiers. Use qualifiers to see only the data you want</p>






Application or feature	Details
	<p>in reference type fields, the same way you do in Flow Designer.</p> <p>Create a process definition</p> <ul style="list-style-type: none"> • In the new Automation tab of Activity properties, a link takes you to the activity's source flow in Flow Designer. • In Activity properties, the outputs of an activity's flows and actions are now displayed.
<p>Procurement Service Management</p>	<p>Procurement Case Management</p> <ul style="list-style-type: none"> • Enhance the procurement service catalog browsing experience with more service catalog items • Have case templates for each case type • Change the prefix for Procurement Case Management records from PSREQ to PC <p>Procurement Workspace Source-to-Pay Workspace list page</p> <ul style="list-style-type: none"> • View related cases and tasks to procurement cases within the contextual sidebar in procurement case records. • View related child cases and tasks to negotiation events and negotiations within the contextual sidebar in negotiation events and negotiation records. • Improve your configuration experience with the updated the supplier profile page. <p>Playbook: Process a return request</p> <p>Enhanced the ability to return multiple product lines within one return request.</p> <p>Modified the Receipt table to additionally track credit memos for the return of items.</p> <p>Add a sourcing request to a negotiation event</p> <p>Create new or add to existing negotiation events directly in a sourcing request record in workspace.</p> <p>Approval rule types</p> <p>Enhanced the auditability for purchase approvals to show self-approved purchases, where the shopper or employee has the authorized purchasing power to self-approve their own purchases. This is an enhancement to the approval plans to show self-approved purchases.</p> <p>Components installed with Procurement Service Management Sourcing and Procurement Operations</p>

Application or feature	Details
	<ul style="list-style-type: none"> • Renamed this application to Procurement Common Architecture. This application was formerly named ShoppingHub. • Moved specific tables to be commonly used and extended by other products. This makes this application a standalone application, with the following tables, ACLs, and form views available. When you purchase Procurement Service Management, you get both this standalone application along with core procurement workflows, business logic, and user experience. Having this standalone application alone does not make core procurement workflows, business logic, and user experience available. <ul style="list-style-type: none"> ◦ Attribute (sn_shop_attribute) ◦ Attribute Set (sn_shop_attribute_set) ◦ Attribute Type (sn_shop_attribute_type) ◦ Delivery Location (sn_shop_delivery_location) ◦ ERP Address Mapping (sn_shop_erp_address_map) ◦ ERP Asset Category Mapping (sn_shop_erp_asset_category_map) ◦ ERP Material Group Mapping (sn_shop_erp_material_group_map) ◦ Invoice (sn_shop_invoice) ◦ Invoice Line (sn_shop_invoice_line) ◦ Job Code (sn_shop_job_code) ◦ Milestone (sn_shop_milestone) ◦ Office Location (sn_shop_office_location) ◦ Order Line Template (sn_shop_order_line) ◦ Order Template (sn_shop_order) ◦ Order to Contract Relationships (sn_shop_m2m_order_contract) ◦ Payment Terms (sn_shop_payment_term) ◦ Price Break (sn_shop_price_break) ◦ Pricing (sn_shop_m2m_product_contract) ◦ Product Group (sn_shop_product_group) ◦ Product Visuals (sn_shop_supplier_product_artifact) ◦ Purchase Order (sn_shop_purchase_order) ◦ Purchase Order Line (sn_shop_purchase_order_line) ◦ Receipt (sn_shop_receipt) ◦ Shipment Details (sn_shop_shipment_details)

Application or feature	Details
	<ul style="list-style-type: none"> ◦ Shipment Product (sn_shop_shipment_product) ◦ Shipping Method (sn_shop_shipping_method) <p>Accessibility on NOW Mobile</p> <p>Experience improved accessibility with issues from WCAG 2.1 AA audit findings fixed on NOW Mobile.</p>
Project Portfolio Management	<p>Scenario Planning for PPM </p> <p>When you install Scenario Planning for PPM version 2.3.0 or later, you must upgrade the legacy Investment Funding application to the ServiceNow Store application for the integration to work. For detailed instructions on upgrading from the legacy Investment Funding application to the ServiceNow Store application, see upgrade instructions .</p>
Security Incident Response	<p>Major Security Incident Management workspace </p> <p>Use the Major Security Incident Management workspace to provide your organization with a more efficient, modernized way for you to work. The classic environment for Major Security Incident Management is still supported in this release.</p> <p>Set up the ServiceNow Security Operations add-on for Splunk </p> <p>Splunk Enterprise base Add-on is enhanced to support OAuth authentication. You are provided with ability to choose between Basic authentication and OAuth authentication.</p> <p>Microsoft Defender for Endpoint </p> <p>Use the Microsoft Defender for Endpoint integration to create configurations to retrieve details about the host, logged-in users, related machines, and other enrichment capabilities. You can request to isolate any machine from accessing the networks or remove the machines from isolation.</p> <p>Data Loss Prevention </p> <p>Identify, respond to, and protect your data loss channels with the Data Loss Prevention Incident Response (DLP) application. You can manage sensitive information for your customers, such as the financial and proprietary data, health records, or social security numbers. With this application, you can also automate the remediation workflows.</p> <p>DLP Incident Response integration with Proofpoint </p> <ul style="list-style-type: none"> • Filter the DLP IR incidents to be imported into the Now Platform. • You can update the incident state and notes in Proofpoint based on the actions that are performed on the incidents in the Now Platform.

Application or feature	Details
	<p>DLP Incident Response integration with Netskope </p> <ul style="list-style-type: none"> • Filter the DLP IR incidents to be imported into the Now Platform. • You can also update the incident state and notes in Netskope based on the actions that are performed on the incidents in the Now Platform. <p>Carbon Black integration</p> <p>This integration is enhanced to support Carbon Black servers with version 7.1 or later.</p>
<p>Service Bridge (Technology)</p>	<p>Single group for administrator tasks and automated emails</p> <p>There's now only one group for admin tasks and automated email notifications. That group is the Service Bridge admins. In previous versions of the Service Bridge application, there were two admin groups. They were the Service Bridge admins for the automated email notifications and the Service Bridge admin group for all administrator tasks.</p> <p>Addition of a Service Bridge channel to Customer Service Management (CSM)</p> <p>Case tasks in the provider's instance are now created with the automatic assignment of a Service Bridge channel value, instead of eBonding.</p>
<p>Service Bridge (Telecommunications)</p>	<p>Single group for administrator tasks and automated emails</p> <p>There's now only one group for admin tasks and automated email notifications. That group is the Service Bridge admins. In previous versions of the Service Bridge application, there were two admin groups. They were the Service Bridge admins for the automated email notifications and the Service Bridge admin group for all administrator tasks.</p> <p>Addition of a Service Bridge channel to Customer Service Management (CSM)</p> <p>Case tasks in the provider's instance are now created with the automatic assignment of a Service Bridge channel value, instead of eBonding.</p>
<p>Service Catalog</p>	<p>Requested for value in requested item </p> <p>In the Requested Item form, view the requester assigned to a requested item instead of the requester assigned to the parent request.</p> <p>New system property </p> <p>The <code>glide.sc.variable.attachment.delete.v2</code> system property enables you to automatically delete a <code>sys_attachment</code> record from the system when you replace or delete an attachment from a catalog item attachment variable. The default value is true.</p>

Application or feature	Details
	<p data-bbox="533 155 943 186">Masked variables encryption </p> <p data-bbox="585 203 1302 331">The default setting of the Use encryption field has been changed to true so configuring a masked variable with secure storage of information is now the default behavior.</p> <p data-bbox="533 350 1091 382">Description field in Standard Ticket page </p> <p data-bbox="585 396 1302 491">You can now map the Description field in the Standard Ticket page configuration record to any other field on the record.</p> <p data-bbox="533 510 1281 541">Skipping questions in Request Catalog item topic block </p> <p data-bbox="585 556 1286 621">You can no longer skip the following type of questions in the Request Catalog item topic block:</p> <ul data-bbox="592 638 1302 1010" style="list-style-type: none"> <li data-bbox="592 638 922 669">• Lookup Multiple Choice <li data-bbox="592 686 751 718">• Select Box <li data-bbox="592 735 852 766">• Lookup Select Box <li data-bbox="592 783 708 814">• Yes/No <li data-bbox="592 831 1161 896">• Numeric Scale (If Do not select first choice configuration is not selected) <li data-bbox="592 913 1302 1010">• Multiple Choice (If Do not select first choice configuration is not selected, or Include none choice configuration is selected) <p data-bbox="533 1050 922 1081">Request Overview dashboard</p> <p data-bbox="585 1096 1193 1161">The Request Overview dashboard can now be accessed only by users with the ITIL User role.</p> <p data-bbox="533 1178 1029 1209">Sequence of states for requested item</p> <p data-bbox="585 1224 1286 1289">The state for a requested item at the beginning of the request approval process is now Request Approved.</p> <p data-bbox="533 1306 895 1337">Display of list collector items</p> <ul data-bbox="592 1362 1326 1854" style="list-style-type: none"> <li data-bbox="592 1362 1251 1491">• To ignore the Before Query business rule while retrieving the display value of the list collector variable, set the <i>fetch_display_value_always</i> attribute of a list collector variable to true. <li data-bbox="592 1514 1326 1673">• To ignore the Before Query business rule while retrieving the display value of all list collector variables, set the <i>glide.sc.variable.fetch_display_value_always</i> system property to true. <li data-bbox="592 1696 1326 1854">• If both the <i>fetch_display_value_always</i> attribute and <i>glide.sc.variable.fetch_display_value_always</i> property are set, the <i>fetch_display_value_always</i> attribute value is considered first. <p data-bbox="533 1892 887 1923">Hide options label property</p>








Application or feature	Details
	<p>If you find the Options label unnecessary, you can hide it through the Hide options label property of the Catalog Item UIB component.</p> <p>New demo data content</p> <p>Use sample catalog items from demonstration data in two new categories: Application and account access and Cables and Adapters.</p> <p>List view for a catalog item in configurable workspace</p> <p>Creation of a catalog item from the list view in a configurable workspace is no longer supported.</p> <p>Delivery information for a request</p> <p>The Buy Item (REST) and CartJS - orderNow (scripted) APIs no longer set the delivery information for a user for a request generated when the <i>delivery_address</i> parameter has an empty string value.</p>
<p>Service Operations Workspace for ITSM</p>	<p>Experts on-call recommendations for an incident </p> <p>Experts on-call recommendations are now based on all configuration items and services associated with the incident.</p> <p>Collaboration using MS Teams from an interaction </p> <p>Collaboration using MS Teams is now available for all types of interactions, for example, chat, phone, or walk-up.</p>
<p>Service Portal</p>	<p>Default portal updated to Employee Center </p> <p>For new (zBoot) instances, Employee Center is the default portal. For upgrade instances, Service Portal remains the default portal.</p> <p>If redirection is configured by setting the <i>glide.entry.first.page.script</i> system property to <code>new SPEntryPage().getFirstPageURL()</code>, end users without roles who visit a full platform URL are redirected to the Employee Center portal. Users without roles who access a URL with the <i>/sp</i> suffix are directed to Service Portal. For more information about redirecting portal users, see Single sign-on, logins, and URL redirects .</p>
<p>Service Portfolio Management</p>	<p>View availability results </p> <p>Service owners can create and map service commitments and associate them to application services as well as to service offerings.</p> <ul style="list-style-type: none"> • Availability capability now resides in an availability module as part of the core capability. This capability enables you to report on availability for application services and extends that reporting ability to other configuration items (CIs) as well.







Application or feature	Details				
	<ul style="list-style-type: none"> The enhanced reporting mechanism reduces an unplanned outage duration when it overlaps with a planned outage. If an unplanned outage in full or in part overlaps with a planned outage, then the unplanned outage time that overlaps will not be included in the total outage time. <p>Note: On upgrade, customers identified as having a heavy data load, the system initiates a long-running background job, which could take a long duration. For more information, see KB1123644.</p> <p>Plugin and role information</p> <table border="1" data-bbox="588 667 1307 1486"> <thead> <tr> <th data-bbox="592 672 983 730">Plugin</th> <th data-bbox="983 672 1303 730">Roles</th> </tr> </thead> <tbody> <tr> <td data-bbox="592 730 983 1482"> <p>The "com.snc.availability" plugin is found under the core capability plugin (app-cmdb)</p> <ul style="list-style-type: none"> Assign the "com.snc.availability" plugin the name "Availability" The plugin is included with the base system (no license required for IT Service Management). The plugin enables three modules: <ul style="list-style-type: none"> Commitments Configure commitments Results </td> <td data-bbox="983 730 1303 1482"> <ul style="list-style-type: none"> To view: <ul style="list-style-type: none"> app_service_user service_viewer To create: <ul style="list-style-type: none"> app_service_admin </td> </tr> </tbody> </table> <p>Convert services in bulk</p> <p>System administrators can bulk convert services from the cmdb_ci_service table to dedicated child tables: cmdb_ci_service_business and cmdb_ci_service_technical.</p> <ul style="list-style-type: none"> When a service record is converted, the record and all its relationships remain intact. Service offerings cannot be converted. Attempts to migrate result in a warning message. 	Plugin	Roles	<p>The "com.snc.availability" plugin is found under the core capability plugin (app-cmdb)</p> <ul style="list-style-type: none"> Assign the "com.snc.availability" plugin the name "Availability" The plugin is included with the base system (no license required for IT Service Management). The plugin enables three modules: <ul style="list-style-type: none"> Commitments Configure commitments Results 	<ul style="list-style-type: none"> To view: <ul style="list-style-type: none"> app_service_user service_viewer To create: <ul style="list-style-type: none"> app_service_admin
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Software Asset Management	SaaS License Management store application name				

Application or feature	Details
	<p>In the ServiceNow Store, the name of the ServiceNow® SaaS License Management application has changed from Software Asset Management - SaaS License Management Integrations to Software Asset Management - SaaS License Management.</p> <p>Option to create direct and SSO integration profiles in SaaS License Management</p> <p>If you are using Software Asset Workspace, the option to create direct and SSO integration profiles in Core UI is turned off. You can create integration profiles from the License operations view in Software Asset Workspace.</p>
Studio	<p>Reduce noise from commit changes</p> <p>Reduce the flags from system-generated fields that are saved to XML files during a commit operation.</p> <p>Convert custom applications to upgrade from the application repository</p> <p>Convert your company-owned application that was installed from the ServiceNow Store application repository to in-development mode.</p>
Subscription Management	<p>One-to-many mapping for roles to applications</p> <p>License Management can now map a role to more than one application. You can view all the applications to which the role is mapped. For example, the itil role can have the Fulfiller role type for Incident Management, Problem Management, and Change Management. With this update, you can see all the applications that the itil role is mapped to.</p>
Table Builder	<p>Inactive fields</p> <p>Make fields on a form inactive and prevent them from displaying in the available list of fields in the form editor. Inactive fields may be reactivated from the Table tab.</p>
UI Builder	<p>Customize tabs</p> <p>Customize your tabs to render vertically. You can create Viewport extension tabs in a set next to the empty container and repeater tabs, and then apply the conditions to hide the individual tabs in a set.</p> <p>Create pages</p> <p>Reduce the time to create pages by using the new templates that use presets and controllers. Former page templates are made available as legacy templates.</p> <p>Table Builder access</p> <p>When the Table Builder plugin is installed, Table Builder is now accessible from UI Builder when adding a form</p>

Application or feature	Details
	<p>component to a page. When the form component is being configured, users can select Edit form views to launch the Forms tab in Table Builder.</p> <p>Edit JSON</p> <p>The JSON editor (released in San Diego) has been enhanced. Use the JSON editor anywhere in UI Builder where JSON exists. You can edit nested JSON objects and save empty property values in the JSON editor.</p>
<p>Universal Request</p>	<p>Assignment group and Assigned to field's restriction removed for RITM transfer</p> <p>ITIL users can transfer RITM requests associated as a primary ticket a UR without any Assignment group or Assigned to field restrictions.</p>
<p>Virtual Agent</p>	<p>Virtual Agent Designer chat components and custom controls</p> <ul style="list-style-type: none"> • In a user input where a "Yes" or "No" answer is expected, Virtual Agent accepts natural variations such as "yeah" or "nope." This applies to Boolean responses and when Virtual Agent prompts the user for confirmation for a recognized entity or default value. • Bot response variations provide a richer, more natural user experience. • The new show icon (🔍) in the Variables sidebar displays where a variable is used. This helps topic authors track where variables are being used if they need to modify or delete them. • The rich text editor in Virtual Agent controls now supports numbered lists. • Support for data entry and data pill for array string, array datetime, and glide list data types makes it easier to use the Action utility without coding. The Action utility lets you integrate Flow Designer actions and subflows in your topic. • Ability to collapse or expand node property sheets to maximize the canvas. • Simplified publishing for both topics and NLU models. <p>Virtual Agent chat enhancements</p> <p>If a user is in an active Virtual Agent conversation and opens a new chat window from an email link or other source, Virtual Agent asks the user if they want to switch to the new conversation or remain in their current conversation.</p> <p>Virtual Agent notifications</p>

Application or feature	Details
	<ul style="list-style-type: none"> • Configure Virtual Agent notification providers from Virtual Agent settings in Conversational Interfaces Home. • New users of the web client channel without previous conversations can now receive notifications. • Virtual Agent sends a message acknowledging script or flow actions. • Enhanced capacity for high volume notifications and increased the default values for number of recipients per notification and number of notifications per day. <p>AI Search in Virtual Agent</p> <ul style="list-style-type: none"> • Customize Genius Card results by creating and editing templates. • Enable users to launch catalog order items from AI Search results. <p>Topic Recommendations</p> <p>Topic Recommendations is now installed with Virtual Agent. When using Topic Recommendations, the app now checks the ServiceNow Store and notifies you when an update is available.</p> <p>Conversational Custom Chat Integration Framework (CCCIF)</p> <p>Admins can control the topic order display (promoted topics).</p> <p>Conversational Integration with Microsoft Teams</p> <p>The bot response time in Microsoft Teams has been improved.</p>
<p>Vulnerability Response</p>	<p>Enhancements to the Software Bill of Materials applications</p> <p>The Data Model for SBOM, SBOM Core, and the SBOM Response applications that are required for the Software Bill of Materials product have the following enhancements. These changes are compatible with version 19.0.6 of Vulnerability Response.</p> <ul style="list-style-type: none"> • Data Model for SBOM (version 1.0.4): Display name is a new field on the BOM Component table. This field uses the name and version as the displayed value of a component. • SBOM Core (version 1.0.8): Added the BOM Entities related list on the component form. You can see all the BOM entities that the component is used in on this related list. You can manually upload BOM documents as expected. • SBOM Response (version 2.0.6): The data model is updated so it supports the Vulnerability Intelligence use case. Discovered application and SBOM


Application or feature	Details
	<p>component are two new fields displayed on the AVI form. Mark as false positive and Request exception are supported on AVIs in the SBOM Workspace.</p> <p>Vulnerability Response Workspaces </p> <p>The Vulnerability Response workspaces provide a more efficient, modernized way for you to work. Note that the classic environment for Vulnerability Response is still supported in this release.</p> <p>JSON-based API introduced for Veracode in Application Vulnerability Response (v3.4) </p> <p>Starting from Veracode V3.4, a JSON-based API from Veracode is being used to retrieve the list of applications. This API provides the capability to bring in the 'last policy compliance check date' for these applications, signifying when these applications were last scanned by Veracode. The previous XML-based integration has been changed to inactive (deprecated).</p> <p>The feature is expected to improve the Veracode integration performance by introducing delta-support at the application level.</p> <p>Enhancements to Patch Orchestration </p> <p>Starting from V16.5, remediation owners can navigate to the scorecards and view the preferred patch associated with the configuration items. They can use this information to remediate the critical vulnerabilities in the assets that they own.</p> <p>Roll up VIs' values to remediation task </p> <p>The Rollup vulnerable item values to vulnerability and group scheduled job runs every 15 minutes and updates the status of a remediation task based on the status of its vulnerable items.</p>
<p>Vulnerability Response integrations</p>	<p>Enhancements to vulnerability integration runs </p> <p>Starting from Tenable v3.3, you can view the following information for the vulnerability integration runs:</p> <ul style="list-style-type: none"> • Total chunks: Total number of chunks generated by Tenable. • Available chunks: Number of chunks available for download for ServiceNow. <p>Renamed Microsoft Azure Security Center integration </p> <p>Starting with version 2.2, Microsoft Azure Security Center is renamed to Microsoft Defender for Cloud Integration for Security Operations.</p> <p>New CI lookup rules for Microsoft Azure Security Center and Palo Alto Prisma Cloud </p>

Application or feature	Details
	Introduced new base system CI lookup rules, Name and S3 Bucket.
Workspace	<p>Add keyword search to the activity stream </p> <p>Search entries in the activity stream using keywords. Results not matching the search criteria are filtered out.</p> <p>Show or hide system and user-generated emails in the activity stream filter </p> <p>Configure the activity stream to hide auto-generated and correspondence emails. End users can choose to filter out auto-generated or correspondence emails.</p> <p>Form personalization </p> <p>Agents can personalize (show or hide) the fields that appear on the form.</p> <p>Ability to access condition builder in reference lists </p> <p>Filter records even if the column you want to use as a filter is not currently on screen.</p> <p>Use Declarative Actions in Database Views </p> <p>Configure the declarative actions to display for database views. Export is included by default.</p> <p>Restrict ribbon configurations to the specific Workspace experience </p> <p>Restrict a ribbon configuration to a specific experience and disallow the ribbon configuration from appearing in the legacy workspace by selecting Experience restricted on the UX Ribbon Settings form.</p>

Removed features and products in Tokyo

Cumulative release notes summary on features that were removed from Tokyo features and products.

Some features were removed as part of Tokyo product updates.

Application or feature	Details
Alignment Planner Workspace	<ul style="list-style-type: none"> • Planning hierarchies and planning organizations are no longer available. • Some of the earlier APW tables are removed. For an updated list of tables available with APW, see Components installed with Alignment Planner Workspace 
Employee Journey Management	<ul style="list-style-type: none"> • Recommended Learning and search support for learning courses on portal pages are no longer supported on Learning Core.

Application or feature	Details
Event Management	When working with anomaly alerts in Metric Intelligence, the Info severity level has been replaced by the Clear Event status, which closes the alert.
Goal Framework	Planning Organization field (For Alignment Planner Workspace users) The Planning Organization field has been removed from the Goal , Strategic Plan , and Strategic Priority forms.
Mobile	ServiceNow Classic is being removed in the Tokyo release. The ServiceNow Classic mobile app is being removed from the Apple App Store and the Google Play Store in mid-July, 2022. You can migrate from the ServiceNow Classic mobile app to the ServiceNow Mobile Platform to take advantage of features such as rapid development, offline capability, and integration with native mobile device features. For details on migrating to the ServiceNow Mobile Platform, see Migrate from the ServiceNow Classic mobile app to the ServiceNow Mobile Platform .
Operational Technology Incident Management v2	<ul style="list-style-type: none"> The Separating IT and OT incidents task was removed from the Manufacturing Guided Setup under Operational Technology Incident Management. The OT Incident User role (ot_incident_user) is no longer supported.
Patient Support Services	The sample Enrollment Request Form [enrollment_request_form] page was removed.
Service Portal	The <code>glide.sp.analytics.enabled.portals</code> property has been removed. Use the <code>glide.analytics.tracking.restricted.portals</code> property to turn off tracking for portals.
UI Builder	<ul style="list-style-type: none"> Users can't edit variant and subpage templates after creating a variant or subpage. Users can't create tabs from a template in the contextual sidebar, viewport modal, viewport tabs, or viewport components.

Deprecation information for all Tokyo features and products

Cumulative release notes summary on deprecation information for Tokyo features and products.

For more information about plugins in Tokyo, refer to [List of plugins \(Tokyo\)](#) and [Changes to plugins in the Tokyo release](#).

Application or feature	Details
API	<ul style="list-style-type: none"> • <i>Product Inventory Open API</i>. All <code>/sn_prd_invt/productinventory</code> endpoints are deprecated. They are replaced by <code>/sn_prd_invt/product</code>. • <i>Product Order Open API</i>. All <code>/sn_ind_tmt_orm/productorder</code> endpoints are deprecated. They are replaced by <code>/sn_ind_tmt_orm/order/productOrder</code>. • <i>Trouble Ticket Open API</i>. All <code>/sn_ind_tsm_sdwan/troubleticket</code> endpoints are deprecated. They are replaced by <code>/sn_ind_tsm_sdwan/ticket/troubleTicket</code>.
Assessments and Surveys	<p>Old widgets and their Angular Providers for assessments are no longer supported on Service Portal and the Now Mobile app.</p>
Authentication	<ul style="list-style-type: none"> • The MultiSSO v1 is deprecated. Upgrade to MultiSSO v2 from MultiSSO v1. <p>For more information, refer to the MultiSSO v2 upgrade instructions [KB0756504] article in the Now Support knowledge base.</p> <ul style="list-style-type: none"> • The SAML1.1 and SAML 1.1 Single Sign-On - Update 1 plugin is deprecated. The SAML-based identity providers (IdP) have already migrated to SAML 2.0. To use SAML 2.0, you must install the MultiSSO and configure your identity provider. • The OpenID SSO plugin is deprecated. To use OpenID Connect (OIDC), you must install the MultiSSO and configure your OIDC-based identity provider.
Cloud Provisioning and Governance	<p>In the Tokyo release, support for the Performance Analytics - Content Pack - Cloud Management plugin (<code>com.snc.pa.cmp</code>) is deprecated. This plugin is a part of the Cloud Management v1 plugin, which was deprecated in the Paris release.</p>
Configuration Management Database (CMDB)	<ul style="list-style-type: none"> • Starting with the Tokyo release, CMDB Search is being prepared for future deprecation. Documentation for CMDB Search is no longer available, however, the feature is activated on new instances and will continue to be supported. For details, see the Deprecation Process [KB0867184] article in the Knowledge Base. <p>To search through the CMDB, use Intelligent Search for CMDB in CMDB Workspace.</p>

Application or feature	Details
	<ul style="list-style-type: none"> The Microsoft SCCM legacy plugin is no longer deployed, enhanced, or supported. For details, see the Deprecation Process [KB0867184] article in the Knowledge Base. <p>To upgrade from the Microsoft SCCM legacy plugin, see Upgrade from SCCM plugin to Service Graph connector for Microsoft SCCM.</p>
Customer Service Management (CSM)	<p>Starting with the Tokyo release, the following applications have been deprecated:</p> <ul style="list-style-type: none"> The Legacy - Workforce Optimization for Customer Service plugin (com.snc.wfo.csm) 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 The Vaccine Administration Management v5.0 is no longer deployed, enhanced, or supported. For details, see the Deprecation Process [KB0867184] article in the Now Support Knowledge Base.
Dashboards	<ul style="list-style-type: none"> The homepage feature is deprecated. If the Next Experience UI is enabled, upgrading customers can view existing homepages but cannot create homepages or edit existing homepages. The Dashboard Builder for workspaces has been removed. The new in-line editor replaces it for most use cases. You can create and edit more technical dashboards in the UI Builder. For more information, see Create a dashboard with the In-line editor. The Dashboard viewport component is no longer supported for new dashboards. <p>The new inline and technical dashboard editors replace these components.</p>
Field Service Management	<p>The ServiceNow Classic app is deprecated. Therefore, the Service Management Geolocation Mobile (com.snc.work_management_m) plugin that was used in conjunction with the ServiceNow Classic app is also deprecated.</p>
HR Service Delivery Case and Knowledge Management	<ul style="list-style-type: none"> Options to dispatch requests or tasks by using a workflow are no longer supported. Existing customers with Service Management core are not affected. The surveys configuration option is no longer supported. The navigation modules for HR surveys and trigger conditions were removed. Existing customers with Service Management core are not affected.

Application or feature	Details										
	<ul style="list-style-type: none"> The Service Management Geolocation Mobile that is used for viewing and dispatching tasks from a mobile map is deprecated and is no longer supported. A ServiceNow employee can activate this plugin. Existing customers are not affected. 										
Intelligent Service Delivery	<ul style="list-style-type: none"> HR Service Delivery Virtual Agent HR Service Delivery Virtual Agent and NLU - The General HR Inquiry topic and the corresponding NLU (intent and utterances) have been deprecated. 										
Knowledge Management	Starting from the Tokyo release, the Knowledge Management, Knowledge Management Overview, and My Knowledge homepages have been deprecated and replaced with the Knowledge Manager Overview dashboard. For more information, see the Deprecation Process [KB0867184] article in the Now Support knowledge base.										
Mobile	To simplify the new hire to employee transition, the HR Onboarding workflows were migrated from the Mobile Onboarding app into the Now Mobile app. New hires can complete their onboarding journey within the Now Mobile app instead of the Mobile Onboarding app . For more information, see the ServiceNow Community blog post Now Mobile for New Hire Onboarding .										
Next Experience Components	<p>Components</p> <table border="1"> <thead> <tr> <th>Component</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Dashboard viewport</td> <td>The Dashboard viewport component is deprecated. All pages using the Dashboard Viewport component will be updated automatically to use the Dashboard component from the Dashboard page template.</td> </tr> <tr> <td>Dropdown panel</td> <td>Dropdown panel is deprecated. Use Dropdown list (<code>now-dropdown-list</code>) with the Dropdown (<code>now-dropdown</code>) component instead.</td> </tr> </tbody> </table> <p>Page templates</p> <table border="1"> <thead> <tr> <th>Page template</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Agent assist</td> <td>The Agent assist page template is deprecated and is replaced by the Agent</td> </tr> </tbody> </table>	Component	Description	Dashboard viewport	The Dashboard viewport component is deprecated. All pages using the Dashboard Viewport component will be updated automatically to use the Dashboard component from the Dashboard page template.	Dropdown panel	Dropdown panel is deprecated. Use Dropdown list (<code>now-dropdown-list</code>) with the Dropdown (<code>now-dropdown</code>) component instead.	Page template	Description	Agent assist	The Agent assist page template is deprecated and is replaced by the Agent
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Inbox	The Inbox page template is deprecated, and there is no replacement. However, existing pages that use Inbox will continue to work normally in instances upgraded to Tokyo or later.							
Platform Analytics Workspace	<ul style="list-style-type: none"> • Dashboard Builder is no longer supported. • The Dashboard viewport component is no longer supported for new dashboards. <p>The new inline and technical dashboard editors replace these components.</p>							
Service Portal	<p>The Usage Overview dashboards added by the Performance Analytics Content Pack for Service Portal are not supported in new instances and are deprecated for upgraded instances. Use the User Experience Analytics for Service Portal dashboards instead. Users with existing Usage Overview dashboards can still access them but can't edit or create new dashboards.</p>							
Software Asset Management	<p>Starting with the Software Asset Management - SaaS License Management 10.0.10 version, Cisco Webex Meetings integration is no longer deployed or enhanced. Instead, use the Cisco Webex integration profile to integrate with Webex Meetings and other Webex applications.</p>							
Virtual Agent	<ul style="list-style-type: none"> • The Metaphone field in the Edit Translations form was removed. This field was used for managing localization in Virtual Agent Designer. • The <code>com.glide.cs.suggest.enable_phonetic_search</code> system property was removed. This property was used to enable the metaphone feature. 							
Workforce Optimization for Customer Service	<p>Starting with the Tokyo release, Legacy Workforce Optimization is being prepared for future deprecation. It will be hidden and no longer activated on new instances but will continue to be</p>							

Application or feature	Details
	<p>supported. For details, see the Deprecation Process [KB0867184] article in the Now Support Knowledge Base.</p> <p>To access the next generation of the Workforce Optimization for Customer Service application, transition to the Workforce Optimization for Customer Service application that is available from the ServiceNow Store. You can now configure Workforce Optimization for Customer Service using the UI Builder. For more information see, Workforce Optimization for Customer Service.</p>
Workforce Optimization for ITSM	<p>Starting with the Tokyo release, the Legacy - Workforce Optimization for ITSM plugin (com.snc.wfo_itsm) 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. For more information, see Legacy - Activate Workforce Optimization for ITSM.</p>

Activation information for all Tokyo features and products

Cumulative release notes summary on activation information for Tokyo features and products.

Some products and features require specific subscriptions, roles, or licenses. Other features are part of the Now Platform[®] and are active by default.

Application or feature	Details
AI Search	AI Search is a Now Platform feature that is active by default.
API	<p>The following APIs are available by default:</p> <ul style="list-style-type: none"> <i>Change Management</i> <i>GlideAggregate</i> (Scoped and Global) <i>IPAddress</i> (Scoped and Global) <i>RTETransformer</i> <p>The following APIs require plugin activation:</p> <ul style="list-style-type: none"> <i>Auto</i> API: This API requires the Automation Center plugin to be activated. <i>AWA Agent</i> and <i>AWA Inbox Actions</i> APIs: These APIs require the Advanced Work Assignment (com.glide.awa) plugin to be activated. <i>ChangeSuccess</i> API: This API requires the ChangeManagement - ChangeSuccess Score (com.snc.change_management.change_success_score) plugin to be activated. <i>MetricBase Time Series</i> API: This API requires the MetricBase (com.snc.clotho) plugin to be activated.

Application or feature	Details
	<ul style="list-style-type: none"> • <i>Product Catalog Open API</i>, <i>Product Inventory Open API</i>, and <i>Service Catalog Open API</i>. These APIs require the Order Management for Telecommunications plugin (sn_ind_tmt_orm) to be activated. • <i>SCIM</i> API: This API requires the SCIM v2 - ServiceNow® Cross-domain Identity Management (com.snc.intefration.scim2) plugin to be activated. • <i>SCIM2Client</i> and <i>SCIM2ClientUtil</i> APIs: These APIs require the SCIM v2 - ServiceNow® Cross-domain Identity Management Client (com.snc.integration.scim2) plugin to be activated. • The <i>ScopedCacheManager</i> API requires the Scoped Cache (com.glide.scopedcache) plugin to be activated.
Admin Center	Admin Center is a Now Platform feature that is active by default.
Advanced Goal Framework	<p>Install Advanced Goal Framework by requesting it from the ServiceNow Store. 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.</p> <p>Note: You can install Advanced Goal Framework only when you own the ServiceNow® Strategic Portfolio Management (SPM), formerly the ServiceNow IT Business Management (ITBM) Pro license.</p>
Advanced Risk	<p>Install Advanced Risk by requesting it from the ServiceNow Store. 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.</p>
Advanced Work Assignment	<p>Advanced Work Assignment is a Now Platform feature that is available with activation of the Glide Advanced Work Assignment (com.glide.awa). For details, see Activate Advanced Work Assignment.</p>
Agile Development 2.0	<p>Agile Development 2.0 is available with the activation of the Agile Development 2.0 plugin (com.snc.sdlc.agile.2.0). For details, see Activate Agile Development 2.0.</p> <p>The Agile Development 1.0 plugin (com.snc.sdlc.scrum.pp) is no longer available. If you're using Agile Development 1.0, upgrade to Agile Development 2.0 for enhanced Agile capabilities.</p>
Alignment Planner Workspace	<p>Based on the SPM license that you have, install one of the following applications by requesting it from the ServiceNow Store:</p>

Application or feature	Details
	<ul style="list-style-type: none"> • SPM Standard: Install Alignment Planner Workspace (sn_align_ws). • SPM Professional: Install Alignment Planner Workspace (sn_align_ws) or Lenses for Alignment Planner Workspace (sn_apw_advanced). <p>The Lenses for Alignment Planner Workspace application provides additional Strategic Investments and Product lenses, and also installs the Alignment Planner Workspace (sn_align_ws) application as a dependency.</p>
App Engine Studio	<p>Install App Engine Studio by requesting it from the ServiceNow Store. 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.</p>
Application Management	<p>Application Management is a Now Platform feature that is active by default.</p>
Application Portfolio Management	<p>Application Portfolio Management is a Now Platform feature that is available with activation of the Application Portfolio Management (com.snc.apm). For details, see Activate Application Portfolio Management.</p>
Assessments and Surveys	<p>Assessments and Surveys is a Now Platform feature that is active by default.</p>
Authentication	<p>Authentication is a Now Platform feature that is active by default.</p>
Automated Test Framework	<p>Automated Test Framework is a Now Platform feature that is active by default.</p> <p>Note: By default, the system property that is used to run automated tests is turned off to prevent you from accidentally running these tests on a production system. To avoid data corruption or an outage, run tests only on development, test, and other non-production instances. For more information, see Enable or disable executing Automated Test Framework tests.</p> <p>To use the quick start tests for an application, activate the plugin that is associated with the application. For more information, see Available quick start tests by application or feature.</p> <p>Set the <code>sn_atf.runner.enabled</code> property to True to activate the content pack for the ATF Test Generator and Cloud Runner store application.</p>
Benchmarks	<p>The Benchmarks application is available when you opt in to the Benchmarks data collection.</p>

Application or feature	Details
	<p>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 details, see Enable Benchmarks.</p> <p>Note: You must install the Success Dashboard and Strategic Portfolio Management applications to access the respective Benchmarks KPIs.</p>
Business Continuity Management	<p>Install Business Continuity Management by requesting it from the ServiceNow Store. 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.</p>
Change Management	<p>Change Management is a Now Platform feature that is active by default.</p>
Cloud Provisioning and Governance	<p>Cloud Provisioning and Governance is available with activation of the Cloud Provisioning and Governance (com.snc.cloud.mgmt) plugin, which requires a separate subscription. For details, see Request the Cloud Provisioning and Governance application.</p>
Commercial Lines Claims	<p>Install Commercial Lines Claims by requesting it from the ServiceNow Store. 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.</p>
Configuration Compliance	<p>Install Configuration Compliance by requesting it from the ServiceNow Store. 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.</p>
Configuration Management Database (CMDB)	<p>CMDB is a Now Platform feature that is active by default with the Configuration Management (CMDB) (com.snc.cmdb) plugin.</p>
Conversational Interfaces Home	<p>Conversational Interfaces Home is a Now Platform[®] feature that is active by default.</p>
Core Now Platform	<p>Core Now Platform is a Now Platform feature that is active by default.</p>
Customer Service Management (CSM)	<p>Customer Service Management is a Now Platform feature that is available with activation of the Customer Service plugin</p>

Application or feature	Details
	<p>(com.sn_customerservice.com). For details, see Activate Customer Service Management.</p> <p>Additional Customer Service Management features are available with activation of other plugins. For details, see Additional plugins for Customer Service Management.</p> <p>Install any ServiceNow Store applications by requesting them from the ServiceNow Store. 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.</p>
Dashboards	<p>The Dashboards application is a Now Platform feature that is active by default.</p>
Decision Builder	<p>Decision Builder is a Now Platform feature that is available in all instances and can be upgraded to the latest version by updating the Decision Builder (sn_decision_design) plugin. For details, see Update to the latest version of Decision Builder.</p>
DevOps Change Velocity	<p>Install DevOps by requesting it from the ServiceNow Store. 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.</p>
DevOps Config	<p>Install DevOps Config by requesting it from the ServiceNow Store. 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.</p>
Digital Portfolio Management	<p>Install Digital Portfolio Management by requesting it from the ServiceNow Store. 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.</p>
Document Intelligence	<p>Install Document Intelligence by requesting it from the ServiceNow Store. 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.</p>
Document Services	<p>Multi-Provider Documents Framework is a Now Platform feature available with activation of the Multi-Provider Documents</p>

Application or feature	Details
	Framework plugin (com.snc.multiprovider_documents). For details, see Multi-Provider documents framework .
Dynamic Translation	Dynamic Translation is available with activation of the Dynamic Translation plugin (com.glide.dynamic_translation). For details, see Activate Dynamic Translation .
Employee Center	Install Employee Center by requesting it from the ServiceNow Store. 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 .
Employee Journey Management	<ul style="list-style-type: none"> Install Journey designer by requesting it from the ServiceNow Store. Install Learning Posts by requesting it from the ServiceNow Store. <p>Note: Installing Learning Posts automatically activates the Learning Core [sn_lc] application. Learning Core contains the base set of tables, content, learning bases, roles, and access configuration that are used in the Learning Posts [sn_lnp] application.</p> <ul style="list-style-type: none"> 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.
Encryption Key Management	<p>The ServiceNow Platform Encryption subscription bundle is a group commercial entitlement that includes Column Level Encryption Enterprise, Cloud Encryption, and Database Encryption.</p> <p>Column Level Encryption Enterprise is the unlimited license of Column Level Encryption The Column Level Encryption Enterprise plugin (com.glide.now.platform.encrypted) is activated as part of the subscription bundle. For details, see Encryption and Key Management subscription bundle.</p>
Enterprise Asset Management	Install Enterprise Asset Management by requesting it from the ServiceNow Store. 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 .
Environmental, Social, and Governance Management	Install ESG Management by requesting it from the ServiceNow Store. 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 .

Application or feature	Details
Event Management	<p>Event Management is available by activating the Event Management plugin (com.glideapp.itom.snac). For details, see Request Event Management.</p>
Field Service Management	<p>Field Service Management is available with activation of the Field Service Management (com.snc.work_management) plugin. For details, see Activate Field Service Management.</p> <p>Additional Field Service features are available with the activation of other plugins. For details, see Additional plugins for Field Service Management.</p> <p>Activate the Field Service Advanced Parts Sourcing plugin (com.snc.fsm_advanced_parts_sourcing) to request and source multiple parts. Agents can receive mobile notifications when part requests are raised by their peers and accordingly approve or reject requests.</p> <p>Activate the Field Service Territory Planning plugin (com.snc.fsm_territory_planning) to create and manage service territories.</p> <p>Activate the Template Management for Field Service plugin (com.snc.fsm_template_management) to automatically identify the work order templates for a work order.</p>
Financial Services Business Deposit Operations	<p>Install Financial Services Business Deposit Operations by requesting it from the ServiceNow Store. 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.</p>
Financial Services Business Lifecycle	<p>Install Financial Services Business Lifecycle by requesting it from the ServiceNow Store. 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.</p>
Financial Services Business Loan Operations	<p>Install Financial Services Business Loan Operations by requesting it from the ServiceNow Store. 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.</p>
Financial Services Card Operations	<p>Install Financial Services Card Operations by requesting it from the ServiceNow Store. Visit the ServiceNow Store website to view all the available apps and for information about submitting requests to</p>

Application or feature	Details
	the store. For cumulative release notes information for all released apps, see the ServiceNow Store version history release notes .
Financial Services Client Lifecycle	Install Financial Services Client Lifecycle by requesting it from the ServiceNow Store. 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 .
Financial Services Complaint Management	Install Financial Services Complaint Management by requesting it from the ServiceNow Store. 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 .
Financial Services Credit Operations	Install Financial Services Credit Operations by requesting it from the ServiceNow Store. 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 .
Financial Services Operations Core	Install Financial Services Operations Core by requesting it from the ServiceNow Store. 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 .
Financial Services Payment Operations	Install Financial Services Payment Operations by requesting it from the ServiceNow Store. 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 .
Financial Services Personal Deposit Operations	Install Financial Services Personal Deposit Operations by requesting it from the ServiceNow Store. 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 .
Financial Services Personal Loan Operations	Install Financial Services Personal Loan Operations by requesting it from the ServiceNow Store. 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 .

Application or feature	Details
Financial Services Treasury Operations	Install Financial Services Treasury Operations by requesting it from the ServiceNow Store. 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 .
Financial Services integration with Jack Henry Associates jXchange	Install the Financial Services Operations integration with JHA by requesting it from the ServiceNow Store. 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 .
Financial Services integration with Socure	Install Financial Services integration with Socure by requesting it from the ServiceNow Store. 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 .
Flow Designer	Flow Designer is a Now Platform feature that is active by default.
Goal Framework	Install Goal Framework by requesting it from the ServiceNow Store. 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 .
Governance, Risk, and Compliance	Install Governance, Risk, and Compliance applications by requesting them from the ServiceNow Store. 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 .
Group Life Servicing	Install Group Life Servicing by requesting it from the ServiceNow Store. 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 .
HR Service Delivery Case and Knowledge Management	<ul style="list-style-type: none"> HR Service Delivery Case and Knowledge Management is a Now Platform feature that is available with activation of the Human Resources Scoped App: Core plugin (com.sn_hr_core). For details, see Activate Case and Knowledge Management.

Application or feature	Details
	<ul style="list-style-type: none"> • Agent Workspace for HR Case and Knowledge Management is available with the activation of Agent Workspace for HR Case Management (com.sn_hr_agent_ws) and the Human Resources Scoped App: Workspace (com.sn_hr_agent_workspace). • After you install or upgrade to the latest Agent Workspace for HR Case and Knowledge Management from ServiceNow Store, you might encounter Restricted Caller Access (RCA) approval messages requesting for an update in the access request. • Request the Manager Hub, Document Template integration with AdobeSign, Document Template integration with DocuSign, and Employee Relations integration with Navex Ethicspoint applications from ServiceNow Store. 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.
Hardware Asset Management 5.0	Install Hardware Asset Management by requesting it from the ServiceNow Store. 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 .
Health Log Analytics	Install Health Log Analytics by requesting it from the ServiceNow Store. For details, see Health Log Analytics installation . 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 .
Healthcare and Life Sciences Service Management Core	Install Healthcare and Life Sciences Service Management Core by requesting it from the ServiceNow Store. 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 .
ITOM Cloud Accelerate	<p>Install the ITOM Cloud Accelerate features by requesting them from the ServiceNow Store. 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.</p> <p>To use the ITOM Cloud Accelerate features, you must have valid ITOM Cloud Accelerate entitlement. Contact your ServiceNow sales representative to procure the ITOM Cloud Accelerate entitlement.</p>
ITOM Optimization	The ServiceNow® Cloud Provisioning and Governance application is available with activation of the Cloud Provisioning and

Application or feature	Details
	Governance (com.snc.cloud.mgmt) plugin, which requires a separate subscription. For details, see Request the Cloud Provisioning and Governance application .
ITOM Visibility	ITOM Visibility is available with activation of the Discovery (com.snc.discovery) plugin and the Service Mapping (com.snc.service-mapping) plugin, which require the ITOM Visibility subscription. For details, see Request Discovery and Request Service Mapping . For full ITOM Visibility functionality, install the latest ITOM Visibility out-of-band applications from the ServiceNow Store. For cumulative release note information for all released apps, see the ServiceNow Store version history release notes.
Import and Export	Import and Export is a Now Platform feature that is active by default.
Incident Management	Incident Management is active by default with the Incident plugin (com.snc.incident).
Individual Life Servicing	Install Individual Life Servicing by requesting it from the ServiceNow Store. 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 .
Instance Data Replication	Instance Data Replication is available with activation of the IDR (com.glide.idr) plugin, which requires a separate subscription. For details, see Request an Instance Data Replication (IDR) subscription .
Instance Scan	Instance Scan is a Now Platform feature that is active by default.
Integration Hub	Integration Hub is included in Automation Engine and is available with activation of an Automation Engine subscription package. For details, see Request Integration Hub .
Intelligent Service Delivery	<ul style="list-style-type: none"> • HR Service Delivery Virtual Agent is available with activation of the Human Resources Scoped App: Core plugin (com.sn_hr_core), the Glide Virtual Agent plugin (com.glide.cs.chatbot) that provides the Virtual Agent framework, and the HR Service Delivery Virtual Agent Conversations plugin (sn_hr_va). For details, see HR Service Delivery Virtual Agent. • Install Issue Auto Resolution by requesting it from the ServiceNow Store. Visit the ServiceNow Store website to view all the

Application or feature	Details
	<p>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.</p>
Investment Funding	<p>Install Investment Funding by requesting it from the ServiceNow Store. 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.</p>
Knowledge Management	<p>Knowledge Management is a Now Platform feature that is active by default. Also, the Knowledge Management Service Portal is available with the Knowledge Management Service Portal (com.snc.knowledge_serviceportal) plugin that is active by default.</p> <p>Activate the Knowledge Management Advanced (com.snc.knowledge_advanced) plugin to enable advanced features for Knowledge Management. For more information on activating the plugin, see Activate the Knowledge Management Advanced plugin.</p> <p>Activate additional plugins that enable various Knowledge Management features. For more information, see Additional plugins for Knowledge Management.</p>
Legal Service Delivery	<p>Install Legal Service Delivery applications by requesting them from the ServiceNow Store. 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.</p>
Localization Framework	<p>Localization Framework is a Now Platform feature that is available with activation of the Localization Framework Installer plugin (com.glide.localization_framework_installer). For details, see Activation of Localization Framework.</p>
MID Server	<p>MID Server is a Now Platform feature that is active by default.</p>
Manufacturing Process Manager	<p>Install Manufacturing Process Manager by requesting it from the ServiceNow Store. 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.</p>
Mobile	<p>ServiceNow Mobile Platform is a Now Platform feature that is active by default.</p>

Application or feature	Details
Natural Language Query	NLQ is a Now Platform feature that is active by default.
Natural Language Understanding	Natural Language Understanding is a Now Platform feature that is available with activation of the NLU Workbench (com.snc.nlu_studio), NLU Workbench - Core (com.glide.nlu), NLU Common Model (com.glide.nlu.model), and Predictive Intelligence (com.glide.platform_ml) plugins. To get the most out of the NLU Workbench, also install the NLU Workbench - Advanced Features application (com.snc.nlu.workbench.advanced) from the ServiceNow Store. For details, see Activate the NLU Workbench .
Next Experience Components	Next Experience Components is a Now Platform feature that is active by default.
Next Experience user interface	The Next Experience is a Now Platform feature that is active by default.
Notifications	Notifications is a Now Platform feature that is active by default.
Operational Resilience	Install Operational Resilience by requesting it from the ServiceNow Store. 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 .
Operational Technology Incident Management v2	Install Operational Technology Incident Management v2 by requesting it from the ServiceNow Store. 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 .
Operational Technology Manager	Install Operational Technology Manager by requesting it from the ServiceNow Store. 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 .
Operational Technology Vulnerability Response	Install Operational Technology Vulnerability Response by requesting it from the ServiceNow Store. 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 .

Application or feature	Details
Order Management for Customer Service Management	<p>Install Order Management by requesting it from the ServiceNow Store. 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 more details, see Install Order Management.</p>
Order Management for Telecommunications, Media, and Technology	<p>Install Order Management for Telecommunications, Media, and Technology (App Version: 2.0.3) by requesting it from the ServiceNow Store. 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.</p> <p>Install Order Management for Telecommunications, Media, and Technology (App Version: 2.0.3) by requesting it from the ServiceNow Store. 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.</p>
Password Reset	<p>Password Reset is a Now Platform feature that is active by default.</p> <p>This feature is active by default for users with a local password. For additional third-party credential support, install Password Reset applications from the ServiceNow Store.</p>
Patient Support Services	<p>Install Patient Support Services by requesting it from the ServiceNow Store. 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.</p>
Performance Analytics	<p>Complimentary Performance Analytics for Incident Management is active by default. You cannot create indicators or breakdowns with this complimentary application.</p> <p>The full features of Performance Analytics are available with a subscription. Activate the Performance Analytics Premium plugin that matches your subscription. For details, see Activate your Performance Analytics subscription.</p>
Personal Lines Claims	<p>Install Personal Lines Claims by requesting it from the ServiceNow Store. 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.</p>

Application or feature	Details
Platform Analytics Workspace	<p>The Platform Analytics Workspace is included in the App Analytics Workspace plugin (sn_app_analytics_w), which is active by default. Updates to this plugin are available on the ServiceNow Store. 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.</p>
Platform Security	<p>Data privacy and PostClone script support are available with activation of the com.glide.data_privacy plugin. With Tokyo patch 3 or later, administrators can activate the data privacy plugin if you have the ServiceNow ServiceNow Vault entitlement. For previous releases, contact Customer Service and Support for activation. For details, see Activate data privacy.</p> <p>Data filtration is available with activation of the com.glide.data_filtration plugin. For details, see Activate data filtration.</p>
Policy and Compliance Management	<p>Install Policy and Compliance Management by requesting it from the ServiceNow Store. 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.</p>
Pre-Visit Management	<p>Install Pre-Visit Management by requesting it from the ServiceNow Store. 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.</p>
Proactive Service Experience Workflows	<p>Install Proactive Service Experience Workflows by requesting it from the ServiceNow Store. 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.</p>
Process Automation Designer	<p>Process Automation Designer is a Now Platform feature, which requires a separate subscription. To build processes for applications, you need a separate subscription to the associated application. For details, see Activate Process Automation Designer.</p>
Procurement Service Management	<p>Install Procurement Service Management by requesting it from the ServiceNow Store. 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.</p>

Application or feature	Details
Project Portfolio Management	<p>Project Portfolio Management is available with activation of the PPM Standard (com.snc.financial_planning_pmo) plugin. For details, see Activate Project Portfolio Management.</p> <p>Install Scenario Planning for PPM by requesting it from the ServiceNow Store. 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.</p>
Project Workspace	<p>Install Project Workspace by requesting it from the ServiceNow Store. 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.</p>
Public Sector Digital Services	<p>Install the Public Sector Digital Services Core and the Service Request Playbook applications by requesting them from the ServiceNow Store. 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.</p> <p>Note: Some functionality in the Service Request Playbook is available only with a subscription.</p> <p>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.</p>
Redox Inbound Integration	<p>Install Redox Inbound Integration by requesting it from the ServiceNow Store. 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.</p>
SPM Benchmarks	<p>Install SPM Benchmarks by requesting it from the ServiceNow Store. 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.</p>
Scaled Agile Framework (SAFe)	<p>ServiceNow provides plugins that support two different configurations of SAFe:</p>

Application or feature	Details
	<ul style="list-style-type: none"> • Essential SAFe is available with activation of the Essential SAFe plugin (com.snc.sdlic.safe). For details, see Activate Essential SAFe. • Essential SAFe and Portfolio SAFe are available with activation of the Portfolio SAFe plugin (com.snc.sdlic.portfolio_safe). For details, see Activate Portfolio SAFe.
Service Bridge (Technology)	Install Service Bridge by requesting it from the ServiceNow Store. 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 .
Service Bridge (Telecommunications)	Install Service Bridge by requesting it from the ServiceNow Store. 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 .
Service Catalog	Service Catalog is a Now Platform feature that is active by default.
Service Graph Connector Integration for Claroty CTD	Install Service Graph Connector Integration for Claroty CTD by requesting it from the ServiceNow Store. 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 .
Service Operations Workspace for ITSM	<p>Service Operations Workspace for ITSM is active by default and its default version is 1.0 in Tokyo. When you upgrade from any previous release to Tokyo from ServiceNow Store, Service Operations Workspace for ITSM 1.0 is automatically installed.</p> <p>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.</p>
Service Portal	Service Portal is a Now Platform feature that is active by default.
Service Portfolio Management	Service Portfolio Management Core (com.snc.service_portfolio_core) is a Now Platform feature that is active by default.
Sitemap Generator	Install Sitemap Generator by requesting it from the ServiceNow Store. Visit the ServiceNow Store website to view all the available apps and for information about submitting requests to the store. For

Application or feature	Details
	<p>cumulative release notes information for all released apps, see the ServiceNow Store version history release notes.</p>
<p>Software Asset Management</p>	<p>Software Asset Management is available with activation of the Software Asset Management Professional plugin (com.snc.samp). For details, see Request Software Asset Management.</p> <p>The Software Asset Workspace is available with activation of the Software Asset Workspace plugin (com.sn_sam_workspace). After this plugin is activated, you can't revert to the classic Software Asset Management application. For details, see Request Software Asset Management.</p> <p>To activate the Next Experience, make sure that the <code>glide.ui.polaris.experience</code> system property in your instance is set to true.</p> <p>Install Software Asset Management SaaS License Management by requesting it from the ServiceNow Store. 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.</p> <p>Install Data Collection for Oracle Global Licensing and Advisory Services by requesting it from the ServiceNow Store. 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.</p>
<p>Studio</p>	<p>ServiceNow® Studio is a Now Platform feature that is active by default.</p>
<p>Subscription Management</p>	<p>Subscription Management is a Now Platform feature that is active by default.</p>
<p>Supplier Lifecycle Management</p>	<p>Install Supplier Lifecycle Management by requesting it from the ServiceNow Store. 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.</p>
<p>Table Builder</p>	<p>Table Builder is a Now Platform feature that is active by default when you install App Engine Studio.</p>
<p>Table Builder for App Engine</p>	<p>Install Table Builder for App Engine by requesting it from the ServiceNow Store. Visit the ServiceNow Store website to view all the available apps and for information about submitting requests to</p>

Application or feature	Details
	the store. For cumulative release notes information for all released apps, see the ServiceNow Store version history release notes .
Technology Provider Service Management	Install Technology Provider Service Management by requesting it from the ServiceNow Store. 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 .
Telecommunications Network Inventory	Install Telecommunications Network Inventory by requesting it from the ServiceNow Store. 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 .
UI Builder	UI Builder is a Now Platform feature that is active by default.
Universal Request	Universal Request is a Now Platform feature and is available on activating the Universal Request plugin (com.snc.universal_request). Additional Universal Request features and integration capabilities are available with the activation of other plugins. For more information, see Universal Request plugins .
Upgrade Center	Upgrade Center is a Now Platform feature that is active by default.
User Experience Analytics	User Experience Analytics is a Now Platform feature that is active by default.
Vaccine Administration Management	Install Vaccine Administration Management by requesting it from the ServiceNow Store. 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 .
Vendor Management Workspace	Vendor Management Workspace is available with activation of the Vendor Manager Workspace (com.snc.sn_itsm_vendor) plugin, which requires a separate subscription. For details, see Activate Vendor Management Workspace .
Virtual Agent	Virtual Agent is available with activation of the Glide Virtual Agent plugin (com.glide.cs.chatbot), which requires a separate subscription. For details, see Activate Virtual Agent .

Application or feature	Details
	<p>Note: The Glide Virtual Agent plugin initially installs the Topic Recommendations and Conversational Analytics apps. Subsequent updates to these apps must be installed from the ServiceNow Store.</p> <p>Virtual Agent Lite is a subset of the Virtual Agent platform that is available to ITSM customers. It does not require activation and works with ITSM Virtual Agent Lite conversations, which are also available to ITSM customers.</p>
Visual Task Boards	Visual Task Boards is a Now Platform feature that is active by default.
Vulnerability Response	Install Vulnerability Response by requesting it from the ServiceNow Store. 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 .
Vulnerability Response Integration with Microsoft Defender for IoT	Install the Vulnerability Response Integration with Microsoft Defender for IoT application by requesting it from the ServiceNow Store. 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 .
Vulnerability Response integrations	Install third-party integrations by requesting them from the ServiceNow Store. 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 .
Walk-up Experience	Walk-up Experience is a Now Platform feature that is available with activation of the Walk-up Experience plugin (com.snc.walkup). For details, see Activate Walk-up Experience .
Workforce Optimization for Customer Service	Workforce Optimization for Customer Service is a Now Platform feature that is available with activation of the Workforce Optimization for Customer Service plugin (com.snc.wfo_csm). For details, see Activate Workforce Optimization for Customer Service .
Workforce Optimization for ITSM	<p>Workforce Optimization for ITSM is available with the activation of the Workforce Optimization for ITSM plugin (sn_wfo_cfg_itsm). For details, see Activate Workforce Optimization for ITSM.</p> <p>The following applications have been moved to the ServiceNow Store:</p> <ul style="list-style-type: none"> • Team Performance [sn_team_perf] • Coaching [sn_coaching]

Application or feature	Details
	These applications are enabled when you activate the Workforce Optimization for ITSM plugin (sn_wfo_cfg_itsm) plugin from the ServiceNow Store. 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 .
Workspace	Workspace is a Now Platform feature that is active by default. ServiceNow® Predictive Intelligence is available with ServiceNow® Agent assist by activating the com.snc.contextual_search, com.glide.platform_ml, and com.snc.contextual_search.ml plugins. Predictive Intelligence requires an additional subscription fee. For details, see Activate a plugin .

Additional requirements for all Tokyo features and products

Cumulative release notes summary on additional requirements for Tokyo features and products.

To use certain products, specific setups or third-party requirements are required.

Application or feature	Details
Instance Data Replication	The consumer and producer must both be running the San Diego release or later to support the custom coalesce feature. A field that is selected as the coalesce field for a replication entry, must have unique values. The field must also have the same name, length, and type on the producer and consumer instances. The consumer and producer must both be running the San Diego release or later to support concurrent job execution.
Platform Analytics Workspace	Some functionalities require an active subscription to Performance Analytics.
Table Builder for App Engine	You must be an App Engine v2 licensed customer to install Table Builder for App Engine. Contact your account team for details.
Vaccine Administration Management	To use Vaccine Administration Management: <ul style="list-style-type: none"> • You must have the following plugins installed: <ul style="list-style-type: none"> ◦ Healthcare and Life Sciences Service Management Core (com.sn_hcls) ◦ Appointment Booking (com.snc.appointment_booking) <p>To use Virtual Agent conversations for Vaccine Administration Management, you must have the Virtual Agent plugin (com.glide.cs.chatbot) installed.</p>

Browser requirements for all Tokyo features and products

Cumulative release notes summary on browser requirements for Tokyo features and products.

Several products have specific browser requirements. Review this information to ensure you are using the correct browsers and browser versions.

Application or feature	Details
AI Search	Internet Explorer is not supported.
Advanced Work Assignment	Similar to Workspace, AWA doesn't support mobile devices, Internet Explorer, or Microsoft Edge. Instead, use Microsoft Edge-Chromium or one of the other supported browsers that are listed in Browser support .
Automated Test Framework	<p>Automated Test Framework supports running tests only from desktop browsers. You can't run tests or test suites from tablets, mobile browsers, or the mobile UI. Some desktop browsers require additional configuration. For more information, see Browser recommendations for Automated Test Framework 🔗.</p> <p>Automated Test Framework offers limited support for test design on tablets. You can't add new custom UI test steps from tablets because tablets can't retrieve components. Review any existing custom UI test steps that were added from a desktop browser instead.</p>
Customer Service Management (CSM)	ServiceNow workspaces do not support mobile devices. Starting with the Orlando release, ServiceNow workspaces do not support Internet Explorer or Microsoft Edge. Instead, use Microsoft Edge - Chromium or one of the other supported browsers listed in Browser support .
Natural Language Understanding	For optimal performance on the Now Platform [®] , use NLU Workbench in the Google Chrome, Safari, Mozilla Firefox, or Microsoft Edge browsers. NLU Workbench isn't supported in Microsoft Internet Explorer.
Policy and Compliance Management	<p>Policy and Compliance Management requires the latest public release and two previous release versions of the following browsers:</p> <ul style="list-style-type: none"> • Chrome, Firefox and Firefox ESR, and Microsoft Edge Chromium • Safari 12.0 and later versions
Service Portal	The Tokyo release doesn't support Internet Explorer 11 so you cannot log in to Service Portal through that browser. The iOS version of Firefox does not support Service Portal pages.
Table Builder	Internet Explorer is not supported.

Application or feature	Details
Table Builder for App Engine	Internet Explorer is not supported.
UI Builder	Internet Explorer is not supported.
User Experience Analytics	To optimize your User Experience Analytics, use either a Google Chrome or Apple Safari browser.
Virtual Agent	Virtual Agent supports various browsers, including Internet Explorer 11 and Microsoft Edge.
Walk-up Experience	<p>You can access Walk-up Experience through the ServiceNow® Workspace. ServiceNow workspaces do not support mobile devices.</p> <p>Starting with the Orlando release, ServiceNow workspaces do not support Internet Explorer or Microsoft Edge. Instead, use Microsoft Edge-Chromium or one of the other supported browsers listed in Browser Support.</p> <p>If you are on New York or an earlier release and using Internet Explorer 11 or Microsoft Edge with any workspace, such as ServiceNow® CSM Agent Workspace or ServiceNow® Vendor Management Workspace, then you must first migrate to a newer browser. After you upgrade to a new browser, you can upgrade to at least the Orlando release. For more information, see the Internet Explorer 11 Performance [KB0683275] article in the Now Support Knowledge Base.</p>
Workspace	Workspace does not support mobile devices, Internet Explorer, or Microsoft Edge. Instead, use Microsoft Edge-Chromium or one of the other supported browsers that are listed in Browser support .

Accessibility information for all Tokyo features and products

Cumulative release notes summary on accessibility information for Tokyo features and products. Some products have specific accessibility information or exceptions.

i Important:

To find documentation about accessibility features in ServiceNow products, see [Product documentation for accessibility](#).

To view accessibility conformance reports (ACRs) for currently supported releases, see [Accessibility conformance reports](#).

Application or feature	Details								
Document Services	<ul style="list-style-type: none"> • Screen reader support has been extended to buttons in the Document Viewer, providing explanations of the button action, for example, zooming, page controls, toggle sidebar, and so on. • Keyboard navigation: <ul style="list-style-type: none"> ◦ Added support to focus on page control buttons in Document Viewer using the Tab key. ◦ Added a tab index to navigate through Document Viewer buttons in a linear order through the Tab key. 								
Mobile	<p>The Indoor Wayfinding and Reservations feature introduces the following accessibility enhancements:</p> <ul style="list-style-type: none"> • Screen Reader support for both wayfinding and reservations. • Users can zoom in or zoom out on the map by using enabled buttons on the map instead of pan gestures or a 2-finger pinch. • Accessible route preferences can be selected for wayfinding. • Map legends identify all icons with text descriptions. 								
Next Experience Components	<p>Data visualization charts</p> <table border="1" data-bbox="507 995 1380 1560"> <thead> <tr> <th data-bbox="512 1001 794 1050">Chart type</th> <th data-bbox="794 1001 1375 1050">Enhancements</th> </tr> </thead> <tbody> <tr> <td data-bbox="512 1050 794 1220">Time series</td> <td data-bbox="794 1050 1375 1220">Access data with keyboard interactions by moving focus through the UI elements and trigger actions on interactive elements.</td> </tr> <tr> <td data-bbox="512 1220 794 1390">Bar</td> <td data-bbox="794 1220 1375 1390">Access data with keyboard interactions by moving focus through the UI elements and trigger actions on interactive elements.</td> </tr> <tr> <td data-bbox="512 1390 794 1560">Pie/Donut</td> <td data-bbox="794 1390 1375 1560">Access data with keyboard interactions by moving focus through the chart segments and legend and trigger actions on interactive elements.</td> </tr> </tbody> </table>	Chart type	Enhancements	Time series	Access data with keyboard interactions by moving focus through the UI elements and trigger actions on interactive elements.	Bar	Access data with keyboard interactions by moving focus through the UI elements and trigger actions on interactive elements.	Pie/Donut	Access data with keyboard interactions by moving focus through the chart segments and legend and trigger actions on interactive elements.
Chart type	Enhancements								
Time series	Access data with keyboard interactions by moving focus through the UI elements and trigger actions on interactive elements.								
Bar	Access data with keyboard interactions by moving focus through the UI elements and trigger actions on interactive elements.								
Pie/Donut	Access data with keyboard interactions by moving focus through the chart segments and legend and trigger actions on interactive elements.								
Platform Analytics Workspace	<p>Keyboard navigation is available on the Data Visualization component. Users can use keyboard interactions to access data by moving focus through the UI elements, and trigger actions on interactive elements. The new keyboard interactions are documented in the usage guidelines for each data visualization type on the ServiceNow® Developer site.</p>								

Product localization information in Tokyo

Cumulative release notes summary on new Tokyo features and products.

Some products may have specific localization requirements or behavior in Tokyo.

Application or feature	Details
AI Search	AI Search supports international languages. For details of language support by feature, see Internationalization support for AI Search .
Commercial Lines Claims	Commercial Lines Claims is available in all languages that the Now Platform supports. For more information, see Activate a language .
Decision Builder	The Localization Framework is integrated in Decision Builder. However, the new Edit in Excel feature does not support localization, so any instance that doesn't use English is not able to use Edit in Excel.
Dynamic Translation	All the messages on the user interface of the Dynamic Translation application have been localized.
Financial Services Business Deposit Operations	Financial Services Business Deposit Operations is available in all languages that the Now Platform supports. For more information, see Activate a language .
Financial Services Business Lifecycle	Financial Services Business Lifecycle is available in all languages that the Now Platform supports. For more information, see Activate a language .
Financial Services Business Loan Operations	Financial Services Business Loan Operations is available in all languages that the Now Platform supports. For more information, see Activate a language .
Financial Services Card Operations	Financial Services Card Operations is available in all languages that the Now Platform supports. For more information, see Activate a language .
Financial Services Client Lifecycle	Financial Services Client Lifecycle is available in all languages that the Now Platform supports. For more information, see Activate a language .
Financial Services Complaint Management	Financial Services Complaint Management is available in all languages that the Now Platform supports. For more information, see Activate a language .
Financial Services Credit Operations	Financial Services Credit Operations is available in all languages that the Now Platform supports. For more information, see Activate a language .

Application or feature	Details
Financial Services Operations Core	Financial Services Operations Core is available in all languages that the Now Platform supports. For more information, see Activate a language .
Financial Services Payment Operations	Financial Services Payment Operations is available in all languages that the Now Platform supports. For more information, see Activate a language .
Financial Services Personal Deposit Operations	Financial Services Personal Deposit Operations is available in all languages that the Now Platform supports. For more information, see Activate a language .
Financial Services Personal Loan Operations	Financial Services Personal Loan Operations is available in all languages that the Now Platform supports. For more information, see Activate a language .
Financial Services Treasury Operations	Financial Services Treasury Operations is available in all languages that the Now Platform supports. For more information, see Activate a language .
Financial Services integration with Socure	Financial Services integration with Socure is available in all languages that the Now Platform supports. For more information, see Activate a language .
Healthcare and Life Sciences Service Management Core	Healthcare and Life Sciences Service Management Core is available in all languages that the Now Platform supports. For more information, see Activate a language .
Natural Language Query	NLQ supports queries in the English, Spanish, French, German, and Japanese languages. However, language support may vary depending on the application or feature consuming NLQ.
Patient Support Services	Patient Support Services is available in all languages that the Now Platform supports. For more information, see Activate a language .
Pre-Visit Management	Pre-Visit Management is available in all languages that the Now Platform supports. For more information, see Activate a language .
Service Catalog	You can translate a catalog item into multiple languages using various translation methods. For more information, see Localization Framework .
Vaccine Administration Management	Vaccine Administration Management is available in all languages that the Now Platform supports. For more information, see Activate a language .

Application or feature	Details
Virtual Agent	The Localization Framework is integrated in Virtual Agent Designer.

Changes to plugins in the Tokyo release

This table lists new plugins in the Tokyo release and existing plugins that were deprecated, planned for deprecation, renamed, or changed in some way.

- **Planned for deprecation:** In preparation for the future deprecation. The application is being prepared for future deprecation. The plugin will be hidden and no longer available for activation but will continue to be supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support knowledge base.
- **Deprecated:** The application is no longer deployed, enhanced, or supported. For details, see the [Deprecation Process \[KB0867184\]](#) article in the Now Support knowledge base.
- **Maintenance mode:** The application will have no new enhancements or activations but will have continued support.

Plugin	Status	Description	Details
Advanced Work Assignment for CSM [com.sn_csm.awa]	Maintenance mode only.	Activating Customer Service (com.sn_customerservice) plugin will activate this plugin.	
Cloud Provisioning and Governance [com.snc.cloud.mgmt]	Plugin requires a separate subscription. Renamed in Rome .	Cloud Provisioning and Governance - Integration with AWS, Azure, VMware OOB and extensible to add support for new clouds.	Renamed to Cloud Provisioning and Governance plugin from Cloud Management plugin.
Cloud Provisioning and Governance Core [com.snc.cloud.core]	Renamed in Rome .	Cloud Provisioning and Governance Core - Discovery and Resource Blocks.	Renamed to Cloud Provisioning and Governance Core plugin from Cloud Management Core plugin.
Cloud Provisioning and Governance - Terraform Connector for IBM Cloud	Planned for deprecation in the U release.		
CMDB: IT Fundamentals [com.sn_apphealth]	Planned for deprecation in the U release.		Transition to CMDB Data Workspace/ Insights and Data Foundation Dashboard.
CMDB Search [com.snc.cmdb_search]	Planned for deprecation in the V release.	Provides enhanced capabilities for	Transition to CMDB Workspace.

Plugin	Status	Description	Details
		searching the CMDB.	
CMS User Interface - Service Management Core [com.snc.service_management.core.cms]	Maintenance mode only.	All Content Management System items (blocks, pages, and menus) used to reference core IT self-service applications are packaged in this plugin. It is also the core foundation for all Service Management applications.	
Configuration Management For Scoped Apps (CMDB) [com.snc.cmdb.scoped]	Active by default in Rome.	Enables scoped apps access to Identification Engine APIs.	
Connect Support [com.glide.connect.support]	Planned for deprecation in the U release.	Builds on the Connect messaging platform and enables support agents to provide real-time assistance to end users, using queues.	Migrate to Advanced Work Assignment and Agent Chat on the Agent Workspace.
Content Management [com.glide.cms]	Maintenance mode only.		
Content Management Extended Types [com.glide.cms.types]	Maintenance mode only.	An extension to Content Management that adds iFrames and Flash frames. You must request the Content Management System (CMS) application from ServiceNow personnel. Instead of activating CMS, use Service Portal for new development. Service Portal is an	

Plugin	Status	Description	Details
		alternative to CMS with a refined user experience, and is active by default in the base system. See Service Portal and Content Management and Service Portal .	
Content Management IFrame Type [com.glide.cms.type.iframe]	Maintenance mode only.		
Content Management Flash Type [com.glide.cms.type.flash]	Maintenance mode only.		
CSM Account Hierarchy [com.snc.sn_csm_account_hierarchy]	Maintenance mode only.		
CSM Lookup and Verify [com.snc.sn_csm_lookup_verify]	Maintenance mode only.		
CSM Workspace [com.snc.agent_workspace.csm]	Planned for deprecation in the W release.		
CSM Workspace - Components [com.csm_workspace_components]	Maintenance mode only.		
Dashboard Builder	Changed in Tokyo.	Helps to create dashboards and share them with other users.	Removed the menu item that redirects the users to the Dashboard Builder on zBoot and upgrade instances. On upgrade, the existing Dashboard from the Dashboard Builder will be merged into the UI Builder pages and available to admins to configure from the technical

Plugin	Status	Description	Details
			dashboard experience.
Document Viewer [com.snc.documentviewer]		Enables you to view documents directly within the platform rather than downloading them to their own file system.	
Embedded Help [com.glide.embedded_help]	Embedded help is only available in Core UI. It is not compatible with UI15.		
ESS Portal (implemented within Content Management) [com.glide.cms.extensions]	Maintenance mode only.	ESS portal content management application. Demo data includes the actual ESS portal. You must request the Content Management System (CMS) application from ServiceNow personnel. Instead of activating CMS, use Service Portal for new development. Service Portal is an alternative to CMS with a refined user experience, and is active by default in the base system. See Service Portal and Content Management and Service Portal .	
Event Management Connector [com.sn_em_connector]	Deprecated.		Install the Event Management Connectors application from the ServiceNow Store.
Facilities Move Management [com.snc.facilities_service_automation.move]	Maintenance mode only.	Enables single user move functionality as	Transition to Workplace Service Delivery.

Plugin	Status	Description	Details
	Planned for deprecation in March 2025 or subscription term end.	well as Enterprise Move and move planning functionality.	
Facilities Service Management [com.snc.facilities_service_automation]	Planned for deprecation in March 2025 or last subscription term end.	Manages facilities requests and enables users to report and track requests by their location. To view requests on a floor plan, the Facilities Visualization Workbench (com.snc.facilities_service_automation.fvw) plugin is required. Integration files installed when the Facilities Visualization Workbench (com.snc.facilities_service_automation.fvw) plugin is also installed. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	Transition to Workplace Service Delivery.
Facilities Service Management CMS Portal [com.snc.facilities_service_automation.cms]	Maintenance mode only.		
Facilities Service Management Mobile [com.snc.facilities_service_automation_m]	Maintenance mode only.	Manages facilities service management mobile components.	
Facilities Visualization Workbench [com.snc.facilities_service_automation.fvw]	Planned for deprecation in March 2025 or subscription term end.	Enables the interactive floor plan functionality.	Transition to Workplace Service Delivery.
Field Service Management CMS Portal	Maintenance mode only.	Lets you launch Field Service Automation and	


Plugin	Status	Description	Details
[com.snc.work_management.cms]		other service management applications from a single CMS page.	
Finance Service Management [com.snc.finance_service_automation]	Planned for deprecation in February 2023 or last subscription term end.	Lets you launch Finance Service Automation and other service management applications. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	
Field Service Management Mobile (Legacy) [com.snc.work_management_m]	Planned for deprecation in the V release.	Helps your organization manage location-based work more efficiently and safely.	Migrate to the new Field Service Mobile application (com.sn_fsm_mobile) that provides all of the features in Field Service Management Mobile with an improved native experience and better offline capabilities.
Finance Common [com.sn_fin]	Renamed in Tokyo.	Maintains primary data such as Enterprise Resource Planning (ERP) sources, legal entities, accounting periods.	Renamed to Finance Common Architecture.
GRC: GDPR DPIA Accelerator [com.sn_irm_gdpr_dpia]	Deprecated in Tokyo .	Allows you to perform data protection impact assessments (DPIA) to protect the personal data of individuals within and outside of the European Union (EU).	Migrate to Privacy Management.

Plugin	Status	Description	Details
GRC: NIST RMF Use Case Accelerator [app-irm-nist-rmf]	Deprecated in San Diego.		This is replaced by GRC: Continuous Authorization and Monitoring.
GRC: RiskLens Integration [com.sn_irm_risklens]	Deprecated in November 2020.		Migrate to RiskLens™ Assessment Integration on the ServiceNow Store.
Homepages	Changed in San Diego.		An action is provided to migrate homepages to dashboards on demand from the sys_portal_page list.
HR Service Delivery v1.0 (Legacy) [com.snc.hr.core.cms, com.snc.hr.core, com.snc.hr.hr_connect, con.snc.hr.pa, com.snc.hr.service_portal]	Planned for deprecation in the W release or in March 2024.	Unlocks enterprise productivity and give your employees the service experience they deserve.	Migrate to the Human Resources Core v2.0 scoped application [com.sn_hr_core].
HR Workday Integration [com.sn_hr_wday]	Deprecated and non-supported.		
Human Resources Application: Core CMS [com.snc.hr.core.cms]	Maintenance mode only.	Provides case and knowledge management for HR. Standardizes the documentation, interaction, and fulfillment of employee inquires and requests while having visibility into the quantity and type of cases coming in.	
Human Resources Scoped App: NLU Model [com.sn_hr_nlu_model]	Changed in Rome.	Activates the NLU model used by HR Virtual Agent to identify conversation topics. It provides NLU models in German, French, Spanish,	Renamed to HR Service Delivery NLU Model for Virtual Agent Conversations (sn_hr_nlu). This plugin is available on the ServiceNow Store.

Plugin	Status	Description	Details
		and Japanese languages in addition to the English language NLU model.	
IBM Connector [com.sn.cmp.ibm]	Planned for deprecation in the U release.		Select and activate alternative capability, Integrations Hub or Integrations with Anisble.
IBM QRadar on IBM E-force Exchange	Deprecated in October 2020.		Replaced by IBM QRadar Offense Ingestion for Security Operations on the ServiceNow Store.
Integration - OpenID SSO [com.snc.integration.sso.openid]	Planned for deprecation the U release.	Legacy version of single sign-on used with an external OpenID Provider (OP). OpenID Connect is provided in London but is limited to web services.	Transition to the "Integration - Multiple Provider Single Sign-On Installer" plugin (com.snc.integration.sso.multi.installer) and configure IDP to use OIDC-based SSO feature.
Integration Hub SAP Spokes [com.sn.sap.ecc.rfc.spoke, com.sn.sap.ecc.idoc.spoke, com.sn.sap.s4.hana.rfc, com.sn.sap.s4.idoc.spk, com.sn.sap.ariba.spoke, com.sn.successfactors.spoke, com.sn.sap.fieldglass, com.sn.sap.concur.spok]	Deprecated in San Diego.		Migrate to SAP spokes on the ServiceNow Store.
Investment Funding [com.snc.investment_planning], [com.snc.investment_planning_pmo]	Deprecated in Tokyo.	Enables continuous and flexible investment funding for the funding entities based on their priorities and strategic objectives. It provides the options of top-down and bottom-up funding and	Activate Investment Funding on the ServiceNow Store (to be released on Store in September 2021).

Plugin	Status	Description	Details
		defunding an entity.	
iText5 PDF generator [com.snc.pdf_generator]	Deprecated in Tokyo.	Tool to generate PDF documents.	This is replaced by iText7 PDF generator.
ITSM Mobile [com.sn_itsm_mobile]	Deprecated in San Diego.	ITSM Mobile Experience	Migrate to ITSM Mobile Agent on the ServiceNow Store.
ITSM Pro - Service Owner Workspace [com.spm_owner_workspace]	Planned for deprecation on subscription term end or on migration to Digital Portfolio Management.	Provides a premium Service Portfolio Management experience. Portfolio managers and service owners access an integrated and graphically intuitive user interface to manage and monitor portfolios and services.	Migrate to Digital Portfolio Management on the ServiceNow Store.
ITSM Workforce Optimization [sn_wfo_itsm, sn_wfo_itsm_cnt]	Planned for deprecation in the V release.	Helps you manage and maintain the productivity of your workforce from a single location.	Install the Workforce Optimization for ITSM Configurable Workspace application from the ServiceNow store.
Legal Service Management [com.snc.legal_service_automation]	Planned for deprecation in February 2023 or last subscription term end.	Lets you launch Legal Service Automation and other service management applications. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	
Legacy Survey [com.snc.bestpractice.task_survey], [com.glideapp.survey],	Deprecated in Rome.		

Plugin	Status	Description	Details
[com.snc.assessment], [com.glideapp.survey_wizard]			
List v3 components [com.glide.ui.list_v3_components]	No longer available for deployments. Contact Customer Service and Support for assistance.	List v3 Components (including REST endpoints, directives, and templates)	
Lookup and Verify [com.snc.sn_lookup_and_verify_config]	Maintenance mode only.		
MaestroRS [app-irm-bcm]	Planned for deprecation on customer's specific contract end term for MaestroRS application.		<p>Activate the four Business Continuity Management replacement applications on the ServiceNow Store;</p> <ul style="list-style-type: none"> • GRC: Business Continuity Management – Core • GRC: Business Continuity Planning • GRC: Business Impact Analysis • GRC: Business Continuity Management – Components
Marketing Service Management [com.snc.marketing_service_automation]	Planned for deprecation in February 2023 or last subscription term end.	Lets you launch Marketing Service Automation and other service management applications. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	
MID Server support for integrations using TLS 1.1 and below versions	Planned for deprecation in the U release.		Use TLS 1.2 or above version for

Plugin	Status	Description	Details
			integrations with the MID server.
Mobile Analytics [com.glide.mobile.analytics]	Replaced as the core plugin by the User Experience Analytics plugin.	<ul style="list-style-type: none"> The User Experience Analytics [com.glide.appsee] is the core plugin for Tokyo. In new and upgraded instances, this plugin checks for new web and mobile applications to register, and provides access to the Dashboard. The Mobile Analytics [com.glide.mobile.analytics] plugin contains the scheduled jobs and business rules to automatically register mobile apps, but uses the APIs and tables from the com.glide.appsee plugin. 	Replaced by User Experience Analytics [com.glide.appsee] as the core plugin.
Mobile Classic	Deprecated in Tokyo.	User interface for mobile devices running iOS 6+ or Android 4+ with the Chrome browser.	Migrate to ServiceNow Mobile. For guidance on migration, see Migration Guide 
Multi SSO (v1) [com.snc.integration.sso.multi.installer]	Deprecated in Tokyo.		Migrate to the Multi SSO (v2) plugin.
Onboarding Mobile [com.sn_hr_onboarding]	Deprecated in Tokyo .		Migrate to the HR Mobile plugin on the NOW Mobile application.
OpenID Single Sign-On [com.snc.integrations.sso.openid]	Planned for deprecation in the U release.		Transition to "Integration - Multiple Provider Single Sign-On

Plugin	Status	Description	Details
			Installer “ plugin (com.snc.integration.sso.multi.insto and configure IDP to use the SSO feature.
Operator Workspace [com.itom-noc-app]		Content for Operator Workspace. New Dashboard page for the Operator role on the Agent Workspace page.	
Performance Analytics Premium for Service Watch Insight [com.snc.pa.premium.swi]	Deprecated in Tokyo.	Enables the Performance Analytics functionality that you are entitled to with a subscription that includes Service Watch Insight and Performance Analytics.	
Purchase and Receipt Automation [com.snc.sn_pr]	Renamed in Tokyo.	Helps automate the end-to-end procurement process from sourcing through requisitioning, to order fulfilment, receipt, and payment. Maintain visibility into the process to identify bottlenecks and reduce risk.	Renamed to Sourcing and Purchasing Automation.
Recorded Future Integration for Security Operations [com.snc.threat.recordedfuture]	Deprecated in Tokyo .		Migrate to Recorded Future for Security Incident Response and Threat Intelligence on the ServiceNow Store.
Risk Vendor Portal [com.snc.vendor_portal]	Planned for deprecation in the Now Platform Rome release.		Upgrade to GRC Vendor Risk Management v10.0.2 and the new Vendor Assessment Portal

Plugin	Status	Description	Details
			will automatically be loaded.
Salesforce Spoke v1 for IntegrationHub [com.sn.salesforce.spoke]	Deprecated in San Diego.		Migrate to Salesforce Spoke for Integration Hub v1.2 (com.sn.sforce.v2.spoke).
SAML 1.1 Single Sign-on - Update 1 [com.snc.sso.saml11.update1]	Planned for deprecation in the U release.		Transition to "Integration - Multiple Provider Single Sign-On Installer " plugin (com.snc.integration.sso.multi.insto and configure IDP to use the SSO feature.
SAML 1.1 Single Sign-On [com.snc.sso.saml11]	Planned for deprecation in the U release.		Transition to "Integration - Multiple Provider Single Sign-On Installer " plugin (com.snc.integration.sso.multi.insto and configure IDP to use the SSO feature.
SCCM Plugins [com.snc.integration.sccm2007], [com.snc.integration.sccm2012v2], [com.snc.integration.sccm2016]	Deprecated in Tokyo.		Activate replacement plugin, Service Graph Connector for SCCM on the ServiceNow Store.
Service360 [com.snc.service_360]	Deprecated in Rome.	Tracks KPIs for Service Portfolio Management plugin.	Migrate to Digital Portfolio Management on the ServiceNow Store.
Service Catalog CMS Extension [com.glideapp.servicecatalog.cms]	Maintenance mode only.	Provides the ability to define the catalog experience within CMS.	
Service Management Application Designer [com.snc.service_management.core]	Deprecated in Tokyo .	Allows you to create custom applications that use a similar service management workflow.	The feature can be enabled using App Engine Studio (com.snc.app-engine-studio).
Service Management Geolocation Mobile	Planned for deprecation in the V release.	Provides a menu in the mobile UI for Service	Migrate to the new Field Service Mobile

Plugin	Status	Description	Details
[com.snc.service_management_m]		Management Geolocation.	application that provides all of the features in Service Management Geolocation with an improved native experience.
ServiceNow Add-Ins for Microsoft Outlook plugin [com.sn_outlook_addin]	Renamed to ServiceNow Add-Ins for Microsoft Office in Rome.	Enables users to interact with ServiceNow from within Microsoft Office.	
ShoppingHub [com.snc.sn_shop]	Renamed in Tokyo.	Enables employees to engage with the procurement organization anytime, anywhere. Your employees can shop for third-party goods and services that they need at work with complete transparency into the procurement process from sourcing through payment.	Renamed to Procurement Common Architecture.
Social Q&A [com.sn_kb_social_qa]	Planned for deprecation in a future release.	Allows users to ask and respond to questions and vote on questions and answers. Social Q&A extends the Knowledge application and uses existing Knowledge functionality such as user criteria and multiple knowledge bases. By default, this plugin is active for existing customers upgrading to the Paris release. Beginning with Paris, the plugin is	

Plugin	Status	Description	Details
		inactive for new customers.	
Social Q&A UI pages artifacts [com.snc.knowledge.social_qa_ui]	Planned for deprecation in the Now Platform Rome release.	Maintains UI pages artifacts for the legacy Social Q&A application. Try to use Communities instead of Social Q&A for creating and maintaining engaging user experiences that are modular and responsive to mobile devices. For more information, see product documentation about Communities . By default, this plugin is active for existing customers upgrading to the Paris release. Beginning with Paris, the plugin is inactive for new customers.	
Software Asset Management Classic UI	Planned for deprecation in the U release.	Classic user interface for Software Asset Management (com.snc.software_asset_management).	Migrate to Software Asset Workspace (com.sn_sam_workspace) user interface.
Standardized Information Gathering (SIG) Assessment [com.snc.sig_asmt_core]	Planned for deprecation in the V release.		
Standardized Information Gathering (SIG) Questionnaire [com.sn_sig_app]	Planned for deprecation in the V release.		
Structured Problem Analysis [com.snc.kt_pa]	Deprecated in San Diego.	Lets you track problem analysis process through the system.	Migrate to the new Advanced Problem Management on the ServiceNow Store.

Plugin	Status	Description	Details
Timeline Visualization [com.snc.timeline_visualization]	Changed in Rome.	Timeline Visualization plugin enables graphical representation of activities over time. You can use this visualization to provide a high-level view of your organization's strategic and operational activities such as incidents, problems, changes, and projects.	Dependency on the Project Management (com.snc.project_management_v) plugin is removed. Activating the Timeline Visualization plugin does not activate the Project Management plugin.
Trusted Security Circles [sn_ti], [sn_tis_a]	Planned for deprecation in September 2023 or last subscription term end.		
Vaccine Administration Management (VAM) 5.0 for CSM [sn_vaccine_sm]	Deprecated in Tokyo.	Provides capabilities to manage vaccinations for infectious diseases from start to finish.	Transition to Healthcare and Life Sciences Service Management.
Vendor Manager Workspace (Legacy) [com.snc.vlm.vmw]	Planned for deprecation in the U release.	Access to the Vendor Manager Workspace.	Migrate to the new workspace, Vendor Management Workspace on the ServiceNow Store.
Vendor Performance Management [com.snc.vendor_performance], [com.snc.vendor_ticket]	Planned for deprecation in March 2024 or subscription term end.	Provides capabilities to measure, manage, and track vendor data and compare performance characteristics in unique graphical views.	Transition to Vendor Manager Workspace, included in ITSM Pro v2 subscription package.
Virtual Agent Analytics Dashboard [com.glide.cs.pa]	Deprecated in Tokyo.	Virtual Agent out-of-the-box analytics dashboard for reviewing chatbot.	Migrate to replacement technology, Conversational Analytics v1.0 on the ServiceNow Store.

Plugin	Status	Description	Details
Virtual Agent Web Client for IE11 [com.glide.cs.chatbot, com.glide.cs.chatbot.life]	Planned for deprecation in the U release.		
Workforce Optimization for CSM (Legacy) [com_snc_wfo_csm]	Planned for deprecation in the V release.		Transition to the Workforce Optimization for CSM application that is available from the ServiceNow Store. You can configure Workforce Optimization for Customer Service using the UI Builder.
Workforce Optimization for ITSM (Legacy) [com.snc.wfo_itsm]	Planned for deprecation in the V release.		Transition to the Workforce Optimization for ITSM (sn_wfo_cfg_itsm) application that is available from the ServiceNow Store. You can configure Workforce Optimization for IT Service Management using the UI Builder.







Release notes for upgrading from Rome


When you upgrade from the Rome release, understand the fixes in each release version, notable changes for the user interface, browser support, plugin updates, and each feature's upgrade and migration tasks if applicable.

Upgrading from Rome to Tokyo

When upgrading from Rome...



<p>Tokyo highlights</p>  <p>High-level overview of products and features in Tokyo</p>	<p>Combined product release notes</p>  <p>Detailed information on new products and features from Rome to Tokyo</p>	<p>Personalized PRB release notes</p>  <p>Generate a list of issues that were fixed between your current version and available target versions</p>
<p>Changes to plugins from Rome to Tokyo</p>  <p>List of new, changed, renamed, and deprecated plugins</p>	<p>Available patches and hotfixes</p>  <p>Release notes for fixed issues</p>	<p>Browser support</p>  <p>Supported browser versions and additional requirements for specific products</p>










<p>Accessibility and conformance</p>  <p>Accessibility conformance reports based on the voluntary product accessibility template (VPAT)</p>		
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Combined product release notes for upgrades from Rome to Tokyo




















To help you upgrade from Rome to Tokyo, we have combined the cross-family release notes for each product onto one page. Select the products you have to customize the release notes results.




















Select your products to view release notes from Rome to Tokyo




















The table below has a list of all products available between Rome and Tokyo. Use the **Filter by** feature to select the products you are interested in. The table will filter to show you the combined release notes for your selected products. Click on the links to read the combined release notes for each product.




















Product	Combined release notes
Account Lifecycle Events	Link 
Accounts Payable Operations	Link 
Admin Center	Link 
Adoption Services	Link 
Advanced Goal Framework	Link 
Advanced Risk	Link 
Advanced Work Assignment	Link 
Agent Chat	Link 
Agent Chat and Sidebar	Link 




















Product	Combined release notes
Agent Client Collector	Link 
Agent Workspace for HR Case Management	Link 
Agile Development 2.0	Link 
AI Search	Link 
Alignment Planner Workspace	Link 
API	Link 
App Engine Studio	Link 
Application Management	Link 
Application Manager	Link 
Application Portfolio Management	Link 
Application Usage Overview dashboard	Link 
Application Vulnerability Response	Link 
Assessments and Surveys	Link 
Asset Management	Link 
Audit Management	Link 
Audit Workspace	Link 
Authentication	Link 
Automated Test Framework	Link 
Benchmarks	Link 




















Product	Combined release notes
Business Continuity Management	Link 
Career Assessment	Link 
Case and Knowledge Management	Link 
Change Management	Link 
Clinical Device Management	Link 
Cloud Call Center	Link 
Cloud Insights	Link 
Cloud Provisioning and Governance	Link 
Coaching	Link 
Commercial Lines Claims	Link 
Common GRC feature	Link 
Common Service Data Model	Link 
Compliance Case Management	Link 
Compliance Workspace	Link 
Configuration Compliance	Link 
Configuration Management Database (CMDB)	Link 
Container Vulnerability Response	Link 
Contextual Search	Link 
Continuous Authorization and Monitoring (CAM)	Link 




















Product	Combined release notes
Conversational Interfaces	Link 
Conversational Interfaces Home	Link 
Core Now Platform	Link 
Customer Service Management	Link 
Customer Service Management (CSM)	Link 
Dashboards	Link 
Data Discovery	Link 
Data Separation	Link 
Decision Builder	Link 
Default admin landing page	Link 
Delegated Development and deployment	Link 
DevOps	Link 
DevOps Change Velocity	Link 
DevOps Config	Link 
Digital End-User Experience	Link 
Digital Portfolio Management	Link 
Document Intelligence	Link 
Document Services	Link 
Document Templates	Link 




















Product	Combined release notes
Domain separation	Link 
Dynamic Translation	Link 
Employee Center	Link 
Employee Document Management	Link 
Employee Growth and Development Activities	Link 
Employee Growth and Development Core	Link 
Employee Journey Management	Link 
Employee Relations	Link 
Encryption and Key Management	Link 
Encryption and Key Management Framework	Link 
Encryption Key Management	Link 
Enterprise Asset Management	Link 
Environmental, Social, and Governance Management	Link 
Equifax spoke	Link 
ERP Customization Mining	Link 
ERP Integration	Link 
Event Management	Link 
Export to PowerPoint for Strategic Portfolio Management	Link 
Field Service Management	Link 




















Product	Combined release notes
Financial Management	Link 
Financial Services Business Deposit Operations	Link 
Financial Services Business Lifecycle	Link 
Financial Services Business Loan Operations	Link 
Financial Services Card Operations	Link 
Financial Services Client Lifecycle	Link 
Financial Services Complaint Management	Link 
Financial Services Credit Operations	Link 
Financial Services Customer Lifecycle Operations	Link 
Financial Services Deposit Operations	Link 
Financial Services Insurance Policy Operations	Link 
Financial Services integration with Jack Henry Associates jXchange	Link 
Financial Services integration with Socure	Link 
Financial Services Loan Operations	Link 
Financial Services Operations Core	Link 
Financial Services Operations Integration with FRISS	Link 
Financial Services Operations Integration with Jack Henry jXchange	Link 
Financial Services Payment Operations	Link 
Financial Services Personal Deposit Operations	Link 




















Product	Combined release notes
Financial Services Personal Loan Operations	Link 
Financial Services Treasury Operations	Link 
Flow Designer	Link 
Generative AI Controller	Link 
Goal Framework	Link 
Goal Framework for SPM	Link 
Governance, Risk, and Compliance	Link 
Granular Delegation	Link 
GRC: integrations with third-party content	Link 
Group Life Servicing	Link 
Hardware Asset Management 3.0	Link 
Hardware Asset Management 4.0	Link 
Hardware Asset Management 5.0	Link 
Hardware Asset Management 7.0.0	Link 
Hardware Asset Management 8.0.0	Link 
Healthcare and Life Sciences Service Management Core	Link 
Health Log Analytics	Link 
Help Center	Link 
Hermes Messaging Service	Link 




















Product	Combined release notes
HR Service Delivery	Link 
HR Service Delivery Case and Knowledge Management	Link 
HR Service Delivery Enterprise Onboarding and Transitions	Link 
HR Service Delivery Integration with Magnit	Link 
HR Service Delivery Integration with Workday Learning	Link 
Identity and Authentication	Link 
Import and Export	Link 
Incident Management	Link 
Individual Life Servicing	Link 
Industry products	Link 
Instance Data Replication	Link 
Instance Scan	Link 
Integration Hub	Link 
Intelligent Service Delivery	Link 
Intelligent Servicing for Fraud	Link 
Investment Funding	Link 
ITOM Governance	Link 
ITOM Health	Link 
ITOM Optimization	Link 




















Product	Combined release notes
ITOM Visibility	Link 
ITSM Agent Workspace	Link 
ITSM Mobile	Link 
ITSM Virtual Agent	Link 
Journey designer	Link 
Journey designer 2.0	Link 
Knowledge Management	Link 
Learning	Link 
Legal Service Delivery	Link 
Localization Framework	Link 
Manager Hub	Link 
Manufacturing	Link 
Manufacturing Process Manager	Link 
MetricBase	Link 
MID Server	Link 
Mobile	Link 
Natural Language Query	Link 
Natural Language Understanding	Link 
Next Experience	Link 




















Product	Combined release notes
Next Experience Components	Link 
Next Experience Developer Tools	Link 
Next Experience UI	Link 
Next Experience user interface	Link 
Notifications	Link 
Notify	Link 
Now Assist	Link 
Now Assist for CSM	Link 
Now Mobile app	Link 
Now Platform performance	Link 
Omnichannel Callback	Link 
Onboarding Experience	Link 
On-Call Scheduling	Link 
Operational Resilience	Link 
Operational Technology Change Management	Link 
Operational Technology Incident Management v2	Link 
Operational Technology Manager	Link 
Operational Technology Service Management	Link 
Operational Technology Vulnerability Response	Link 












Product	Combined release notes
Order Management	Link 
Order Management for CSM	Link 
Order Management for Customer Service Management	Link 
Order Management for Telecommunications and Media	Link 
Order Management for Telecommunications, Media, and Technology	Link 
Password Reset	Link 
Patient Support Services	Link 
Performance Analytics	Link 
Personal Lines Claims	Link 
Platform Analytics Workspace	Link 
Platform Security	Link 
Policy and Compliance integrator	Link 
Policy and Compliance Management	Link 
Portfolio Planning	Link 
Pre-Visit Management	Link 
Privacy Management	Link 
Proactive Prompts	Link 
Proactive Service Experience Workflows	Link 
Proactive Service Experience Workflows (Technology)	Link 

Product	Combined release notes
Proactive Service Experience Workflows (Telecommunications)	Link 
Proactive Triggers	Link 
Problem Management	Link 
Process Automation Designer	Link 
Process Mining	Link 
Process Optimization	Link 
Procurement Service Management	Link 
Project Portfolio Management	Link 
Project Workspace	Link 
Public Sector Digital Services	Link 
Recommendation Framework	Link 
Redox Inbound Integration	Link 
Regulatory Change Management	Link 
Release Management	Link 
Reporting	Link 
Responsive dashboards	Link 
Risk Workspace	Link 
Robotic Process Automation (RPA) Hub	Link 
Scaled Agile Framework (SAFe)	Link 

Product	Combined release notes
Scripting	Link 
Search administration	Link 
Security Center	Link 
Security Incident Response	Link 
Service Bridge	Link 
Service Bridge (Technology)	Link 
Service Bridge (Telecommunications)	Link 
Service Builder	Link 
Service Catalog	Link 
Service Desk	Link 
Service Graph Connector Integration for Claroty CTD	Link 
Service Level Management	Link 
ServiceNow Performance dashboard	Link 
ServiceNow Studio	Link 
ServiceNow Voice	Link 
Service Operations Workspace for ITOM	Link 
Service Operations Workspace for ITSM	Link 
Service Portal	Link 
Service Portfolio Management	Link 

Product	Combined release notes
Sidebar	Link 
Sitemap Generator	Link 
Skills Intelligence	Link 
Skills Management	Link 
Software Asset Management	Link 
Sourcing and Procurement Operations	Link 
SPM Benchmarks	Link 
Store Usage Overview dashboard	Link 
Strategic Planning	Link 
Studio	Link 
Subscription Management	Link 
Supplier Lifecycle Management	Link 
System Administration dashboard	Link 
System Clone	Link 
System Diagnostics homepage	Link 
Table Builder	Link 
Table Builder for App Engine	Link 
Task Intelligence for ITSM	Link 
Technology Provider Service Management	Link 

Product	Combined release notes
Telecommunications	Link 
Telecommunications, Media and Technology Assurance	Link 
Telecommunications Network Inventory	Link 
Telecommunications Service Management	Link 
Test Management 1.0	Link 
Test Management 2.0	Link 
Theme Builder	Link 
Third-party Risk Management	Link 
Threat Intelligence	Link 
Time Card Management	Link 
UI Builder	Link 
Universal Request	Link 
Universal Task	Link 
Upgrade Center	Link 
User Experience Analytics	Link 
Vaccine Administration Management	Link 
Vendor Management Workspace	Link 
Vendor Manager Workspace	Link 
Vendor Risk Management	Link 

Product	Combined release notes
Virtual Agent	Link 
Visual Task Boards	Link 
Vulnerability Response	Link 
Vulnerability Response integrations	Link 
Vulnerability Response Integration with Claroty CTD	Link 
Vulnerability Response Integration with Microsoft Defender for IoT	Link 
Walk-up Experience	Link 
Workforce Optimization for Customer Service	Link 
Workforce Optimization for HR	Link 
Workforce Optimization for ITSM	Link 
Workspace	Link 

Changes to plugins from Rome to Tokyo

Before you upgrade from Rome to Tokyo, read the release notes for information about new plugins and existing plugins that were deprecated, renamed, or changed in some way.

Rome and San Diego plugin changes

See [Rome plugin changes](#) for more information.

See [San Diego plugin changes](#) for more information.

Tokyo plugin changes

Plugin	Status	Description	Details
Advanced Work Assignment for CSM [com.sn_csm.awa]	Maintenance mode only.	Activating Customer Service (com.sn_customerservice) plugin will activate this plugin.	

Plugin	Status	Description	Details
Amazon Web Services [com.snc.aws]	Deprecated and non-supported.	Provided Integration with Amazon Web Services - CloudFormation, EC2	Replaced by Cloud API [com.snc.cloud.ap].
Cloud Provisioning and Governance [com.snc.cloud.mgmt]	Plugin requires a separate subscription. Renamed in Rome.	Cloud Provisioning and Governance - Integration with AWS, Azure, VMware OOB and extensible to add support for new clouds.	Renamed to Cloud Provisioning and Governance plugin from Cloud Management plugin.
Cloud Provisioning and Governance Core [com.snc.cloud.core]	Renamed in Rome.	Cloud Provisioning and Governance Core - Discovery and Resource Blocks.	Renamed to Cloud Provisioning and Governance Core plugin from Cloud Management Core plugin.
Cloud Provisioning and Governance - Terraform Connector for IBM Cloud	Planned for deprecation in the U release..		
CMDB: IT Fundamentals [com.sn_apphealth]	Planned for deprecation in the U release.		Transition to CMDB Data Workspace/ Insights and Data Foundation Dashboard.
CMDB Search [com.snc.cmdb_search]	Planned for deprecation in the V release..	Provides enhanced capabilities for searching the CMDB.	Transition to CMDB Workspace.
CMS User Interface - Service Management Core [com.snc.service_management.core.cms]	Maintenance mode only.	All Content Management System items (blocks, pages, and menus) used to reference core IT self-service applications are packaged in this plugin. It is also the core foundation for all Service Management applications.	
Configuration Management For Scoped Apps (CMDB)	Active by default in Rome.	Enables scoped apps access to	

Plugin	Status	Description	Details
[com.snc.cmdb.scoped]		Identification Engine APIs.	
Connect Support [com.glide.connect.support]	Maintenance mode only.	Builds on the Connect messaging platform and enables support agents to provide real-time assistance to end users, using queues.	
Content Management [com.glide.cms]	Maintenance mode only.		
Content Management Extended Types [com.glide.cms.types]	Maintenance mode only.	<p>An extension to Content Management that adds iFrames and Flash frames.</p> <p>You must request the Content Management System (CMS) application from ServiceNow personnel. Instead of activating CMS, use Service Portal for new development. Service Portal is an alternative to CMS with a refined user experience, and is active by default in the base system. See Service Portal and Content Management and Service Portal.</p>	
Content Management IFrame Type [com.glide.cms.type.iframe]	Maintenance mode only.		
Content Management Flash Type	Maintenance mode only.		

Plugin	Status	Description	Details
[com.glide.cms.type.flash]			
CSM Account Hierarchy [com.snc.sn_csm_account_hierarchy]	Maintenance mode only.		
CSM Lookup and Verify [com.snc.sn_csm_lookup_verify]	Maintenance mode only.		
CSM Workspace [com.snc.agent_workspace.csm]	Planned for deprecation in the W release.		
CSM Workspace - Components [com.csm_workspace_components]	Maintenance mode only.		
Dashboard Builder	Changed in Tokyo.	Helps to create dashboards and share them with other users.	Removed the menu item that redirects the users to the Dashboard Builder on zBoot and upgrade instances. On upgrade, the existing Dashboard from the Dashboard Builder will be merged into the UI Builder pages and available to admins to configure from the technical dashboard experience.
Document Viewer [com.snc.documentviewer]		Enables you to view documents directly within the platform rather than downloading them to their own file system.	
Embedded Help [com.glide.embedded_help]	Embedded help is only available in Core UI.		
ESS Portal (implemented within Content Management)	Maintenance mode only.	ESS portal content management application.	

Plugin	Status	Description	Details
[com.glide.cms.extensions]		Demo data includes the actual ESS portal. You must request the Content Management System (CMS) application from ServiceNow personnel. Instead of activating CMS, use Service Portal for new development. Service Portal is an alternative to CMS with a refined user experience, and is active by default in the base system. See Service Portal and Content Management and Service Portal .	
Event Management Connector [com.sn_em_connector]	Deprecated.		Install the Event Management Connectors application from the ServiceNow Store.
Facilities Move Management [com.snc.facilities_service_automation.move]	Maintenance mode only. Planned for deprecation in March 2025 or subscription term end.	Enables single user move functionality as well as Enterprise Move and move planning functionality.	Transition to Workplace Service Delivery.
Facilities Service Management [com.snc.facilities_service_automation.fvw]	Planned for deprecation in March 2025 or last subscription term end.	Manages facilities requests and enables users to report and track requests by their location. To view requests on a floor plan, the Facilities Visualization Workbench (com.snc.facilities_service_automation.fvw) plugin is required.	Transition to Workplace Service Delivery.


Plugin	Status	Description	Details
		<p>Integration files installed when the Facilities Visualization Workbench (com.snc.facilities_service_automation.fvw) plugin is also installed.</p> <p>Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.</p>	
<p>Facilities Service Management CMS Portal</p> <p>[com.snc.facilities_service_automation.cms]</p>	Maintenance mode only.		
<p>Facilities Service Management Mobile</p> <p>[com.snc.facilities_service_automation_m]</p>	Maintenance mode only.	Manages facilities service management mobile components.	
<p>Facilities Service Management Floor Plan Viewer</p> <p>[com.snc.facilities_service_automation.fpv]</p>	Deprecated.	Provided a floor plan view as part of Facilities Service Management. The floor plan view has been replaced by interactive facility maps.	
<p>Facilities Visualization Workbench</p> <p>[com.snc.facilities_service_automation.fvw]</p>	Planned for deprecation in March 2025 or subscription term end.	Enables the interactive floor plan functionality.	Transition to Workplace Service Delivery.
<p>Field Service Management CMS Portal</p> <p>[com.snc.work_management.cms]</p>	Maintenance mode only.	Lets you launch Field Service Automation and other service management applications from a single CMS page.	
<p>Finance Service Management</p> <p>[com.snc.finance_service_automation]</p>	Planned for deprecation in February 2023 or earlier.	Lets you launch Finance Service Automation and other service	

Plugin	Status	Description	Details
	last subscription term end.	management applications. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	
Field Service Management Mobile (Legacy) [com.snc.work_management_m]	Planned for deprecation in the V release.	Helps your organization manage location-based work more efficiently and safely.	Migrate to the new Field Service Mobile application (com.sn_fsm_mobile) that provides all of the features in Field Service Management Mobile with an improved native experience and better offline capabilities.
GRC: GDPR DPIA Accelerator [com.sn_irm_gdpr_dpia]	Deprecated in Tokyo.	Allows you to perform data protection impact assessments (DPIA) to protect the personal data of individuals within and outside of the European Union (EU).	Migrate to Privacy Management.
GRC: NIST RMF Use Case Accelerator [app-irm-nist-rmf]	Deprecated in San Diego.		Replaced by GRC: Continuous Authorization and Monitoring.
GRC: RiskLens Integration [com.sn_irm_risklens]	Deprecated in November 2020.		Migrate to RiskLens™ Assessment Integration on the ServiceNow Store.
Homepages	Changed in San Diego.		An action is provided to migrate homepages to dashboards on demand from the sys_portal_page list.

Plugin	Status	Description	Details
HR Service Delivery v1.0 (Legacy) [com.snc.hr.core.cms, com.snc.hr.core, com.snc.hr.hr_connect, con.snc.hr.pa, com.snc.hr.service_portal]	Planned for deprecation in August 2024.	Unlocks enterprise productivity and give your employees the service experience they deserve.	Migrate to the Human Resources Core v2.0 scoped application [com.sn_hr_core].
HR Workday Integration [com.sn_hr_wday]	Deprecated and non-supported.		
Human Resources Application: Core CMS [com.snc.hr.core.cms]	Maintenance mode only.	Provides case and knowledge management for HR. Standardizes the documentation, interaction, and fulfillment of employee inquires and requests while having visibility into the quantity and type of cases coming in.	
Human Resources Scoped App: NLU Model [com.sn_hr_nlu_model]	Changed in Rome.	Activates the NLU model used by HR Virtual Agent to identify conversation topics. It provides NLU models in German, French, Spanish, and Japanese languages in addition to the English language NLU model.	Renamed to HR Service Delivery NLU Model for Virtual Agent Conversations (sn_hr_nlu). This plugin is available on the ServiceNow Store.
IBM QRadar on IBM E-force Exchange	Deprecated in October 2020.		Replaced by IBM QRadar Offense Ingestion for Security Operations on the ServiceNow Store.
Integration - OpenID SSO [com.snc.integration.sso.openid]	Planned for deprecation in the U release.	Legacy version of single sign-on used with an external OpenID Provider (OP). OpenID Connect is provided in	Transition to the "Integration - Multiple Provider Single Sign-On Installer" plugin (com.snc.integration.sso.multi.installer) and configure

Plugin	Status	Description	Details
		London but is limited to web services.	IDP to use OIDC-based SSO feature.
Investment Funding [com.snc.investment_planning], [com.snc.investment_planning_omo]	Deprecated in Tokyo.	Enables continuous and flexible investment funding for the funding entities based on their priorities and strategic objectives. It provides the options of top-down and bottom-up funding and defunding an entity.	Activate Investment Funding on the ServiceNow Store (to be released on Store in September 2021).
iText5 PDF generator [com.snc.pdf_generator]	Deprecated in Tokyo.	Tool to generate PDF documents.	Replaced by iText7 PDF generator.
ITSM Mobile [com.sn_itsm_mobile]	Deprecated in San Diego.	ITSM Mobile Experience	Migrate to ITSM Mobile Agent on the ServiceNow Store.
ITSM Pro - Service Owner Workspace [com.spm_owner_workspace]	Planned for deprecation in a future release.	Provides a premium Service Portfolio Management experience. Portfolio managers and service owners access an integrated and graphically intuitive user interface to manage and monitor portfolios and services.	Migrate to Digital Portfolio Management on the ServiceNow Store.
Legal Service Management [com.snc.legal_service_automation]	Planned for deprecation in February 2023 or last subscription term end.	Lets you launch Legal Service Automation and other service management applications. Activation of this plugin on production instances may	

Plugin	Status	Description	Details
		require a separate license. Contact ServiceNow for details.	
Legacy Survey [com.snc.bestpractice.task_survey], [com.glideapp.survey], [com.snc.assessment], [com.glideapp.survey_wizard]	Deprecated in Rome.		
List v3 components [com.glide.ui.list_v3_components]	No longer available for deployments. Contact Customer Service and Support for assistance.	List v3 Components (including REST endpoints, directives, and templates)	
Lookup and Verify [com.snc.sn_lookup_and_verify_config]	Maintenance mode only.		
MaestroRS [app-irm-bcm]	Planned for deprecation in March 2024 or last subscription term end.		<p>Activate the four Business Continuity Management replacement applications on the ServiceNow Store;</p> <ul style="list-style-type: none"> • GRC: Business Continuity Management – Core • GRC: Business Continuity Planning • GRC: Business Impact Analysis • GRC: Business Continuity Management – Components
Marketing Service Management [com.snc.marketing_service_automation]	Planned for deprecation in February 2023 or last subscription term end.	Lets you launch Marketing Service Automation and other service management applications. Activation of this plugin on production	

Plugin	Status	Description	Details
		instances may require a separate license. Contact ServiceNow for details.	
MID Server support for integrations using TLS 1.1 and below versions	Planned for deprecation in the U release.		Use TLS 1.2 or above version for integrations with the MID server.
Mobile Analytics [com.glide.mobile.analytics]	Replaced as the core plugin by the User Experience Analytics plugin.	<ul style="list-style-type: none"> The User Experience Analytics [com.glide.appsee] is the core plugin for Tokyo. In new and upgraded instances, this plugin checks for new web and mobile applications to register, and provides access to the Dashboard. The Mobile Analytics [com.glide.mobile.analytics] plugin contains the scheduled jobs and business rules to automatically register mobile apps, but uses the APIs and tables from the com.glide.appsee plugin. 	Replaced by User Experience Analytics [com.glide.appsee] as the core plugin.
Mobile Classic	Deprecated in Tokyo.	User interface for mobile devices running iOS 6+ or Android 4+ with the Chrome browser.	Migrate to ServiceNow Mobile. For guidance on migration, see Migration Guide 
Onboarding Mobile [com.sn_hr_onboarding]	Deprecated in Tokyo.		Migrate to the HR Mobile plugin on the NOW Mobile application.

Plugin	Status	Description	Details
Operator Workspace [com.itom-noc-app]		Content for Operator Workspace. New Dashboard page for the Operator role on the Agent Workspace page.	
Performance Analytics Premium for Service Watch Insight [com.snc.pa.premium.swi]	Deprecated in Tokyo.	Enables the Performance Analytics functionality that you are entitled to with a subscription that includes Service Watch Insight and Performance Analytics.	
Recorded Future Integration for Security Operations [com.snc.threat.recordedfuture]	Deprecated in Tokyo.		Migrate to Recorded Future for Security Incident Response and Threat Intelligence on the ServiceNow Store.
Risk Vendor Portal [com.snc.vendor_portal]	Deprecated in Rome.		Upgrade to GRC Vendor Risk Management v10.0.2 and the new Vendor Assessment Portal will automatically be loaded.
Salesforce Spoke v1 for IntegrationHub [com.sn.salesforce.spoke]	Deprecated in San Diego.		Migrate to Salesforce Spoke for Integration Hub v1.2 (com.sn.sforce.v2.spoke).
SAML 1.1 Single Sign-on - Update 1 [com.snc.sso.saml11.update1]	Planned for deprecation in the U release.		Transition to "Integration - Multiple Provider Single Sign-On Installer " plugin (com.snc.integration.sso.multi.installer) and configure IDP to use the SSO feature.
SCCM Plugins	Deprecated in Tokyo.		Activate replacement plugin, Service

Plugin	Status	Description	Details
[com.snc.integration.sccm2007], [com.snc.integration.sccm2012v2], [com.snc.integration.sccm2016]			Graph Connector for SCCM on the ServiceNow Store.
Service360 [com.snc.service_360]	Deprecated in Rome.	Tracks KPIs for Service Portfolio Management plugin.	For enhanced capabilities, transition to Service Owner Workspace (com.spm_owner_workspace). This is part of the ITSM Pro license.
Service Catalog CMS Extension [com.glideapp.servicecatalog.cms]	Maintenance mode only.	Provides the ability to define the catalog experience within CMS.	
Service Management Application Designer [com.snc.service_management.core]	Deprecated in Tokyo.	Allows you to create custom applications that use a similar service management workflow.	The feature can be enabled using App Engine Studio (com.snc.app-engine-studio).
Service Management Geolocation Mobile [com.snc.service_management_m]	Planned for deprecation in the V release.	Provides a menu in the mobile UI for Service Management Geolocation.	Migrate to the new Field Service Mobile application that provides all of the features in Service Management Geolocation with an improved native experience.
Service Portal Social QA [com.glide.service-portal.sqanda], [com.snc.knowledge.social_qa.ui]	Deprecated in Rome.	Service Portal Social QA lets people ask questions and get answers from their peers, because none of us is as smart as all of us.	Transition to communities application (com.sn_customer_communities).
ServiceNow Add-Ins for Microsoft Outlook plugin [com.sn_outlook_addin]	Renamed to ServiceNow Add-Ins for Microsoft Office in Rome.	Enables users to interact with ServiceNow from within Microsoft Office.	
Social Q&A UI pages artifacts [com.snc.knowledge.social_qa.ui]	Deprecated in Rome.	Maintains UI pages artifacts for the legacy	

Plugin	Status	Description	Details
		Social Q&A application. Try to use Communities instead of Social Q&A for creating and maintaining engaging user experiences that are modular and responsive to mobile devices. For more information, see product documentation about Communities .	
Software Asset Management [com.snc.software_asset_management]	Planned for deprecation in the V release.	Provides the capability to do software asset management, includes reconciliation of entitlements to license including those for named users, workstation, and enterprise software agreements.	Migrate to Software Asset Workspace (com.sn_sam_workspace).
Standardized Information Gathering (SIG) Assessment [com.snc.sig_asmt_core]	Planned for deprecation in the V release.		
Standardized Information Gathering (SIG) Questionnaire [com.sn_sig_app]	Planned for deprecation in the V release.		
Structured Problem Analysis [com.snc.kt_pa]	Deprecated in San Diego.	Lets you track problem analysis process through the system.	Migrate to the new Advanced Problem Management on the ServiceNow Store.
Timeline Visualization [com.snc.timeline_visualization]	Changed in Rome.	Timeline Visualization plugin enables graphical representation of activities over time. You can use this visualization	Dependency on the Project Management (com.snc.project_management_v) plugin is removed. Activating the Timeline Visualization

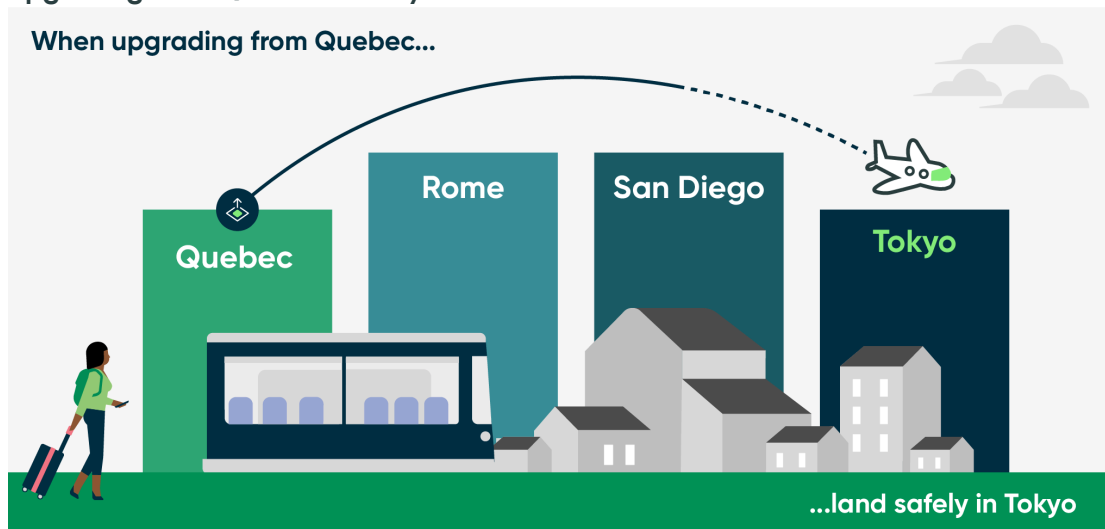
Plugin	Status	Description	Details
		to provide a high-level view of your organization's strategic and operational activities such as incidents, problems, changes, and projects.	plugin does not activate the Project Management plugin.
Trusted Security Circles [sn_ti], [sn_tis_a]	Planned for deprecation in September 2023 or last subscription term end.		
Vaccine Administration Management (VAM) 5.0 for CSM [sn_vaccine_sm]	Deprecated in Tokyo.	Provides capabilities to manage vaccinations for infectious diseases from start to finish.	Transition to Healthcare and Life Sciences Service Management.
Vendor Manager Workspace (Legacy) [com.snc.vlm.vmw]	Planned for deprecation in the U release.	Access to the Vendor Manager Workspace.	Migrate to the new workspace, Vendor Management Workspace on the ServiceNow Store.
Vendor Performance Management [com.snc.vendor_performance], [com.snc.vendor_ticket]	Planned for deprecation in March 2025 or subscription term end.	Provides capabilities to measure, manage, and track vendor data and compare performance characteristics in unique graphical views.	Transition to Vendor Manager Workspace, included in ITSM Pro v2 subscription package.
Virtual Agent Analytics Dashboard [com.glide.cs.pa]	Deprecated in Tokyo.	Virtual Agent out-of-the-box analytics dashboard for reviewing chatbot.	Migrate to replacement technology, Conversational Analytics v1.0 on the ServiceNow Store.
Virtual Agent Web Client for IE11 [com.glide.cs.chatbot, com.glide.cs.chatbot.life]	Planned for deprecation in the U release.		

Plugin	Status	Description	Details
Workforce Optimization for CSM (Legacy) [com_snc_wfo_csm]	Planned for deprecation in the V release.		Transition to the Workforce Optimization for CSM application that is available from the ServiceNow Store. You can configure Workforce Optimization for Customer Service using the UI Builder.
Workforce Optimization for ITSM (Legacy) [com.snc.wfo_itsm]	Planned for deprecation in the V release.		Transition to the Workforce Optimization for ITSM (sn_wfo_cfg_itsm) application that is available from the ServiceNow Store. You can configure Workforce Optimization for IT Service Management using the UI Builder.

Release notes for upgrading from Quebec

When you upgrade from the Quebec release, understand the fixes in each release version, notable changes for the user interface, browser support, plugin updates, and each feature's upgrade and migration tasks if applicable.

Upgrading from Quebec to Tokyo






















<p>Tokyo highlights</p>  <p>High-level overview of products and features in Tokyo</p>	<p>Combined product release notes</p>  <p>Detailed information on new products and features from Quebec to Tokyo</p>	<p>Personalized PRB release notes</p>  <p>Generate a list of issues that were fixed between your current version and available target versions</p>
<p>Changes to plugins from Quebec to Tokyo</p>  <p>List of new, changed, renamed, and deprecated plugins</p>	<p>Available patches and hotfixes</p>  <p>Release notes for fixed issues</p>	<p>Browser support</p>  <p>Supported browser versions and additional requirements for specific products</p>
<p>Accessibility and conformance</p>  <p>Accessibility conformance reports based on the voluntary product accessibility template (VPAT)</p>		




















Combined product release notes for upgrades from Quebec to Tokyo




















To help you upgrade from Quebec to Tokyo, we have combined the cross-family release notes for each product onto one page. Select the products you have to customize the release notes results.




















Select your products to view release notes from Quebec to Tokyo




















The table below has a list of all products available between Quebec and Tokyo. Use the **Filter by** feature to select the products you are interested in. The table will filter to show you the combined release notes for your selected products. Click on the links to read the combined release notes for each product.




















Product	Combined release notes
Admin Center	Link 
Advanced Goal Framework	Link 
Advanced Risk	Link 
Advanced Work Assignment	Link 
Agent Client Collector	Link 
Agile Development 2.0	Link 
AI Search	Link 
Alignment Planner Workspace	Link 
API	Link 
App Engine Studio	Link 
Application Management	Link 
Application Portfolio Management	Link 
Application Usage Overview dashboard	Link 
Application Vulnerability Response	Link 
Assessments and Surveys	Link 
Asset Management	Link 
Audit Management	Link 
Audit Workspace	Link 
Authentication	Link 




















Product	Combined release notes
Automated Test Framework	Link 
Benchmarks	Link 
Business Continuity Management	Link 
Change Management	Link 
Classic Experiences dashboards	Link 
Cloud Call Center	Link 
Cloud Insights	Link 
Cloud Provisioning and Governance	Link 
Coaching	Link 
Column Level Encryption Enterprise and Key Management Framework	Link 
Commercial Lines Claims	Link 
Common Service Data Model	Link 
Compliance Workspace	Link 
Configuration Compliance	Link 
Configuration Management Database (CMDB)	Link 
Contact Tracing	Link 
Container Vulnerability Response	Link 
Contextual Search	Link 
Continual Improvement Management	Link 




















Product	Combined release notes
Continuous Authorization and Monitoring	Link 
Conversational Interfaces	Link 
Conversational Interfaces console	Link 
Conversational Interfaces Home	Link 
Core Now Platform	Link 
COVID-19 Global Health Data Set	Link 
Customer Service Management	Link 
Dashboards	Link 
Data archiving	Link 
Decision Builder	Link 
Default admin landing page	Link 
Delegated Development and deployment	Link 
DevOps	Link 
DevOps Change Velocity	Link 
DevOps Config	Link 
Digital Portfolio Management	Link 
Document Intelligence	Link 
Document Services	Link 
Document Templates	Link 




















Product	Combined release notes
Document Viewer	Link 
Domain separation	Link 
Dynamic Translation	Link 
eBonding for Telecommunications	Link 
Edge Encryption	Link 
Emergency Exposure Management	Link 
Emergency Outreach	Link 
Emergency Response Management	Link 
Emergency Self Report	Link 
Employee Center	Link 
Employee Document Management	Link 
Employee Health Screening	Link 
Employee Journey Management	Link 
Employee Readiness Core	Link 
Employee Readiness Surveys	Link 
Employee Relations	Link 
Employee Travel Safety	Link 
EMR Help	Link 
Encryption and Key Management	Link 

Product	Combined release notes
Encryption and Key Management Framework	Link 
Encryption Key Management	Link 
Enterprise Asset Management	Link 
Enterprise Employee Experience Pack	Link 
Entity View Action Mapper (EVAM)	Link 
Environmental, Social, and Governance Management	Link 
Event Management	Link 
Field administration	Link 
Field Service Management	Link 
Financial Management	Link 
Financial Services Business Deposit Operations	Link 
Financial Services Business Lifecycle	Link 
Financial Services Business Loan Operations	Link 
Financial Services Card Operations	Link 
Financial Services Client Lifecycle	Link 
Financial Services Complaint Management	Link 
Financial Services Credit Operations	Link 
Financial Services Customer Lifecycle Operations	Link 
Financial Services Deposit Operations	Link 




















Product	Combined release notes
Financial Services Insurance Policy Operations	Link 
Financial Services integration with Jack Henry Associates jXchange	Link 
Financial Services integration with Socure	Link 
Financial Services Loan Operations	Link 
Financial Services Operations Core	Link 
Financial Services Operations Integration with Jack Henry Associates jXchange	Link 
Financial Services Payment Operations	Link 
Financial Services Personal Deposit Operations	Link 
Financial Services Personal Loan Operations	Link 
Financial Services Treasury Operations	Link 
Flow Designer	Link 
Goal Framework	Link 
Goal Framework for SPM	Link 
Governance, Risk, and Compliance	Link 
Granular Delegation	Link 
GRC: integrations with third-party content	Link 
Group Life Servicing	Link 
Guided Application Creator	Link 
Hardware Asset Management 2.0	Link 

Product	Combined release notes
Hardware Asset Management 3.0	Link 
Hardware Asset Management 4.0	Link 
Hardware Asset Management 5.0	Link 
Hardware Asset Management 7.0.0	Link 
Health and Safety Testing	Link 
Healthcare and Life Sciences Service Management Core	Link 
Health Log Analytics	Link 
Help Center	Link 
Hermes Messaging Service	Link 
HR Service Delivery	Link 
HR Service Delivery Case and Knowledge Management	Link 
HR Service Delivery Employee Service Center	Link 
HR Service Delivery Enterprise Onboarding and Transitions	Link 
HR Service Delivery Integration with Magnit	Link 
HR Service Delivery Integration with Workday Learning	Link 
Identity and Authentication	Link 
Import and export	Link 
Incident Management	Link 
Individual Life Servicing	Link 




















Product	Combined release notes
Industry products	Link 
Instance Data Replication	Link 
Instance Data Replication (IDR)	Link 
Instance Scan	Link 
Integration Hub	Link 
Intelligent Service Delivery	Link 
Intelligent Servicing for Fraud	Link 
Investment Funding	Link 
ITOM Governance	Link 
ITOM Health	Link 
ITOM Optimization	Link 
ITOM Visibility	Link 
ITSM Agent Workspace	Link 
ITSM Mobile	Link 
Journey designer 2.0	Link 
Knowledge Management	Link 
Legal Service Delivery	Link 
Lightstep Team Bridge	Link 
Localization Framework	Link 




















Product	Combined release notes
Manager Hub	Link 
Manufacturing	Link 
Manufacturing Process Manager	Link 
MetricBase	Link 
MID Server	Link 
Mobile	Link 
Natural Language Query	Link 
Natural Language Understanding	Link 
Next Experience	Link 
Next Experience Components	Link 
Next Experience UI	Link 
Next Experience user interface	Link 
Notifications	Link 
Notify	Link 
Now Mobile app	Link 
Now Platform performance	Link 
Omnichannel Callback	Link 
Onboarding Experience	Link 
On-Call Scheduling	Link 




















Product	Combined release notes
Operational Resilience	Link
Operational Technology Foundation Manager	Link
Operational Technology Incident Management v2	Link
Operational Technology Manager	Link
Operational Technology Service Management	Link
Operational Technology Vulnerability Response	Link
Order Management for CSM	Link
Order Management for Customer Service Management	Link
Order Management for Telecommunications	Link
Order Management for Telecommunications and Media	Link
Order Management for Telecommunications, Media, and Technology	Link
Password Reset	Link
Patient Support Services	Link
Performance Analytics	Link
Personal Lines Claims	Link
Platform Analytics Workspace	Link
Platform Security	Link
Policy and Compliance integrator	Link
Policy and Compliance Management	Link

Product	Combined release notes
Portfolio Planning	Link 
Predictive Intelligence	Link 
Predictive Intelligence Workbench	Link 
Pre-Visit Management	Link 
Privacy Management	Link 
Proactive Prompts	Link 
Proactive Service Experience Workflows	Link 
Problem Management	Link 
Process Automation Designer	Link 
Process Optimization	Link 
Procurement Service Management	Link 
Project Portfolio Management	Link 
Project Workspace	Link 
Public Sector Digital Services	Link 
Recommendation Framework	Link 
Redox Inbound Integration	Link 
Regulatory Change Management	Link 
Release Management	Link 
Remote Tables	Link 

Product	Combined release notes
Reporting	Link
Risk Workspace	Link
Robotic Process Automation (RPA) Hub	Link
Safe Workplace	Link
Safe Workplace Dashboard	Link
Scaled Agile Framework (SAFe)	Link
Script Debugger	Link
Scripting	Link
Search administration	Link
Security Incident Response	Link
Service Bridge	Link
Service Bridge (Technology)	Link
Service Bridge (Telecommunications)	Link
Service Catalog	Link
Service Desk	Link
Service Graph Connector Integration for Claroty CTD	Link
Service Level Management	Link
ServiceNow CLI	Link
ServiceNow Performance dashboard	Link

Product	Combined release notes
ServiceNow Studio	Link 
ServiceNow Voice	Link 
Service Operations Workspace for ITOM	Link 
Service Operations Workspace for ITSM	Link 
Service Owner Workspace	Link 
Service Portal	Link 
Service Portfolio Management	Link 
Sitemap Generator	Link 
Software Asset Management	Link 
SPM Benchmarking	Link 
Store Usage Overview dashboard	Link 
Strategic Planning	Link 
Studio	Link 
Subscription Management	Link 
System Administration dashboard	Link 
System Clone	Link 
System Diagnostics homepage	Link 
Table Builder	Link 
Table Builder for App Engine	Link 

Product	Combined release notes
(Technology)	Link 
Technology Provider Service Management	Link 
Telecommunications	Link 
Telecommunications Assurance Workflows	Link 
Telecommunications Network Inventory	Link 
Telecommunications Service Management	Link 
Test Management 1.0	Link 
Test Management 2.0	Link 
Threat Intelligence	Link 
Time Card Management	Link 
UI Builder	Link 
Universal Request	Link 
Universal Task	Link 
Upgrade Center	Link 
User Experience Analytics	Link 
Vaccination Status	Link 
Vaccine Administration Management	Link 
Vendor Management Workspace	Link 
Vendor Manager Workspace	Link 

Product	Combined release notes
Vendor Risk Management	Link 
Virtual Agent	Link 
Visual Task Boards	Link 
Vulnerability Response	Link 
Vulnerability Response integrations	Link 
Vulnerability Response Integration with Microsoft Defender for IoT	Link 
Walk-up Experience	Link 
Workforce Optimization for Customer Service	Link 
Workforce Optimization for HR	Link 
Workforce Optimization for ITSM	Link 
Workplace Calendar Synchronization	Link 
Workplace Case Management	Link 
Workplace PPE Inventory Management	Link 
Workplace Reservation Management	Link 
Workplace Safety Management	Link 
Workplace Service Delivery	Link 
Workplace Service Delivery Space Mapping	Link 
Workplace Visitor Management	Link 
Workspace	Link 

Changes to plugins from Quebec to Tokyo

Before you upgrade from Quebec to Tokyo, read the release notes for information about new plugins and existing plugins that were deprecated, renamed, or changed in some way.

Quebec to San Diego plugin changes

See [Quebec plugin changes](#) for more information.

See [Rome plugin changes](#) for more information.

See [San Diego plugin changes](#) for more information.

Tokyo plugin changes

Plugin	Status	Description	Details
Advanced Work Assignment for CSM [com.sn_csm.awa]	Maintenance mode only.	Activating Customer Service (com.sn_customerservice) plugin will activate this plugin.	
Amazon Web Services [com.snc.aws]	Deprecated and non-supported.	Provided Integration with Amazon Web Services - CloudFormation, EC2	Replaced by Cloud API [com.snc.cloud.ap].
Cloud Provisioning and Governance [com.snc.cloud.mgmt]	Plugin requires a separate subscription. Renamed in Rome.	Cloud Provisioning and Governance - Integration with AWS, Azure, VMware OOB and extensible to add support for new clouds.	Renamed to Cloud Provisioning and Governance plugin from Cloud Management plugin.
Cloud Provisioning and Governance Core [com.snc.cloud.core]	Renamed in Rome.	Cloud Provisioning and Governance Core - Discovery and Resource Blocks.	Renamed to Cloud Provisioning and Governance Core plugin from Cloud Management Core plugin.
Cloud Provisioning and Governance - Terraform Connector for IBM Cloud	Planned for deprecation in the U release.		
CMDB: IT Fundamentals [com.sn_apphealth]	Planned for deprecation in the U release.		Transition to CMDB Data Workspace/ Insights and Data Foundation Dashboard.

Plugin	Status	Description	Details
CMDB Search [com.snc.cmdb_search]	Planned for deprecation in the V release.	Provides enhanced capabilities for searching the CMDB.	Transition to CMDB Workspace.
CMS User Interface - Service Management Core [com.snc.service_management.core.cms]	Maintenance mode only.	All Content Management System items (blocks, pages, and menus) used to reference core IT self-service applications are packaged in this plugin. It is also the core foundation for all Service Management applications.	
Coaching Loops [com.snc.coaching_loops]	Deprecated in Quebec.	-	For enhanced capabilities, transition to the new Coaching application (com.sn_coaching).
Configuration Management For Scoped Apps (CMDB) [com.snc.cmdb.scoped]	Active by default in Rome.	Enables scoped apps access to Identification Engine APIs.	
Connect Support [com.glide.connect.support]	Maintenance mode only.	Builds on the Connect messaging platform and enables support agents to provide real-time assistance to end users, using queues.	
Content Management [com.glide.cms]	Maintenance mode only.		
Content Management Extended Types [com.glide.cms.types]	Maintenance mode only.	An extension to Content Management that adds iFrames and Flash frames. You must request the Content	

Plugin	Status	Description	Details
		Management System (CMS) application from ServiceNow personnel. Instead of activating CMS, use Service Portal for new development. Service Portal is an alternative to CMS with a refined user experience, and is active by default in the base system. See Service Portal and Content Management and Service Portal .	
Content Management IFrame Type [com.glide.cms.type.iframe]	Maintenance mode only.		
Content Management Flash Type [com.glide.cms.type.flash]	Maintenance mode only.		
CSM Account Hierarchy [com.snc.sn_csm_account_hierarchy]	Maintenance mode only.		
CSM Lookup and Verify [com.snc.sn_csm_lookup_verify]	Maintenance mode only.		
CSM Workspace [com.snc.agent_workspace.csm]	Planned for deprecation in the W release.		
CSM Workspace - Components [com.csm_workspace_components]	Maintenance mode only.		
Dashboard Builder	Changed in Tokyo.	Helps to create dashboards and share them with other users.	Removed the menu item that redirects the users to the Dashboard Builder on zBoot and upgrade instances. On upgrade, the existing

Plugin	Status	Description	Details
			Dashboard from the Dashboard Builder will be merged into the UI Builder pages and available to admins to configure from the technical dashboard experience.
Document Viewer [com.snc.documentviewer]		Enables you to view documents directly within the platform rather than downloading them to their own file system.	
Embedded Help [com.glide.embedded_help]	Embedded help is only available in Core UI.		
Enterprise Release Management [com.snc.enterprise_release_management]	Deprecated in Quebec.	Enables you to plan efficiently and manage enterprise releases, product releases, and deployment process.	For enhanced capabilities, you can transition to Release Management (com.snc.release_management_v
ESS Portal (implemented within Content Management) [com.glide.cms.extensions]	Maintenance mode only.	ESS portal content management application. Demo data includes the actual ESS portal. You must request the Content Management System (CMS) application from ServiceNow personnel. Instead of activating CMS, use Service Portal for new development. Service Portal is an alternative to CMS with a refined user experience, and is active by	

Plugin	Status	Description	Details
		default in the base system. See Service Portal and Content Management and Service Portal .	
Event Management Connector [com.sn_em_connector]	Deprecated.		Install the Event Management Connectors application from the ServiceNow Store.
Facilities Move Management [com.snc.facilities_service_automation.move]	Maintenance mode only. Planned for deprecation in March 2025 or subscription term end.	Enables single user move functionality as well as Enterprise Move and move planning functionality.	Transition to Workplace Service Delivery.
Facilities Service Management [com.snc.facilities_service_automation]	Planned for deprecation in March 2025 or last subscription term end.	Manages facilities requests and enables users to report and track requests by their location. To view requests on a floor plan, the Facilities Visualization Workbench (com.snc.facilities_service_automation.fvw) plugin is required. Integration files installed when the Facilities Visualization Workbench (com.snc.facilities_service_automation.fvw) plugin is also installed. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	Transition to Workplace Service Delivery.
Facilities Service Management CMS Portal	Maintenance mode only.		

Plugin	Status	Description	Details
[com.snc.facilities_service_automation.cms]			
Facilities Service Management Mobile [com.snc.facilities_service_automation_m]	Maintenance mode only.	Manages facilities service management mobile components.	
Facilities Service Management Floor Plan Viewer [com.snc.facilities_service_automation.fpv]	Deprecated.	Provided a floor plan view as part of Facilities Service Management. The floor plan view has been replaced by interactive facility maps.	
Facilities Visualization Workbench [com.snc.facilities_service_automation.fvw]	Planned for deprecation in March 2025 or subscription term end.	Enables the interactive floor plan functionality.	Transition to Workplace Service Delivery.
Field Service Management CMS Portal [com.snc.work_management.cms]	Maintenance mode only.	Lets you launch Field Service Automation and other service management applications from a single CMS page.	
Finance Service Management [com.snc.finance_service_automation]	Planned for deprecation in February 2023 or last subscription term end.	Lets you launch Finance Service Automation and other service management applications. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	
Field Service Management Mobile (Legacy) [com.snc.work_management_m]	Planned for deprecation in the V release.	Helps your organization manage location-based work more efficiently and safely.	Migrate to the new Field Service Mobile application (com.sn_fsm_mobile) that provides all of the features in Field Service Management Mobile with an

Plugin	Status	Description	Details
			improved native experience and better offline capabilities.
GRC: GDPR DPIA Accelerator [com.sn_irm_gdpr_dpia]	Deprecated in Tokyo.	Allows you to perform data protection impact assessments (DPIA) to protect the personal data of individuals within and outside of the European Union (EU).	Migrate to Privacy Management.
GRC: NIST RMF Use Case Accelerator [app-irm-nist-rmf]	Deprecated in San Diego.		Replaced by GRC: Continuous Authorization and Monitoring.
GRC: RiskLens Integration [com.sn_irm_risklens]	Deprecated in November 2020.		Migrate to RiskLens™ Assessment Integration on the ServiceNow Store.
Help The Help Desk [com.snc.help_the_help_desk]	Deprecated in Quebec.		Replaced by Agent Client Collector.
Homepages	Changed in San Diego.		An action is provided to migrate homepages to dashboards on demand from the sys_portal_page list.
HR Service Delivery v1.0 (Legacy) [com.snc.hr.core.cms, com.snc.hr.core, com.snc.hr.hr_connect, con.snc.hr.pa, com.snc.hr.service_portal]	Planned for deprecation in August 2024.	Unlocks enterprise productivity and give your employees the service experience they deserve.	Migrate to the Human Resources Core v2.0 scoped application [com.sn_hr_core].
HR Workday Integration [com.sn_hr_wday]	Deprecated and non-supported.		
Human Resources Application: Core CMS [com.snc.hr.core.cms]	Maintenance mode only.	Provides case and knowledge management for HR. Standardizes the	

Plugin	Status	Description	Details
		documentation, interaction, and fulfillment of employee inquires and requests while having visibility into the quantity and type of cases coming in.	
Human Resources Scoped App: NLU Model [com.sn_hr_nlu_model]	Changed in Rome.	Activates the NLU model used by HR Virtual Agent to identify conversation topics. It provides NLU models in German, French, Spanish, and Japanese languages in addition to the English language NLU model.	Renamed to HR Service Delivery NLU Model for Virtual Agent Conversations (sn_hr_nlu). This plugin is available on the ServiceNow Store.
IBM QRadar on IBM E-force Exchange	Deprecated in October 2020.		Replaced by IBM QRadar Offense Ingestion for Security Operations on the ServiceNow Store.
Integration - OpenID SSO [com.snc.integration.sso.openid]	Planned for deprecation in the U release.	Legacy version of single sign-on used with an external OpenID Provider (OP). OpenID Connect is provided in London but is limited to web services.	Transition to the "Integration - Multiple Provider Single Sign-On Installer" plugin (com.snc.integration.sso.multi.installer) and configure IDP to use OIDC-based SSO feature.
Investment Funding [com.snc.investment_planning], [com.snc.investment_planning_pmo]	Deprecated in Tokyo.	Enables continuous and flexible investment funding for the funding entities based on their priorities and strategic objectives. It provides the options of top-down and bottom-up funding and	Activate Investment Funding on the ServiceNow Store (to be released on Store in September 2021).

Plugin	Status	Description	Details
		defunding an entity.	
iText5 PDF generator [com.snc.pdf_generator]	Deprecated in Tokyo.	Tool to generate PDF documents.	This is replaced by iText7 PDF generator.
ITSM Mobile [com.sn_itsm_mobile]	Deprecated in San Diego.	ITSM Mobile Experience	Migrate to ITSM Mobile Agent on the ServiceNow Store.
ITSM Pro - Service Owner Workspace [com.spm_owner_workspace]	Planned for deprecation in a future release.	Provides a premium Service Portfolio Management experience. Portfolio managers and service owners access an integrated and graphically intuitive user interface to manage and monitor portfolios and services.	Migrate to Digital Portfolio Management on the ServiceNow Store.
Legal Service Management [com.snc.legal_service_automation]	Planned for deprecation in February 2023 or last subscription term end.	Lets you launch Legal Service Automation and other service management applications. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	
Legacy Survey [com.snc.bestpractice.task_survey], [com.glideapp.survey], [com.snc.assessment], [com.glideapp.survey_wizard]	Deprecated in Rome.		
List v3 components [com.glide.ui.list_v3_components]	No longer available for deployments. Contact Customer Service	List v3 Components (including REST endpoints, directives, and templates)	

Plugin	Status	Description	Details
	and Support for assistance.		
Lookup and Verify [com.snc.sn_lookup_and_verify_config]	Maintenance mode only.		
MaestroRS [app-irm-bcm]	Planned for deprecation in March 2024 or last subscription term end.		<p>Activate the four Business Continuity Management replacement applications on the ServiceNow Store;</p> <ul style="list-style-type: none"> • GRC: Business Continuity Management – Core • GRC: Business Continuity Planning • GRC: Business Impact Analysis • GRC: Business Continuity Management – Components
Marketing Service Management [com.snc.marketing_service_automation]	Planned for deprecation in February 2023 or last subscription term end.	Lets you launch Marketing Service Automation and other service management applications. Activation of this plugin on production instances may require a separate license. Contact ServiceNow for details.	
MID Server support for integrations using TLS 1.1 and below versions	Planned for deprecation in the U release.		Use TLS 1.2 or above version for integrations with the MID server.
Mobile Analytics [com.glide.mobile.analytics]	Replaced as the core plugin by the User Experience Analytics plugin.	<ul style="list-style-type: none"> • The User Experience Analytics [com.glide.appsee] is the core plugin for Tokyo. 	Replaced by User Experience Analytics [com.glide.appsee] as the core plugin.

Plugin	Status	Description	Details
		<p>In new and upgraded instances, this plugin checks for new web and mobile applications to register, and provides access to the Dashboard.</p> <ul style="list-style-type: none"> The Mobile Analytics [com.glide.mobile.analytics] plugin contains the scheduled jobs and business rules to automatically register mobile apps, but uses the APIs and tables from the com.glide.appsee plugin. 	
Mobile Classic	Deprecated in Tokyo.	User interface for mobile devices running iOS 6+ or Android 4+ with the Chrome browser.	Migrate to ServiceNow Mobile. For guidance on migration, see Migration Guide 
Onboarding Mobile [com.sn_hr_onboarding]	Deprecated in Tokyo.		Migrate to the HR Mobile plugin on the NOW Mobile application.
Operator Workspace [com.itom-noc-app]		Content for Operator Workspace. New Dashboard page for the Operator role on the Agent Workspace page.	
Performance Analytics Premium for Service Watch Insight [com.snc.pa.premium.swi]	Deprecated in Tokyo.	Enables the Performance Analytics functionality that you are entitled to with a subscription that includes Service Watch Insight	

Plugin	Status	Description	Details
		and Performance Analytics.	
Recorded Future Integration for Security Operations [com.snc.threat.recordedfuture]	Deprecated in Tokyo.		Migrate to Recorded Future for Security Incident Response and Threat Intelligence on the ServiceNow Store.
Risk Vendor Portal [com.snc.vendor_portal]	Deprecated in Rome.		Upgrade to GRC Vendor Risk Management v10.0.2 and the new Vendor Assessment Portal will automatically be loaded.
Salesforce Spoke v1 for IntegrationHub [com.sn.salesforce.spoke]	Deprecated in San Diego.		Migrate to Salesforce Spoke for Integration Hub v1.2 (com.sn.sforce.v2.spoke).
SAML 1.1 Single Sign-on - Update 1 [com.snc.sso.saml11.update1]	Planned for deprecation in the U release.		Transition to "Integration - Multiple Provider Single Sign-On Installer " plugin (com.snc.integration.sso.multi.installer) and configure IDP to use the SSO feature.
SCCM Plugins [com.snc.integration.sccm2007], [com.snc.integration.sccm2012v2], [com.snc.integration.sccm2016]	Deprecated in Tokyo.		Activate replacement plugin, Service Graph Connector for SCCM on the ServiceNow Store.
Service360 [com.snc.service_360]	Deprecated in Rome.	Tracks KPIs for Service Portfolio Management plugin.	For enhanced capabilities, transition to Service Owner Workspace (com.spm_owner_workspace). This is part of the ITSM Pro license.
Service Catalog CMS Extension [com.glideapp.servicecatalog.cms]	Maintenance mode only.	Provides the ability to define the catalog experience within CMS.	

Plugin	Status	Description	Details
Service Desk Call [com.snc.service_desk_call]	Deprecated in Quebec.	Enables Service Desk staff to collect information in a call that does not relate to a specific process. The call is transferred to an incident, problem, change request or service catalog request.	Transition to Interaction Management on Agent Workspace.
Service Management Application Designer [com.snc.service_management.core]	Deprecated in Tokyo.	Allows you to create custom applications that use a similar service management workflow.	The feature can be enabled using App Engine Studio (com.snc.app-engine-studio).
Service Management Geolocation Mobile [com.snc.service_management_m]	Planned for deprecation in the V release.	Provides a menu in the mobile UI for Service Management Geolocation.	Migrate to the new Field Service Mobile application that provides all of the features in Service Management Geolocation with an improved native experience.
Service Portal Social QA [com.glide.service-portal.sqanda], [com.snc.knowledge.social_qa.ui]	Deprecated in Rome.	Service Portal Social QA lets people ask questions and get answers from their peers, because none of us is as smart as all of us.	Transition to communities application (com.sn_customer_communities).
ServiceNow Add-Ins for Microsoft Outlook plugin [com.sn_outlook_addin]	Renamed to ServiceNow Add-Ins for Microsoft Office in Rome.	Enables users to interact with ServiceNow from within Microsoft Office.	
Social Q&A UI pages artifacts [com.snc.knowledge.social_qa.ui]	Deprecated in Rome.	Maintains UI pages artifacts for the legacy Social Q&A application. Try to use Communities instead of Social Q&A for creating and maintaining	

Plugin	Status	Description	Details
		engaging user experiences that are modular and responsive to mobile devices. For more information, see product documentation about Communities .	
Software Asset Management [com.snc.software_asset_management]	Planned for deprecation in the V release.	Provides the capability to do software asset management, includes reconciliation of entitlements to license including those for named users, workstation, and enterprise software agreements.	Migrate to Software Asset Workspace (com.sn_sam_workspace).
Standardized Information Gathering (SIG) Assessment [com.snc.sig_asmt_core]	Planned for deprecation in the V release.		
Standardized Information Gathering (SIG) Questionnaire [com.sn_sig_app]	Planned for deprecation in the V release.		
Structured Problem Analysis [com.snc.kt_pa]	Deprecated in San Diego.	Lets you track problem analysis process through the system.	Migrate to the new Advanced Problem Management on the ServiceNow Store.
Timeline Visualization [com.snc.timeline_visualization]	Changed in Rome.	Timeline Visualization plugin enables graphical representation of activities over time. You can use this visualization to provide a high-level view of your organization's strategic and operational activities such	Dependency on the Project Management (com.snc.project_management_v) plugin is removed. Activating the Timeline Visualization plugin does not activate the Project Management plugin.

Plugin	Status	Description	Details
		as incidents, problems, changes, and projects.	
Trusted Security Circles [sn_ti], [sn_tis_a]	Planned for deprecation in September 2023 or last subscription term end.		
Vaccine Administration Management (VAM) 5.0 for CSM [sn_vaccine_sm]	Deprecated in Tokyo.	Provides capabilities to manage vaccinations for infectious diseases from start to finish.	Transition to Healthcare and Life Sciences Service Management.
Vendor Manager Workspace (Legacy) [com.snc.vlm.vmw]	Planned for deprecation in the U release.	Access to the Vendor Manager Workspace.	Migrate to the new workspace, Vendor Management Workspace on the ServiceNow Store.
Vendor Performance Management [com.snc.vendor_performance], [com.snc.vendor_ticket]	Planned for deprecation in March 2025 or subscription term end.	Provides capabilities to measure, manage, and track vendor data and compare performance characteristics in unique graphical views.	Transition to Vendor Manager Workspace, included in ITSM Pro v2 subscription package.
Virtual Agent Analytics Dashboard [com.glide.cs.pa]	Deprecated in Tokyo.	Virtual Agent out-of-the-box analytics dashboard for reviewing chatbot.	Migrate to replacement technology, Conversational Analytics v1.0 on the ServiceNow Store.
Virtual Agent Web Client for IE11 [com.glide.cs.chatbot, com.glide.cs.chatbot.life]	Planned for deprecation in the U release.		
Workforce Optimization for CSM (Legacy) [com_snc_wfo_csm]	Planned for deprecation in the V release.		Transition to the Workforce Optimization for CSM application that is available from the ServiceNow Store. You can configure

Plugin	Status	Description	Details
			Workforce Optimization for Customer Service using the UI Builder.
Workforce Optimization for ITSM (Legacy) [com.snc.wfo_itsm]	Planned for deprecation in the V release.		Transition to the Workforce Optimization for ITSM (sn_wfo_cfg_itsm) application that is available from the ServiceNow Store. You can configure Workforce Optimization for IT Service Management using the UI Builder.

Personalized PRB release notes for upgrades to Tokyo

If you are thinking about upgrading to the Tokyo family, problem (PRB) fixes can be an important factor in your upgrade plans. Compare the lists of fixed problems across various Tokyo upgrade scenarios to help you decide which release version to upgrade to.

What release version should I upgrade to?

Compare lists of fixed problems across various upgrade scenarios to help you decide:

Select current version

Current version ▼

Select target version

Target version ▼

Download a spreadsheet or click the link to view a list

html
csv

Repeat these steps to explore other upgrade options

Generate cumulative PRB release notes

To create personalized release notes for your upgrade, use the **Filter by** feature to select your current release version and your target version. The table will filter to show you the personalized release notes for the selected upgrade scenario. You can view the cumulative PRB release notes in HTML or download them in a CSV file. We are working on improving the HTML display of these release notes, but in the meantime, we hope you enjoy this personalized release notes experience.

⚠ Warning: The personalized PRB release notes now include security PRB fixes. You can filter on the PRB tables by security category, or you can search for the text "Security bug."

Fixed problems in upgrades to Tokyo

Only available target release versions are listed in the personalized release notes generator. For further information on a PRB, documentation updates, or fixes included for a specific release version, you can also browse the standard release notes topics on the [ServiceNow Product Documentation](#) website.

i Important: Be sure to upgrade to the latest release version that includes all of the PRB fixes you are interested in.

Current version	Target version	View	Download
San Diego Early Access Hot Fix 2	Tokyo Patch 9	html	csv
San Diego Patch 3	Tokyo Patch 9	html	csv
San Diego Patch 4b	Tokyo Patch 9	html	csv
San Diego Patch 5	Tokyo Patch 9	html	csv
San Diego Patch 6	Tokyo Patch 9	html	csv
San Diego Patch 7	Tokyo Patch 9	html	csv
San Diego Patch 7 Hot Fix 2	Tokyo Patch 9	html	csv
San Diego Patch 7a	Tokyo Patch 9	html	csv
San Diego Patch 7b	Tokyo Patch 9	html	csv
San Diego Patch 8	Tokyo Patch 9	html	csv
San Diego Patch 9	Tokyo Patch 9	html	csv
San Diego Patch 9a	Tokyo Patch 9	html	csv
San Diego Patch 9a Hot Fix 1	Tokyo Patch 9	html	csv
San Diego Patch 9b	Tokyo Patch 9	html	csv
San Diego Patch 10	Tokyo Patch 9	html	csv

(continued)

Current version	Target version	View	Download
San Diego Patch 10 Hot Fix 1	Tokyo Patch 9	html	csv
San Diego Patch 10 Hot Fix 2	Tokyo Patch 9	html	csv
Tokyo Early Access	Tokyo Patch 9	html	csv
Tokyo Patch 1	Tokyo Patch 9	html	csv
Tokyo Patch 1 Hot Fix 1	Tokyo Patch 9	html	csv
Tokyo Patch 1a	Tokyo Patch 9	html	csv
Tokyo Patch 1b	Tokyo Patch 9	html	csv
Tokyo Patch 2	Tokyo Patch 9	html	csv
Tokyo Patch 2 Hot Fix 1	Tokyo Patch 9	html	csv
Tokyo Patch 2 Hot Fix 2	Tokyo Patch 9	html	csv
Tokyo Patch 2 Hot Fix 3	Tokyo Patch 9	html	csv
Tokyo Patch 2 Hot Fix 4	Tokyo Patch 9	html	csv
Tokyo Patch 3	Tokyo Patch 9	html	csv
Tokyo Patch 3 Hot Fix 1	Tokyo Patch 9	html	csv
Tokyo Patch 3 Hot Fix 2	Tokyo Patch 9	html	csv
Tokyo Patch 3 Hot Fix 3	Tokyo Patch 9	html	csv
Tokyo Patch 3 Hot Fix 4	Tokyo Patch 9	html	csv
Tokyo Patch 4	Tokyo Patch 9	html	csv
Tokyo Patch 4 Hot Fix 1	Tokyo Patch 9	html	csv

(continued)

Current version	Target version	View	Download
Tokyo Patch 4 Hot Fix 2	Tokyo Patch 9	html	csv
Tokyo Patch 4 Hot Fix 3	Tokyo Patch 9	html	csv
Tokyo Patch 4a	Tokyo Patch 9	html	csv
Tokyo Patch 4a Hot Fix 1	Tokyo Patch 9	html	csv
Tokyo Patch 4b	Tokyo Patch 9	html	csv
Tokyo Patch 5	Tokyo Patch 9	html	csv
Tokyo Patch 5 Hot Fix 1	Tokyo Patch 9	html	csv
Tokyo Patch 5 Hot Fix 2	Tokyo Patch 9	html	csv
Tokyo Patch 5 Hot Fix 3	Tokyo Patch 9	html	csv
Tokyo Patch 6	Tokyo Patch 9	html	csv
Tokyo Patch 6 Hot Fix 1	Tokyo Patch 9	html	csv
Tokyo Patch 6 Hot Fix 2	Tokyo Patch 9	html	csv
Tokyo Patch 7	Tokyo Patch 9	html	csv
Tokyo Patch 7 Hot Fix 1	Tokyo Patch 9	html	csv
Tokyo Patch 7a	Tokyo Patch 9	html	csv
Tokyo Patch 7b	Tokyo Patch 9	html	csv
Tokyo Patch 8	Tokyo Patch 9	html	csv
Tokyo Patch 8 Hot Fix 1	Tokyo Patch 9	html	csv
Tokyo Patch 8 Hot Fix 2	Tokyo Patch 9	html	csv

Available patches and hotfixes

The Tokyo family includes patches and hotfixes.

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) ↗.

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) ↗.

Q1 2024 Patching Program Targets

Targets are subject to change prior to patching. Target versions change only if absolutely necessary.

Releases	Patch target option	Release notes
Vancouver	Vancouver Patch 4 Hotfix 1b ↗	Vancouver ↗
Utah	Utah Patch 9 Hotfix 1b ↗	Utah ↗
Tokyo	Tokyo Patch 10 Hotfix 2b ↗	Tokyo ↗

Available versions

To view security patch and security hotfix release notes, log into support.servicenow.com ↗ (formerly HI).

Release version	Release type	Released on	Availability
Tokyo Patch 10 Hotfix 3	Hotfix	2023/10/25	Unavailable
Tokyo Patch 10 Hotfix 2b ↗	Hotfix	2023/12/13	Available
Tokyo Patch 10 Hotfix 2	Hotfix	2023/09/21	Unavailable
Tokyo Patch 10 Hotfix 1b ↗	Security patch	2023/11/07	Unavailable
Tokyo Patch 10 Hotfix 1a ↗	Security patch	2023/10/17	Unavailable
Tokyo Patch 10 Hotfix 1	Hotfix	2023/08/24	Unavailable
Tokyo Patch 10	Patch	2023/08/10	Unavailable
Tokyo Patch 10 security fixes ↗			
Tokyo Patch 9 Hotfix 4	Hotfix	2023/08/10	Unavailable
Tokyo Patch 9 Hotfix 3b	Hotfix	2023/10/18	Unavailable
Tokyo Patch 9 Hotfix 3	Hotfix	2023/08/01	Unavailable
Tokyo Patch 9 Hotfix 2b ↗	Security patch	2023/08/16	Unavailable

Release version	Release type	Released on	Availability
Tokyo Patch 9 Hotfix 2a 	Security patch	2023/07/19	Unavailable
Tokyo Patch 9 Hotfix 2	Hotfix	2023/06/26	Unavailable
Tokyo Patch 9 Hotfix 1	Hotfix	2023/06/07	Unavailable
Tokyo Patch 9 Tokyo Patch 9 security fixes 	Patch	2023/05/30	Unavailable
Tokyo Patch 8 Hotfix 2	Hotfix	2023/05/25	Unavailable
Tokyo Patch 8 Hotfix 1	Hotfix	2023/05/03	Unavailable
Tokyo Patch 8 Tokyo Patch 8 security fixes 	Patch	2023/03/30	Unavailable
Tokyo Patch 7 Hotfix 1	Hotfix	2023/05/24	Unavailable
Tokyo Patch 7b 	Security patch	2023/05/17	Unavailable
Tokyo Patch 7a 	Security patch	2023/04/11	Unavailable
Tokyo Patch 7 Tokyo Patch 7 security fixes 	Patch	2023/03/02	Unavailable
Tokyo Patch 6 Hotfix 2	Hotfix	2023/05/04	Unavailable
Tokyo Patch 6 Hotfix 1	Hotfix	2023/02/09	Unavailable
Tokyo Patch 6 Tokyo Patch 6 security fixes 	Patch	2023/02/02	Unavailable
Tokyo Patch 5 Hotfix 3	Hotfix	2023/02/22	Unavailable
Tokyo Patch 5 Hotfix 2 	Hotfix	2023/01/30	Unavailable
Tokyo Patch 5 Hotfix 1	Hotfix	2023/01/27	Unavailable
Tokyo Patch 5 Tokyo Patch 5 security fixes 	Patch	2023/01/12	Unavailable
Tokyo Patch 4 Hotfix 3	Hotfix	2023/01/06	Unavailable
Tokyo Patch 4 Hotfix 2	Hotfix	2022/12/23	Unavailable
Tokyo Patch 4b 	Security patch	2023/02/14	Unavailable
Tokyo Patch 4a Hotfix 1	Hotfix	2023/02/06	Unavailable
Tokyo Patch 4a 	Security patch	2023/01/17	Unavailable

Release version	Release type	Released on	Availability
Tokyo Patch 4 Tokyo Patch 4 security fixes ↗	Patch	2022/12/15	Unavailable
Tokyo Patch 3 Hotfix 4	Hotfix	2023/01/13	Unavailable
Tokyo Patch 3 Hotfix 3	Hotfix	2023/01/06	Unavailable
Tokyo Patch 3 Hotfix 2	Hotfix	2022/12/13	Unavailable
Tokyo Patch 3 Hotfix 1	Hotfix	2022/11/23	Unavailable
Tokyo Patch 3 Tokyo Patch 3 security fixes ↗	Patch	2022/11/10	Unavailable
Tokyo Patch 2 Hotfix 4	Hotfix	2022/12/15	Unavailable
Tokyo Patch 2 Hotfix 3	Hotfix	2022/11/18	Unavailable
Tokyo Patch 2 Hotfix 2	Hotfix	2022/11/10	Unavailable
Tokyo Patch 2 Hotfix 1	Hotfix	2022/11/04	Unavailable
Tokyo Patch 2 Tokyo Patch 2 security fixes ↗	Patch	2022/10/13	Unavailable
Tokyo Patch 1 Hotfix 1	Hotfix	2023/01/05	Unavailable
Tokyo Patch 1b ↗	Security patch	2022/11/15	Unavailable
Tokyo Patch 1a ↗	Security patch	2022/10/18	Unavailable
Tokyo Patch 1 Tokyo Patch 1 security fixes ↗	Patch General Availability	2022/09/21	Unavailable
Tokyo security and notable fixes All other Tokyo fixes	Feature Early Availability	2022/08/04	Unavailable

- Available: Any user can upgrade to the version. "Available" versions will appear on the [Instance Upgrade Management Dashboard](#) [↗](#).

ServiceNow Patching Program targets and patches are immediately available. Users do not need to request an entitlement to schedule an upgrade to these versions.

- Available by request: [Contact Customer Service and Support](#) [↗](#) for approval to upgrade to the version.
- Unavailable: The release version is not available.

MetricBase releases

For the latest MetricBase on-premise release notes, refer to [KB0748185](#).

Ancillary software releases

For information about latest Password Reset Windows Application, ODBC driver, and all other ancillary software available for download from the ServiceNow Store, see [ServiceNow Store release notes](#).

Tokyo Patch 10 Hotfix 3

The Tokyo Patch 10 Hotfix 3 release contains fixes to these problems.

Build information:

Build date: 10-21-2023_0155

Build tag: glide-tokyo-07-08-2022__patch10-hotfix3-10-16-2023

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#).

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#).

Fixed problem

Problem	Short description	Description	Steps to reproduce
Email Notifications PRB1705668	Connections not being released after use, causing them to be locked		

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 10 Hotfix 2](#)
- [Tokyo Patch 10 Hotfix 1](#)
- [Tokyo Patch 10](#)
- [Tokyo Patch 9](#)
- [Tokyo Patch 8](#)
- [Tokyo Patch 7](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)

- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 10 Hotfix 2

The Tokyo Patch 10 Hotfix 2 release contains fixes to these problems.

Build information:

Build date: 09-15-2023_0140

Build tag: glide-tokyo-07-08-2022__patch10-hotfix2-09-08-2023

i Important: For more information about how to upgrade an instance, see [.](#)

For more information about the release cycle, see the [ServiceNow Release Cycle](#) [↗](#).

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) [↗](#).

Fixed problem

Problem	Short description	Description	Steps to reproduce
Next Experience Unified Navigation PRB1609636 KB1501269 ↗	An API call takes a long time to execute on first load if the 'All' menu is pinned and several application menus are expanded	The expanded menus are stored as a sys_user_preference, in the format of 'menu.<sysID_of_sys_app_application>.expanded'. If these are deleted, it results in a quicker load time after the initial load is completed. The presence of expanded menus results in a higher SQL count and CPU time for the transaction.	Refer to the listed KB article for details.
Next Experience Unified Navigation PRB1626945	APPLICATION_REFRESH_REQUESTED dispatches during a direct load		

Problem	Short description	Description	Steps to reproduce
Next Experience Unified Navigation PRB1670549	Pinned menu performance is slow	Unified Navigation menu performance is slow when a menu is pinned. All menu data is retrieved in a single call, delaying the rendering of any pinned main menu in L1.	<ol style="list-style-type: none"> 1. Log into any base instance or any instance with many applications and modules (500+). 2. Pin the All menu. 3. Log out and clear the local storage. 4. Log in again. <p>Actual behavior: Pinned menus must wait for all menu data to be retrieved and other page data to be rendered.</p> <p>Expected behavior: Pinned menus load faster relative to the rest of the page.</p>
Next Experience Unified Navigation PRB1691498	First view direct incident loads are taking longer to load due to ellipsis in the center data pill		
Seismic Framework PRB1646154	Service Worker serves stale content after upgrading		<ol style="list-style-type: none"> 1. Log in to a Tokyo instance. 2. Let the page redirect to the Next Experience homepage. 3. Trigger an upgrade to the latest Utah. 4. Wait for the upgrade to complete. 5. Log in to the upgraded instance. 6. Let it redirect to the Next Experience homepage. 7. Inspect the seismic element. 8. Open the console: \$0.version. <p>Expected behavior: The version returned is 23.x.</p> <p>Actual behavior: The version returned is 22.0.12.</p>

Problem	Short description	Description	Steps to reproduce
UX Framework PRB1610281	Non-visible viewports render due to an incorrect subroute filtering on macroponent	When multiple experiences are enabled with inbox, ongoing chat features are available on an instance, and screens aren't loaded correctly for the top-level viewport screens.	<ol style="list-style-type: none"> 1. Open an instance with Next Experience off, with build glide-09-23-2022_0916. 2. Navigate to a config ws home (/now/demo/baseaw/home) by URL with Next Experience off. 3. View load time of the page and compare to glide-09-22-2022_1730 <p>Expected behavior: Load times or visually complete times are comparable between glide-09-23-2022_0916 and glide-09-22-2022_1730.</p> <p>Actual behavior: glide-09-23-2022_0916 mainline is degraded compared to glide-09-22-2022_1730.</p>
UX Framework PRB1637936	PageFragment objects aren't poorly created	The response time for UxAppProcessor is slow.	<p>Run a sampling profiler (like YourKit) while invoking UxAppProcessor by repeatedly invoking UXF apps such as Next Experience Home Page or AW Record Page.</p> <p>Notice the long runtime in UxAppProcessor.</p>
UX Framework PRB1642975	Serve more libraries from the service worker hot cache	Save assets to cache storage first so that delivering the saved assets makes them available in the hot cache later.	
UX Framework PRB1650108	Enable asset hot cache in the log in page		<ol style="list-style-type: none"> 1. Open a new tab with the URL 'chrome://tracing'. 2. Start recording. 3. Log in to the instance. 4. Stop the recording. 5. Search for 'compileModule'. <p>Notice that none of the JavaScript modules are served from the hot cache.</p>
UX Framework PRB1650555	uxsp/all.jsdbx should be pre-fetched and support multi-cache per		<ol style="list-style-type: none"> 1. Open a new incognito window. 2. Open Chrome developer tools. 3. Navigate to the Applications tab.

Problem	Short description	Description	Steps to reproduce
	asset type in Service Worker		<ol style="list-style-type: none"> 4. Navigate to the instance and stay on the log in page (don't log in). 5. In the 'Applications' tab of chrome dev tools, navigate to the cache section. 6. Navigate to 'Cache Storage'. 7. Notice that uxsp/all.jsdbx isn't present in any cache. <p>Expected behavior: uxsp/all.jsdbx is present in the SYS_PROPERTIES cache and page fragments (/uxpf) should be cached in the PAGE_FRAGMENT cache bucket.</p> <p>Actual behavior: uxsp/all.jsdbx isn't present in the cache.</p>
UX Framework PRB1652721	Create an endpoint to deliver user-agnostic PageFragment metadata	This is a performance enhancement.	
UX Framework PRB1652749	Macro component priorities shouldn't appear in page fragment responses	Macro component priorities property and all related code should be removed from PageFragment.	
UX Framework PRB1653063	Register one global service worker to improve resource sharing		<ol style="list-style-type: none"> 1. Open Chrome's dev tools. 2. Navigate to the Application tab. 3. Click Service Workers. 4. In the right panel, notice three service workers registered for three scopes: now_x.js for /now scope, now_x.js for /x scope, root.js for / scope.
UX Framework PRB1663724	Pre-load the top 50 (configurable) most used static page fragments on login.do		<ol style="list-style-type: none"> 1. Log in to an instance. 2. Use UXF apps to warm up the page fragment creation counter. 3. Log out. 4. Navigate to the login page (/ login.do) in incognito mode to simulate service worker installation.

Problem	Short description	Description	Steps to reproduce
			Notice that the top 50 most used static page fragments (macroponents) are pre-loaded. The limit is configurable with a system property glide.uxf.page_fragment_preloads.login_page_limit. If set to 0, login page pre-loading should be turned off.
UX Framework PRB1666394	Add disk-based content cache in Glide for serving uxf asset requests	This is a performance enhancement to add a server-side disk-based cache for serving uxf asset requests.	<ol style="list-style-type: none"> 1. Navigate to a couple different UXF-served apps (/now/nav/ui, /now/sow/home). <p>This populates items in the newly added disk cache.</p> <ol style="list-style-type: none"> 2. Validate that the disk cache does get used. <p>Notice that the cache is invalidated when the source tables for the generated content are updated (for example, changing a row in the macro component table).</p>
UX Framework PRB1682079	Duplicate calls are made when an incident/case form is loading	For the Next Experience Core UI, the app shell loads the Core UI jelly page in an iFrame. If the iFrame hasn't returned by the time the App Shell needs it, another request is made, resulting in a duplicate call. The duplicate call results in performance degradation.	<ol style="list-style-type: none"> 1. Log into an instance as an admin. 2. Navigate to the incident list in the Core UI. 3. Click an incident record. <p>Notice that duplicate calls are made to request the record.</p>
UX Framework PRB1686081	There's slow response time on a main document request when the 'Core UI' page is loading	The iFrame prefetch request lands on Glide earlier than the main doc request, so the main doc is held up until the iFrame request is complete.	
UX Framework PRB1686106 KB1507905	Some modals aren't loading	Post-upgrade UI issues are observed when using an application opened in a browser prior to upgrade. This is due to differences in library-uxf dist on client and server.	Refer to the listed KB article for details.

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 10 Hotfix 1](#)
- [Tokyo Patch 10](#)
- [Tokyo Patch 9](#)
- [Tokyo Patch 8](#)
- [Tokyo Patch 7](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 10 Hotfix 1

The Tokyo Patch 10 Hotfix 1 release contains fixes to these problems.

Build information:

Build date: 08-21-2023_1705

Build tag: glide-tokyo-07-08-2022__patch10-hotfix1-08-16-2023

i Important: For more information about how to upgrade an instance, see [ServiceNow Release Cycle](#).

For more information about the release cycle, see the [ServiceNow Release Cycle](#).

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#).

Fixed problem

Problem	Short description	Description	Steps to reproduce
System Export Sets PRB1685206 KB1449172	URL export (CSV) runs slower in Utah than Tokyo	com.glide.generators.AbstractGridExporter#isDiskBufferedStream() is called from two methods, one that should have a default setting of true and another that should	

Problem	Short description	Description	Steps to reproduce
		have a default setting of false.	

Note: A defect affecting cursor flickering and placement issues that was documented in PRB1673239 was resolved in TP10HF1 and UP6 by reverting PRB1632844.

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 10](#)
- [Tokyo Patch 9](#)
- [Tokyo Patch 8](#)
- [Tokyo Patch 7](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 10

The Tokyo Patch 10 release contains important problem fixes.

Tokyo Patch 10 was released on August 10, 2023.

- Build date: 08-08-2023_1235
- Build tag: glide-tokyo-07-08-2022__patch10-07-20-2023

Important: For more information about how to upgrade an instance, see [here](#).

For more information about the release cycle, see the [ServiceNow Release Cycle](#).

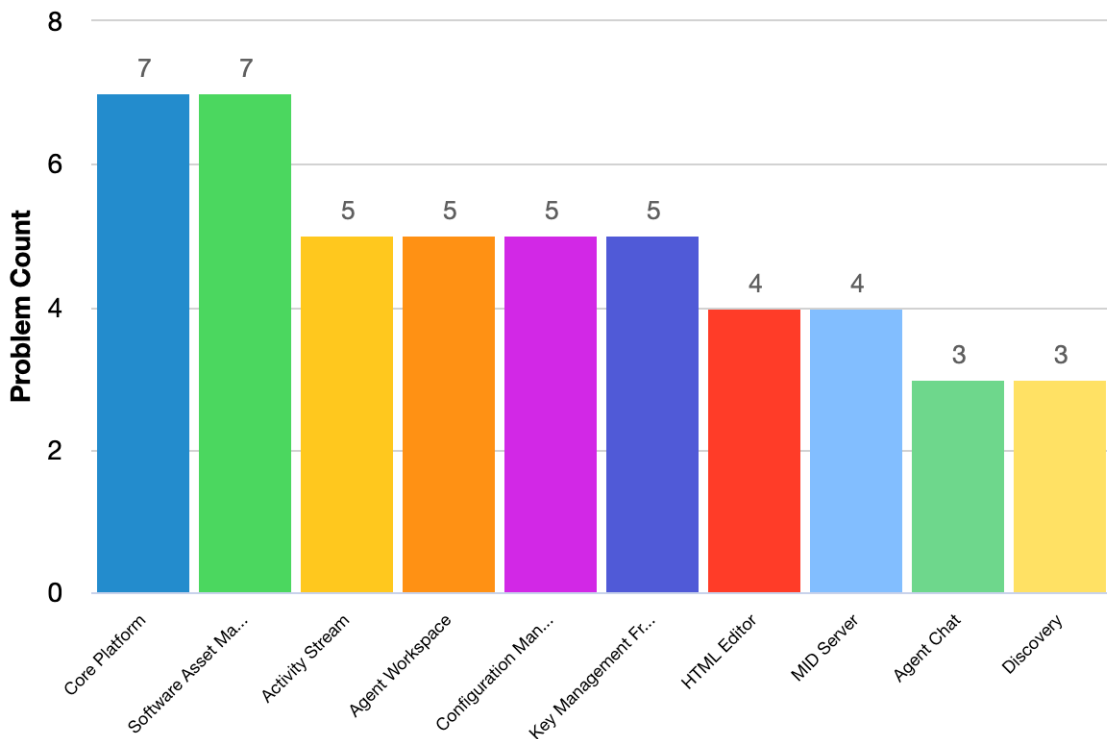
Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#).

For a downloadable, sortable version of the fixed problems in this release, click [here](#).

Overview

Tokyo Patch 10 includes 232 problem fixes in various categories. The chart below shows the top 10 problem categories included in this patch.

Top 10 problem categories



Security-related fixes

Tokyo Patch 10 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform®. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Tokyo Patch 10, refer to [KB1496501](#).

Changes in Tokyo Patch 10

Multisource CMDB

You can optionally exclude classes and their descendents from collecting and processing CMDB 360 data. The CMDB MultiSource Data [cmdb_multisource_data] table doesn't contain data for those excluded classes. For more information, see [Exclude classes from CMDB 360](#).

Components related to Multisource CMDB

Classes that are excluded from CMDB 360 data collection and processing. For any class with an active record, there won't be any data in the CMDB 360 Data [cmdb_multisource_data] table.

Exclude classes from CMDB 360

Prevent CMDB 360 collect, store, and analyze data for classes for which this isn't needed. CMDB 360 processes large amounts of data. Therefore, excluding classes can help improve the performance of the Multisource Dashboard Analytics Population scheduled job and of CMDB 360 queries.

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1674942 KB1415068	When sending emails, a workspace's activity stream displays random text rather than a username or email address	When using the 'Compose Email' feature within a workspace, once an email is sent and the entry is recorded in the activity steam of the record, it doesn't display the recipient. Instead, it displays a random string of characters.	
HR Service Delivery PRB1648026 KB1336330	The Rich description field does not format in HR case records	The Rich description field is not formatted in HR case record.	Refer to the listed KB article for details.
HTML Editor PRB1619694 KB1205889	Users can't add an image to the HTML editor using drag and drop	Users can't add an image to the HTML editor using drag and drop. The editor displays an error message: 'Failed to upload image: Request failed with status code 400'. The same issue occurs when users copy an image with some text from a file, such as an MS Word document, and paste it to the HTML editor using CTRL+C and CTRL+V commands.	Refer to the listed KB article for details.
MetricBase PRB1593907	A Clotho XMLStats request never returns if Clotho becomes unresponsive, leading to semaphores exhaustion on Glide		Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
Software Asset Management PRB1638140 KB1227294	Reconciliation errors caused due to the <code>dimNewPerCoreForMicrosoftLicenseCalculator</code> loading all the optimization records	The Per Core VM allocations are missing relationships.	
Software Asset Management PRB1662889 KB1316557	Adobe subscriptions aren't pulled by the 'SAM - Import User Subscriptions' scheduled job	'Get groups and profiles' and 'product name' were modified to contain additional information, which breaks pulling subscriptions.	
UI Actions PRB1641523 KB1281885	The Edit UI action in related lists stopped working for IIL users when there's a 'create' ACL that requires another role on the referenced table	The system throws an error: 'Unable to execute UI Action because user does not have permission to create the current record'.	Refer to the listed KB article for details.

All other fixes

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1678217	External email addresses are omitted from To/Cc fields in a workspace's activity stream		<ol style="list-style-type: none"> 1. Create an incident in Service Operations Workspace, or another workspace. 2. Compose an email for the incident. 3. Add email addresses to the To and Cc fields that don't match existing users. 4. Send the email. 5. Update the email record type to 'sent' instead of 'send-ready'. 6. Expand the email in the activity stream of the incident record in Service Operations Workspace. <p>Expected behavior: All email addresses added to the To/Cc fields in the</p>

Problem	Short description	Description	Steps to reproduce
			<p>original email should be displayed in the To/Cc fields in the email details in the activity stream.</p> <p>Actual behavior: External email addresses are omitted from the To/Cc fields in the email details in the activity stream.</p>
<p>Activity Stream</p> <p>PRB1682448</p>	<p>Mini-compose email client isn't dismissed in Configurable Workspace</p>	<p>The EMAIL_POP_OUT_OPENED event wasn't added to the presets. The event needs to be added to the TOML file and now_ui.json.</p>	<ol style="list-style-type: none"> 1. On the platform side, on a form such as an incident, send an email on the case from the three dots menu in the upper right. 2. Navigate to sys_email table. 3. Locate the email that was just sent. It should be in send-ready in the Type field. Change this to Sent. <p>This causes the email to display in the activity stream.</p> <ol style="list-style-type: none"> 4. Navigate to the same incident on HR Configurable Workspace 2.0. 5. Locate the email in the activity stream. 6. Click the Reply arrow icon in the upper right. This opens the email draft editor. 7. In the email draft editor, click the Pop Out Email Draft to a new workspace tab folder button. <p>Observe that the user is immediately taken to a new tab.</p> <ol style="list-style-type: none"> 8. Click the previous Details tab or send the email. <p>Expected behavior: The mini compose email draft is closed when it pops out to the full compose.</p> <p>Actual behavior: The mini compose email draft editor is still present when it should have been closed once the draft window popped out to the new tab.</p>
<p>Activity Stream</p> <p>PRB1685919</p>	<p>The 'Email' tab isn't focusing when users click 'Reply/reply-all' from</p>		<ol style="list-style-type: none"> 1. Navigate to Agent Workspace. 2. Open an incident record where there's at least one email in the activity stream.

Problem	Short description	Description	Steps to reproduce
	an email in an activity stream		<p>3. Click the Reply icon on the activity.</p> <p>Nothing seems to happen.</p> <p>4. Scroll up.</p> <p>Observe that the email composer opens.</p>
Advanced Work Assignment PRB1667829	When Asynchronous Message Bus (AMB) re-tries and fails, there's no callback in the AMB subscription flow		
Agent Assist PRB1596307 KB1436397	The copy resolution modal on a recommended incident doesn't pull through resolution details		
Agent Chat PRB1631954	Portrait-oriented images in the Agent Workspace are zoomed in when enlarged in an Active Chat		<ol style="list-style-type: none"> 1. Impersonate an agent. 2. Navigate to Agent Workspace and mark the Inbox as Available. 3. In another browser/incognito tab, navigate to Service Portal as a customer. 4. Initiate a chat and connect with the impersonated Live Agent. 5. Accept work item on the Agent's side. 6. As the customer, attach a portrait-oriented image. 7. As the impersonated agent, click the image in the Active chat. <p>Notice that the image is zoomed in and the user is unable to zoom in, zoom out, or scroll.</p>
Agent Chat	Fix client_logging to include audio played		

Problem	Short description	Description	Steps to reproduce
PRB1659288	and work item rendered		
Agent Chat PRB1671391	Audio notifications either don't play or play much later, if the tab is inactive for more than 15 minutes in a Chrome browser		
Agent Workspace PRB1450401	Correct choice list value is not selected when the first few letters of the word are typed		<ol style="list-style-type: none"> 1. Open an incident. 2. Click the Category field and select the software. 3. Click the Category field again, so the drop-down shows the available choices. 4. Type 'in' and notice that the focus goes to choice 'Inquiry/Help' since it starts with 'in'. 5. Open Agent Workspace and repeat the same steps. Notice that the choice that shows in the drop-down begins with the last letter typed in. <p>Expected behavior: It should behave the same as in the Platform UI where the focus goes to the choice that begins with all the letters typed.</p> <p>Actual behavior: The correct choice list value is not selected when the first few letters of the word are typed.</p>
Agent Workspace PRB1587660	On a screen reader, 'Now Loading' and 'Finished Loading' list messages incorrectly use the table name instead of the label	When the VoiceOver cursor is on the column header(Number/ State.. etc) and presses the button, the table instance name is exposed before and after loading. This table instance name sometimes is meaningless and confusing to the user. It is suggested to use the table display name instead.	<ol style="list-style-type: none"> 1. Open Agent Workspace. 2. Open All under change. 3. Enable VoiceOver of macOS (command F5). 4. Navigate to the column header of Number. 5. Press Ctrl+Opt+space to sort the column. <p>Observe that the table instance name is exposed before (for example, 'Now loading: List - All - Table change_request') and after loading</p>

Problem	Short description	Description	Steps to reproduce
			(for example, 'Finished loading: List - All - Table change_request').
Agent Workspace PRB1630542 KB1262203	A 'Workspace' list doesn't load when workspace.list.columnWidths.<sys_id>'s user preference has the value 'auto'	A 'Workspace' list fails to load when the sys_user_preference workspace.list.columnWidths.<sys_id_of_sys_ux_list> contains 'auto'.	<ol style="list-style-type: none"> 1. View a list in a configurable workspace. 2. Resize one of the columns with the drag handle in the list header. 3. Find the user preference that was just created/modified, named workspace.list.columnWidths.<sys_id_of_sys_ux_list>. 4. Change the user preference's value to 'auto' (without quotes). 5. Log out. 6. Log back in. 7. View the same list. <p>Expected behavior: The list should load.</p> <p>Actual behavior: The list doesn't load. The preference value is apparently invalid and not handled gracefully.</p>
Agent Workspace PRB1657175	The script field is positioned over the drop-down of all headers		<ol style="list-style-type: none"> 1. Add field type script and plain script on any table in CSM Workspace. 2. Open the form with fields in CSM workspace. 3. Click All from header. <p>Notice that the script field is positioned over the drop-down of all headers.</p>
Agent Workspace PRB1677964	The 'Customer 360' ribbon component is not displaying dot fields on HR Agent Workspace	When the user adds the ribbon 'Customer 360' to HR Agent Workspace, it doesn't display dot fields.	<ol style="list-style-type: none"> 1. Log in to a Tokyo instance. 2. Navigate to HR Agent Workspace. 3. Open sn_hr_core_case. 4. Observe a ribbon. 5. Add dot fields in the Ribbon Setting under Primary fields. <p>Notice that dot fields are not visible on the ribbon.</p>
AI Search Glide PRB1669437	Indexing the child table deletes the parent as well as other child		<ol style="list-style-type: none"> 1. Enable AIS from glide. 2. Once all data is ingested, open an index source with child tables, such as sc_cat_item.

Problem	Short description	Description	Steps to reproduce
	table data from the index		<ol style="list-style-type: none"> 3. Verify the AIS index doc count by table by using facet on *** query. 4. Index any child table using the button or the background script. 5. After the ingestion, notice the reduction in the doc count on the AIS index. 6. Verify the index using same request as Step 3 and notice that the other child table/parent table is also missing. <p>Notice the deleteByQuery request in AIS logs.</p>
AI Search PRB1619435	Exact match click returns a blank page and the 'View All' link does not take the user anywhere		<ol style="list-style-type: none"> 1. Bring up a main instance. 2. Make sure to that AI search connections and AIS are enabled. 3. Perform an exact match (for example, search for a KB or Incident). 4. Click the exact match. <p>Notice a blank page. Also notice that clicking View all results does nothing.</p>
Application Manager PRB1674226	AppsDataApi.getEntitledApps leads to a large number of requests to sync Store apps from the Store		
Application Navigator PRB1628759	Multiple records are being created to the Knowledge Use (kb_use) table when navigating through the page	The Next Experience generates duplicate events.	<ol style="list-style-type: none"> 1. Log in to an instance. 2. Open Knowledge Article from Kb_View page. 3. Open any Published Knowledge Article. 4. After opening the article, scroll the article twice. 5. Navigate to the kb_use table and apply a filter with Article Number. <p>Notice that the Next Experience generates duplicate events.</p>

Problem	Short description	Description	Steps to reproduce
Application Navigator PRB1636354	If sys_ui_navigator changes are skipped, the logs will be full with syslog errors	The syslog errors are: Navigation history No such column: ui_type: no thrown error.	
Appsee - Platform Infrastructure PRB1670811	Users with a read-only role are unable to save consent decision and the pop-up reappears		<ol style="list-style-type: none"> 1. Create a user with snc_read_only role with explicit opt-in analytics consent policy. 2. Log in with the user credentials. 3. A user consent pop-up will appear. 4. Click either Agree or Disagree. <p>Expected behavior: User decision should be saved in the DB table and a pop-up should not appear again.</p> <p>Actual behavior: In either choice, the decision is not saved. An exception is thrown in the back-end.</p>
Appsee - Platform Infrastructure PRB1678962	Calculate GeolP from LoadBalancer's MaxMind header		
Asynchronous Message Bus (AMB) PRB1642265	Asynchronous Message Bus (AMB) Client on WebSocket protocol should handle the message size limitations gracefully	Asynchronous Message Bus (AMB) Client on WebSocket protocol should handle the message size limitations gracefully and give a call back to the caller on unsupported message sizes.	<ol style="list-style-type: none"> 1. Navigate to any page on a ServiceNow instance with AMB. 2. Launch Browser Console. 3. Access AMB client via g_ambClient variable or amb.getClient(). 4. Use getChannel API of AMB client. 5. There are two ways to send a message longer than 8192 characters to the server, one via channel subscription and publishing a message: <ol style="list-style-type: none"> a. Create a channel name longer than 8192 characters and send a subscription request b. Create a channel and publish a message longer than 8192 characters to the server <p>Observe the client is disconnected from the server. The client shouldn't send any message longer than 8192</p>

Problem	Short description	Description	Steps to reproduce
			characters to the server and fail the request. They should give a call back to the application.
Automated Test Framework (ATF) PRB1643379	ATF tests can unexpectedly cancel themselves if there are network issues while reporting a step result		
Benchmarks PRB1637222	'Number of incidents resolved' indicator should be deleted in app-bm-common		
Cache PRB1644011	Change caching isolation strategy on st_design_system_icon table		
Cache PRB1645732	ScopedCacheManager should flush the cache across all instance nodes but it's only flushing on the node that calls the API	When we flush the ScopedCacheManager API, it's only flushing on the node that calls the API, when it should be propagating the flush across all nodes. Secondary nodes do pick up the sys_cache_flush entry, but the flush doesn't actually occur.	
Change Advisory Board (CAB) Workbench PRB1673241 KB1377507	After an upgrade, comments on an approval do not render		
Change Management	Approvals' states (Approve/Reject buttons) aren't	This is caused by the approval responder not being registered correctly when	<ol style="list-style-type: none"> 1. Log in to an instance. 2. Impersonate a CAB meeting manager.

Problem	Short description	Description	Steps to reproduce
PRB166115	Updated automatically in CAB Workbench	moving to the next item in the agenda.	<ol style="list-style-type: none"> 3. Start a CAB meeting. 4. Navigate to sys_rw_action.list. 5. Notice that there are records for a sysapproval_approver record with the name 'cab.responder'. 6. Check the responder key value. 7. In CAB workbench, navigate to the next agenda item. 8. In sys_rw_action list, duplicate the tab. 9. Compare the new responder record with the previous responder. <p>Expected behavior: The new responder should have a different responder key.</p> <p>Actual behavior: The new responder has the same responder key (which can potentially cause issues).</p>
Change Management PRB1663948	The ChangeModelAJAXProcessor script isn't accessible from all application scopes	The access should be set to public for non-global apps to access ChangeModelAJAXProcessor.	
CMDB to CSDM Data Synchronization PRB1683245	A record is inactive for a configuration item with 'End of Life' and 'Retired'	'Configuration - End of Life - Retired' shouldn't be inactive. The following Life Cycle Control records should still be set to active as they're still needed in current feature workflows: 'Configuration - End of Life - Retired', Asset - Design - Build', and 'Product Model - Operational - In Use'.	<ol style="list-style-type: none"> 1. Navigate to the life_cycle_control table. 2. Locate the record for the table: <ol style="list-style-type: none"> a. Configuration item, life cycle stage: End of Life b. Life cycle status: Retired <p>Notice that its active state is set to false.</p>
Code Signing PRB1649143	GCC instances are seeing records return as untrusted for PSScript.ps		<ol style="list-style-type: none"> 1. Upgrade an instance from Tokyo to Utah. 2. Log in as a security admin with the crypto manager role. 3. Navigate to sn_kmf_record_signature.list table.

Problem	Short description	Description	Steps to reproduce
			<p>4. Search records by type PSScript.</p> <p>5. Run the isTrusted API.</p> <p>Expected behavior: It returns as trusted.</p> <p>Actual behavior: It returns as untrusted.</p>
Column Level Encryption Enterprise PRB1648259	Updating a column with an EFC is updating the data type of the field in the database		
Common Service Data Model (CSDM) PRB1642626	Lifecycle's stage and status are missing for the 'Product Model' class	Users expect to have all of the stages and statuses that are given in the documentation for the product model.	
Communities PRB1663911	An update to the Community Profile [sn_communities_profile] record's Company and Title fields aren't reflected in the hover card		
Configuration Management Database (CMDB) PRB1627051 KB1211804	An encoded query isn't properly displayed on a condition builder when editing a policy	When using the CMDB data manager policies, a condition builder isn't displaying the selected class name. Filters aren't saved even after it shows that the record was saved successfully.	Refer to the listed KB article for details.
Configuration Management Database (CMDB) PRB1640651	The cmdb_categories.name field is missing the 'allow_public=true' attribute	On CMDB categories cmdb_categories.name , the name is a table name type reference to a table, and the user can't select any non-global	<ol style="list-style-type: none"> 1. Log in to an instance with the session in the global application scope. 2. cmdb_categories.list > New > cmdb_ci_multimedia > Name (in the field).

Problem	Short description	Description	Steps to reproduce
KB1268839 ↗		application scope tables.	
Configuration Management Database (CMDB) PRB1651302	Non-cmdb tables and columns in CMDB Query Builder don't load		
Configuration Management Database (CMDB) PRB1669057	Add 'deny' tables to avoid writing of the Identification and Reconciliation engine data to cmdb_multisource_discovery	When CMDB 360 properties to collect (CMDB CI and Non-CMDB CI) are enabled, IRE stores all data sent by callers like discovery or SG connectors. However, some data sent by SN discovery related to network infrastructure items are ephemeral (they get cleaned in a short time frame like seven to 30 days) using table cleaners. Table cleaners don't call business rules to clean multisource data and as a result, multisource data tables get too large for small to medium customers and causes scale issues.	<ol style="list-style-type: none"> 1. Enable the discovery license plugin. 2. Enable a collection of CMDB 360 data. 3. Send data to IRE using ServiceNow discovery. <p>Observe that discovery records created by IRE are also stored in cmdb_multisource_data.</p>
Configuration Management Database (CMDB) PRB1669614	Identification and Reconciliation Engine (IRE) before script cannot access lookup/related items in the payload		<ol style="list-style-type: none"> 1. Install any SG connector or use the demo data source from IH-ETL. 2. Navigate to the cmdb_inst_application_feed table and find the record for the data source of the application. 3. Edit the before script and add the code (that is listed at the end of these steps) in the existing function. 4. Run the application (through IH-ETL or data source itself). 5. Navigate to system logs and search the info message. <p>Expected behavior: The length is not undefined.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: The length is undefined.
Contextual Search PRB1615867	Having multiple record producers with cxs configured in an order guide breaks the contextual search	Contextual search results can't be listed under record producers. This issue can be observed when there's multiple record producers under an order guide. These record producers have valid cxs_rp_config records. The issue can't be reproduced in the 'Service catalog' view.	
Core Platform PRB1625721 KB1276010	After setting the glide.system.locale property to a non-EN value, any state updates that update to a negative state value fails	After setting the 'glide.system.locale' property to a non-EN value (for example, ar.SA or no.NO), any state update that updates to a negative state value fails.	
Core Platform PRB1638469	Events with a future process_on time are processed immediately	This problem arises when multiple threads are involved. Polling occurs twice, which causes an event with a future process_on time to be returned now.	
Core Platform PRB1650267	DNS/hostname resolution fails during node startup and results in the node being set as the primary node	If a node restarts and experiences DNS/hostname resolution failures during startup, the node will be marked as a primary node. This is problematic for secondary nodes.	
Core Platform PRB1662314	Events are not delegated if they stay in queue.processor_id for more than 300 seconds		<ol style="list-style-type: none"> 1. Have nowmq on. 2. Create a event with queued.processor_id event. 3. Ensure there is no consumer running or consumer is long running and didn't get chance to look at event with queued.processor_id.

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: NowMQ should be able to reassign events to different node after 300 sec (EventManager.recoverStuckEvents) which it does if event state is ready.node_id.</p> <p>Actual behavior: Events never get reassigned to different node.</p>
Core Platform PRB1664706	A log export combined with an outage/network delay that is over ten seconds can prevent a node from starting up	If an instance is configured to export logs and there is a network delay, or a delay in communication at node startup, or it is the first time the user is sending to a topic, the network call to send logs could take ten seconds before timing out. During that time, all transactions and semaphores that are producing logs will block, making the instance have a significant startup delay or preventing the node from starting.	
Core Platform PRB1664709	Log API causes hermes error due to function call looping	The log export combined with Hermes outage/network delay of more than ten seconds can prevent a node from starting up.	
Core Platform PRB1668254	CollisionDetector with 400+ MB of records causes memory issues and application installation failure		
Currency Administration PRB1674427	Referenced Fx Currency field gets populated with sysID rather than the actual		<ol style="list-style-type: none"> 1. Create a new field of type Fx Currency on the problem table. 2. Add it to the Service Operations Workspace on the problem form. 3. Add the field created in Step 1 to the incident form (use Problem [+]).

Problem	Short description	Description	Steps to reproduce
	currency value		<ol style="list-style-type: none"> 4. Add it to the Service Operations Workspace on the incident form. 5. Navigate to an open problem in Service Operations Workspace. 6. Set a value to the newly created field, for example 1000 USD. 7. Save. 8. Navigate to an open incident and set the problem reference (Related Records section) to the PRB from the previous step. <p>Expected behavior: The Fx Currency field on the incident populates with the amount set in Step 6.</p> <p>Actual behavior: The Fx Currency field on the incident populates with the sysId string.</p>
<p>Currency Administration PRB1675528</p>	<p>Referenced FX Currency field does not display the currency value when the reference value changes</p>		<ol style="list-style-type: none"> 1. On the problem table, create a field 'Test FX Currency' of the Fx Currency type. 2. Navigate to the incident Form Configuration slushbucket. 3. For the default view, add a referenced field Problem. Test FX Currency. 4. Navigate to an open incident in UI16 and set the problem reference to a Problem with a value set for Test FX Currency. <p>Expected behavior: The referenced FX Currency field displays the value from the reference problem.</p> <p>Actual behavior: The FX Currency field is empty and a console log is thrown, 'Syntax error, unrecognized expression: option[value=\$1,000]'</p>
<p>Customer Service integration with Computer Telephony Integration (CTI)</p>	<p>There's a spike in / openframe/ agent_status calls when a user unsubscribes from a</p>	<p>The issue occurs because of the way the agent presence is currently set.</p>	<p>Refer to the listed KB article for details.</p>

Problem	Short description	Description	Steps to reproduce
PRB1639757 KB1265232	channel on an instance		
Customer Service Management with IT Service Management (ITSM) PRB1662464 KB1314313	The Customer 360 component in a language other than English does not display the VIP icon	Issue with the Customer360 component used in Agent Workspace to display information about the Caller and the Affected user. The VIP icon works correctly if the user has the instance language set to English, but it is not displayed if the instance language changes to anything other than english.	
Database Persistence - Data Scale PRB1662075	There is contention on sys_db_table_checkpoint when a transaction is open for long time	A sys_db_table_checkpoint update creates a global lock per table, which causes lock contention on high churning tables.	
Database Persistence PRB1671149	Union replacement rewrite is throwing an exception and turning off the query rewrite	The subselect generated by the union optimization is aliased as 'innerselect', so mysql can't differentiate between sys_id fields.	
Discovery PRB1651389	Behavior discovery schedule configured with multiple functionalities, with same phase, and same MIDs on those functionalities discovers the same IP with the same protocol via multiple MID servers		
Discovery	True up for scoped applications		

Problem	Short description	Description	Steps to reproduce
PRB1658936			
Discovery PRB1676183	SNC.IPAddressV4 no longer supports isPrivateAddress	In Tokyo onwards, SNC.IPAddressV4 (ipAddress). isPrivateAddress() returns undefined.	
Edge Encryption PRB1665864 KB1412076	Asynchronous Message Bus (AMB)'s record watcher displays encrypted content in Edge		Refer to the listed KB article for details.
Employee Taxonomy Framework PRB1643835 KB1275931	System performance is impacted by duplicate notifications during Tokyo upgrade		Refer to the listed KB article for details.
Employee Taxonomy Framework PRB1673559	Defects true-up to Employee Center Store artifacts		
Encryption Support PRB1653365	Access is denied to a crypto module because the context or module sys_id is missing, causing a message to be incorrectly thrown and a certain level of delay		<ol style="list-style-type: none"> 1. Navigate to an instance. 2. Create a crypto module (column level encryption). 3. Create a module access policy with a role. 4. Create Encryption fields on the change_request table. 5. Added the fields to the 'List' view. <p>Encryption field configurations are needed for all the encrypted fields.</p> <ol style="list-style-type: none"> 6. Log in as an ITIL user. 7. Navigate to change_request.LIST. 8. Verify the logs. <p>Observe the warning message: '*** WARNING *** Access denied to crypto module - context or module sys id is missing'.</p>

Problem	Short description	Description	Steps to reproduce
Event Management PRB1659000	A mediator script should be added to test the pull connector synchronous API		<p>Scenario 1:</p> <ol style="list-style-type: none"> 1. Navigate to 'Integration launchpad'. 2. Create a pull connector. 3. Try to delete it. <p>Notice that the connector isn't deleted with an exception.</p> <p>Scenario 2:</p> <ol style="list-style-type: none"> 1. Navigate to 'Integration launchpad'. 2. Create a connector instance. 3. Click the Test Connector button after filling in the connector instance creation form. <p>Notice that the test connector check fails.</p> <p>Scenario 3:</p> <ol style="list-style-type: none"> 1. Navigate to 'Integration launchpad'. 2. Create a pull connector of vCenter. 3. Open the 'Related events' tab for the connector. <p>Notice that there's an empty list.</p>
Event Management PRB1664841	The evt_mgmt.valid_impact_free_services_amount property isn't being used properly	Property evt_mgmt.valid_impact_free_services_amount, which was created in order to limit the number of services fetched from em_impact_changes table when impact calculating, is not being used in the proper way.	
Event Management PRB1679095 KB1436822	Service Analytics RCA for the 'Change Requests' scheduled job should handle null pointer exceptions	In rare cases where the primary alert has no secondary alerts, the issue can occur.	

Problem	Short description	Description	Steps to reproduce
Field Administration PRB1623940	In Agent workspace, the 'Preview Record' icon is redirecting to an old value instead of a current value	This happens when the value is set via the onChange client script in the Agent Workspace.	
Field Administration PRB1630484	Close dialog does not work in the template form in workspace		<ol style="list-style-type: none"> 1. Log into a Tokyo base instance 2. Create an experience in UI builder. 3. Create a page using the record page template. 4. Modify the URL (add the record sys_id) to open an incident record in that. 5. Navigate to the Templates tab and click Create. 6. In the template form, click the Search icon. 7. A pop-up opens and clicking Close does not work. <p>Expected behavior: The Close dialog is clickable.</p> <p>Actual behavior: The Close dialog is not clickable.</p>
Flow Designer PRB1636443	When users trigger a flow from a script in automation, there's a flow encounter 'Date parse' error		
Flow Designer PRB1682045 KB1437909	global.WorkflowApprovalUtils().reset Does Not Validate Parameters	There is no validation of the task record which is passed through global.WorkflowApprovalUtils().reset. This can cause unwanted records to be removed when the function is used.	

Problem	Short description	Description	Steps to reproduce
Form Administration PRB1642368	Character counter below the multiline text field doesn't show in Configurable Workspace	The Character Counter displaying below the text field is not displaying in the UIB workpsace but it is working fine in legacy workspace and native UI.	<ol style="list-style-type: none"> 1. Open any base instance. 2. Make sure system property 'glide.ui.textarea.character_counter' is set to true. 3. Open any problem/incident record which contains the description field. 4. Observe the behavior in native UI, legacy workspace, UIB/configurable workspace. <p>Expected behavior: Character count should get displayed in any UIB/configurable workspaces.</p> <p>Actual behavior: Character count doesn't get displayed in any UIB/configurable workspaces.</p>
Form Administration PRB1667184	Referenced Fx Currency field can not be updated in Workspace		
Form Administration PRB1681716	The form section user session object check should check for empty objects	When a form section gets loaded into an environment that sends an empty object into the form section, that form section should not allow that to be used. In the case an empty object is sent, the form section should try to grab the user session from the window UX globals cache.	<ol style="list-style-type: none"> 1. Set up a local test harness that is passing an empty object as the prop for userSession. 2. Notice that form section is using the empty object rather than finding the window object. <p>Expected behavior: On empty object for user Session, the component should grab the window object.</p> <p>Actual behavior: On empty object for user Session, the component tries to use the empty object.</p>
Form Builder PRB1672922 KB1380292	Having the value of the glide.ui.concourse.onmessage_enforce_same_origin_whitelist property separated by linebreaks causes the instance to get stuck the establishing session		

Problem	Short description	Description	Steps to reproduce
Hermes (Family) PRB1665105	There is an initialization of Glide Hermes Client State for LES		
Hermes (Family) PRB1665721	Hermes iPKI certificate generator doesn't work on a Tokyo instance	On a Tokyo instance, the certificate generator tool was stuck on the first step. There were some console errors.	
HR Service Delivery PRB1599116 KB1430156	The Rich Description field is empty when a case is created from a record producer		Refer to the listed KB article for details.
HTML Editor PRB1625272	Text inserted in an HTML variable (tinyMCE v5) is lost if the font is changes before submitting to Record Producer	When submitting a form with an HTML variable, if all (or part) of the text gets its font changed from the font selector above, it will not get submitted and the variable will lose the text.	<ol style="list-style-type: none"> 1. Create a table with a single string field. 2. Create a record producer for the table created in the previous step. 3. Add an HTML variable in the record producer, and do not forget to map the variable to the string field in the table. 4. Type something to the HTML variable, select the entire text, and change the font-family to the Arial in the tinymce editor. 5. Submit the form. <p>Observe that the record is created with an empty value, and the value of the HTML editor is not passed to the post request.</p>
HTML Editor PRB1654477	In TinyMCE, there's a missing inline attachment for the image library		<ol style="list-style-type: none"> 1. Navigate to a knowledge article. 2. Create a new article. 3. Click the Image uploader on the TinyMCE toolbar. <p>Expected behavior: The Attachment button should be there next to the Browser button.</p> <p>Actual behavior: The Attachment button is not available.</p>

Problem	Short description	Description	Steps to reproduce
HTML Editor PRB1663067	Active-line isn't highlighting in Source Code	When highlighting text in an HTML field and selecting 'Source Code', the text in Source Code isn't highlighted. The cursor is at the beginning of where the highlighted text was.	<ol style="list-style-type: none"> 1. Navigate to a knowledge (kb_knowledge) record in either Platform (UI16/Next Experience) or Workspace. 2. In the TinyMCE Article body field, click the Source Code button on the toolbar. 3. Click some text to place the cursor focus there. <p>Expected behavior: The entire line is highlighted with a light blue background color.</p> <p>Actual behavior: The entire line isn't highlighted. The only highlighting occurs when the cursor focus is placed on a tag. Only the tags and their attributes are highlighted.</p>
Key Management Framework (KMF) for Platform Encryption PRB1665778	KMFAutoKeyExchange PluginEventListener affects the upgrade when the sys_trigger table is large		<p>Upgrade an instance with the large sys_trigger table.</p> <p>Actual behavior: The upgrade takes much longer than usual.</p> <p>Expected behavior: The upgrade time is not impacted.</p>
Key Management Framework (KMF) PRB1592780	Instance PKI shouldn't log errors when it's not configured	When attempting to use the CRL endpoint of the Instance PKI functionality, an error can sometimes be observed even though the component is not configured.	<ol style="list-style-type: none"> 1. Start Glide. 2. Navigate to the CRL endpoint. <p>Expected behavior: A 503 error message is returned saying IPKI isn't configured.</p> <p>Actual behavior: Observe the error, 'Fail to create CRL due to: Unable to find instance PKI issuing CA certificate in sys_kmf_certificate'.</p>
Key Management Framework (KMF) PRB1597138	Slowness in list or form load of tables with encrypted fields	If there are a large number of encrypted fields in a single table, the list and form load may experience slowness pre-Utah. This is due to a large number of expensive queries to analyze access.	

Problem	Short description	Description	Steps to reproduce
Key Management Framework (KMF) PRB1599179	KMFDestroyableSecretKey should return a copy of the encoded secret key		<ol style="list-style-type: none"> 1. Use package calls to fetch the HMAC key and HMAC a value 2. Run the same script again. <p>Expected behavior: Both calls lead to the same value.</p> <p>Actual behavior: The second call returns a different HMAC value. When inspecting the secret key, the user notices that it's not filled with zeroes.</p>
Key Management Framework (KMF) PRB1649076	Some instances are missing the Auto-Key Exchange requests		
Key Management Framework (KMF) PRB1650973	Key Exchange rotates the automatic requests nonce, which breaks instances that were restored using the same backup		<ol style="list-style-type: none"> 1. Provision three instances A, B, and C. 2. Take a backup of A. 3. Restore A over B using the backup from #2. 4. Confirm that Key Exchange runs successfully between A and B. 5. Restore A over C using the backup from #2 (again). <p>Expected behavior: Key Exchange successfully runs and exchanges keys from A to C.</p> <p>Actual behavior: Key Exchange rotated the nonce/token in step 4, effectively 'invalidating' the backup - and any instance restored or cloned off of it will fail.</p>
LDAP integration PRB1655964	LDAP Listener issues in MID Server Issues in all instances		
List Administration PRB1638192	When duplicate copies of lists are created, the 'listname was created' error message doesn't		

Problem	Short description	Description	Steps to reproduce
	appear in New Workspaces		
List Filters PRB1665658	Total count of grouped breadcrumbs is not displayed for the dashboard table		<ol style="list-style-type: none"> 1. Create any dashboard. 2. Add any list report with grouped data. <p>Expected behavior: The total count should be displayed.</p> <p>Actual behavior: Only the group-specific count is displayed.</p>
Microsoft Active Directory Spoke PRB1622557	ActionCreateNewGroup.ps1 does not accept '&' as a valid character		
MID Server PRB1645610	High heap memory usage leading to Out of Memory Error		<ol style="list-style-type: none"> 1. Open an instance with the ACC-F and ACC-M plugins installed. 2. Set up the MID with 8GB Max heap memory. 3. Use the simulator to bring the 4K agents. 4. Start sending Linux OS metrics 100 per agent. <p>Expected behavior: Memory consumption should not be greater compared to Tokyo build.</p> <p>Actual behavior: Heap memory consumption is greater.</p>
MID Server PRB1659246	The method getHostIPAddresses in the class IPRangeMidFilter is not looping through all the 'cmdb_ci_dns_name' records to find the ip_address	The ip_address resolution form hostname fails when there exists multiple records in the 'cmdb_ci_dns_name' table because the code is checking only the first record in that table and returning the exception 'Unable to resolve host name'.	

Problem	Short description	Description	Steps to reproduce
MID Server PRB1671293	A session is null for an agent during a MID heap pressure		<ol style="list-style-type: none"> 1. Connect the 8K agents with 8GB MID heap. 2. Start sending the 550+KB discovery payload. <p>The session is null for an agent.</p>
MID Server PRB1678119	Implement connection timeout logging	The connections between agent, MID, and the instance don't have sufficient logging to determine if keep alive messages are making it from the agent to the instance.	<ol style="list-style-type: none"> 1. Connect an agent to a MID server. 2. Verify that the logging statements for partial/full connections aren't present prior to the defect, and present after implementation of the defect. 3. Disconnect the agent. <p>Verify that the disconnection statement appears in the log after applying the defect.</p>
Mobile Experience for Field Service Management PRB1667847	Inactive users shouldn't display in 'My Teams'	In FSM Mobile, inactive users shouldn't display 'My Teams' in the 'List' and 'Map' views.	<ol style="list-style-type: none"> 1. Log in to the mobile app as an FSM agent. 2. Navigate to 'My Team - Team members'. 3. Verify. 4. Click Map View. 5. Verify. <p>Expected behavior: Inactive users shouldn't display in 'My Team - Team members'.</p> <p>Actual behavior: Inactive users display as empty rows in the 'List' view and as empty cards in the 'Map' view.</p>
Mobile Platform PRB1682909	Auto redirection to screen after an action execution is not working properly when the destination screen contains client-submitted UI parameters	Arabic characters are displayed when they shouldn't be.	

Problem	Short description	Description	Steps to reproduce
Multi-provider Single Sign-on (SSO) PRB1475434	User is redirected to login_cpw after logging in via SSO		<ol style="list-style-type: none"> 1. Log in to an instance with a user that has password_needs_reset set to True. 2. After logging in, leave the browser for a while (do not open anything else on the browser). 3. After 1-2 hours, try opening a page on the instance. <p>Observe that the user is redirected to login_cpw.do.</p>
Multi-provider Single Sign-on (SSO) PRB1645688	Single Sign-On's OpenID Connect integration isn't stable	The Clock Skew in OAuth OIDC Entity of OIDC Identity Provider in ServiceNow instance does not honor leeway in the timestamp differences ServiceNow instance and OpenID Connect.	
Mutual Transport Layer Security (TLS) Authentication PRB1644381	sys_ca_certificate record is lost after clone		<ol style="list-style-type: none"> 1. Activate mutual authorization plugin in Instance A. 2. Install the ATF Test Generator and Cloud Runner store application in Instance A. 3. Navigate to sys_ca_certificate. 4. Notice that the ServiceNow Root CA Certificate record is present. 5. Clone Instance A over to Instance B. 6. Navigate to sys_ca_certificate. <p>Notice that the ServiceNow Root CA Certificate record is NOT present.</p>
Next Experience Unified Navigation PRB1635280	Update Pinned Menu User Preference fix script can set User Preferences to the wrong value during upgrade	Specifically, in the glide.ui.menu.main.pinned.id user preference where 'favorites' is the value, it is unexpectedly changed to 15a7264c320011001dd7096e940dd37 (which is NOT the sys_id of the Favorites).	
Next Experience Unified Navigation	Translation prefixes are missing for the Workspace menu		

Problem	Short description	Description	Steps to reproduce
PRB1640897			
Next Experience Unified Navigation PRB1648392	Admins are now allowed to customize system menus		
Next Experience Unified Navigation PRB1658796	The help panel doesn't update when the user navigates between workspaces	The help panel isn't refreshed when switching between the different routes inside a page. After clicking the Back button in the content of the help panel, the help panel and page title stop updating correctly when the user continues navigating between workspaces and/or pages within a workspace.	<ol style="list-style-type: none"> 1. Click any document inside a help panel. 2. Click the Back button to go back. 3. Navigate to any other route inside the page. <p>Expected behavior: The help panel should be refreshed with new content or with no content if no help exists on that route.</p> <p>Actual behavior: The page URL changes but the help panel isn't refreshed.</p>
NLU Service - Glide PRB1644606	ULT query for irrelevant utterances is misspelled		
Notify PRB1641506	New API for Async Bulk SMS Processing		
Now Code Editor PRB1664120	Mouse click incorrectly sets the caret position		<ol style="list-style-type: none"> 1. Drag and drop the code editor component in any UIB page. 2. Open in preview mode. 3. Add a long code for test. 4. click a specific position. <p>Expected behavior: The cursor is on the clicked position of the editor.</p> <p>Actual behavior: The cursor is moving incorrectly to random positions.</p>
Now Experience	A column of type 'List' shows 'undefined'	When the user assigns sn_hr_er_case to themselves, the	

Problem	Short description	Description	Steps to reproduce
Component Library PRB1642469	as form field value	'collaborators' field displays 'undefined'.	
Now Experience Framework PRB1597241	Source Sans Pro doesn't support all diacritics in Polish	Some characters are larger or bolder.	<ol style="list-style-type: none"> 1. Install the Polish language. 2. Navigate to a page using the font. <p>Observe that some characters are larger or bolder.</p>
Now Experience UI Builder PRB1635429	In Tokyo's UI Builder, there's an unexpected 'Private Scope' message, and a missing 'new/old layout' message	The issue occurs anytime users return to a variant page. When updating the layout and allowing the flow to complete, the 'New/old layout' message should appear. Refreshing the page and/or opening the page in another tab makes the 'Private Scope' message appear.	<ol style="list-style-type: none"> 1. Log in to a Tokyo instance. 2. Open UI Builder. 3. Open an existing one. 4. Click Create new page. 5. Select View legacy templates. 6. Select List. 7. Select Legacy template. 8. Give it a name. 9. Select Copy content of the page. 10. Click Create. 11. Once the page is ready, click Update layout. 12. Once the pop-up appears, refresh the screen. <p>Expected behavior: Users should see a message asking to keep the old layout or the new one.</p> <p>Actual behavior: The 'Private scope' message displays and isn't allowing the page to be edited.</p>
Now Experience UI Builder PRB1666090	A user can't modify required or optional parameters if a page has multiple variants with mismatched scopes		<ol style="list-style-type: none"> 1. Create a page. 2. Change scope. 3. Create a variant. 4. Change back to original scope, and navigate to the original page. 5. Add req or opt parameters. <p>Expected behavior: Req and opt parameters are added and page macroponent has a new props added. Also, sys_ux_app_route has params added to record.</p>

Problem	Short description	Description	Steps to reproduce
			<p>Actual behavior: Observe a failure message. Only the sys_ux_app_route record was modified. Macroponent props were not added. Cannot use new params.</p>
<p>Now Experience UI Builder PRB1668921</p>	<p>Creating a theme in UI Builder when Next Experience is turned off causes an error and is locking the instance</p>	<p>The UI is different in Utah and this issue isn't occurring.</p>	<ol style="list-style-type: none"> 1. On a Tokyo instance, switch the Next Experience UI off by setting the system property 'glide.ui.polaris.experience' to false. 2. Navigate to UI Builder via the application navigator. 3. Click Service Operations Workspace. 4. Navigate to Menu > Edit Experience Settings in the top menu. 5. Click Branding and theming on the left tab. 6. click Create a theme. <p>Expected behavior: The window opens to create a theme.</p> <p>Actual behavior: Users receive a blue error prompt in a new window 'Unknown: sys_ux_theme' and the whole instance becomes unavailable. Users can't access any other lists.</p>
<p>On-Call Scheduling PRB1675218</p>	<p>On-call custom group escalations are launched into a loop, which causes a large rise in the event queue</p>		<ol style="list-style-type: none"> 1. Create a trigger rule with Trigger when group assigned changes is False and Group field as a particular group (for example, Service Desk). 2. For Service Desk, create a custom escalation policy with two steps. <ol style="list-style-type: none"> a. Have three groups (Network, Hardware, and Nimsoft Desk) along with a couple of users. Reminder time is two minutes, number of reminders is two, and time to next step five minutes. b. Have two users. Reminder time is two minutes, number of reminders is two. 3. For Hardware, create a custom escalation policy with two steps. <ol style="list-style-type: none"> a. Have one group (Nimsoft Desk) along with two users. Reminder time is two minutes, number of

Problem	Short description	Description	Steps to reproduce
			<p>reminders is 2, and time to next step five minutes.</p> <p>b. Have two users. Reminder time is two minutes, number of reminders is 2.</p> <p>Observe that group escalations to run in a loop.</p>
<p>Password Encryption</p> <p>PRB1642444</p>	<p>Reinitializing StorageEncryption causes excessive full cache flushes</p>	<p>Each node should flush its local cache when it receives the message to reinitializeLocal. However, each node performs a cluster flush when it receives the message, causing other nodes to flush as well.</p>	
<p>Password Reset</p> <p>PRB1643444</p>	<p>Password reset flow throws an error on a Windows app when users have the workflow option and some of the strings aren't localised</p>	<p>Issue occurs from Tokyo onwards.</p>	
<p>Performance Analytics API</p> <p>PRB1629329</p>	<p>Vertical bar graphs labels on the landing pages are not sorting</p>		<ol style="list-style-type: none"> 1. Navigate to UI builder. 2. Create a new Experience for the Agent Workspace App Shell. 3. Create a new page. 4. Add a Data visualization component to it. 5. In the configurations on the right panel, set the configurations as follows: Data Visualization type: Vertical bar > Data > Data Sources: Task table > Group By > Updated: State > Sorting > Sort by: Report Range > Sort by order: Descending > Presentation > Chart variation: Stacked 6. Click Save to save the configurations. 7. Open the URL.

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: The sorting works.</p> <p>Actual behavior: Notice that the sorting on the X-axis is not correct.</p>
Performance Analytics Dashboards PRB1666055	An interactive filter that is based on a choice list on a referenced field displays incorrect choices		<ol style="list-style-type: none"> 1. On a Tokyo or Utah instance, create an interactive filter with any name. 2. Set the following: <ol style="list-style-type: none"> a. Filter based on: Choice list. b. Table: change_task. c. Field: Change request.State. 3. Add this interactive filter to a dashboard. <p>Expected behavior: The filter should display the choices for change_request.state (and 'All').</p> <p>Actual behavior: The filter displays different choices, apparently from task.state (task is parent of change_request).</p>
Performance Analytics PRB1631896	PA clean scores events process is using so much memory		<ol style="list-style-type: none"> 1. Delete an indicator with too many scores. 2. Run the 'PA clean scores events process' job. <p>Observe that there is a spike in memory usage.</p>
Performance Analytics PRB1663789	In HSQL Data Collector, there's an incorrect score calculation for a count distinct indicator	This happens for indicators with the Distinct field selected as a reference field.	
Planned Maintenance (Family) PRB1683886	PMM nightly run performance issues		
Platform Licensing PRB1669337	GlideEntitlement getFromLegacyIdentifier needs to return the renewed	The subscription identifier on differ.	<ol style="list-style-type: none"> 1. In the license_details table, filter by 'Name' (ServiceWatch Insight). 2. Open the subscription present for ServiceWatch Insight.

Problem	Short description	Description	Steps to reproduce
	legacy license for Service Watch		<p>Expected behavior: Users expect it to return ServiceWatch Insight as well, to account for its license usage and then calculating Discovery using high watermark as it is present in the ServiceWatch Insight Bundle.</p> <p>Actual behavior: The value returned while fetching these legacy Licenses using the GlideEntitlement API is only 'Discovery – Node v2'.</p>
Platform Runtime PRB1541236 KB1124245	Frequent property changes to piwb.instance_eligible_trigger results in cache flushing	The changing of this property results in a instance wide cache eligible_trigger to perform issues. In some instances, this property is changing almost daily.	Refer to the listed KB article for details.
Playbook Experience Core PRB1643615	Activity overrides with roles required hides the activity for all users even though they have that role	Only maint users and admin users can see the activity.	<ol style="list-style-type: none"> 1. Start a PAD execution for any record and ensure the playbook experience is set up for it. 2. Create a new Activity override for any activity in your playbook and in the 'What to override' section, add any non-admin role in 'Roles Required'. 3. Ensure one user has that role (used in step 2) and also has access to view the playbook. 4. While impersonating that user, navigate to the playbook page and notice the activity is not visible for them even though they have the role required. 5. Using any other user who has access to the playbook, view the playbook page, notice the activity is still not visible 6. Impersonate admin or log in as maint. <p>Notice that the activity is visible to them.</p>
Predictive Intelligence PRB1579574	Glide throws a NullPointerException while the trainer is updating the	From the logs of the trainer, observe that there are 500 intermittent responses from a glide instance during a training.	

Problem	Short description	Description	Steps to reproduce
	status of the solution		
Predictive Intelligence PRB1662639 KB1414563	'ml_model_artifact' is the top contributor to 'sys_attachment' table	It was identified that 'ml_model_artifact' table is the top contributor to 'sys_attachment' table. This issue results in ML orphaned attachments, which can result in a large amount of data on 'sys_attachment_doc'.	Refer to the listed KB article for details.
Predictive Intelligence PRB1665525	Error when downloading Root Cause Analysis (RCA) records		
Process Automation Designer PRB1663468	Experience fields show the same display value as Activity Details fields with the same name	Since the Tokyo release, within Process Automation Designer, when updating the Description field under Experience with Advanced toggled to True, any updated value does not save visually.	
Process Automation Designer PRB1676177	When an activity is transitioning from a Ready to an In Progress state, an error during its save causes the PD engine to endlessly reattempt the activity's execution	Activity contexts remain in a Ready state and the execution logs keep displaying PD trying to start the activities in an endless loop.	
Process Mining PRB1672077	Empty nodes in the 'Initial creation' event creates ambiguity	There's misinformation that a problem is attached twice.	
Process Mining PRB1672292	PO License check doesn't work on Sub-Prod	Although the license check works on production instances, the API does not work for non-prod instances, causing the user to	

Problem	Short description	Description	Steps to reproduce
		mine unlimited on non-prod instances.	
Reporting PRB1621091 KB1278240	The list arrow on a report condition builder's reference select is misaligned	The list arrow in the condition builder is partially hidden in the reference fields.	Refer to the listed KB article for details.
Request Management PRB1675720	Insensitive function name in the business rule	The rule name has been corrected.	
SaaS integration with Workday PRB1663167 KB1316426	Workday recon fails if the subscriptions are pulled from the SSO integration profile		
Service Catalog PRB1643842	Requested for field on a Request is populating with the 'logged in' user instead of the 'requested for' user		<ol style="list-style-type: none"> 1. Impersonate as ITIL User. 2. Open Agent Workspace/ SOW. 3. Click any Open Incident. 4. Click Create request UI action. 5. Click any Item that doesn't have Requested For variable (for example, a Standard Laptop). 6. Click Submit. 7. On the pop-up, it shows the Caller of Incident. 8. Click Submit. <p>Expected behavior: It shows actual Requested For user.</p> <p>Actual behavior: Requested For shows as Logged In user.</p>
Service Catalog PRB1650500	all_user_criteria cache is using most of the heap memory and impacting the nodes		

Problem	Short description	Description	Steps to reproduce
Service Catalog PRB1655993 KB1438109	Large number of QUESTION_CACHE entries is causing performance issues when the sys_choice update is applied via Update Set		Refer to the listed KB article for details.
Service Mapping PRB1654775	Svc_ci_assoc records with broken references to ci_id are not removed		<ol style="list-style-type: none"> 1. Create some mapped application service. 2. Run the following script: <pre>var gr = new GlideRecord('svc_ci_assoc'); gr.setValue('service_id',); gr.setValue('ci_id', 'dummy'); gr.insert(); new SNC.SvcAssocPopulationManager().syncSingleService</pre> 3. Check svc_ci_assoc. <p>Expected behavior: The record with the dummy ci_id is removed.</p> <p>Actual behavior: The record with the dummy ci_id is still there.</p>
Service Portal PRB1608586	There are discrepancies in the colors between the displayed Disney Plus URL and Disney Streaming ServiceNow URL		
Service Portfolio Management PRB1672886	SLAResultCalculator is calculating service level agreement (SLA) results for not SLA commitments		<ol style="list-style-type: none"> 1. Create an offering. 2. Create an availability commitment for the offering. 3. Navigate to service_sla_result. 4. Wait a few seconds. <p>Expected behavior: No SLA results should be generated.</p> <p>Actual behavior: SLA results are generated for availability commitment.</p>

Problem	Short description	Description	Steps to reproduce
Skills Management PRB1656989	Should limit skills to 50 as a default	The Skill Matrix in WFO Coaching Module does not load when the number of skills is scaled beyond certain number.	
Software Asset Management PRB1583981 KB1122513	SAM integrations such as SAP pick a random MID Server (SAMSoapHandler script include)		
Software Asset Management PRB1590548 KB1263314	Single apps subscriptions aren't retrieved from Adobe Cloud	The 'groupName' column doesn't follow the naming standard that includes Single_App in it. Those subscriptions/apps aren't fetched.	Refer to the listed KB article for details.
Software Asset Management PRB1616105	Non-licensable discovery products that are using a product rule should be processed	Normalization status of Non licensable Discovery Models are set as Normalized even if they are Partially Normalised (Norm Version = empty).	
Software Asset Management PRB1666400	SuiteEngine might not infer to suites when running recon in grouping mode		<ol style="list-style-type: none"> 1. Create a Microsoft SQL Server Per Device Entitlement, set company as ACME America, add some random suite components. 2. Create a Microsoft Office Per Device Entitlement, set company as blank, add Word as suite component. 3. Create a Word install with device as ACME America. 4. Run recon. <p>Expected behavior: Word should be inferred to Office.</p> <p>Actual behavior: Word is not inferred.</p>
Software Asset Management	Issue with the fix script 'SAMP - Handle deletion of options from		

Problem	Short description	Description	Steps to reproduce
PRB1666826	'c' from the Software Asset Management Professional for Oracle plugin		
Survey Management PRB1627453	Survey using smileys in my To-Dos portal does not display the labels		
Table Administration and Data Management PRB1602278	CSVunloader.java throws an out of memory error scheduled execution of jobs	The user notices that writeRows() calls writeRow() in a while loop.	Run a scheduled job on an incident table that fetches data and sends the report as an email attachment. Observe that OutOfMemory error is thrown during this process.
UI Actions PRB1581607 KB1124166	Platform's related list control UI action Omit new condition isn't working as expected	An error message displays.	Refer to the listed KB article for details.
UI Actions PRB1628386 KB1297135	sys_ui_actions incorrectly generates sys_update_xml when the record is viewed, due to the 'set Format for Configurable Workspace' business rule	Some base instance sys_ui_actions generate versions/ sys_update_xml records unnecessarily when the record form is being viewed.	
Upgrade Center PRB1643061	During the upgrade summary, Collision Detector's memory is reduced	Upgrade hashes from the 'sys_upgrade_state' table are loaded into memory when a Collision Detector object is created. These upgrade state hashes aren't used during the upgrade summary's process. Loading them on Collision Detector's object creation during the upgrade summary	

Problem	Short description	Description	Steps to reproduce
		is unnecessary and a waste of instance memory.	
User Experience Engineering PRB1574071	Accessibility issue on What's New Overview Help Close button to be end of DOM		<ol style="list-style-type: none"> 1. Log in to any base Rome instance. 2. Navigate to system properties. 3. Set 'glide.product.show_what_is_new' to 'true'. 4. Clear cache flush. 5. Log out and log in again. 6. On banner frame - right click Help sidebar 7. Click the three dots on the sidebar. 8. Select What's New. <p>Expected behavior: The close X button must be placed as the last element in the DOM within the dialog container.</p> <p>Actual behavior: The Close button is focus first and voiceover users experience that message as Close the dialog.</p>
UX Framework PRB1651272	When SRP has a combination of conditional inline tabs and conditional extension point tabs, related lists on a record that doesnt have tabs from inline and extension points are not loaded for the first time	This issue is observed only if the record has no inline tabs and extension point tabs, but works as expected for records that have at least one of the inline/extension point tabs.	<ol style="list-style-type: none"> 1. Ensure that SRP has conditional inline tabs and extension point tabs. 2. Select a table or record where the user doesn't have any tabs coming from either an inline or extension point. It should contain only the 'Details' tab and 'Related lists' tab. 3. Navigate to the above record in the workspace. 4. Select any Related list tab. <p>Notice that the content switches back to 'Details' the first time.</p>
UX Framework PRB1666867	Create scriptable APIs to build UXF cache	UXF caches are evicted on customer instances which causes a significant slowness when the instance has to rebuild the caches. Additionally, a scheduled job can be created to call these	

Problem	Short description	Description	Steps to reproduce
		APIs to rebuild caches, if needed.	
UX Framework PRB1673498	Tabs jump back and forth after quickly clicking between them for a tab set configured as 'Dynamic tabs'	After clicking the tabs on an open record in a workspace quickly, the tabs jump back and forth with no interaction.	<ol style="list-style-type: none"> 1. Have Customer Service Management demo data (com.snc.customerservice.demo) installed. 2. Have Customer Central (com.sn_csm_customer_central) with demo data installed. 3. Open the CSM/FSM Workspace case record with a contact. 4. Switch through the tabs using the arrow keys quickly <p>Observe the infinite tabs switching.</p>
UX Framework PRB1688273	Comments/ Work notes posted are retained in the respective field and still appear even if the modal is re-opened	This issue is observed on the See Activity modal in playbook.	
vCenter Event Collector PRB1645487 KB1307865	Vcenter Event Collector fails to iterate through credentials and returns an error reading, 'Remote Exception Permission to perform this operation was denied'	MID server logs report an error.	Refer to the listed KB article for details.
Virtual Agent PRB1589806	On Windows in Virtual Agent Designer, the scroll left/right (shift + scroll) wheel doesn't work		<ol style="list-style-type: none"> 1. Log in into an instance on a Windows machine. 2. Navigate to Conversational Interfaces > Virtual Agent > Designer to open the Designer module. 3. Select any topic.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> When viewing the flow, hold SHIFT on your keyboard and scroll the wheel up/down. Notice that the frame moves up/down instead of left/right.
Virtual Agent PRB1655015	Script evaluation error [FieldValueValidator.validate()] appears while providing multiple lines of feedback or if the response contains a '\r' to the Virtual Agent		<ol style="list-style-type: none"> Open Virtual Agent chat in MS Teams with the VA API. Send 'test' as an input command. Select I'm all set, then No twice. For Feedback, select a neutral or bad option. In the next page, enter multiple lines of comments or a comment with '/r'. <p>Observe the script evaluation error [FieldValueValidator.validate()].</p>
Virtual Agent PRB1668517	An AI Search fallback topic should be invoked when a MID-topic Discovery doesn't return any results		<ol style="list-style-type: none"> Create a topic with a static choice node. Create three choices on that. Ensure the 'Enable NLU to switch topics' slider is enabled. Test the topic. <p>It displays the choices eligible for selection. It also has the search area enabled on Virtual Agent for users to enter any free text.</p> <ol style="list-style-type: none"> Type text that doesn't match any of the choices and doesn't return any matched intent.
Virtual Agent Web Client PRB1600573	Live chat wait status is not updated on web client		<ol style="list-style-type: none"> Navigate to Conversational Interfaces settings > Agent chat > Statuses > Live chat wait > Status > Select wait time. Initiate a conversation with a live agent. <p>Expected behavior: Wait time should be updated frequently when queue wait times are updated in the script.</p> <p>Actual behavior: 'Your expected wait time is x minutes' shows incorrect value.</p>

Problem	Short description	Description	Steps to reproduce
Virtual Agent Web Client PRB1667147	Web client does not support all diacritics in Polish		
Web UX Runtime PRB1674480	UI can become unresponsive when opening an unsupported experience from the header		<ol style="list-style-type: none"> 1. Navigate to <code>sys_ux_registry_m2m_category_list.do</code>. 2. Add a new record with Experience Category as 'Workspace' and UX Application as 'Agent Workspace'. 3. Clear Experience Category of all the other records so that Agent Workspace shows as a top-level menu item. 4. Clear local browser cache and refresh. 5. Click Agent Workspace, navigate back to the original tab, and try to click the All menu. <p>Observe that Agent Workspace doesn't open.</p>
Workflow Editor PRB1671777	Only one record is updated when the user selects and updates multiple records in the list view and the Workflow Scratchpad plugin is installed		<ol style="list-style-type: none"> 1. Navigate to <code>com.snc.encrypted.scratchpad</code>. 2. Create a workflow that has a run script activity containing: <code>workflow.scratchpad.var1 = 'hello world';</code> 3. Add a wait for condition after run script activity. 4. Trigger the workflow. 5. Once at the wait-for_activity, run the background script to touch wf_context record. <p>Notice that the scratchpad column is cleared out and set to empty json: '{}'. </p>
Work Order Management PRB1673882	The hh:mm (12 hour) time format for users causes scheduled times to default to 12AM when	When a users time format is set to hh:mm (12 hour) it will default the scheduled time to 12AM when creating an event on Agent Mobile for FSM application.	<ol style="list-style-type: none"> 1. Install FSM on an instance. 2. Set an agent to have a time format preference of 'hh:mm (12 hour)'. 3. Log in to Agent Mobile. 4. Impersonate that user. 5. Navigate to a schedule.

Problem	Short description	Description	Steps to reproduce
	creating an event		<p>6. Create an event.</p> <p>7. Save the event.</p> <p>Observe that the event time is 12:00 am.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 9 Hotfix 3](#)
- [Tokyo Patch 9 Hotfix 2a](#) 
- [Tokyo Patch 9 Hotfix 2](#)
- [Tokyo Patch 9 Hotfix 1](#)
- [Tokyo Patch 9](#)
- [Tokyo Patch 8](#)
- [Tokyo Patch 7](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 9 Hotfix 4

The Tokyo Patch 9 Hotfix 4 release contains fixes to these problems.



Build information:

Build date: 08-07-2023_1031

Build tag: glide-tokyo-07-08-2022__patch9-hotfix4-08-02-2023

 **Important:** For more information about how to upgrade an instance, see [.](#)

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

 **Note:** This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Flow Designer PRB1619620 KB1208304	<p>A flow may continue executing and transition into a complete state even after it has been cancelled</p>	<p>If users only run one flow, users still can't cancel the flow when the flow is running.</p>	<ol style="list-style-type: none"> 1. Create a long running flow by using a long running action. 2. In the action, create a script step that uses 'gs.sleep (45 *1000)' to make the action run for 45 seconds. 3. Create a flow. 4. Add the action. 5. Run the flow. 6. Open sys_flow_context. 7. Verify that the flow is in the 'Progress' state. 8. Cancel the flow using the UI action. <p>Notice that the flow state changes to 'Cancelled'.</p> <ol style="list-style-type: none"> 9. Wait until the time for 'gs.sleep (45 *1000)' has elapsed. <p>Notice that the flow state changed to 'Complete' and the flow did run completely.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 9 Hotfix 3](#)
- [Tokyo Patch 9](#)
- [Tokyo Patch 8](#)
- [Tokyo Patch 7](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 9 Hotfix 3b

The Tokyo Patch 9 Hotfix 3b release contains fixes to these problems.

Build information:

Build date: 10-10-2023_2045

Build tag: glide-tokyo-07-08-2022__patch9-hotfix3b-10-06-2023

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Health Log Analytics (Family) PRB1687551	For Elastic DI, pulling logs from the indexes that succeed should continue	The execution shouldn't be stopped if there's an exception from one of the indexes.	<ol style="list-style-type: none"> 1. Create many indexes in an ES. 2. For a couple of the indexes, don't provide access to the user that is used by the ES DI to pull the data. 3. Create an ES data input. 4. Provide an prefix pattern that matches all indexes from the previous step. <p>When ES DI tries to pull the data from the index for which there's no permission for the user, DI stops.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 9 Hotfix 2b](#) .
- [Tokyo Patch 9](#)
- [Tokyo Patch 8](#)
- [Tokyo Patch 7](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)

- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 9 Hotfix 3

The Tokyo Patch 9 Hotfix 3 release contains fixes to these problems.

Build information:

Build date: 07-27-2023_1945

Build tag: glide-tokyo-07-08-2022__patch9-hotfix3-07-05-2023

i Important: For more information about how to upgrade an instance, see [.](#)

For more information about the release cycle, see the [ServiceNow Release Cycle](#) [↗](#).

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) [↗](#).

Fixed problem

Problem	Short description	Description	Steps to reproduce
UI Policies PRB1609636	An API call takes a long time to execute on first load if the 'All' menu is pinned and several application menus are expanded	The expanded menus are stored as a sys_user_preference, in the format of 'menu.<sysID_of_sys_app_application>.expanded'. If these are deleted, it will result in a quicker load time after the initial load is completed. The presence of expanded menus results in a higher SQL count and CPU time for the transaction.	<ol style="list-style-type: none"> 1. Open a San Diego or Tokyo base instance with Next Experience enabled. 2. Pin the 'All' menu. 3. Expand several of the application menus (sys_app_application) entries within the 'All' menu. 4. Log out (/logout.do), and clear cookies for the instance. Log back in. <p>Notice that the 'All' menu takes a long time to load.</p>
UX Framework PRB1610281	Non-visible viewports render due to an incorrect subroute filtering on macropoint	When multiple experiences are enabled with inbox, ongoing chat features are available on an instance, and screens aren't loaded correctly for the top-level viewport screens.	<ol style="list-style-type: none"> 1. Open an instance with Next Experience off, with build glide-09-23-2022_0916. 2. Navigate to a config ws home (/now/demo/baseaw/home) by URL with Next Experience off. 3. View load time of the page and compare to glide-09-22-2022_1730

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: Load times or visually complete times are comparable between glide-09-23-2022_0916 and glide-09-22-2022_1730.</p> <p>Actual behavior: glide-09-23-2022_0916 mainline is degraded compared to glide-09-22-2022_1730.</p>
Next Experience Unified Navigation PRB1626945	APPLICATION_REFRESH_REQUESTED dispatches during direct load		
UX Framework PRB1637936	PageFragment objects are not poorly created	The response time for UxAppProcessor is slow.	<p>Run a sampling profiler (like YourKit) while invoking UxAppProcessor by repeatedly invoking UXF apps like Next Experience Home Page or AW Record Page.</p> <p>Notice the long runtime in UxAppProcessor.</p>
UX Framework PRB1642975	Serve more libraries from the service worker hot cache	Save assets to cache storage first so that delivering the saved assets will make them available in the hot cache later.	
Seismic Framework PRB1646154	Service Worker serves stale content after upgrading		<ol style="list-style-type: none"> 1. Log in to a Tokyo instance. Let the page redirect to the Next Experience homepage. 2. Trigger an upgrade to the latest Utah. 3. Wait for the upgrade to complete. 4. Log in to the upgraded instance. Let it redirect to the Next Experience homepage. 5. Inspect the seismic element. Open the console: \$0.version. <p>Expected behavior: The version returned is 23.x.</p> <p>Actual behavior: The version returned is 22.0.12.</p>

Problem	Short description	Description	Steps to reproduce
UX Framework PRB1650108	Enable asset hot cache in the login page		<ol style="list-style-type: none"> 1. Open a new tab with the URL 'chrome://tracing'. 2. Start recording. 3. Log in to the instance. 4. Stop the recording. 5. Search for 'compileModule'. <p>Observe that none of the javascript modules are served from the hot cache.</p>
UX Framework PRB1650555	uxsp/all.jsdbx should be pre-fetched and support multi-cache per asset type in service worker		<ol style="list-style-type: none"> 1. Open a new incognito window. 2. Open Chrome developer tools and navigate to the 'Applications' tab. 3. Navigate to the instance and stay on the login page (do not log in). 4. In the applications tab of chrome dev tools, navigate to the cache section and then Cache Storage. <p>Expected behavior: uxsp/all.jsdbx is present in the SYS_PROPERTIES cache and page fragments (/uxpf) are cached in the PAGE_FRAGMENT cache bucket.</p> <p>Actual behavior: uxsp/all.jsdbx is not present in the cache.</p>
UX Framework PRB1652721	Create an endpoint to deliver user-agnostic PageFragment metadata		
UX Framework PRB1652749	Macroponent priorities should not appear in page fragment responses	Macroponent priorities property and all related code should be removed from PageFragment.	
UX Framework PRB1663724	Pre-load the top 50 (configurable) most used static page fragments on login.do		<ol style="list-style-type: none"> 1. Log in and use UXF apps to warm up the page fragment creation counter. 2. Log out and navigate to the login page (/login.do) in incognito mode to simulate service worker installation.

Problem	Short description	Description	Steps to reproduce
			Observe that the top 50 most used static page fragments (macroponents) are pre-loaded. The limit is configurable with a system property <code>glide.uxf.page_fragment_preloads.login_page_limit</code> . If set to 0, login page preloading should be disabled.
UX Framework PRB1666394	Add disk-based content cache in glide for serving uxf asset requests	This is a performance enhancement to add a server-side disk-based cache for serving uxf asset requests 0.	<ol style="list-style-type: none"> 1. Navigate to a couple different UXF-served apps (<code>/now/nav/ui</code>, <code>/now/sow/home</code>). <p>Notice that this will populate items in the newly added disk cache.</p> <ol style="list-style-type: none"> 2. Validate that the disk cache does get used. <p>Observe that the cache is invalidated when the source tables for the generated content are updated (for example, changing a row in the macroponent table).</p>
Next Experience Unified Navigation PRB1670549	Pinned menu performance is slow	Unified Navigation menu performance is slow when a menu is pinned. All menu data is retrieved in a single call, delaying the rendering of any pinned main menu in L1.	<ol style="list-style-type: none"> 1. Log in to any base instance or any instance with many applications and modules (500+). 2. Pin the All menu. 3. Log out and, optionally, clear the local storage. 4. Log in again. <p>Expected behavior: Pinned menu loads faster relative to the rest of the page.</p> <p>Actual behavior: Pinned menus must wait for all menu data to be retrieved and other page data to be rendered.</p>
UX Framework PRB1682079	Duplicate calls are made when an Incident/Case form is loading	In Next Experience Core UI, the app shell loads the Core UI Jelly page in an iFrame. If the iFrame has not returned by the time the App Shell needs it, another request is made, resulting in a duplicate call. The duplicate call results in performance degradation.	<ol style="list-style-type: none"> 1. Log in to an instance as an admin. 2. Navigate to incident list in Core UI. 3. Click an incident record. <p>Observe that duplicate calls are made to request the record.</p>

Problem	Short description	Description	Steps to reproduce
UX Framework PRB1653063	Register one global service worker to improve resource sharing		<ol style="list-style-type: none"> 1. Open chrome dev tools, navigate to the Application tab. 2. Click Service Workers. <p>In the right panel, observe three service workers registered for three scopes: now_x.js for /now scope, now_x.js for /x scope, root.js for / scope.</p>
UX Framework PRB1686081	Slow response time on the main document request in core UI page loading	The iFrame prefetch request lands on glide earlier than the main doc request, so the main doc is held up until the iFrame request is complete.	
UX Framework PRB1686106	Some modals do not load post-upgrade	Post-upgrade UI issues are observed when using an application opened in a browser prior to upgrade. This is due to differences in library-uxf dist on client and server.	

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 9 Hotfix 2](#)
- [Tokyo Patch 9 Hotfix 1](#)
- [Tokyo Patch 9](#)
- [Tokyo Patch 8](#)
- [Tokyo Patch 7](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 9 Hotfix 2

The Tokyo Patch 9 Hotfix 2 release contains fixes to these problems.

Build information:

Build date: 06-23-2023_1740

Build tag: glide-tokyo-07-08-2022__patch9-hotfix2-06-07-2023

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1674942 KB1415068	When sending emails, a workspace's activity stream displays random text rather than a username or email address	When using the 'Compose Email' feature within a workspace, once an email is sent and the entry is recorded in the activity steam of the record, it doesn't display the recipient. Instead, it displays a random string of characters.	Refer to the listed KB article for details.
Activity Stream PRB1678217	External email addresses are omitted from To/Cc fields in a workspace's activity stream		<ol style="list-style-type: none"> 1. Create an incident in Service Operations Workspace, or another workspace. 2. Compose an email for the incident. 3. Add email addresses to the To and Cc fields that don't match existing users. 4. Send the email. 5. Update the email record type to 'sent' instead of 'send-ready'. 6. Expand the email in the activity stream of the incident record in Service Operations Workspace. <p>Expected behavior: All email addresses added to the To/Cc fields in the original email should be displayed in the To/Cc fields in the email details in the activity stream.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: External email addresses are omitted from the To/Cc fields in the email details in the activity stream.
Database Persistence PRB1671149	Union replacement rewrite is throwing an exception and turning off query rewrite	The subselect generated by the union optimization is aliased as 'innerselect', so mysql can't differentiate between sys_id fields.	
Encryption Support PRB1653365	Access is denied to a crypto module because the context or module sys_id is missing, causing a message to be incorrectly thrown and a certain level of delay		<ol style="list-style-type: none"> 1. Navigate to an instance. 2. Create a crypto module (column level encryption). 3. Create a module access policy with a role. 4. Create Encryption fields on the change_request table. 5. Added the fields to the 'List' view. <p>Encryption field configurations are needed for all the encrypted fields.</p> <ol style="list-style-type: none"> 6. Log in as an ITIL user. 7. Navigate to change_request.LIST. 8. Verify the logs. <p>There's a warning message: '*** WARNING *** Access denied to crypto module - context or module sys id is missing'.</p>
UX Framework PRB1673498	Tabs jump back and forth after quickly clicking between them for a tab set configured as 'Dynamic tabs'	After clicking the tabs on an open record in a workspace quickly, the tabs jump back and forth with no interaction.	<ol style="list-style-type: none"> 1. Install Customer Service Management demo data (com.snc.customerservice.demo). 2. Install Customer Central (com.sn_csm_customer_central) with demo data. 3. Open the CSM/FSM Workspace case record with a contact. 4. Switch through the tabs using the arrow keys quickly to reproduce the infinite tabs switching.

Problem	Short description	Description	Steps to reproduce
Virtual Agent PRB1668517	An AI Search fallback topic should be invoked when a MID-topic Discovery doesn't return any results		<ol style="list-style-type: none"> 1. Create a topic with a static choice node. 2. Create 3 choices on that. 3. Ensure that the 'Enable NLU to switch topics' slider is enabled. 4. Test the topic. It displays the choices eligible for selection. It also has the search area enabled on Virtual Agent for users to enter any free text. 5. Type text that doesn't match any of the choices and doesn't return any matched intent.

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 9 Hotfix 1](#)
- [Tokyo Patch 9](#)
- [Tokyo Patch 8](#)
- [Tokyo Patch 7](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 9 Hotfix 1

The Tokyo Patch 9 Hotfix 1 release contains fixes to these problems.

Build information:

Build date: 06-02-2023_1535

Build tag: glide-tokyo-07-08-2022__patch9-hotfix1-05-31-2023

i Important: For more information about how to upgrade an instance, see [here](#).

For more information about the release cycle, see the [ServiceNow Release Cycle](#).

Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#).

Fixed problems

Problem	Short description	Description	Steps to reproduce
UX Framework PRB1666867	Create scriptable APIs to build UXF cache	UXF caches are evicted on customer instances which causes a significant slowness when the instance has to rebuild the caches. Additionally, a scheduled job can be created to call these APIs to rebuild caches, if needed.	
Configuration Management Database (CMDB) PRB1669614	IRE before script cannot access lookup/related items in the payload		<ol style="list-style-type: none"> 1. Install any SG connector or use the demo data source from IH-ETL. 2. Go to the cmdb_inst_application_feed table and find the record for the data source of the application. 3. Edit the 'before' script and add this code: <pre>{gs.info('CSTASK580194 length ' + input[0].payload.items[0].lookup.length);} (error) { gs.info('CSTASK580194 length call failed');}</pre> 4. Run the application (through IH-ETL or data source itself). 5. Go to the system logs and search the info message. <p>Expected behavior: The length is not undefined.</p> <p>Actual behavior: The length is undefined.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 9](#)
- [Tokyo Patch 8](#)
- [Tokyo Patch 7](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
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- [All other Tokyo fixes](#)

Tokyo Patch 9

The Tokyo Patch 9 release contains important problem fixes.

Tokyo Patch 9 was released on May 30, 2023.

- Build date: 05-25-2023_0925
- Build tag: glide-tokyo-07-08-2022__patch9-05-10-2023

i Important: For more information about how to upgrade an instance, see [.](#)

For more information about the release cycle, see the [ServiceNow Release Cycle](#) [↗](#).

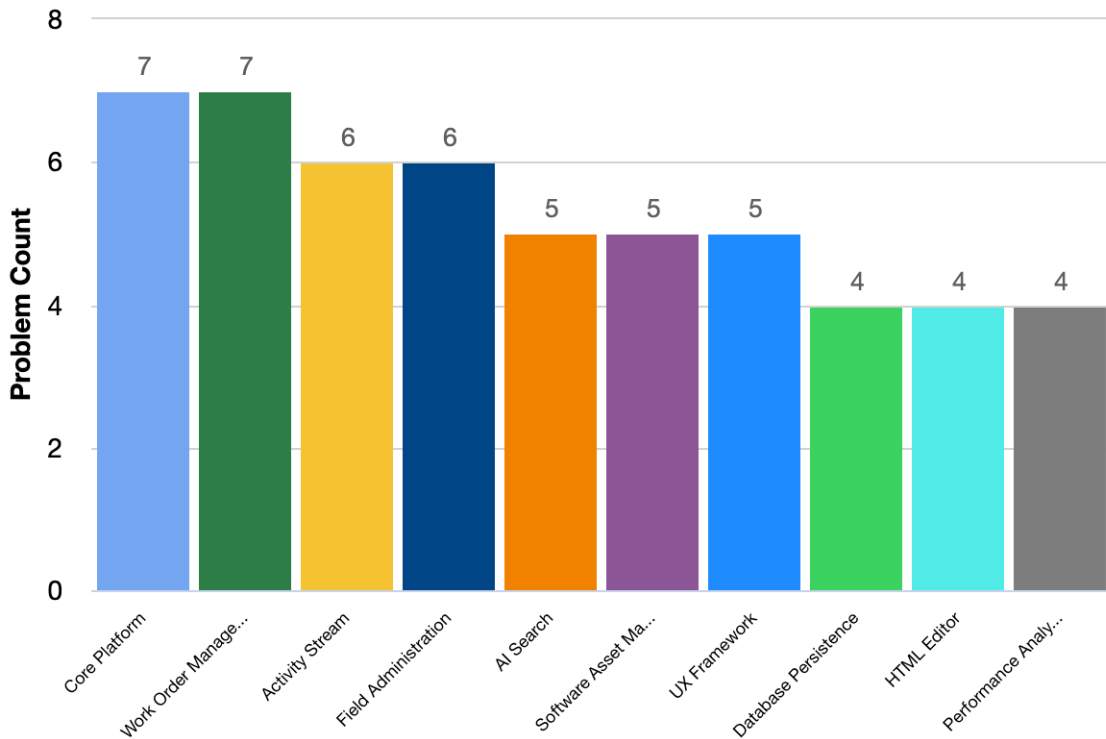
i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) [↗](#).

For a downloadable, sortable version of the fixed problems in this release, click [here](#) [↗](#).

Overview

Tokyo Patch 9 includes 157 problem fixes in various categories. The chart below shows the top 10 problem categories included in this patch.

Top 10 problem categories



Security-related fixes

Tokyo Patch 9 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform®. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Tokyo Patch 9, refer to [KB1333269](#).

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1648393 KB1298601	When the Activity Stream API is v1 and a 'sent' email with a recipient and an event creator resolve to the same username, the usernames fail to resolve	If a document record has an email and a journal, attachment, or field change event from the same user, all usernames will fail to resolve in the document's activity stream. The name will either be their user ID or their email—possibly their sys id.	Refer to the listed KB article for details.
Search Administration	Selecting the search suggestions		Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
PRB1619316 KB1213471	from the order guide Redirects user to the catalog page when AI search is enabled		
Zing Text Indexing and Search Engine PRB1638688 KB1277450	A post-clone text index program triggers an 'optimize table' query	This causes a performance issue.	Refer to the listed KB article for details.
Agent Workspace PRB1647878 KB1309211	HTML tag show up in Agent Workspace compose field when the template is applied	In Agent Workspace, when composing a field using template (with HTML tags in template), the HTML tags are not rendered and show up in the field.	Refer to the listed KB article for details.
Form Administration PRB1655121 KB1313839	Some characters within templates are not rendered correctly within configurable workspaces	Characters such as an apostrophe.	Refer to the listed KB article for details.

All other fixes

Problem	Short description	Description	Steps to reproduce
Access Control List (ACL) Rules PRB1642679	Number of attachments for a target record unexpectedly impacts calls to Before Query Business Rules on target table	Potential load/ processing delays are noticed due to an unexpectedly high number of calls to the Before Query Business Rule when attachments are on a record's Form and attachment manager is used.	

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1615265 KB1193609	In Agent Workspace, clicking the 'Reply' icon in an email activity in the activity stream opens the email composer on top, but the focus remains on the 'Reply' icon	This is confusing for users as they have no idea that the Email Composer has been opened, and would need to scroll up to see it.	Refer to the listed KB article for details.
Activity Stream PRB1632844 KB1219727	Comments/worknotes do not clear in the journal box after they're posted on Workspace		
Activity Stream PRB1648756	Request Info UI action is not working in the configurable workspace		<ol style="list-style-type: none"> 1. Navigate to configurable workspace. 2. Create a new case from list. 3. Click the Accept button. 4. Enter some comments in the Comments section. 5. Click the Request Info button. <p>Expected behavior: The case status changes to Awaiting Info.</p> <p>Actual behavior: An error shows up asking the user to enter some details.</p>
Activity Stream PRB1650645	A field change translation from English to Japanese is incorrect in Agent Workspace	The Japanese translation for field changes in Activities is not correct in Agent Workspace.	<ol style="list-style-type: none"> 1. Enable the Japanese plugin. 2. Navigate to Agent workspace 3. Navigate to List > Incident > Open open any record. 4. Check the activity and observe that there is a field change in English. 5. Switch the language to Japanese. 6. Check the activity and observe there is a field change in Japanese. <p>Observe that the Japanese translation for field changes in Activities is not correct.</p>

Problem	Short description	Description	Steps to reproduce
Advanced Work Assignment PRB1640999	No audio notifications are received if a workspace is refreshed and there's no interaction with the page		<ol style="list-style-type: none"> 1. Ensure Agent Chat/CSM workspace plugins are active. 2. Log in as an agent on CSM Workspace. 3. Make the agent online. 4. Ensure no tabs are open. 5. Refresh the workspace. 6. Don't make any clicks within the workspace. <p>The agent switches to another browser tab.</p> <ol style="list-style-type: none"> 7. Initiate a requester conversation. <p>A work item is assigned to the agent while the workspace's tab is still out of focus. No audio is heard on the agent's side. Audio is expected to be heard.</p>
Advanced Work Assignment PRB1644778	There should be a sys prop that, if enabled, ignores the update presence to away/unavailable' on a work item card's timeout settings	Issue observed because agents were not seeing work item cards in their inbox. After the work item times out, the agents' presence were set to 'Unavailable'.	
Agent Workspace PRB1647959	Honor the date time user preference in CFW		<ol style="list-style-type: none"> 1. Navigate to All > Self-Service > My Profile on an instance. 2. In the Date format field, select an option. 3. Click Update. 4. Open a record with a date field on a CFW and validate that the date format matches the format selected in step 2. <p>Validate that any client scripts or UI policies running in the users context honor the date format from step 2.</p>
Agent Workspace	The 'New Email' modal dialogue in Workspace	Upon clicking 'Pop Out Email Draft to a new workspace tab', the user is immediately	

Problem	Short description	Description	Steps to reproduce
PRB1649012	doesn't work as expected after clicking 'Pop Out Email Draft to a new workspace tab'	redirected to the new email draft tab. On the previous tab in the workspace, there is a 'New email' modal dialog that says 'Do you want to continue closing the existing email without saving?' and has Continue/Cancel buttons. However, this does nothing as they have already been redirected, and no changes are made in the dialog even if the user clicks the Continue or Cancel button.	
AI Search for Virtual Agent PRB1657046	New EVAM and QnA Card UX Changes for Chat GPT LLM AI Search results		
AI Search Glide PRB1643917 KB1279121	Stale ingestion trigger check-ins are blocking AIS failover and other IA workflows	AIS Index Event processing is controlled via an ingestion trigger table. There are safety mechanisms to ensure that the stale ingestion trigger check-ins are automatically deleted. However, this cleanup happens only when the trigger runs again (on a different node or the same node). All the scheduled jobs will not run, causing the stale check-in record to linger.	Refer to the listed KB article for details.
AI Search PRB1598675	When searching with a term that matches the attachment in a catalog item, unexpected	Genius results doesn't work as expected.	<ol style="list-style-type: none"> 1. Open any San Diego instance. 2. Create a catalog item with an attachment. 3. Navigate to Service Portal and try to search using the same terms as used in the attachment name.

Problem	Short description	Description	Steps to reproduce
	results are displayed		Observe that incorrect results are displayed (the catalog item is displayed with unexpected data).
AI Search PRB1623104	Security is not enforced on attachment of knowledge article in some cases		
AI Search PRB1645961	The redirection behavior for GR is inconsistent with the regular search results		
AI Search PRB1646098	The script type 'Genius Result' configuration script should be processed after searching	Currently, the 'Genius Result' (GR) script for script-type GR is processed before a search is performed instead of after.	<ol style="list-style-type: none"> 1. Enable AIS. 2. Create a script type 'Genius Result' configuration script. <p>Expected behavior: A regular search result should be exposed to the GR script.</p> <p>Actual behavior: No scriptable API returns a regular search result.</p>
AI Search PRB1653377	The sn-search-genius-cards should conform to visual design specs to accommodate the Generative AI Q&A		<ol style="list-style-type: none"> 1. Enable AI Search. 2. Install AI Search for Generative AI and configure as directed. <p>Expected behavior: Q&A Genius Result does conform to the visual design specs.</p> <p>Actual behavior: The Q&A Genius Result does not conform to the visual design specs.</p>
Application Manager PRB1653768	OEM Configuration is missing the com.glide.update_operation.queue plugin		<p>Create an OEM instance (Platform Only).</p> <p>Expected behavior: Update Operation Queue plugin is installed.</p> <p>Actual behavior: Update Operation Queue plugin is not installed.</p>

Problem	Short description	Description	Steps to reproduce
Application Portfolio Management PRB1637591	Leverage the publisher name field (even if the manufacturer field is not available)		
Authentication PRB1596007	Multi-factor authentication with a password reset redirects the user to Platform instead of Portal	This occurs when logging into the CSM Portal for the first time.	
Automated Test Framework (ATF) PRB1619022 KB1212565	Page with large amount of elements produces an empty (black) screenshot in Safari or Firefox		Refer to the listed KB article for details.
Automated Test Framework (ATF) PRB1661243	ATF Pick a Browser modal does not show Cloud Runner option when store app is not installed		<ol style="list-style-type: none"> 1. Log into an instance that does not have the ATF Test Generator and Cloud Runner store app installed. 2. Navigate to Automated Test Framework (ATF) > Tests. 3. Click any test where Active = true. 4. Click Run Test. <p>Expected behavior: Pick a Browser modal radio button group should contain the option 'Cloud Runner - To run tests with a Cloud Runner, install the ATF Test Generator and Cloud Runner store application' (link to install the store app).</p> <p>Actual behavior: Pick a Browser modal radio button group does not contain the option 'Cloud Runner - To run tests with a Cloud Runner, install the ATF Test Generator and Cloud Runner store application' (link to install the store app).</p>

Problem	Short description	Description	Steps to reproduce
Change Management PRB1638619	TaskUtils\$NC has an incorrect reference to a current object		<ol style="list-style-type: none"> 1. Convert 'Services' to 'Application Services'. 2. Create a UI action on 'Problem' to refresh change services. 3. Amend problem form to display the 'Impacted Cis' related list. 4. Create a problem with an email as the configuration item. 5. Create an associated change request via the 'Change Requests' related list, also with 'Email' as the configuration item. 6. On the problem record, click the UI action created in step 2. <p>Expected behavior: The impacted services on the associated change record should be populated.</p> <p>Actual behavior: The impacted services on the problem record are populated and the change record isn't populated.</p>
Cloud Provisioning and Governance PRB1646987	After migration, Azure alert configuration is deleted from single Service account only.	After Migration (Azure Resource changes), only one alert configuration is disabled and the state of other Alert configurations are set to false. However, the actual webhook(s) are not deleted on the Azure side depending on which PUSH based cloud events are active on a few subscriptions, even after migrating to Pull based change processing.	
Core Platform PRB1609714 KB1179336	Unable to find a user in impersonation lookup when using UI15	When entering the user's name in the impersonation lookup box, the user is found. This only happens when UI is set to UI15.	Refer to the listed KB article for details.
Core Platform	Xmlstats are missing code	Xmlstats are missing code cache	

Problem	Short description	Description	Steps to reproduce
PRB163252	Cache metrics when the TieredCompilation is disabled	metrics when the TieredCompilation is disabled. It's working fine when the TieredCompilation is ON. this is because the segmented metrics are not available when the TieredCompilation is off.	
Core Platform PRB1655970	Optimize scheduler completed log messages for Splunk		
Customer Self-service and Omnichannel Engagement PRB1649566	The 'show full email' message for emails on the activity stream looks like a text now instead of a link		
Customer Service Management Configurable Workspace PRB1626751	In Agent Workspace, the Customer 360 ribbon component does not display First name and Last Name fields, even though they are Primary fields		<p>Pre-requisites: Ensure that the Customer 360 ribbon setting is present in the instance.</p> <ol style="list-style-type: none"> 1. Log in to any Tokyo or Utah instance and open the Customer 360 ribbon settings. 2. Add the additional fields of First Name and Last Name in the 'Primary fields' under the Ribbon Component Attributes, and save the changes. 3. Open Agent Workspace/CSM Workspace and open any existing case record that has the Contact field with some user. 4. Notice the ribbon. <p>Expected behavior:First Name and Last Name fields display in the ribbon.</p> <p>Actual behavior: First Name and Last Name fields do not display in the ribbon</p>
Database Persistence	Excessive optimize table	Excessive optimizing of a table can be triggered by	

Problem	Short description	Description	Steps to reproduce
PRB1595393	call from DBI layer	TableCleaner if the total row count of a table is small. TableCleaner will optimize a table if it cleans up 50% of the rows (based on threshold property). However, this can lead to overly frequent optimization on small tables.	
Database Persistence PRB1644267	Primary nodes won't not start after the transfer for 'nabenterprise' and the AHA workflow is still active		
DevOps (Family) PRB1660449	Cat item Security defect impact on DevOps		
Document Viewer PRB1638090	Export Detailed PDF doesn't work for Database view list	The Detailed export to PDF functionality has issues where related lists were not exported completely along with the record and form for the list view.	
Edge Encryption PRB1655962	Prevent Signature verification on Locked Header sent by Edge	After an instance upgrade, security_admin users see the banner warning that they are not going through a proxy when attempting to schedule an Edge Proxy upgrade.	
Email Notifications PRB1589441 KB1279794	Static Notification should work without any additional step after installing the plugin and translated layout records	Translated notifications may not work directly (with dynamic translation) after deploying them.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
	must be honored		
Email Notifications PRB1660631	The SMTP sender job is stuck for over 60 minutes	Outgoing emails are stuck in the SMTP process for more than 60 minutes.	
Embedded Help PRB1636834 KB1275475	The Next Experience overview help menu appears for non-admin users		Refer to the listed KB article for details.
Employee Taxonomy Framework PRB1622919	A file is skipped during the installation of a plugin, which causes upgrade issues	A record present on installation is part of a different scope that was deleted as part of a script fix.	
Employee Taxonomy Framework PRB1657239	Mega menu changes to a hamburger and moves to right of the page when the page is refreshed by refreshing the browser	When user clicks and selects an child topic which is present under the topic from the mega menu, the user can see the form with the main menu. But once the page is refreshed, the mega menu disappears and a hamburger icon displays to the right of the page.	
Event Management PRB1625391	MID Web Server accepts weak SSL ciphers when MID host is configured with an SSL certificate	Testing with SSL Labs or other SSL tools (openssl) shows that the MID server host will accept weak ciphers.	
Field Administration PRB1410987 KB0966333	File attachment field does not perform a mandatory validation check and saves the record submitting the form	The User image field is impacted, as it has validation checked for required fields when uploading.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
Field Administration PRB1610588 KB1289541	Tabs keep switching on record pages without any interaction		Refer to the listed KB article for details.
Field Administration PRB1613998	In Agent Workspace, the Search on Translated Text reference field only works in ENU	If a user exposes a reference field on a form in Agent Workspace that references a Translated Text field on the destination table, record searching only works for ENU. Specifically, only when entering text into it to identify a potential record to select.	<ol style="list-style-type: none"> 1. In Tokyo, install a French language plugin. 2. Create a reference field on an incident form with these details: <ol style="list-style-type: none"> a. Table: Incident [incident] b. Type: Reference c. Column Label: Announcement d. Column name: announcement e. Reference Specification: Reference = Announcement f. Use reference qualifier: Simple 3. Expose the Announcement field on the Workspace and 'Default view' views for an incident form. 4. With the language set to ENU, navigate to an open incident record in the ITSM backend. 5. Click the Announcement field. The ENU translations of announcement records are visible. 6. Begin typing in the field to filter the records in the list. 7. Verify the list of potential records are filtered as expected. 8. Open the same incident record in Agent Workspace and repeat steps 5 and 6. 9. Verify the list of potential records are filtered as expected. 10. Change the language to French and repeat steps 5-7. <p>In Agent Workspace, the list is blank and users receive a 'Résultats introuvables' message.</p>

Problem	Short description	Description	Steps to reproduce
Field Administration PRB1615399	ATF Custom UI output components aren't readable		<ol style="list-style-type: none"> 1. Hop to a Tokyo instance. 2. Navigate to the Test Steps table using 'sys_atf_step.LIST'. 3. Search for 'Click Component (Custom UI)' under the Display Name field. 4. Open any record. 5. Navigate to the Component field on the form. 6. Select the drop-down and see the view.
Field Administration PRB1627737	In HR Agent Workspace, the description field does not show up when the user switches to a different tab before the tab opens fully or when multiple tabs open		<ol style="list-style-type: none"> 1. Check that the HR case has the field 'rich_description' of type 'HTML'. 2. Create an onLoad client script to set the 'rich_description' field to read-only. 3. Open Agent Workspace for HR Case Management. 4. Navigate to the lists of HR cases. 5. Open one of the records from the case, but before that record opens completely, open another two to three HR cases. <p>Observe that in all of the HR cases, the 'rich_description' value is not showing.</p>
Field Administration PRB1638284 KB1278649	Clearing text from multi-line text fields using the Save button is not working in Agent Workspace or Configurable Workspace		Refer to the listed KB article for details.
Flow Designer PRB1628696	Typeahead search shows suggestions only in lowercase even if the variable has an uppercase name	The flow sends an error on inactive variables when inline script is used.	<ol style="list-style-type: none"> 1. Create or update a catalog item to have a variable that contains some Uppercase letters. 2. Create a flow with the trigger as Service Catalog. 3. Add the action to 'Get Catalog Variables', then get the newly created or updated variable.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 4. Add any action that uses inline scripting. 5. Try to use the Typeahead suggestion in the inline scripting. <p>Observe that the flow sends an error on inactive variables when inline script is used.</p>
Flow Designer PRB1637680	If the default stage value is empty, there's a null pointer exception when a service catalog flow is triggered	Occurs if the default stage value in the sc_req_item table is empty.	
Flow Designer PRB1652115	Due date function of ask for approve is not working as expected	When Ask For Approval is overdue, the approval state of the action is requested but not in approve, reject, or canceled.	<ol style="list-style-type: none"> 1. Create a flow with ask for approve action. 2. Click the Test button, then click + to create a new incident. 3. Input the caller and assignee, then submit the incident. 4. Find the approver records, approve one, then wait to the due time. 5. Check the context and observe that it is finished. <p>Observe that the approval state of the Ask for Approval action is 'requested' instead of 'approved'.</p>
Form Designer PRB1650790 KB1289139	'Invalid Integer' error occurs when adding Configuration item. Install status' and 'Configuration item. Operational status' to any form		Refer to the listed KB article for details.
GRC Platform Plugins PRB1642818	Consume CMDB Global API for Entity Scoping via CMDB Query	This defect was created in GRC Common to consume CMDB API.	

Problem	Short description	Description	Steps to reproduce
HTML Editor PRB1538260 KB1000259	There is no option to create an attachment link in the Agent Workspace HTML field and Rich Text journal input		Refer to the listed KB article for details.
HTML Editor PRB1618154	The user is not able to select the font family and size		<ol style="list-style-type: none"> 1. Log in into an instance. 2. Navigate to catalog builder. 3. Navigate to Catalog items > New item. 4. Enter the name of an item. 5. Navigate to the Question tab. 6. Click Insert new question. 7. Select type 'Display label' and subtype 'Rich text'. 8. Enter text in Details field for rich text. 9. Select the field and try to change font family /size. <p>Expected behavior: The font family / size should change.</p> <p>Actual behavior: The user can't change the font family/size.</p>
HTML Editor PRB1628587	Key info in the HTML 'Source code' modal is missing	When a source code on the Knowledge article is opened from HTML field, keys are missing from the bottom of the source code pop-up.	<ol style="list-style-type: none"> 1. Navigate to kb_knowledge.list. 2. Open any of the articles. 3. Navigate to any record that has an HTML field where the user can click the Source code button. <p>Observe that the following options are missing from the bottom of the source code pop up: Start search, Find next, Find previous, Replace, Replace all.</p>
HTML Editor PRB1632574	An HTML field doesn't display properly when users set a preference height in TinyMCEv5		<ol style="list-style-type: none"> 1. Create User preference (sys_user_preference)Name: tinymce_height. sc_cat_item_content.descriptionValue: 48Type: StringUser: System Administration (admin) 2. Log out (to make the user-preference take effect)


Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 3. Log in as an admin user. 4. Open sc_cat_item_content.do. 5. Set content type to 'Catalog Content'. 6. Check the Description field (Translated HTML field) <p>Expected behavior: The HTML shows full the editor.</p> <p>Actual behavior: The HTML area was cut and cannot see all editor.</p>
Integration Hub PRB1642452	A bug appears in 'AWSRequestSignerBase.getRegionFromEndpoint(java code for Authentication Algorithm	In 'getRegionFromEndpoint(endpoint)', 'AWSRequestSignerBase.getRegionFromEndpoint(endpoint)' to generate AWS authorization header, assumes region is the second value when splitting host with a period. However in this case, for endpoint, it is not true because region is actually in the third value. This is a bug in the 'AWSRequestSignerBase.getRegionFromEndpoint(endpoint)' java code.	
Key Management Framework (KMF) PRB1646533 KB1291203	code_signing_key_publiccodesigner certificates are sending expiry warnings to instance administrators	code_signing_key_publiccodesigner certificate expiration warning for a code_signing_key_publiccodesigner certificate.	Refer to the listed KB article for details.
List Administration PRB1401967	Personalized list layout isn't displaying correctly when switching the session language	The issue is reproducible in Madrid, NY, Orlando, Rome, and San Diego.	<ol style="list-style-type: none"> 1. Log in to an instance with the French language installed (I18N: French Translations plugin). 2. Using an English session, navigate to sys_user.list. 3. Personalize the list layout by adding a couple of columns. 4. Switch the language to French. Navigate to sys_user.list again.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 5. Verify that the list is reflecting the proper layout. 6. Switch to English. 7. Navigate to sys_user.list again. 8. Personalize the list layout by adding a couple of columns. 9. Switch the language to French. 10. Navigate to sys_user.list. <p>Expected behavior: The list layout should reflect the same layout personalized from the English session.</p> <p>Actual behavior: The list layout is still displaying the previous version. Clicking the cogwheel 'update personalized list' brings a slushbucket with the columns that should be displayed.</p>
List Administration PRB1557127 KB1199798	When entering text in a list with an inline edit, the first character is replaced with the second character	When any reference type field is double-click and the user start typing, the first character typed gets selected automatically and then the next character typed replaces the first character.	Refer to the listed KB article for details.
List Administration PRB1639538	The personalized list view doesn't update when the English language isn't active	After deactivating the English language, a user should still be able to use the personalized list view, but can't.	
Next Experience UI16 Theming PRB1633877	Form content that is absolutely positioned or floating gets clipped		<ol style="list-style-type: none"> 1. Open any base instance. 2. Add some DOM elements that are absolutely positioned. <p>Notice that the elements get clipped.</p>
Next Experience Unified Navigation	The glide.ui.text_search_enforced view property isn't honored	The 'text_search' view is enforced view records opened via exact match results in Global Search even though	<ol style="list-style-type: none"> 1. Access any San Diego instance. 2. Make sure the field value of 'glide.ui.text_search.match_view' is set to blank (default view).

Problem	Short description	Description	Steps to reproduce
PRB1594362	In the Next Experience UI	the system property Value field is set to blank(default view).	<ol style="list-style-type: none"> 3. Make sure Next Experience UI is enabled. 4. Open any incident record through exact match results in Global Search. 5. Notice the text_search view is enforced when the record is opened (it is present in the URL as well). 6. Disable Next Experience UI, repeat the steps above. Notice record opens in the default view, which is expected behavior. 7. Change system property value to 'ess', reload the browser window, and search again. <p>Note same behavior, text_search view is used for the exact match form vs. the 'ess' view.</p>
Next Experience Unified Navigation PRB1645745	UI Notifications count query fails on Oracle		<ol style="list-style-type: none"> 1. Load Next Experience on an instance using an Oracle database. 2. Check the logs. <p>Expected behavior: No errors about 'General Data Exception detected by database (ORA-01843: not a valid month)'.</p> <p>Actual behavior: Error shows about 'General Data Exception detected by database (ORA-01843: not a valid month)'.</p>
Next Experience Unified Navigation PRB1657497	'Reset to Default' in the domain picker doesn't lead to Global Domain in the Next Experience UI	Global domain is missing for the user. When clicked on 'Reset to default', it goes to global domain in the UI16 but in the Next Experience UI, it goes to the ACME domain.	<ol style="list-style-type: none"> 1. Activate Domain Support - Domain Extensions Installer plugin (com.glide.domain.msp_extensions.installer) plugin in the TP8 or above instance. 2. Make sure that the property, glide.ui.domain_reference_picker.enabled, is set to true. 3. Add Admin role to the acme.itil user who is in ACME domain. 4. Create a group and provide Domain visibility to all the domains. 5. Add the user acme.itil to the group. 6. Impersonate the user: acme.itil.

Problem	Short description	Description	Steps to reproduce
			<p>7. Change the domain in the domain picker.</p> <p>8. Click 'Reset to default'.</p> <p>9. In the UI 16, it goes to Global domain.</p> <p>10. In the Next experience, it leads to the user's default domain : ACME.</p> <p>Expected behavior: The user should be able to navigate to the Global domain.</p> <p>Actual behavior: The user navigates to the default domain, which is ACME in this case. There is no way for the user to navigate to the Global domain.</p>
Now User Experience PRB1641340	The ux_data_broker ACL for Enabled Plugins has an incorrect condition set	The incorrect condition causes OpenFrameIT to fail.	<p>1. Open the latest track.</p> <p>2. Try to run OpenFrameIT.</p> <p>Expected behavior: OpenFrameIT should not fail.</p> <p>Actual behavior: OpenFrameIT fails and an error message displays.</p>
On-Call Scheduling PRB1638827	An accepted incident displays as 'Unacknowledged/Rejected'		<p>1. Set up an on-call escalation on an instance.</p> <p>2. Integrate with MS Teams and other service providers.</p> <p>3. Define the escalation policy for a shift (RTR).</p> <p>4. Start the escalation.</p> <p>5. Ensure MS Teams notifications are received.</p> <p>6. Click Accept on the card.</p> <p>Expected behavior: The status should be accepted.</p> <p>Actual behavior: The incident is assigned to the user but the status is set to 'Unacknowledged'.</p>
Oracle Infrastructure Management PRB1629784	Oracle queries with FIRST_ROWS hint choose a slower		

Problem	Short description	Description	Steps to reproduce
	execution plan		
Oracle Infrastructure Management PRB1642955	Oracle queries with suppressed FIRST_ROWS hint still generate suboptimal execution plan	Many Oracle queries with a FIRST_ROWS hint and joining two or more tables are choosing a slower execution plan, typically a NESTED LOOP instead of a HASH JOIN. This primarily affects queries which have an ORDER BY on a column that isn't in the WHERE clause.	
Performance Analytics Dashboards PRB1651961	The Homepage Deprecation Help Tool conversion is failing due to empty dropzone		<ol style="list-style-type: none"> 1. Add a new dropzone to the homepage through the homepage's [Portal] related list. 2. Navigate to Flow Designer and launch 'Populate Homepage migration status table' flow to create a homepage (modified in step 1) record within 'Migration status table'. 3. Do the conversion. <p>Expected behavior: Dashboard migration was completed successfully.</p> <p>Actual behavior: An error is displayed.</p>
Performance Analytics PRB1560880	The homepage reloads infinitely when 'my_home_navigation_page' is set to an empty string		<ol style="list-style-type: none"> 1. Log in to a San Diego instance as System Admin. 2. Set the user preference 'my_home_navigation_page' for the System Admin user with the value empty string. 3. Log out of the instance and log back in. <p>Expected behavior: The user is navigated toward the homepages (or dashboards if the deprecate_homepages preference is set to true).</p> <p>Actual behavior: The page is blank and the request to home.do gets infinitely called.</p>

Problem	Short description	Description	Steps to reproduce
Performance Analytics PRB1631080	The Data Collector job is holding a previous indicator source's breakdown elements in memory		<ol style="list-style-type: none"> 1. Create a data collector job. 2. Add two indicators from a different indicator source. 3. Make sure the indicators have a few breakdowns. 4. Add a debug point in DataCollectorJob class's collect method. 5. Execute data collector. <p>Observe that after collecting scores for each indicator source, the breakdown elements are still held in memory in Config.</p>
Performance Analytics PRB1641120	Getting migration fails due to validation failure as counts from the pa_scores_11 and pa_score_12 table are not matching with migratedCount	This occurs on a Domain Separated instance if Performance Analytics Score Migration is triggered not from global (user level).	
Performance Analytics PRB1653251	The user cannot 'Edit dashboard' from a responsive dashboard and send to a 'missing page'		<ol style="list-style-type: none"> 1. Select any dashboard from the list. 2. Click the vertical '3-dots' on the right. 3. Click Edit dashboard. <p>The user lands on a missing page.</p>
Predictive Intelligence Clustering Solution PRB1647429	Clustering jobs fail because they don't have enough data	Happens to jobs with fewer than ten rows of data.	
Process Automation Designer PRB1649066 KB1282747 	Activate Process does not work in a non-english language		Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
Process Optimization PRB1647729	Error messages from ML Shared Scheduler don't display when scheduling a PO mining	Users expect an error message to display to the user when a mining fails.	<ol style="list-style-type: none"> 1. Ensure that the default limit is 50 scheduled ML solutions per 24 hours. Optionally, users can update the limit to two for the test instance. 2. Kick off the full mining. 3. Repeat step 2. <p>Notice the failure in the progress bar.</p>
Process Optimization PRB1651333	Full mine is failing on support instance after Utah upgrade	An error is thrown.	
Process Optimization PRB1655456	Faulty finding definition causes all projects related to designated process / project configuration to fail to load	A faulty configured process finding definition results in the failure of all projects related to the table related to the process configuration. Specifically, if a stop condition is configured with a 'contains' phrase that results in more than 250 records, all projects related to the table become invisible in the workbench. Additionally, attempting to access the projects via the all-project list results in an error being thrown. The expected behavior is for the faulty finding to be skipped from the project results, allowing all projects to remain visible and accessible in the workbench.	
Project Portfolio Management PRB1619749	The project 'GoLives' dashboard displays jumbled characters in a Tokyo upgrade	The text is all pushed to the very left and is unreadable.	<ol style="list-style-type: none"> 1. Navigate to 'pa_dashboards.LIST'. 2. Navigate to 'PMO Dashboard'. 3. Click the 'View Dashboard' related link. 4. On the 'Summary' tab, click the + button.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 5. Navigate to the widget category 'Project Management'. 6. Add 'GoLives'. <p>Notice that the text is all pushed to the very left and is unreadable.</p>
Remote Process Synchronization PRB1636207	No debug logs at record capture time		<ol style="list-style-type: none"> 1. Turn on RPS debug logging with sys property: glide.hub.process.sync.debug = true. 2. Do not turn on CDC logging. 3. Execute simple RPS example. <p>Observe that there is no logging related to record capture.</p>
Resource Management PRB1630012	Percent utilization displays zero when 'Allocated' is not selected in configuration		
Scheduled Jobs PRB1555807	Backlog of events occurs because of jobs stuck in queued, running, or error state with the 'claimed_by = dead' node	Some jobs, such as event processors for queues like metric_update or report_view, have been stuck in a queued state for the past one to two years. This results in an accumulation of events.	
Scheduled Jobs PRB1639793	SchedulerThread doesn't try to update a node's heartbeat every five seconds	The interval expected by SchedulerBasedTimer is in seconds. It's set to 5000.	<p>Add a cluster message that sleeps for one day.</p> <p>Expected behavior: The node should stay online.</p> <p>Actual behavior: The node is marked offline, becomes online roughly every 90 minutes, and then goes offline in five minutes.</p>
Search Administration PRB1612078	On a Zing search result, a catalog item should open in		<ol style="list-style-type: none"> 1. Perform a Zing search: Apple watch. 2. Click the catalog item. <p>Notice that the catalog record opens instead of sc_cat_item_view.</p>

Problem	Short description	Description	Steps to reproduce
	sc_cat_item_view or try it page		
Service Catalog PRB1643631 KB1294388	Users are unable to submit a catalog item that's created through Catalog Builder	An item displays an empty page when submitting.	Refer to the listed KB article for details.
Service Mapping PRB1615406	Process to Process connection table delete mechanism does not work		<ol style="list-style-type: none"> 1. Open the sa_ml_process_to_process table. 2. Remove the source process or target process of any record. <p>The record stays in the sa_ml_process_to_process table with an empty source or target process.</p>
Service Mapping PRB1652770	Opening Related incident from Service Map in Service Operations Workspace does not work		<ol style="list-style-type: none"> 1. Open Service Operations Workspace. 2. Open the Service Map of an application service. 3. On the right panel, open the list view and apply filter to view list of incidents. 4. Click the icon on the upper right corner (Open record button) as shown in the attached screenshot. <p>Expected behavior: The incident should open in the Service Operations Workspace.</p> <p>Actual behavior: The incident doesn't open.</p>
Service Mapping PRB1653118	A service map's name is missing from its page title		<p>On a Tokyo or newer instance, open any application service map.</p> <p>Verify if the service name appears in the Next Experience title area as expected.</p>
Service Portal PRB1308754 KB0997111	A password reset link redirects the user to the 'SSO login' page		Refer to the listed KB article for details.


Problem	Short description	Description	Steps to reproduce
Service Portal PRB1648484	Knowledge Base (KB) categories don't display on the KB categories 'KBv3' widget when the language is non-English	KB categories don't display on the KB categories 'KBv3' widget when the language is non-English. This occurs even when glide.knowman.enable_multi_language_search is set as 'true'.	
Service Portal PRB1652415	Instances using encryption context no longer have the encrypt attachment modal display in Service Portal	When a user adds an attachment in Service Portal on an instance utilizing encryption contexts, the Encrypt attachment modal will not appear.	<ol style="list-style-type: none"> 1. Ensure that encryption contexts are set up on the instance. 2. Navigate to Service Portal as user with an associated encryption context role. 3. Navigate to any catalog item containing the attachment icon. 4. Click the 'Paper clip' icon. 5. Attach any document. <p>Observe that the file is attached but the encrypt attachment modal does not appear.</p>
Service Portfolio Management PRB1638620	Historical calculation isn't calculated after a service_commitment is attached to an application service		<ol style="list-style-type: none"> 1. Navigate to an application service. 2. Add a service commitment to the app service. <p>Availability records are created.</p> <ol style="list-style-type: none"> 3. Associate another commitment with another app service. <p>Availability records aren't generated.</p>
Service Portfolio Management PRB1652996	Visualization New UI Action does not display for dpm_admin users	Visualization related list does not display a new button under KPI Group Visualization related list.	
Software Asset Management PRB1605239	There's inconsistency in the True-up cost widget for Microsoft, and there are missing Microsoft widgets on the Publisher	In the Software Asset Workspace, there are missing Microsoft widgets on the 'Publisher Overview' page. Also, unexpected data is observed in the True-up cost widget for Microsoft	

Problem	Short description	Description	Steps to reproduce
	Overview page	(data related to other publishers is shown instead of Microsoft).	
Software Asset Management PRB1610760 KB1211805	SAMP Reconciliation job fails with error 'TypeError: Cannot read property 'install_condition' from null' when the Import User Subscriptions job is running at the same time	The SAMP reconciliation fails after 100% progress due to a race condition when the Import User Subscriptions job is also running at the same time.	Refer to the listed KB article for details.
Software Asset Management PRB1611875 KB1182666	Relationship between the LPAR instance and the AIX server is reversed	Unlicensed installs are present for the Oracle Database Server although there are enough entitlements. This is because of a recent change from Discovery that reversed the relationship between the AIX server and the LPAR instance, that is used in Oracle calculators.	<ol style="list-style-type: none"> 1. Upgrade to San Diego. 2. Run Discovery. Observe the relationship between AIX Server and LPAR instance. 3. Run reconciliation. Observe that Oracle DB Server installs are not correctly licensed.
Software Asset Management PRB1613614	SAM Enterprise entries appear when the user has SAM installed but not Cloud insights	The requirement to show SAM Enterprise when Cloud Insights plugins are enabled isn't true or is enhanced over releases.	
Software Asset Management PRB1613722	Performance issues in Allocation Suite Engine	SAM - Software License Reconciliation job takes a long time to complete.	
Source Control Engine PRB1650589	The com.service_now.mid.probe.sourcecontrol.RefreshRepositoryProbe probe reloads credentials on the MID Server every		

Problem	Short description	Description	Steps to reproduce
	time the repo is refreshed		
Source Control Menu for Dev Studio PRB1636438	Applying remote changes for a customization that is linked to Source Control might cause some of the base app records to be deleted	When a customization is imported from Source Control, the absence of a file either means that it used to be customized but now isn't, so it needs to be reverted to the base app version, or it was a new file added just in the customization, and should be deleted.	<ol style="list-style-type: none"> 1. Customize one of the records in the base app. 2. Create a record. 3. Apply remote changes. <p>Expected behavior: The change in step 1 is reverted to the version in the base app and the record in step 2 is deleted.</p> <p>Actual behavior: Both records are deleted.</p>
Syntax Editor PRB1606482	Toolbar labels and PowerPaste modal text is untranslated from English when using Brazilian Portuguese, Norwegian, or Swedish	HTML Editor form controls pop-ups do not display in correct language when these languages are selected. Other languages do seem to be recognized in the pop-ups.	<ol style="list-style-type: none"> 1. Using the English language for the session, navigate to kb_knowledge.do. 2. Notice the 'Fonts' list (hover over to see tooltip) displays 'System font'. 3. Take some formatted text (for example, open a Word document, create a bulleted list, copy the list) and paste it in. 4. Notice a modal pops up in English, 'Paste Formatting Options'. 5. Switch language to Brazilian Portuguese, Norwegian, or Swedish using the profile/cog wheel in the top right banner 6. Repeat steps 2-4. <p>Notice that all text in TinyMCE/HTML Editor is displaying in English (not translated).</p>
System Archiving PRB1637481	Archive Log table records aren't being destroyed		
System Archiving PRB1656391	The Archive Related Records of a second archive rule called from the first archive rule is ignored	Due to the Delete action that is specified in the Archive Related Records of the first rule.	<ol style="list-style-type: none"> 1. Create an archive rule on an incident. 2. Create an archive rule on an incident task. 3. For the archive rule for the incident, create an archive related record with the action: Delete on the related incident task.d. For the

Problem	Short description	Description	Steps to reproduce
			<p>archive rule for the incident task, create an archive related record to delete the attachment for the incident task record, and be sure the rule for the incident_task is inactive.</p> <p>4. Create an incident and a related incident task. Attach an attachment to the incident task and modify the conditions for the archive rule for the incident to archive it.</p> <p>5. Run the archive rule on the incident.</p> <p>Expected behavior: Both the sys_attachment and the related sys_attachment_doc records are deleted.</p> <p>Actual behavior: The attachment in the incident task is not deleted. The table_sys_id of the sys_attachment record is still referencing the sys_id of the deleted incident_task, creating an orphaned record.</p>
Table Administration and Data Management PRB1576535	A caching issue causes JDBC connection issues on MID Server	A scheduled import sometimes fails to run.	
Table Administration and Data Management PRB1619739	STARTSWITH encoded query with a partial value on sys_id/GUID field does not return results (Oracle DB)	A filter on sys_id with a partial value does not work as expected on Oracle DB.	
Table Administration and Data Management PRB1646293	ReferenceOptimizer throws an IllegalStateException when a query specifies sys_ids in combination with query conditions that negate them		
Table Administration	Cascade delete not properly	This may occur if the property 'com.snc.process_	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
and Data Management PRB1646790 KB1314003	configured on <code>sys_flow_report_set</code> resulting in a large number of rows ↗	<code>flow.reporting.level</code> is set to TRAC.	
Table Builder (Family Release Channel) PRB1647295	Form builder API returns non-dictionary entries	The form builder GET call returns an incomplete field object. As a result, UI is breaking and the remaining fields aren't displayed in the table grid.	
Upgrade Center PRB1653367	SQL errors appear prior to a dictionary being created during Upgrade to Tokyo	This is caused by <code>com.glide.ais.configuration.loadDatasourceByTable</code> (<code>retention_policy.days</code>) being triggered.	<ol style="list-style-type: none"> 1. While upgrading to Tokyo, create a new problem. 2. Click the Create Known Error article link from the problem record. 3. Fill in all mandatory field on the new KE knowledge article. 4. Click the Save button. 5. Click the View Article link available on the KE knowledge article. <p>Observe the syntax error in the preview screen.</p>
UX Framework PRB1554345	Empty containers show errors in runtime		<ol style="list-style-type: none"> 1. Open UI Builder on a San Diego or newer instance. 2. Create an empty page. 3. Add a component onto the stage, but don't add anything inside. 4. Save the page and open the runtime. <p>An error shows because the runtime incorrectly treats an empty container as if it were an error state.</p>
UX Framework PRB1641921	The null pointer exception in <code>UxAppUtil.transformAppShellConfigValue()</code> when <code>UxAppUtil.getAppProperty()</code> returns the null, causes the page to not load		<ol style="list-style-type: none"> 1. Create a simple page in UI Builder. 2. Remove the application's corresponding 'sys_ux_app_property' record. 3. Open the page <p>Expected behavior: Page loads.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: Page does not load (white screen is displayed).
UX Framework PRB1644340	A null point exception (NPE) displays when saving sys_macroponent	extensionPoints being null on a tabset component in composition causes the page to crash.	<ol style="list-style-type: none"> 1. Navigate to any sys_ux_macroponent record in UI16. 2. Modify some fields. 3. Save. 4. Navigate to syslog. <p>Observe the exception.</p>
UX Framework PRB1650185	Viewport should set the hideEmptyState property for containers		
Virtual Agent Designer PRB1609042	Input nodes are allowed to switch topics without having 'Enable NLU to switch topics' checked	Users are able to input text at any time during the conversation.	<ol style="list-style-type: none"> 1. Enable NLU. 2. Create a topic with an input node and do NOT check 'Enable NLU to switch topics'. 3. Execute the topic in MS Teams. 4. Enter some utterance that matches to another topic, at the input node. <p>Expected behavior: The topic should NOT switch.</p> <p>Actual behavior: The topic is switched.</p>
Virtual Agent Designer PRB1655720	Unable to test or publish a topic containing a Topic Block	It sends a properties undefined error.	Refer to the listed KB article for details.
	KB1301032 		
Virtual Agent PRB1623409	Virtual Agent briefly flashes base instance icons before changing to the custom icons	Even after Virtual Agent icons have been customized, the base instance icons load briefly before switching to the custom icons.	<ol style="list-style-type: none"> 1. Open a Tokyo or newer instance and customize the New chat and Close chat icons in Virtual Agent. 2. Open Virtual Agent through Engagement Messenger. <p>Notice that the base instance icons display for a second before switching to the customized icons.</p>
Virtual Agent	Default branding icons are		Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
PRB164546 KB1285923	momentarily visible while the web client loads		
Work Order Management PRB1612517	Clicking 'Submit' after filling in a questionnaire displays a window pop-up, which prompts the user to choose between 'Leave' and 'Cancel'		
Work Order Management PRB1621851	A work order (WO) task created from WO templates doesn't have values in boolean fields		<ol style="list-style-type: none"> 1. Navigate to WO template. 2. Click New. 3. Name the template. 4. Add a task. 5. Add the field Add check box (for example, under warranty, ignore travel). 6. Select the check box and save. 7. Navigate to Work order and click Create new. 8. Select the template created in step 3 and save. 9. Approve it. <p>WOT is created</p> <p>Observe that the template field is correct but checkbox is off. Empty the template field once and then re-select the same template, then observe that the check box is on.</p>
Work Order Management PRB1647051	An assignment group changes to a group that isn't covered by the dispatch group already assigned to a task with Central Dispatching	It returns all assignment groups of the agents. The task sys_id isn't the one that is dragged/dropped. It's the one selected on the task section on the top of Central Dispatch.	<ol style="list-style-type: none"> 1. Navigate to Central Dispatching. 2. Search for a user in the 'Teams' section. 3. Navigate to any date where this user has multiple tasks. 4. Attempt to move one of the tasks by dragging one of the orange markers. <p>A pop-up form appears with the work order task details.</p>

Problem	Short description	Description	Steps to reproduce
			Observe as the page loads, the assignment group is for 'US - Field Support - SoCal' and updates to 'US - Field Support - Cross-Country'.
Work Order Management PRB1655139	Remove the try/catch block in the close complete/incomplete online step action item	In the online close complete/incomplete action item step, there's try/catch block on follow up tasks.	<ol style="list-style-type: none"> 1. Open Agent Mobile app. 2. Open a work order under My task and Click Close Complete. 3. Fill in mandatory fields and see the error. <p>Expected behavior: Users should be allowed to close the work order task.</p> <p>Actual behavior: An error displays.</p>
Work Order Management PRB1657502	Event types listed in the team calendar page are sorted in ascending order by default	In this list, the first entry is always hidden in the Calendar Configuration.	
Work Order Management PRB882938	The 'on display' Business Rule 'Show/Hide task map scratchpad' using the SMFilter can create a huge amount of sys_user queries		

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 8 Hotfix 2](#)
- [Tokyo Patch 8 Hotfix 1](#)
- [Tokyo Patch 8](#)
- [Tokyo Patch 7 Hotfix 1](#)
- [Tokyo Patch 7b](#) 
- [Tokyo Patch 7a](#) 

- [Tokyo Patch 7](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 8 Hotfix 2

The Tokyo Patch 8 Hotfix 2 release contains fixes to these problems.

Build information:

Build date: 05-19-2023_0638

Build tag: glide-tokyo-07-08-2022__patch8-hotfix2-05-10-2023

i Important: For more information about how to upgrade an instance, see [.](#)

For more information about the release cycle, see the [ServiceNow Release Cycle](#) [↗](#).

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) [↗](#).

Fixed problem

Problem	Short description	Description	Steps to reproduce
Password2 Encryption PRB1642444	Reinitializing StorageEncryption causes excessive full cache flushes	Each node should flush its local cache when it receives the message to reinitializeLocal. However, each node performs a cluster flush when it receives the message, causing other nodes to flush as well.	Run the 'new GlideStorageEncryptionAPI().reinitialize();' script.

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 8 Hotfix 1](#)
- [Tokyo Patch 8](#)

- [Tokyo Patch 7](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 8 Hotfix 1

The Tokyo Patch 8 Hotfix 1 release contains fixes to these problems.

Build information:

Build date: 04-28-2023_1230

Build tag: glide-tokyo-07-08-2022__patch8-hotfix1-04-21-2023

i Important: For more information about how to upgrade an instance, see [.](#)

For more information about the release cycle, see the [ServiceNow Release Cycle](#) [↗](#).

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) [↗](#).

Fixed problem

Problem	Short description	Description	Steps to reproduce
Email Notifications PRB1660631 KB1307652 ↗	The SMTP sender job is stuck	Outgoing emails are stuck in the SMTP process for more than 60 minutes.	Refer to the listed KB article for details.
Agent Workspace PRB1647878 KB1309211 ↗	HTML tags appear in Agent Workspace fields when a template value is applied	In Agent Workspace, when composing a field using a template that contains HTML tags, the HTML tags are not rendered properly and appear in the field as tags.	Refer to the listed KB article for details.
Activity Stream PRB1648393	When the Activity Stream API is v1 and a 'sent' email with	If a document record has an email and a journal, attachment, or field change event from the same user,	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
KB1298601	i recipient and an event creator resolve to the same username, the usernames fail to resolve	all usernames will fail to resolve in the document's activity stream. The name will either be their user ID or their email—possibly their sys id.	

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 8](#)
- [Tokyo Patch 7](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 8

The Tokyo Patch 8 release contains important problem fixes.

Tokyo Patch 8 was released on March 30, 2023.

- Build date: 03-24-2023_1357
- Build tag: glide-tokyo-07-08-2022__patch8-03-16-2023

i Important: For more information about how to upgrade an instance, see [here](#).

For more information about the release cycle, see the [ServiceNow Release Cycle](#).

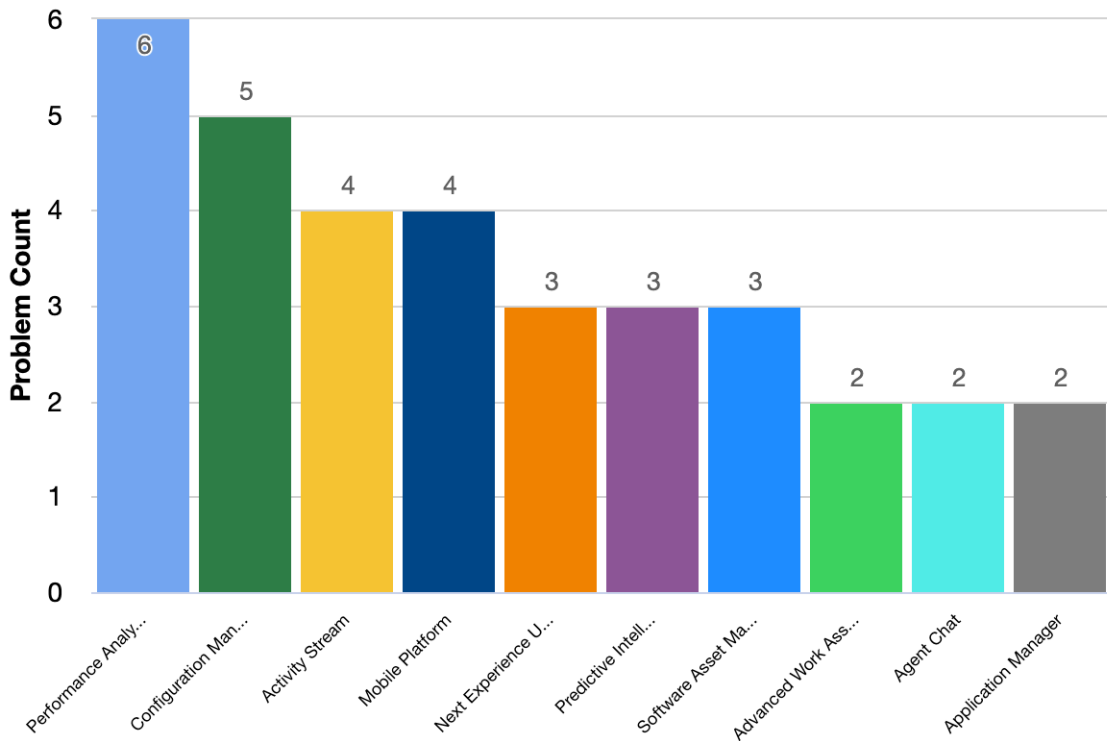
i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#).

For a downloadable, sortable version of the fixed problems in this release, click [here](#).

Overview

Tokyo Patch 8 includes 95 problem fixes in various categories. The chart below shows the top 10 problem categories included in this patch.

Top 10 problem categories



Security-related fixes

Tokyo Patch 8 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform®. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Tokyo Patch 8, refer to [KB1288138](#).

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
Encryption PRB1547401 KB1208278	Gateway database pool can't be instantiated at node startup	It succeeds after SecondaryDatabaseSweepJob runs.	Refer to the listed KB article for details.
System Archiving PRB1504919 KB1001569	Data archiving causes fields to duplicate	The archive rule runs with the errors. In the 'sn_hr_er_case' and 'sn_hr_le_case' forms, there are duplicate fields in the main section. The form section contains duplicate fields in the 'sys_ui_section'.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
Configuration Management Database (CMDB) PRB1630363 KB1224143	Large Standby DBI Replication Lags being caused by multiple IndexCreator Jobs	This is being triggered on large CMDB tables via fix script introduced after upgrading to Tokyo.	Refer to the listed KB article for details.
List Administration PRB1630973	With Next Experience enabled, list columns and headers are misaligned when list actions are hidden		<ol style="list-style-type: none"> 1. Navigate to Performance Analytics > Analytics Hub > Number of open incidents. 2. If there is no historical data already collected, navigate to 'edit scores' from the hamburger menu on the top left and add one score for yesterday. 3. Navigate back to the analytics hub. 4. Click the Show records button at the top right corner. <p>Observe that the column headers are shifted to the right and no longer align with the column data.</p>
Field Administration PRB1639825	Cross-scope errors fill up a page when triggered by the scoped g_form.setReadOnly setDisplay	New notifications are disruptive. They happen because users loop through all editable fields on the Only and make them read/only or invisible.	<ol style="list-style-type: none"> 1. Set up a client script on the sn_customerservice_case table in the 'Customer Service' scope. 2. Have it call: <ul style="list-style-type: none"> ◦ g_form.setReadOnly('number', true); ◦ g_form.setReadOnly('parent', true); ◦ g_form.setReadOnly('priority', true); <p>Notice cross-scope errors.</p>

All other fixes

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1607249	Searching audit tiles function is broken	Part of the HTML gets cut off when the content is sanitized in the now-label-value-tabbed.	<p>Search for some content inside of a field changes tile using the built-in activity stream search.</p> <p>Notice that the content is messed up in most cases for the field that matches the search (words missing, highlight</p>

Problem	Short description	Description	Steps to reproduce
			word missing, or even the search not returning a result at all).
Activity Stream PRB1637689 KB1226239	When the sys_activity_document table is present for tables with their own AS rule, the updates don't show up in Workspace Activity Stream	In Agent Workspace (agent_workspace_sys_activity_document_table) has specific records, email details updates do not appear in the activity stream.	
Activity Stream PRB1640708	Activity Stream 'Expand all' does not have a logical cap on the server-side consuming resources	The instance struggles to process and return a result.	
Activity Stream PRB1641032	A newly created Incident's date is displayed as the previous day in the activity stream		<ol style="list-style-type: none"> 1. Navigate to Workspace > Agent > New Record > Incident. 2. Fill out the Caller and Short Description fields, then click Save to create new incident. <p>Expected behavior: The date in the activity stream entry is the current day (the day incident was created).</p> <p>Actual behavior: The date in the activity stream entry is from previous day.</p>
Advanced Work Assignment PRB1636867	Agent capacity isn't correct when there's a global 'OR' clause in a service channel condition		<ol style="list-style-type: none"> 1. Install Agent Chat and AWA with an incident. 2. Add a service channel with a global 'OR' clause. 3. Create an incident. 4. Accept the work item from the agent. 5. As an agent, change the assignment group of the incident. 6. Verify Assigned to is empty.

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: The agent's capacity should be decreased.</p> <p>Actual behavior: The agent's capacity doesn't decrease.</p>
Advanced Work Assignment PRB1645435	Enable AMB quick delivery for AMB processor for chat messages and AMB processor for WI	Due to record watcher issues Agents do not see WI cards in their inbox. After the WI times out, the agent presence is set to 'Unavailable'.	-
Agent Chat PRB1574449	Slow query from 'User's Tasks' relationship on the interaction table causes slow / interaction.do form loads	Slow interaction form loads due to the 'User's Task' Related List.	
Agent Chat PRB1645399	Live chat freezes the agent chat window when user sends an emoji as part of a text message		<ol style="list-style-type: none"> 1. Open conversation with live agent. 2. Send a text message containing an emoji '👉' as requester/agent. <p>Observe that the agent chat errors out with `Uncaught TypeError: Cannot read properties of undefined (reading 'description')` message. The chat window gets intermittently frozen until user refreshes the screen.</p>
Agent Workspace PRB1511618 KB0992711	The Audit History related list is empty if 'History Set' doesn't yet exist when a record is viewed in Agent Workspace	The Audit History related list on a task record is empty until the browser is refreshed in Agent Workspace or the record is opened at least once.	Refer to the listed KB article for details.
AI Search for Service Portal PRB1641282	Search result EVAM card details are cut off vertically		

Problem	Short description	Description	Steps to reproduce
Application Manager PRB1617507	The files from a new dependency app are skipped when a parent app is upgraded which contains the new dependency	This occurs when a parent app with a package optimizer set is upgrading, and it has a dependency app that is getting installed for the first time.	
Application Manager PRB1641613	Package Optimizer doesn't work correctly if the filename contains uppercase characters		<p>In a custom app, complete the following steps:</p> <ol style="list-style-type: none"> 1. Create a view with uppercase name. 2. Create a list for the view. 3. Publish v1. 4. Make changes to the list. 5. Publish v2. 6. On another instance, install v1 and v2. <p>Expected behavior: The change is loaded.</p> <p>Actual behavior: The change is skipped because the optimizer says is unchanged.</p>
Approvals PRB1612903	Sysevents are created for unrelated flow executions when a user approves an approval record	When user deletes any approval record created by Ask for Approval, the approval field becomes empty in the sys_flow_approver_listener_reference record.	
Asset Management PRB1609226	The 'NOT_AVAILABLE' model category is added to hardware models	When the 'Update model category' business rule is executed, it updates the 'cmdb_model_category' with the 'NOT_AVAILABLE' category when it is not an interactive session.	

Problem	Short description	Description	Steps to reproduce
Asynchronous Message Bus (AMB) PRB1641352	Sending an AMB message from client that is longer than 4096 characters causes the connection to be closed by the server	Sending an AMB message from client that is longer than 4096 characters instead of 8192.	
Audit History PRB1588627	The 'Recalculate' business rule for planned_task based tables causes sys_mod_count to reset	The 'Recalculate' business rule for planned_task based tables causes sys_mod_count to reset which misaligns history by impacting the update numbers in comparison to their updated times. The 'Recalculate' business rule comes from com.snc.planned_task_v2 package. History can become entangled as the update number drops to 0 with the update times remaining sequential.	
Change Management PRB1641808 KB1272049	Domain value changes when there is a conflict in the planned start and end date in the change request	In script ChangeCheckConflictsSNC, there is updateMultiple query that has ddDomainQuery(), addDomainQuery actually sets the domain value of GlideRecord. This works fine if it's just querying data, but it actually domain value of glideRecord when used with update.	Refer to the listed KB article for details.
CMDB Query Builder PRB1644005	Cannot open the Query Builder canvas with source 'NLQ'		<ol style="list-style-type: none"> 1. Create a multi-table query in the CMDB Workspace using NLQ Intelligent Search. For example, 'show me linux servers depending on databases' 2. On the results page, attempt to open the query in Query Builder by clicking 'View in Query Builder'. 3. Open a new browser tab.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> Copy and paste the URL from Query Builder (with the sys_id sysparm) and attempt to open the query this way. The query only shows the landing page and does not open the specific canvas for the sys_id.
Configuration Management Database (CMDB) PRB1574337	CMDB QB left nav has performance issues		<p>Open CMDB Query Builder and create a CMDB Query.</p> <p>Notice that the left nav is taking a long time to load.</p>
Configuration Management Database (CMDB) PRB1591491	Duplicate Remediator throws a 'Unique Key Violation' error	The task_ci table cannot have two records with the same task and ci_item combination. When a change request has 2 CIs in the affected CIs list and the user tries to remediate them using the Duplicate Remediator, the RelatedItemMerger class tries to update the ci_item field of task_ci record for the duplicate CI with the main CI reference.	<ol style="list-style-type: none"> Create two Linux servers A and B. Create a de-duplication task for those two servers. Create a new change request and the two Linux servers to the affected CIs related list on the change request (Affected CIs is different than the Configuration Item field on the change request). Configuration Item can be any other CI (for example, Linux server 3 which is not a part of the de-duplication task). Remediate the de-duplication task and select any CI (A or B) as the main CI. Add the Affected CI (task_ci) record in the related items to be merged. Select the option to delete the duplicate CI. Remediate the de-duplication task. <p>Expected behavior: The de-duplication task should not throw any errors and be in the 'Closed Complete' state.</p> <p>Actual behavior: The de-duplication task throws 'Unique Key Violation' error and be in the 'Pending' state.</p>
Configuration Management Database (CMDB)	Service Dashboard doesn't scale with millions of sys_ids	A very high number of configured CIs causes performance issues due to calling	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
PRB1608538 KB1286948		TableDescriptor.isValid() with sys_IDs.	
Configuration Management Database (CMDB) PRB1628831	Dynamic CI groups and CMDB groups miss out on CIs coming from encoded queries	When a dynamic CI group is selected as 'configuration item' in a change request and then saved, the 'Affected CIs' list isn't filled completely with the CIs contained in the dynamic group. This is because the Dynamic CI group and CMDB group miss out on CIs coming from encoded queries defined in the CMDB group. There can be CIs in which the user would expect to be included under a change, but won't surfaced or picked up by the change request.	<ol style="list-style-type: none"> 1. Log in to a Tokyo instance. 2. Create a normal change request. 3. Fill out the required fields, including 'cmdb_ci' set to a dynamic CI group that contains multiple CIs. 4. Save. <p>Expected behavior: All CIs (derived from the dynamic CI) populate under 'Affected CIs'.</p> <p>Actual behavior: A few CIs (derived from the dynamic CI) populate under 'Affected CIs'.</p>
Data Filtration PRB1637274	Data filtration does not work on hiding reference field info if QBR is turned on for the same purpose		
Discovery PRB1547409 KB1123732	Pattern Debugger fails with an error: Test failed: Failed to execute task, PatternDebuggerTask with failure message: null'	When the user wants to debug the ADO .NET connectivity pattern in order to troubleshoot, the debug works until step 4. Upload decryption exe. The user cannot get beyond this step.	Refer to the listed KB article for details.
Discovery PRB1633655	New Azure alert configuration is not disabled	And the Azure alert configuration module is not deprecated after configuring pull based change processing.	<ol style="list-style-type: none"> 1. Disable the New button from the Azure alert configuration. 2. The New button does not display.

Problem	Short description	Description	Steps to reproduce
Email Notifications PRB1639344	Compose email page does not load		<ol style="list-style-type: none"> 1. Open any configurable workspace and open any case/incident. 2. Inspect the page, navigate to network tab, and throttle it to slow 3G. 3. Click the three dot button on top right and 'Compose Email'. 4. Before the page loads, click the reload option. <p>Observe that the page doesn't load and the name of the tab remains 'record' instead of 'new email draft'.</p>
Encryption Support PRB1528926 KB1279832	Users are unable to submit a record with a blank encrypted HTML field		<ol style="list-style-type: none"> 1. Create an encryption module. 2. Generate a key. 3. Create an encrypted field configuration on an HTML field. 4. Navigate to the configured table as a user with encryption access. 5. Create a new record, leaving the configured field blank. <p>Expected behavior: The record submission is successful.</p> <p>Actual behavior: The record submit/update is blocked if the configured field is blank, and an error message is displayed.</p>
Event Management PRB1643739	If the EM and MI plug-ins are installed, ACC-M is automatically installed upon upgrade to Tokyo or Utah		<ol style="list-style-type: none"> 1. Install the EM and MI family plug-ins (with no ACC-M and ACC-F). 2. Upgrade to Tokyo or Utah. 3. Notice that the ACC-M and ACC-F apps are also now installed.
Field Administration PRB1610588	Tabs keep switching on record pages without any interaction		<ol style="list-style-type: none"> 1. Navigate to Operational Resilience Workspace. 2. Open a list. 3. Navigate to the 'Business services list' view. 4. Click any business service to open Business Service.

Problem	Short description	Description	Steps to reproduce
			<p>5. Click the tab.</p> <p>6. Click the right and left arrows repeatedly multiple times.</p> <p>The tab switches without any interaction. It's sporadic in nature and can't be reproduced 100% of the time.</p>
Flow Designer PRB1593743	Update set back out doesn't remove the flow that is created with the update set		
HR Service Delivery PRB1618841 KB1262396	The UI policy 'Show HR service fields' causes cross scope errors on loading	If the user has a case field in a scope other than HR core scope (for example, a custom field in LE case table which belongs to LE scope), and they added this custom field to the HR service (for LE COE) service table fields, it will give a cross scope access error on loading the LE case form.	
HR Service Delivery PRB1640075 KB1273281	High heap memory consumption during PDF generations with Itext5		
HTML Editor PRB1612221	Service Operations Workspace displays white text on a white background with a dark theme when the rich text editor is used		
Major Incident Management	Communication task email client is not backward		

Problem	Short description	Description	Steps to reproduce
PRB1639013	Compatible with TinyMCE v4		
MetricBase PRB1636325	Client Manager does not honor the Clotho server proximity	When there is replication (multiple servers) set up for MetricBase/Clotho, the MetricBase client should always connect to the closer server, meaning the one closest to the Glide database. If the MetricBase client connects to the farther server, it may lead to negative performance due to higher latencies.	
Metric Intelligence (Family) PRB1641834	ML anomaly detection enhancements to support metric distribution tables for models accuracy		
Metric Intelligence (Family) PRB1642276	Duplicated metrics that get rejected upon registration in the metric to CI table causes the instance to overload		<ol style="list-style-type: none"> 1. Send the payload with a new metric (Postman + MID + Instance). 2. Verify the metric registered and bound to CI (sa_metric_map table). 3. Change the metric identifier of the payload and send it again. 4. Notice that the error message starting with 'Same Combination of metric type'... appears in the syslog (error).
MID Server PRB1610827	The user gets a null pointer exception when 8K agents start discovery		<ol style="list-style-type: none"> 1. Open an instance with the ACC-F and ACC-V plug-ins. 2. Set up the MID with 8GB Max heap memory. 3. Use the simulator to bring the 8K agents. 4. Start sending enhanced discovery payload of 552KB.

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: All the 8K agents should be up and data collection is successful.</p> <p>Actual behavior: The user receives a null Pointer Exception and only 5K agents are up and data collected.</p>
<p>MID Server</p> <p>PRB1618416</p> <p>KB1217557</p>	<p>Records are added to the ECC queue table when a group is deleted</p>	<p>System Command Records CustomOperationChanged, PatternExtensionChanged, and CustomParsingStrategyChanged are created on the ECC queue table when a group record is deleted from the User Group [sys_user_group] table.</p>	<p>Refer to the listed KB article for details.</p>
<p>Mobile Platform</p> <p>PRB1591772</p>	<p>The user observes a 'could not load applet launcher' error upon log in</p>	<p>The error displays and JavaScript does not load.</p>	<ol style="list-style-type: none"> 1. Open the mobile (requestor) app. 2. Log in to an instance. 3. Tap on any screen in the app. <p>Expected behavior: Screen will display.</p> <p>Actual behavior: Observe the error: 'Error running script. received result: null'.</p>
<p>Mobile Platform</p> <p>PRB1593127</p>	<p>When navigate to scripted param group list, the title of the items does not display</p>	<p>The group list should contains the category of the fields (Hardware, Network, Service Desk, Software), but the title does not display.</p>	
<p>Mobile Platform</p> <p>PRB1640873</p>	<p>FlatMap support in old browser - Now Mobile App does not work after Tokyo upgrade</p>	<p>This occurs on Android devices using older versions of Chrome.</p>	<p>Log in to an instance with Now mobile.</p> <p>Observe that ALP is not loaded properly.</p>
<p>Mobile Platform</p> <p>PRB1643039</p>	<p>The same value is used for all phone cell actions for all items in a list screen with embedded detail screens</p>	<p>Each phone action uses the value of the last list item's record context.</p>	<ol style="list-style-type: none"> 1. Set up a list screen with an embedded details screen. 2. Configure a cell in the details screen to have a phone action. 3. Create records with different values for the list screen to use.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 4. Navigate to that list screen and tap the list item to open the details screen. 5. Tap the cell that has the phone action and note the number that is used. 6. Repeat steps 4 and 5 but with the last list item instead. <p>Expected behavior: Each phone action uses the value from the current list item's record context.</p> <p>Actual behavior: Each phone action uses the value of the previous list item's record context.</p>
Next Experience Unified Navigation PRB1627410	The system property 'glide.ui.domain_reference_picker.enabled' is not supported in the Unified Navigation		
Next Experience Unified Navigation PRB1643019	Invalid impersonation does not provide the user with an informative message		<ol style="list-style-type: none"> 1. Create a new user without an ID. 2. Impersonate that user. <p>Expected behavior: Graceful UX.</p> <p>Actual behavior: Generic 400 error.</p>
Next Experience Unified Navigation PRB1643397	Selecting Text in Filter Navigator input text box is behaving differently in UI16 and Next Experience		<p>Consider two Instances which have Next Experience and UI16.</p> <ol style="list-style-type: none"> 1. Log in to the instance (Note: Try with Next Experience Enabled, and then UI16 Enabled to notice the difference). 2. Filter Navigator > Type: Incident. 3. Click 'All Incidents'. 4. Navigate to Filter Navigator again: In UI16, single-click the input text. In Next Experience UI, double-click the input text in quick-succession. <p>Expected behavior: A single click should be required in order to highlight over the input text.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: In Next Experience UI, double-click the input text with quick-succession is required to highlight text.
Now Experience UI Builder PRB1639150	List in Workspace Settings in UI Builder does not allow the user to select all values		<ol style="list-style-type: none"> 1. Hop into a base Tokyo instance. 2. Navigate to UI Builder and open CSM/FSM Configurable Workspace. 3. Change scope to 'CSM and FSM Configurable Workspace Foundation'. 4. Navigate to Menu > Edit Experience Settings. 5. From the Workspace Settings screen, click 'Side Navigation'. 6. Click the 'Page route' list that has a value of 'List'. 7. Scroll to the bottom of the list and try to hover over the last value in the list. <p>Expected behavior: The user should be able to hover over the last value in the list and select it.</p> <p>Actual behavior: The list automatically scrolls back up and does not allow the user to hover over the last few values in the list.</p>
Now User Experience PRB1639895	Hebrew language issues with Next Experience on	It seems the Modules are actually displayed correctly in the application navigator, it is only the Application names which are incorrectly displayed on the left.	<ol style="list-style-type: none"> 1. Log in to a Tokyo instance with the Hebrew language installed and Polaris turned on. 2. Change language to Hebrew. 3. Open Application Menu. <p>Actual behavior: Menu displays Application names in left.</p> <p>Expected behavior: Application names are displayed on the right.</p>
On-Call Scheduling PRB1596462	On-call subscription file contains subscriptions for more than one shift	After clicking Send Subscription for a specific shift, the on-call subscription ICS file contains subscriptions for more than one shift.	<ol style="list-style-type: none"> 1. Select a group and create two shifts for the group; a weekday and a weekend shift. 2. Log in to an instance. 3. Navigate to the on-call calendar, and select the group that was created.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> Provide coverage on the weekend shift, using one of the users on the weekday shift. Send the calendar subscription by navigating to the particular rota (weekday) and clicking Send Subscriptions. Navigate to the email log and open an email for a member of the shift who is on call in the current week. Preview the email and click Subscription link to download the ICS file. Open the ICS file and import into a mail client to view. <p>Expected behavior: To show the roster entries for the weekday shift only.</p> <p>Actual behavior: If the user is on-call for any other shift, it will also be presented in the file. It shows the rostered user for BOTH the weekday and weekend shift, even though the subscription was for only the weekday shift.</p>
On-Call Scheduling PRB1634235	An Agent cannot change the on-call contact preference in ZH language		<ol style="list-style-type: none"> Impersonate a user with the language set for ZH. As an Agent, navigate to On-call Scheduling > My preferences. Create an Availability. Click Add Contact Attempt. <p>Expected behavior: No error message should appear.</p> <p>Actual behavior: An error message appears, 'No device available'.</p>
Performance Analytics Dashboards PRB1564762	Console error when opening reports overview		<ol style="list-style-type: none"> Open Console. Navigate to On-Call Scheduling > Reports > Overview. <p>Observe the console error.</p>
Performance Analytics Dashboards	A breakdown value specified in a URL parameter	This occurs in every patch since Rome.	

Problem	Short description	Description	Steps to reproduce
PRB1603010	Isn't applied when the selected breakdown isn't present in the first 100 records when alphabetically sorted		
Performance Analytics PRB1523864	Breakdowns are not followed while switching the tabs on a dashboard if the user scrolls down without waiting for the widgets to load	Breakdowns are not followed while switching the tabs on a dashboard when one of the tabs has a multi-pivot report added as a widget.	
Performance Analytics PRB1603059	A potentially missing database index across 'pa_rw_aggregate' is causing high CPU use	A missing index on the base instance 'pa_rw_aggregate' database table (cause highlighted) is causing higher than expected CPU utilisation on database servers.	
Performance Analytics PRB1640691			
Performance Analytics PRB1640852	Timeseries timestamp in the payload is coming up as a formatted string instead of actual timestamp		<ol style="list-style-type: none"> 1. Open UIB, create a page in any experience. 2. Add visualization and configure a timeseries. 3. Create a script in UIB that prints out the event.payload. 4. Connect the script to data visualization. 5. Click Event. 5. Open the page in runtime, and click any data point. <p>Expected behavior: The payload contains an epoch timestamp.</p> <p>Actual behavior: The payload includes only the x axis label as formatted.</p>

Problem	Short description	Description	Steps to reproduce
Performance Analytics PRB1643705	Performance Analytics and Reporting (PAR)'s aggregate count responder sends unnecessary messages to Asynchronous Message Bus (AMB)	The problem is worse when thousands of users are watching the same widget. For every update to the watch set, all users receive the same score from new AMB messages. This potentially exhausts AMB.	<ol style="list-style-type: none"> 1. Create a single score live report on an incident table with the condition state=category. 2. Launch the dashboard with single score reports. 3. Watch the AMB connection in browser network tools. 4. Watch the sys_amb_message table for the channelId. 5. Create an incident with state=category. 6. Verify the count increases in real time. 7. Verify there's a new message in network tools. 8. Verify sys_amb_message receives one entry. 9. Open any incident with state=category. 10. Update the short_description of the incident. <p>Expected behavior: There are no new AMB messages in the 'Network tab' or no new record in sys_amb_message.</p> <p>Actual behavior: The user receives a new message from AMB with the same score. Sys_amb_message has one new record.</p>
Platform Licensing Systems PRB1635116	Expired subscriptions appear in license_details	Documentation states that expired subscriptions will not show up by default, but they in fact are shown.	<p>Log in to a Tokyo instance with expired subscriptions.</p> <p>Open Subscription Management and notice that expired subscriptions still show on the page.</p>
Predictive Intelligence PRB1563201 KB1113284	Cluster Solution Data such as Solution Coverage is not being retained	The Cluster Solution Data, such as Solution Coverage, is not being retained. This is due to the Cluster Update removing records every seven days.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
Predictive Intelligence PRB1614545	When the ml_solution_definition record is deleted, the related sysauto_script record remains active		<ol style="list-style-type: none"> 1. Delete a ml_solution definition record. 2. Check for the associated sysauto_script. <p>Expected behavior: The associated sysauto_script is deleted or disabled when the ml_solution definition record is deleted.</p> <p>Actual behavior: The associated sysauto_script remains active and writes warnings to the logs for a missing record.</p>
Predictive Intelligence PRB1639454	Custom HTTP route for dedicated predictor		
Secrets Management PRB1636294	Users are unable to see the value of Edge encrypted journal field after upgrading to Tokyo	With the Edge upgrade complete, users are unable to see the value of an Edge encrypted journal field in applicable tables that extend the task table and that include this field. The value is indeed encrypted and can be seen in sys_journal_field.	
Service Catalog PRB1592291	A window's title is incorrect on Portal when using non-English languages	Window title is incorrect (%naam - Serviceportal) on Portal when using non-English languages.	<ol style="list-style-type: none"> 1. Log in to base Rome instance. with plug-in I18N: Dutch Translations. 2. Log out and log in again. 3. Switch language to Dutch. 4. Open a Catalog Item from Portal. <p>Observe that the title at the top (window/tab) is incorrect: %naam - Serviceportal</p>
Service Mapping PRB1610830	SAPProcessTopology unwanted invocation of this.getAfpMemorizedClassifier() and this.getTotalAfpCount()	The Classifier getTotalAfpCount() is called in getClassifier() method, which is only for logging purpose. This function call and	

Problem	Short description	Description	Steps to reproduce
		the log message are removed.	
Software Asset Management PRB1439805 KB0862870	Publisher list is not available on the Run Recon page if any of the manufacturer core_company records has double quotation marks in its name		
Software Asset Management PRB1610364 KB1206208	Page load time is high without pagination	Landing page load time is high when the number of cards are high.	
Software Asset Management PRB1642698	After upgrading to Tokyo, IndexCreator jobs triggers large standby DBI replication lags on large cmdb_sam_sw_install tables	To improve the upgrade time to Tokyo, index creation on cmdb_sam_sw_install tables are triggered asynchronously from the platform fix script. However, this causes severe replication lag in standby DBIs for large user instances that have large cmdb_sam_sw_install database tables. Replication lags limit the ability to perform an AHA in the event of an outage to the primary DBI, and poses risk for data loss.	
Survey Management PRB1562191	Image scale button text of Like , Neutral and Dislike buttons is truncated at 200% text resize		<ol style="list-style-type: none"> 1. Pre-requisite: Resize Edge Chromium/ Chrome browser zoom to 200%. 2. Navigate to <instance>/esc. 3. Navigate to 'Surveys' link present under 'My Active Items' section and activate. <p>'My Assessments and Surveys' page opens.</p>

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 4. Navigate to 'Survey with all questions' link and activate. 5. Activate the Get started button. Survey Category 1 page opens. 6. Fill the required form fields and activate Next button. Survey Category 2 page opens. 7. Fill the required form fields and activate Next button. Survey Category 3 page opens. 8. Navigate to 'Image Scale' section and observe button text of Like, Neutral and Dislike buttons. <p>Expected behavior: All the interactive controls, labels of form fields etc., are clearly visible without loss or truncation.</p> <p>Actual behavior: Button text gets truncated and not clearly visible to the user.</p>
<p>System Archiving PRB1593108</p>	<p>'Archive Related Records' of an archive rule is specified in the 'Archive Related Records' of the first rule</p>	<p>'Archive Related Records' of a second archive rule called from the first archive rule that was ignored for the Delete action is specified in the 'Archive Related Records' of the first rule.</p>	<ol style="list-style-type: none"> 1. Create an archive rule on incident. 2. Create an archive rule on the incident task. 3. For the archive rule for incident, create an archive related record with the action: delete on the related incident task. 4. For the archive rule for incident task, create an archive related record to delete the attachment for the incident task record, make sure the rule for incident_task is inactive. 5. Create an incident and a related incident task. 6. Attach an attachment to the incident task and modify the conditions for the archive rule for incident to archive this incident. 7. Run the archive rule on incident. <p>Expected behavior: Both sys_attachment and related sys_attachment_doc records are deleted.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: The attachment in the incident task is not deleted. The table_sys_id of the sys_attachment record is still referencing the sys_id of the deleted incident_task, creating an orphaned record.
Tags PRB1615831	Excluding conditions in reports or lists is not working for Tags when applied on parent table		
Upgrade Center PRB1640992	If upgrade plan items state is empty, there is a NullPointerException for UpgradePlanRegistry.createUpgradePlanItemHistoryForNotReadyItems() during upgrade	The change request closes as complete, upgrade continues to retry and fails for NPE.	
UX Framework PRB1616894	Tab contents don't render when switching tabs	A page heading should be displayed, but the content is not rendered.	
UX Framework PRB1629427	Modal window of the first tab is showing in second tab, which results in showing the wrong data	Some buttons are not working for the Firefox browser.	
Virtual Agent PRB1632737	Incorrect conversationId sent to dynamic translation for a VA API call		
Virtual Agent PRB1637404 KB1225904	A link is displayed instead of text in a Virtual Agent response message	Link is displayed instead of text in Virtual Agent response message.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
Visual Task Boards PRB1616235 KB1225120	Opening a record preview from a visual task board displays an empty space on top of the pop-up	Opening a record preview from a visual task board shows a black rectangle on top of the pop-up. This happens only if at least one response template of the channel, 'Form', is configured on the table.	
Visual Task Boards PRB1633072	When Next Experience is enabled, the case and incident forms rendered in Core UI 16 show blank space above the form header	Upgrade issue cases open in a new tab with a blank space above the top portion of the case form when opened from a visual task board.	<ol style="list-style-type: none"> 1. Open an instance with the plug-in <code>com.sn_templated_snip</code> installed and Polaris UI turned on. 2. Navigate to <code>sn_templated_snip_note_template</code> list. 3. Open an incident or any table template. 4. In the Channels related list, click Edit to add the 'Form' channel. 5. Navigate to the incident list, right-click the List header and select 'View in Visual Task Board'. 6. Right-click and open any incident in a new tab. <p>Notice space above the top portion of the incident form.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 7](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 7 Hotfix 1

The Tokyo Patch 7 Hotfix 1 release contains fixes to these problems.

Build information:

Build date: 05-19-2023_1532

Build tag: glide-tokyo-07-08-2022__patch7-hotfix1-05-18-2023

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1648393 KB1298601	When the Activity Stream API is v1 and a 'sent' email with a recipient and an event creator resolve to the same username, the usernames fail to resolve	If a document record has an email and a journal, attachment, or field change event from the same user, all usernames will fail to resolve in the document's activity stream. The name will either be their user ID, their email, or possibly their sys ID.	

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 7](#)
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- [All other Tokyo fixes](#)

Tokyo Patch 7

The Tokyo Patch 7 release contains important problem fixes.

Tokyo Patch 7 was released on March 02, 2023.

- Build date: 02-28-2023_1844
- Build tag: glide-tokyo-07-08-2022__patch7-02-16-2023

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

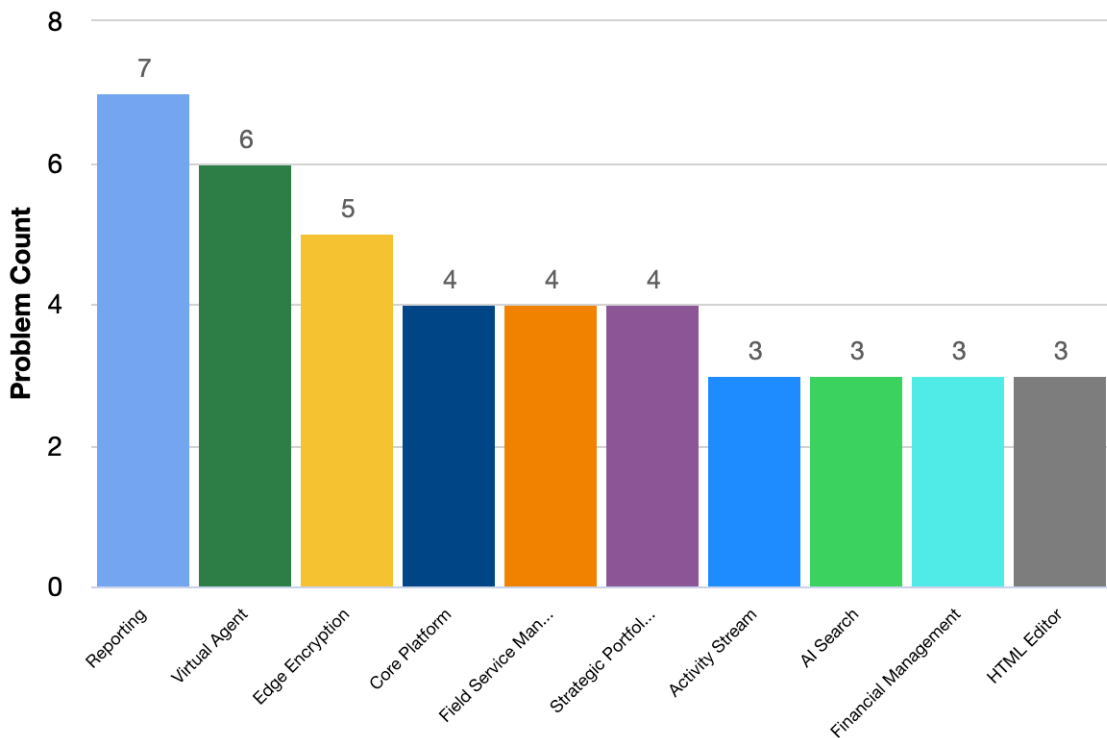
i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

For a downloadable, sortable version of the fixed problems in this release, click [here](#) .

Overview

Tokyo Patch 7 includes 112 problem fixes in various categories. The chart below shows the top 10 problem categories included in this patch.

Top 10 problem categories



Security-related fixes

Tokyo Patch 7 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform®. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Tokyo Patch 7, refer to [KB1271385](#) .

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
AI Search UX PRB1626781 KB1227397	Clicking KBs from 'Suggested Results' appends 'sys_id=undefined' to the URL and 'Record not found' displays		Refer to the listed KB article for details.
Change Management PRB1597643 KB1162254	The 'Change Model: Resuables' client script switches a change request's state to 'New' rather than a valid state	The 'Change Model: Resuables' client script switches a change request's state to 'New'. When the Change Model field isn't on the form, it sets a valid state that is set by a server script and updated by the record watcher.	Refer to the listed KB article for details.
Field Administration PRB1635028 KB1227120	The @mention feature doesn't work in the workspace for work notes and additional comments and clears the fields' content	The @mention function erases the Worknotes and Comments fields in all workspaces.	Refer to the listed KB article for details.
HTML Editor PRB1615921 KB1220830	Pasted images are lost in Agent Workspace's activity stream, due to copy and paste not working on journal fields 'Work Notes/ Comments'	An error displays: 'Cannot convert blob'.	Refer to the listed KB article for details.
Software Asset Management	Reconciliation fails with an error when an incorrect	Recon fails if an incorrect license metric is used on a Microsoft product.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
PRB1608883 KB1176827	license metric is used ↗		

All other fixes

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1638403	A query on the sys_user table causes performance issues	A message may appear in the logs.	<ol style="list-style-type: none"> 1. Create multiple users with the same email address. There may be a need to create several thousand. 2. Send an email as one of the users with a duplicated email. 3. Reload the activity stream. <p>Expected behavior: The query for activity stream loads in under one second.</p> <p>Actual behavior: The query takes several minutes.</p>
Activity Stream PRB1638410	'Need to pass' in the isJournal property to HTML compose fields prevents controls from uploading attachments		<ol style="list-style-type: none"> 1. Ensure the glide.ui.journal.use_html system property is set to true. 2. Navigate to a record on the workspace. 3. Open the 'Network' tab in the developer console. 4. Copy and paste or drag an image into the rich text editor for work notes or comments.
Activity Stream PRB1639830	Activity stream sticks in an infinite loop when it's hidden from the page, causing the page to crash	It may take a while for it to crash. This depends on the hardware configuration.	<ol style="list-style-type: none"> 1. Open SOW. 2. Create an interaction with a short description. 3. Save. 4. From the interaction, click Create Incident. <p>When saving, users are on the 'Overview' tab section in the form. Google Chrome crashes. It may take a while for it to crash. This depends on the hardware configuration.</p>

Problem	Short description	Description	Steps to reproduce
Advanced Work Assignment PRB1636128	Historical data collection in all domains that are supplied as 'active' with a run frequency set as 'periodic' cause memory issues on an instance	Historical PA jobs should be supplied as 'Inactive' with run set to 'On Demand'.	
Agent Workspace PRB1592928	A filter applied to a list unexpectedly continues to another list in a different category in the configurable workspace when their defined filters are the same	Issue also occurs in Service Operations Workspace when switching between a 'Problem' list and a 'Change' list.	<ol style="list-style-type: none"> 1. Ensure that HR Configurable Workspace is installed on an instance (sn_hr_agent_ws). 2. Launch HR Configurable Workspace. 3. Navigate to 'All HR Cases'. 4. Click Open. 5. Select any state. 6. Select Show Matching. 7. Click Other. 8. Click Talent Management. <p>Expected behavior: 'Talent Management' under 'Other' should show all the talent management cases without applying any filter.</p> <p>Actual behavior: 'Talent Management' under 'Other' shows only those cases where the state is as selected on the previous screen.</p>
AI Search PRB1617179 KB1210183	If the system language isn't English, migrated sys_search_sources includes multiple languages		Refer to the listed KB article for details.
AI Search PRB1621132	Auto-suggestion doesn't work properly with the existing San Diego configuration	There's also an issue with the '+' exact match's 'View more result'.	<ol style="list-style-type: none"> 1. In any Tokyo instance with AI Search enabled for Employee Center, open the 'Employee center' homepage. 2. Start typing any term, preferably some search term that has already been queried.

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: At least the current search term should appear in the auto-suggestion pop over.</p> <p>Actual behavior: Auto-suggestion doesn't come, and displays as empty.</p>
<p>AI Search</p> <p>PRB1626677</p> <p>KB1226869</p>	<p>Users can't select the search configuration in the search header's dropdown</p>	<p>A user should be able to select the search configuration in the search header's dropdown, which is related to the current workspace.</p>	<p>Refer to the listed KB article for details.</p>
<p>App Core: Family</p> <p>PRB1636566</p>	<p>A Common Page Templates app version should be updated on Tokyo</p>	<p>The 'Base list' page should be updated to use List Navigation Client's client state data broker selectable property.</p>	
<p>Asset Management</p> <p>PRB1614257</p> <p>KB1224121</p>	<p>With the I18N pack installed, the License Type field on Software Entitlement lists the available values in English as well as the current non-English session language</p>	<p>The state of the alm_license record changes from 'In Stock' to 'In Use' when the language is set to Spanish.</p>	<p>Refer to the listed KB article for details.</p>
<p>Change Management</p> <p>PRB1639704</p> <p>KB1263233</p>	<p>'Standard' changes are created as 'normal'</p>	<p>Continuous upgrade defect between Quebec/Rome/San Diego (or before) to Tokyo (occurs during the upgrade).</p>	
<p>Configuration Management Database (CMDB)</p> <p>PRB1620231</p>	<p>Multi-source builder is missing the 'OR' condition for non-reporting sources</p>	<p>CMDB 360 queries can have only one excluded discovery source, but users are looking for querying with multiple excluded discovery sources.</p>	
<p>Content Experiences</p>	<p>Some defects should be</p>	<p>Property file changes to be made.</p>	

Problem	Short description	Description	Steps to reproduce
PRB1637757	updated (retrue up)		
Database Persistence - Data Access PRB1635358	Relationship/Discovery for vmWare instances aren't updating	Relationship/Discovery for vmWare instances don't update due to a missing ObjectID.	
Discovery PRB1637111 KB1264221	The Visibility Content plugin version is downgraded after upgrading	A Visibility Content plugin version higher than 6.0.0 is reverted to an earlier version after upgrading from Tokyo to Utah.	Refer to the listed KB article for details.
Employee Taxonomy Framework PRB1640262	Defects to true-up Employee Center Store artifacts to Tokyo		
Field Service Management PRB1590411	Error when users try to edit/delete an event from 'My Schedule'	On the FSM mobile app, when editing/ deleting the events on 'My Schedule', an error populates.	
Field Service Management PRB1592482	When editing an event, after submitting, event details display as empty in iOS	This works fine when users edit from the 'Pencil' icon from the event card on the 'My Schedule' screen.	<ol style="list-style-type: none"> 1. Log in to the Agent app. 2. Open the app. 3. Navigate to 'My Schedule'. 4. Tap the 3 dots. 5. Tap the 'Overflow' menu. 6. Open the 'Create event' option. 7. Tap Create event. 8. Enter the necessary details to create an event. 9. Tap Submit. 10. Verify that the event appears in the 'My schedule' screen. 11. Tap the event card that redirects to the 'Event details' screen. 12. Click the three dots. 13. Click Edit event.

Problem	Short description	Description	Steps to reproduce
			<p>14. In the 'Edit event' screen, make any valid changes.</p> <p>15. Tap Submit.</p> <p>16. In the 'Edit event' screen, make any valid changes.</p> <p>17. Tap Submit.</p> <p>The user is redirected to the 'Event details' screen. All the fields are empty (except for the Show as field). This shouldn't happen. After the changes are made successfully, the changes should reflect on the 'Event details' screen.</p>
Field Service Management PRB1593758	Background scripts throw an error message related to install base	The error is introduced by the Install Base feature in the Tokyo release.	
Field Service Management PRB1597527	The ETA field changes when a user changes the Assigned to field on a <code>wm_task</code>		
Financial Management PRB1626241	There's no scroll bar in the financial planning workbench	The scroll bar isn't available in the financial workbench. Buckets inside are displayed vertically without any scroll button.	
Flow Designer PRB1615701	The Flow Designer UI is slow when a user has many flows, subflows, and scopes	In an instance, there are thousands of flows in 285 different scopes. There are a few spots where additional scopes or additional flows slow down the list view of flows and various parts of the flow designer UI's backend services.	<p>1. Load an instance with over 250 scopes.</p> <p>2. Add at least 3 flows, 3 subflows, and 3 actions into each scope.</p> <p>3. Load Flow Designer.</p> <p>4. Load any flow.</p> <p>5. Open the 'Network' tab.</p> <p>6. Reload the flow.</p> <p>Expected behavior: The call should only be made when a user clicks the Subflow button to add a subflow in a flow.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: The call to fetch subflows is made right away.
Health Log Analytics (Family) PRB1636122	Markers aren't sent from MID		
HR Service Delivery Case Management PRB1553426	An HR case is related to the wrong interaction record when toggling between two interaction tabs		<ol style="list-style-type: none"> 1. Log in to an instance. 2. Navigate to Workspace > HR. 3. Click Interaction > Assigned to me. 4. Click the filter by 'All'. 5. Open 2 interaction records, so they are on 2 tabs (A and B). 6. Click the Create HR Case button on interaction A. 7. Fill out the required information. 8. Click Create Case. 9. Switch to the next tab interaction, B, after clicking the Create Case button. <p>Expected behavior: The HR case should be related to interaction record A.</p> <p>Actual behavior: The HR case is related to interaction record B.</p>
HTML Editor PRB1622781	Copy/paste doesn't work when using WordPad	Pasting the text as plain text works as expected. Function works as expected in Word and Libre.	<ol style="list-style-type: none"> 1. Open an instance. 2. Open a form with TinyMCE editor. 3. Copy text from WordPad.
HTML Editor PRB1624120	In Agent Workspace, an href link opens in a new window tab instead of the same page's tab	Issue is reproducible in Tokyo but not Rome.	<ol style="list-style-type: none"> 1. Navigate to a Tokyo instance. 2. Upload XML files into the instance (2 dictionary fields on the incident table and business rule.) 3. Navigate to incident.LIST. 4. Open any record. 5. Add both fields to the form that was uploaded in the 'Workspace' view.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 6. Add a value to the List type field (html_list). 7. Navigate to Agent Workspace. 8. Open the same incident record. 9. Click the configuration item href from the HTML field. <p>Expected behavior: It should open in the same page's tab.</p> <p>Actual behavior: The href link opens in a new tab.</p>
<p>Incident Communications Management</p> <p>PRB1615678</p> <p>KB1211656</p>	<p>A communication task in the TinyMCE editor doesn't change the size appropriately when clicking 'Full Screen'</p>	<p>In Tokyo, the TinyMCE editor from 'Communication Tasks' on Workbench doesn't change the size of the 'Text' field appropriately when users click 'Full Screen'.</p>	<p>Refer to the listed KB article for details.</p>
<p>Instance Data Replication (IDR)</p> <p>PRB1637853</p>	<p>Seeding creates lingering AdminClient threads</p>	<p>Seeding Acknowledgement's handler creates and Admin Client Thread deletes messages from the seeding topic. Admin Client isn't closed and the thread persist past its usable life. Since the threads never disappear, this impacts the system performance.</p>	
<p>Instance Data Replication (IDR)</p> <p>PRB1638715</p>	<p>The SeedingConsumer creates a lingering Kafka-Producer-Network-Thread</p>	<p>Every Kafka connection must be closed.</p>	<ol style="list-style-type: none"> 1. Reset the nodes of an existing instance. 2. Create a legacy replication set. 3. Insert 1000 records into the table that's being replicated. 4. Seed over the records. 5. After seeding is complete, navigate to the consumer. 6. Navigate to <instance_url>/threads.do. 7. Search for 'kafka-producer-network-thread'.

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: Only one client appears.</p> <p>Actual behavior: There's more than one that has a reference to the IDRSeedingConsumerJob.</p>
Integration Hub PRB1622245	Object storage (AWS S3) isn't working	Audits fail with an error.	<ol style="list-style-type: none"> 1. Log in to an instance. 2. Create credentials for a normal AWS account, or an AWS member account. 3. Ensure that Discovery runs for datacenters. 4. Create a policy set using an S3-based policy. 5. Create scheduler admin. 6. Run an audit.
Issue Auto Resolution for Virtual Agent PRB1634423	ITSM Issue Auto Resolution (IAR) configuration deactivates after upgrading San Diego to Tokyo/Utah		<ol style="list-style-type: none"> 1. Have a San Diego DC. 2. Setup/activate ITSM IAR. 3. Upgrade to Tokyo. <p>Expected behavior: The IAR configuration should still be active.</p> <p>Actual behavior: The IAR for ITSM is inactive.</p>
Key Management Framework (KMF) PRB1589994 KB1124122	The vault token property glide.kmf.vault.token triggers a full cache flush	The expiration of the system property glide.kmf.vault.token triggers a cache flush. That impacts the instance performance property glide.kmf.vault.token. Its update results in a cache flush.	Refer to the listed KB article for details.
Key Management Framework (KMF) PRB1614008 KB1211494	Key exchange recurring clone requests aren't generated for new modules	The recurring clone key exchange requests are created when a fix script runs. However, this fix script runs only once. Therefore, if a new plugin is activated, it's missing a recurring clone key exchange request because the	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
		business rules don't run.	
Key Management Framework (KMF) PRB1636242 KB1263904	Password2 decryption fails during an upgrade when a new table schema hasn't been updated	An error is thrown.	Refer to the listed KB article for details.
List Administration PRB1592318 KB1124140	Adding a filter on the Integer field in a list column's header adds a comma in the wrong place and then filters on an incorrect number	The filter should work with or without the format=none Dictionary attribute.	Refer to the listed KB article for details.
List Administration PRB1623912	Users are unable to apply tags to multiple records by selecting 'Existing Tag' in the list	If a user types a full tag and enters, it works. If a user selects the tag for multiple records, it isn't working. Issue is reproducible in Tokyo but not San Diego.	<ol style="list-style-type: none"> 1. Navigate to a Tokyo instance. 2. Navigate to incident.list. 3. Click the 'Personalize' column. 4. Add the column 'Tags' if it isn't present. 5. Select multiple records for the 'Tags' column. 6. Double-click any. <p>The count of the number of rows is updated.</p> <ol style="list-style-type: none"> 7. Type any letter. 8. Select the existing tag. <p>It should only apply to one row.</p>
Mobile Platform PRB1638622	After upgrading to Tokyo, the 'My tasks' related list's order changed on the Agent Mobile app	The related list's order is different in the studio from the Agent app.	<ol style="list-style-type: none"> 1. Navigate to a Tokyo instance. 2. Studio > Field Service Mobile > My Tasks > Form > Body. 3. Navigate to the related list. 4. Verify if there are any details. 5. If there are no details, create some.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 6. In the sys_sg_related_lists_screen for work order tasks, verify if the order matches in the back end and in the studio. 7. Navigate to the Agent app. 8. Open any work order task. 9. Navigate to the related list. <p>The order of the related list doesn't match the one in the studio.</p>
<p>Mobile Platform</p> <p>PRB1640421</p>	<p>In Tokyo, a 'Can't execute action' message displays when submitting a function with the signature enabled in offline mode</p>	<p>The issue is caused by 'currentMapping' being undefined in the getUIParameterDataTemplateTransform method in TemplateTransformFactory.js</p>	<ol style="list-style-type: none"> 1. Navigate to a Tokyo instance. 2. Make sure that FSM Mobile and Demo Data plugins are activated. 3. Create an action item with type script and on the table: wm_task. 4. Create a button on wm_task with no condition and that uses the action item created in the last step. 5. Check 'show signature field'. 6. Check 'offline'. 7. Add this button as a top menu button on the 'Work Order Task' form. 8. Log in as an agent. 9. Download the offline cache. 10. Switch to offline mode. 11. Navigate to any WOT under 'My work'. 12. Click the Signature button. <p>Expected behavior: No error should display.</p> <p>Actual behavior: 'Can't execute action' displays when submitting the action.</p>
<p>Next Experience UI16 Theming</p> <p>PRB1641058</p>	<p>With Next Experience enabled, list editing in a grouped list report displays the incorrect cell editor</p>	<p>Only occurs on list-based reports.</p>	

Problem	Short description	Description	Steps to reproduce
Notify PRB1621048	Remove Twilio's bulk SMS configuration from the Twilio 'Direct configuration' page	The configuration makes errors when the API is unsupported.	
Now Experience Component Library PRB1633176	The multi-type ahead component is displayed with undefined and null text on Tokyo and above platforms	On the multi-type ahead component, when users select a record, 'undefined' text displays. When users remove the selected record, 'null' displays.	<ol style="list-style-type: none"> 1. Navigate to Security Incident Response's workspace. 2. Open any security incident. 3. From the form actions, click Add playbook. 4. From the 'Add playbook' modal window, choose a playbook. 5. Select it. <p>After selection, 'undefined' displays. When the selected playbook is removed from the modal window, 'null' displays.</p>
Now Experience Framework PRB1579954	On the Virtual Agent dashboard, graph points don't display as expected	On the Virtual Agent dashboard, graph points display behind the graph lines and don't display the number on the graph for the points.	<ol style="list-style-type: none"> 1. Open the Virtual Agent dashboard. 2. Open the 'Overview' page. 3. Open > Active VA users widget > the graph. 4. Verify if when pointing to the graph points if the count displays (0,0) or peak points. <p>Expected behavior: Users should see the graph points number when pointing to the graph points. The points on top of the graph aren't behind the graph lines.</p> <p>Actual behavior: The graph doesn't have graph points to display the number. The points on top of the graph are behind the graph lines.</p>
Now Experience Framework PRB1604229	'target="_blank"' is removed from links, even though 'rel="noopener"' is specified	'target="_blank"' wasn't removed from previous versions.	<ol style="list-style-type: none"> 1. Navigate to UI Builder. 2. Create an experience. 3. Create an empty page. 4. Add a rich text component.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 5. Click the rich text component on the left. 6. Click the Edit HTML button on the right. 7. Type any text into the pop-up. 8. Highlight the text. 9. Click the 'Hyperlink' icon. 10. Set the URL to anything. 11. Set 'Open link in...' to 'New window'. 12. Click Save. 13. Click Apply. 14. Save the page. 15. Open the page just created. 16. Click the link. The link opens in the current tab instead of a new one. 17. Navigate back to the page. 18. Right-click the link. 19. Click Inspect. The 'target="_blank"' attribute has been removed. 20. Navigate back to UI Builder. 21. Open the page created in UI Builder, if it's not already open. 22. Click Menu > Developer > Open page definition. 23. In the Composition field, find the link created. The attribute 'rel="noopener"' is present in the same element as 'target="_blank"'.
<p>Now Experience UI Builder PRB1630977</p>	<p>Macroponents loaded in Component Builder from a SOW record page lose property bindings on saving</p>	<p>Navigating directly to a component builder URL, instead of from the context of a page, still results in the issue described.</p>	<ol style="list-style-type: none"> 1. From UIB, open a SOW experience. 2. Select the 'Record' page from the list of pages. 3. Select the record SNC variant. 4. Open the action menu for the 'Record' page tabs component. 5. Select Edit Selected Element. 6. Select the 'Incidents Overview' page.

Problem	Short description	Description	Steps to reproduce
			<p>7. On the 'Config' tab, notice that the list of properties don't have all the bindings displayed (for example, the table, sys_id, fields, view, so on).</p> <p>8. Menu > Developer > Open variant.</p> <p>When a change is made and saved on the 'Incidents Overview' page, the property binding is removed from the variant record and breaks the runtime version of the page in SOW.</p>
<p>Password Reset</p> <p>PRB1614242</p>	<p>Auto-generated passwords don't display when a redirection URL is configured on the process</p>	<p>The user should be shown the auto-generated password before they're redirected to the configured redirect URL.</p>	<ol style="list-style-type: none"> 1. Configure a password reset process. 2. Log out. 3. Click the 'Forgot password' link to start the password reset process. 4. Finish the identification and verification steps to go to the 'Reset password' page. 5. Verify that the page with some message displays to inform the user to 'Click on Reset Password' button below to get the new password. 6. Click the Reset Password button. <p>Observe that the user is redirected to the configured URL without being shown the auto-generated password.</p>
<p>Password Reset</p> <p>PRB1617113</p>	<p>The password reset (PWRA) application is unable to retrieve a lock state in the Tokyo releases</p>	<p>PRWA is complete after QA verification succeeds, but it doesn't trigger the password reset workflow to complete the reset of the password.</p>	<ol style="list-style-type: none"> 1. Create a user account. 2. Enroll in password reset. 3. Answer the security questions. 4. Install Password Reset Tool on a Windows machine. 5. On the lock screen, click Unlock or Reset Password. 6. Fill out the user name, CAPTCHA, and security questions. 7. Click Next. 8. Verify PWRA loads. 9. Verify that the QA verification success is at 100%. 10. Open the password reset request number. 11. Look at the request number.

Problem	Short description	Description	Steps to reproduce
			No password reset workflow is triggered and the user=unknown.
Process Automation Designer PRB1630533	Non-admin users can't add manual activities at runtime		<ol style="list-style-type: none"> 1. Use Activity Playbook plugins with demo data so that Incident Response Demo is available to use. 2. Assign roles (agent_workspace_user, itil, sn_incident_read, sn_incident_write) to abel.tutor. 3. Impersonate Abel Tutor. 4. Navigate to the 'Agent Workspace' homepage. 5. Create an incident. 6. Fill in the required fields. 7. Click Save. 8. Click the Add Incident Response Playbook button. 9. Point to the first lane. 10. Click the 3 dots. 11. Click Add Activity. 12. Click the Add Activity Here button. 13. Choose the Escalate Incident optional activity. <p>The optional activity can't be added and there's an error from graphql.</p>
Report Designer PRB1632847	Multi-pivot cuts off during a scheduled export	In Classic, multi-pivot shrunk itself down to fit its parent container.	<ol style="list-style-type: none"> 1. Create a report. 2. Set the table to 'Task'. 3. Set the columns to 'State'. 4. Set the row to 'Assignment group'. 5. Set the number of groups to 'Show all'. 6. Schedule an export. 7. Choose PDF as the file type. 8. Choose 'Letter' as the page size.
Reporting PRB1607702	A classic multi-pivot report's font coloring rule doesn't work when using Next Experience	Issue isn't reproducible in UI16.	<ol style="list-style-type: none"> 1. Update the glide.ui.permitted_tables property by adding the syslog_transaction table. 2. In any Tokyo or San Diego instance using Next Experience, navigate to Reports > View / Run.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 3. In the 'Data' tab, populate with the following details: <ul style="list-style-type: none"> ◦ Report Name: Multilevel Pivot ◦ Source Type: Table ◦ Table: syslog_transaction 4. In the 'Type' tab, choose 'Muti-level pivot table'. 5. In the 'Configure' tab, populate with the following details: <ul style="list-style-type: none"> ◦ Select columns: Type ◦ Select rows: System ID ◦ Aggregation: Average Response Times 6. Save the report. 7. In the 'Style' tab, add a new rule with the following details: <ul style="list-style-type: none"> ◦ Operator: greater than ◦ Value 1: 1500 ◦ Font Color: White ◦ Background Color: Red <p>Expected behavior: Data with values greater than 1500 have a red background and white font.</p> <p>Actual behavior: Data with values greater than 1500 have a red background and blue font.</p>
Reporting PRB1609591	The 'Report ACL' dashboard doesn't work for domain-separated instances		<ol style="list-style-type: none"> 1. Install the RVA store app. 2. Set 'run_scan_with_queryNoDomain' to true. 3. Open the 'Report ACL' dashboard. <p>Expected behavior: The dashboard opens without errors.</p> <p>Actual behavior: The following error message appears on top of Step 2: 'This API can be called only from Report ACL scope and only with both roles, admin and security_admin.'</p>
Reporting	Missing links for some metrics		

Problem	Short description	Description	Steps to reproduce
PRB1630402	on the 'RVA' dashboard		
Reporting PRB1631539	VAs are incorrectly marked as customized during the upgrade process		<ol style="list-style-type: none"> 1. On a Tokyo instance, install the last version of RVA (before V3.0). 2. Set a few RVAs to false. 3. Delete the entries created from the 'Customer update' table. 4. Open the 'RVA' dashboard. 5. Click Activate ACLs. 6. Look for the activated ACLs entries in the 'Customer update' table. 7. Confirm that they exist. 8. Upgrade to Utah. <p>Expected behavior: No skipped ACLs entries appear.</p> <p>Actual behavior: A skipped ACLs warning appears.</p>
Rollback and Recovery PRB1638853 KB1269802	In Tokyo, the system property 'glide.rollback.exception_days_helps_by' changed from the default 10 to 1	This has the potential to increase the amount of work required to help a user to recover from a bad background script execution.	Refer to the listed KB article for details.
Service Catalog PRB1611394	An error message about 'ReadOnly true not set on field...' displays when opening a case record after upgrading to Tokyo	After upgrading to Tokyo, a user experiences an error message that displays and disappears when opening a case record. This issue occurs when the record producer has a check box variable and there's a UI policy setting fields as read-only.	<ol style="list-style-type: none"> 1. Install the CSM plugin. 2. Create a variable set that includes a check box variable. 3. Use Record Producer to create a case for a product. 4. Add the variable set with the check box variable. 5. Create a UI policy on the 'Case' table. 6. Make the fields read-only with any condition. 7. From the portal, fill in the fields. 8. Submit the record to create a case. 9. In Platform, open the case record.

Problem	Short description	Description	Steps to reproduce
			A record displays at the bottom of the page.
Service Management Virtual Agent Topic B PRB1609202	Two records in the <code>sys_res_context_config_prop</code> are missing ID fields		
Service Mapping PRB1573218 KB1123503	Inefficient GlideRecord query for 'sm_ci_field_data' from 'CiFieldDataDaolmpl' (function '_size') through 'CiChangeFlapperHandler' results in a warning: 'Table handling an extremely large result set'	Warnings display in the logs.	Refer to the listed KB article for details.
Service Mapping PRB1634095	Logging from 'SAProcessTopologyCalculationsUtil' and 'SAProcessTopologyClassifier' is too verbose, which causes a read replication (RR) lag	Logging from the <code>SAProcessTopologyCalculationsUtil</code> is too verbose, which causes database disk growth and RR lag: 'SAProcessTopologyCalculationsUtil' and 'SAProcessTopologyClassifier'.	
Service Portal PRB1627216	In the 'Instance options' dialog, the Close button was added but doesn't respond to the click action	The Save button works fine to close.	<ol style="list-style-type: none"> 1. Log in to the application. 2. Navigate to Service Portal. 3. Click Ctrl+Command+Click on any widget. 4. Select 'Instance options' from the context menu. <p>The Close button is displayed, and on clicking, the dialog doesn't close and the page isn't responding.</p>
Software Asset Management	SAMPro uninstallation or reclamation doesn't work with CSD 2.0		

Problem	Short description	Description	Steps to reproduce
PRB1599068			
Source Control Menu for Dev Studio PRB1598307	The update set commit with the 'delete' payload successfully deletes the table but doesn't generate the sys_metadata_delete record for sys_db_object		<ol style="list-style-type: none"> 1. Have two instances. 2. In instance 1, create v1 of an app with a table and two columns. 3. Publish v1 to the update set. 4. Delete one of the columns of the app in v2. 5. Publish to the update set. 6. Delete the table and the other column of the app in v3. 7. Publish to the update set. 8. Make sure that 'Delete payload' for the table is available in update set v3. 9. In instance 2, import the update set v1 of the app. 10. Ensure that the table and two columns are created. 11. Import v2 of the update set. 12. Ensure that one of the columns is deleted and sys_metadata_delete is created for the column. 13. Import v3 of the update set. <p>Expected behavior: The table is deleted and a sys_metadata_delete record is created for the sys_db_object record.</p> <p>Actual behavior: The table isn't deleted and the sys_metadata_delete record isn't present for the sys_db_object_record.</p>
Source Control Menu for Dev Studio PRB1636986	Metadata deletes aren't packaged due to incorrect parsing of composite payloads when checking coalesce rules	When certain metadata elements are deleted from an application as part of a customization, the deletes aren't packaged due to a perceived coalesced record match. This results in the deletes not being contained in the distributions and not occurring on target instances.	<ol style="list-style-type: none"> 1. Create or find an application that has multiple sys_ui_sections created for a table. 2. Install the base application on an instance. 3. Customize the app by deleting one of the sys_ui_section elements. 4. Publish the customization. 5. Examine the resulting package. 6. Create sys_app.

Problem	Short description	Description	Steps to reproduce
		An example is with sys_ui_section records.	<ol style="list-style-type: none"> 7. Link to the studio. 8. Create a record with a composite payload. 9. Publish. 10. Delete the record created in step 8. 11. Verify that sys_metadata_delete is created in the app. 12. Publish the app again. <p>Expected behavior: sys_metadata_delete remains on the instance and is packaged with the app's publication.</p> <p>Actual behavior: sys_metadata_delete is removed from the instance and not on the app package.</p>
Source Control Menu for Dev Studio PRB1639195	UpgradeSummary jobs can be scheduled simultaneously on a single node post-multi app or dependency install, leading to memory issues	The UpgradeSummary job instantiates the CollisionDetector, which loads large numbers of records from the sys_upgrade_state table. Often, many of these jobs are scheduled on the same node and cause memory issues. That can lead to performance issues or restarts.	<ol style="list-style-type: none"> 1. Ensure that log optimization is enabled (glide.upgrade_log.optimization.enabled). 2. Install a store app that also installs dependencies. 3. In the logs, observe 'postUpgradeLogUnchangedHistory: processing application install' messages for both the app and dependency. 4. In the sys_upgrade_history table, compare the upgrade finished time of both installs to the timestamp of the log messages. <p>Both jobs are running at the same time.</p>
UI Actions PRB1616125	UI actions that have layouts/groups can cause the UI actions to overlap the tags/short description of the form header	The issue depends the window size. When viewing an incident record in Agent Workspace, the 'Tag' icon and a long 'Short description' display behind UI actions at various zoom levels. The 'Tag' icon doesn't appear	<ol style="list-style-type: none"> 1. Create a UI action layout record: <ol style="list-style-type: none"> a. Navigate to All > Workspace > Experience > Forms > UI Action Layouts. b. Click New to create a record. c. Fill out the following information:

Problem	Short description	Description	Steps to reproduce
		<p>equal distance from the UI actions at some zoom levels. This issue only appears on incident cases and is consistently reproducible.</p>	<ul style="list-style-type: none"> ▪ Layout name: Test UI Action Layout ▪ Table: Incident [incident] ▪ Active: true <p>d. Click Save/Submit.</p> <p>2. Create a UI action group record:</p> <ul style="list-style-type: none"> a. Navigate to All > Workspace > Experience > Forms > UI Action Groups. b. Click New to create a record. c. Fill out the following information: <ul style="list-style-type: none"> ▪ Name: Test UI Action Group ▪ UI Action layout: Test UI Action Layout (or whichever record was created in step 1) ▪ UI Actions: (add multiple UI actions) ▪ Active: true <p>3. Click Save/Submit.</p> <p>4. Navigate to the 'UI Actions [sys_ui_action]' table.</p> <p>5. Query UI actions under the 'Incident' table.</p> <p>6. Open a few records.</p> <p>7. Check the Workspace Form button or personalize a list to contain the 'Workspace Form' button column.</p> <p>8. Change the values from 'true false' to 'true' via the list cell edit.</p> <p>9. Navigate to Agent Workspace > Lists.</p> <p>10. Look for the 'Incident' table under 'Lists'.</p> <p>11. Create an incident record by clicking New.</p> <p>12. Fill out the required fields.</p> <p>13. Ensure that the short description has many characters.</p> <p>14. Save/Submit the record.</p> <p>15. Zoom in and out of the page.</p> <p>The title/header of the record ('Short description' + 'Tag' icon) doesn't truncate. They display behind the</p>

Problem	Short description	Description	Steps to reproduce
			UI actions. This occurs at varying magnification based on window size.
Upgrade Center PRB1618732	A summary counter for changes skipped/updated on plugins may not be correct	The summary counter for changes skipped/updated on plugins may not be correct if the history lines contain entries marked as changed by the vendor (true) but the change type is null. The related list on an upgrade history record displays all changes applied.	<ol style="list-style-type: none"> 1. Provision an instance pre-Tokyo. 2. Upgrade an instance. 3. Post-upgrade, review the upgrade history. 4. Verify if upgrade history entries are related to plugins. 5. Cross-check the reported number of changes applied against changes listed in the upgrade history's related list.
UX Framework PRB1636113 KB1227421	TincyMCE fields aren't visible on Workspace	The issue can occur for other lib assets that have isAttachment=true and ES Module=true.	Refer to the listed KB article for details.
UX-Metrics PRB1636213	Workspace forms (table forms on all workspaces) fail to load and display a blank/white page during an instance upgrade	There are forms and some components that depend on the com.snc.ux.metrics.client plugin. That causes these workspace forms (any table forms on all workspaces) to fail because the dependencies aren't resolved.	<ol style="list-style-type: none"> 1. Provision an instance. 2. Test to make sure the workspace works. 3. Upgrade the instance. 4. Keep refreshing the opened record form in the workspace.
Virtual Agent PRB1608500	Topic titles are presented to users in the incorrect language after a cache flush	NLU doesn't need to be enabled to observe this.	
Virtual Agent PRB1616070	A custom icon doesn't display for a 'link' type menu item	Virtual Agent appears to send the proper branding settings in the silent handshake.	<ol style="list-style-type: none"> 1. Navigate to the CI settings module. 2. Open General > Branding. 3. Click New under the menu items pane. 4. Create a link type item. 5. Give the item a label, value (URL), and a custom icon. 6. Open Web Client.

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: The link item should display with the custom icon.</p> <p>Actual behavior: The link item displays with the default icon.</p>
<p>Virtual Agent PRB1630517</p>	<p>Virtual Agent branding's 'Chat Header' and 'Menu Title' don't translate for the VA Web Client</p>	<p>The 'sysparm_requester_session_language' successfully translates the rest of the page to the target language. Only the branding header [sys_cs_branding_setup.header_label] is left in English.</p>	<p>Expected behavior: In English, the entire page should translate to German based on the 'de' parameter.</p> <ol style="list-style-type: none"> 1. Ensure that an extra language is installed. 2. Create a branding record for Virtual Agent: <ol style="list-style-type: none"> a. Conversational Interfaces > Settings > Branding Settings > New Branding <ul style="list-style-type: none"> ▪ Branding name: Koala Support ▪ Chat header: Koala Support ▪ Branding key: koala_support b. Save. 3. Create the translation: <ol style="list-style-type: none"> a. Navigate to 'Translated Name/Fields'. b. Create New. <ul style="list-style-type: none"> ▪ Label (translate): Koala-Unterstützung ▪ Table: Branding [sys_cs_branding_setup] ▪ Element: header_label ▪ Language: de ▪ Value: Koala Support c. Submit. 4. With English as the selected language, test the affected URL with passing German (de) as the session language parameter. 5. Verify the URL loads and the page is German except the header label (Koala Support). 6. Repeat step 4 with German as the selected language. 7. Verify if the entire page is in German, including the header label.

Problem	Short description	Description	Steps to reproduce
			Actual behavior: The entire page translates to German except the header label, unless the selected language matches the parameter.
Virtual Agent PRB1637002	A live agent conversation freezes on VA Web Client when an agent sends an image attachment	The VA server message batching mechanism sets the output image rich control to translating, but isn't sending it off to translation. There's nothing to translate.	
Virtual Agent PRB1637326	Virtual Agent branding's 'Chat Header' and 'Menu Title' don't translate for the embedded client (sn_va_web_client_app_embed) when the language is passed via 'sysparm_requester_session_language'	The instance selected language is English, versus the language passed in the parameter 'sysparm_requester_session_language'.	<ol style="list-style-type: none"> 1. Ensure that an extra language is installed. 2. Create a branding record for Virtual Agent: <ol style="list-style-type: none"> a. Conversational Interfaces > Settings > Branding Settings > New Branding <ul style="list-style-type: none"> ▪ Branding name: Koala Support ▪ Chat header: Koala Support ▪ Branding key: koala_support b. Save. 3. Create the translation: <ol style="list-style-type: none"> a. Navigate to 'Translated Name/Fields'. b. Create New. <ul style="list-style-type: none"> ▪ Label (translate): Koala-Unterstützung ▪ Table: Branding [sys_cs_branding_setup] ▪ Element: header_label ▪ Language: de ▪ Value: Koala Support c. Submit. 4. With English as the selected language, test the affected URL with passing German (de) as the session language parameter. 5. Verify the URL loads and the page is German except the header label (Koala Support).

Problem	Short description	Description	Steps to reproduce
			<p>6. Repeat step 4 with German as the selected language.</p> <p>7. Verify if the entire page is in German, including the header label.</p> <p>Expected behavior: In English, the entire page should translate to German based on the 'de' parameter.</p> <p>Actual behavior: The entire page translates to German except the header label, unless the selected language matches the parameter.</p>
Virtual Agent PRB1639350	Inconsistent data in the sys_ci_analytics table	The data in the sys_ci_analytics table is inconsistent, causing the ETL job to fail. This results in empty widgets on the dashboard.	<ol style="list-style-type: none"> 1. Open Virtual Agent. 2. Start a conversation. 3. Trigger AI Search with a string that has results. 4. Check sys_ci_analytics table for search events. <p>The result displayed has the search ID undefined.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 6 Hotfix 1](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4b](#) 
- [Tokyo Patch 4a Hotfix 1](#)
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Tokyo Patch 6 Hotfix 2

The Tokyo Patch 6 Hotfix 2 release contains fixes to these problems.

Build information:

Build date: 05-01-2023_2351

Build tag: glide-tokyo-07-08-2022__patch6-hotfix2-04-10-2023

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Core Platform PRB1638469	Events with a future process_on time are processed immediately	This problem arises when multiple threads are involved. Polling occurs twice, which causes an event with a future process_on time to be returned now.	

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 6 Hotfix 1](#)
- [Tokyo Patch 6](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
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- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 6 Hotfix 1

The Tokyo Patch 6 Hotfix 1 release contains fixes to these problems.

Build information:

Build date: 02-02-2023_0949

Build tag: glide-tokyo-07-08-2022__patch6-hotfix1-02-01-2023

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) ↗.

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) ↗.

Fixed problem

Problem	Short description	Description	Steps to reproduce
App Templates (Family) PRB163703 KB1228434 ↗	App Engine Studio: The user is not able to add 'Data' or 'Experience' to the App	When accessing or creating a template, the user observes the error 'We encountered an error while fetching templates.' The user cannot add 'Data' or 'Experience' to the App because the Add button is not displaying.	Refer to the listed KB article for details.

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

1. [Tokyo Patch 6](#)
2. [Tokyo Patch 5 Hotfix 2](#) ↗
3. [Tokyo Patch 5 Hotfix 1](#)
4. [Tokyo Patch 5](#)
5. [Tokyo Patch 4](#)
6. [Tokyo Patch 3](#)
7. [Tokyo Patch 2](#)
8. [Tokyo Patch 1](#)
9. [Tokyo security and notable fixes](#)
10. [All other Tokyo fixes](#)

Tokyo Patch 6

The Tokyo Patch 6 release contains important problem fixes.

Tokyo Patch 6 was released on February 2, 2023.

- Build date: 01-27-2023_1724
- Build tag: glide-tokyo-07-08-2022__patch6-01-18-2023

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#).

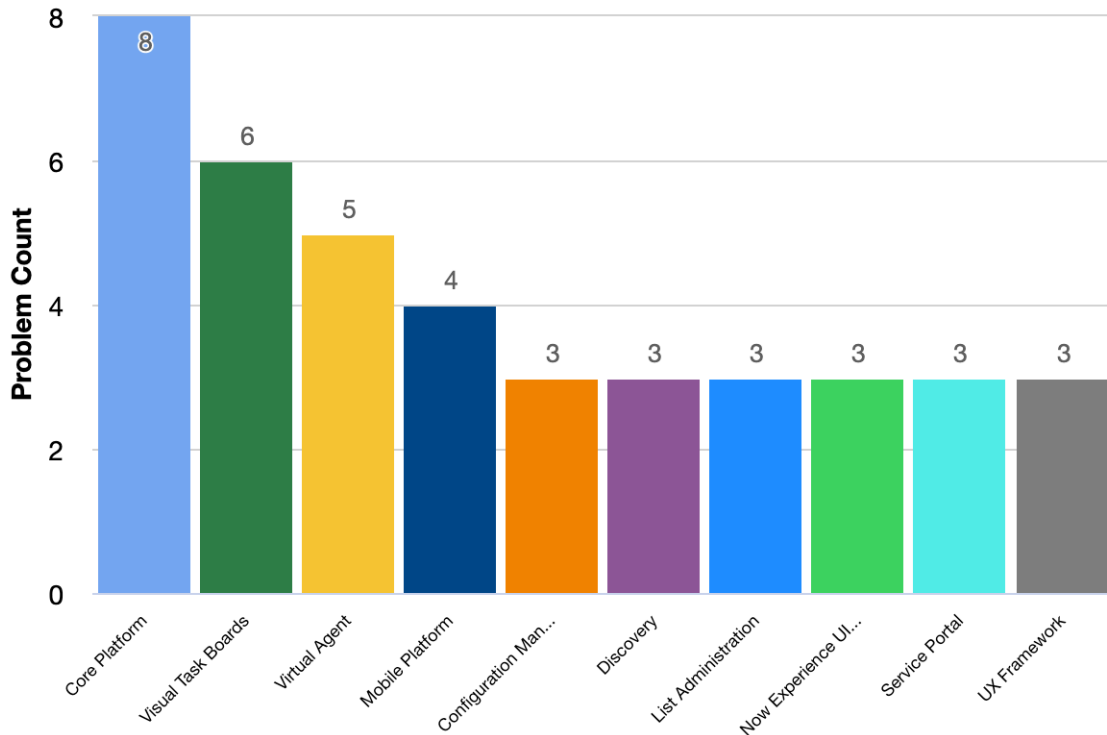
Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#).

For a downloadable, sortable version of the fixed problems in this release, click [here](#).

Overview

Tokyo Patch 6 includes 105 problem fixes in various categories. The chart below shows the top 10 problem categories included in this patch.

Top 10 problem categories



Security-related fixes

Tokyo Patch 6 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform®. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Tokyo Patch 6, refer to [KB1226900](#).

Changes in Tokyo Patch 6

[Dashboards release notes](#)

Many dashboards that were created in releases prior to San Diego using the Dashboard Viewport component did not migrate properly to Advanced Dashboards. The fix to this issue is documented in [KB1223780](#).

[Platform Analytics Workspace release notes](#)

The Dashboard viewport component is no longer supported for new dashboards.

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
Next Experience UI16 Theming PRB1623594 KB1224191	With Next Experience enabled, list editing in a grouped list displays the incorrect cell editor		Refer to the listed KB article for details.
Service Catalog PRB1598937	There is no related list on a requested item when a custom theme is selected	When a custom theme is selected from a user's preferences, 'Related list' is not displayed under the requested items. Tokyo instances are impacted.	<ol style="list-style-type: none"> 1. Ensure no plugins are installed. 2. Activate the Next Experience theme. 3. Set the glide.ui.polaris.dark_themes_enabled property to true. 4. In any Tokyo instance, create a custom UX style. 5. Navigate to user preferences. 6. Change the theme to the custom theme. 7. Navigate to any related item (sc_req_item.list). 8. Create a related item. 9. Click the header. 10. Configure the related list. 11. Ensure the view is default 12. Navigate to user preferences. 13. Under 'Theme', select the custom theme. <p>Expected behavior: The related list should be loaded when a custom theme is added.</p> <p>Actual behavior: The related list is not loaded when a custom theme is added. When using the default theme, the related list is seen.</p>
Core Platform PRB1635585	StaticContentServer caches the existence and nonexistence	After instance migration, some instances do not come online when	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
KB1221999	of snc_node_disable	nodes are re-pointed to the new DB.	
Syntax Editor PRB1615397 KB1192991	There is no horizontal scrollbar in the Email Client HTML editor TinyMCE v5 when a large image is added	The scroll bar is not visible or out of the screen in Email Client when a large image is attached.	Refer to the listed KB article for details.
Cache PRB1598997 KB1161964	The presence of a property that starts with 'glide.cache.disabled' might cause performance degradation	If a property exists on an instance that starts with 'glide.cache.disabled' and a global cache flush is invoked, performance issues can be observed under certain circumstances.	

All other fixes

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1631277	The 'System' title text is missing for system-generated notification events in Agent Workspace UI	When a User creates a new incident or updates an incident on behalf of someone, the System generates an email notification which is recorded in the Activity Stream as an event stamp. The header of an event stamp should display 'System' for System generated events. However, the label 'System' has been missing since upgrading to Tokyo release from San Diego release.	<ol style="list-style-type: none"> 1. Log in to a base Instance. 2. Navigate to Agent Workspace > Incidents > All. 3. Trigger a notification (comment / log incident on behalf of someone). <p>Expected behavior: The Activity lane should contain System in the 'title text' of an event stamp generated by the System.</p> <p>Actual behavior: The 'title text' is blank for event stamps generated by the System.</p>
Advanced Work Assignment Dashboard	'Abandon Rate' intermittently doesn't load	When 'Abandon Rate' is loading, a blank widget or null pointer exception is displayed.	On an instance with the com.glide.pa.awa and com.glide.messaging.awa plugins installed,

Problem	Short description	Description	Steps to reproduce
PRB1590277			<ol style="list-style-type: none"> 1. Make some AWA interactions. 2. Navigate to AWA for Messaging-Advanced Analytics. <p>Expected behavior: Abandon Rate loads properly without any issues.</p> <p>Actual behavior: The blank widget or null pointer exception is displayed for Abandon Rate from 'AWA for Messaging- Advanced Analytics' intermittently.</p>
Agent Chat PRB1632249 KB1217281	The agent chat window appears empty after the agent accepts the work item if Dynamic Translation for Agent Chat (DTAC) is on	The agent chat window stays blank after the agent accepts the work item if Dynamic Translation for Agent Chat (DTAC) is on. The issue occurs when a record number such as INC0000001 is used as a label in the dynamic choice input component of a topic.	Refer to the listed KB article for details.
Agent Workspace PRB1593809	Editing columns on a list refocuses the list search	When editing lists(on columns) in Agent Workspace, the list search refreshes/resets by itself.	<ol style="list-style-type: none"> 1. Log in to a San Diego instance. 2. Open Agent Workspace and navigate to the Lists view. 3. Select Incidents > Open list. 4. Click List Actions > Edit columns. 5. In the Edit List dialog window, type 'Res' into the search bar of the Available Columns to reduce the list of columns displayed. 6. Click the Resolved column. <p>Note that the search bar is cleared and full list of available columns is displayed. Scrolling down shows that 'Resolved' is still selected.</p> <p>Expected behavior: Filtering and Selecting a field in the Left slush bucket should not refresh the list of fields.</p> <p>Actual behavior: Filtering and Selecting a field in the Left slush bucket refreshes the list of fields on the slush bucket.</p>

Problem	Short description	Description	Steps to reproduce
Agent Workspace PRB1609820	The mini email composer doesn't close after sending an email through a pop-out	The general composer closes but the mini email composer does not.	<ol style="list-style-type: none"> 1. Click Reply on the Activity stream Observe that an email draft opens in a mini email composer. 2. Click Send. Observe that this email closes. 3. Click Reply again. Observe that the email draft opens in a mini email composer. 4. Click the pop out button. Observe that the email opens in the general composer. 5. Click Send. Observe that the general composer closes but the mini email composer does not.
AI Search UX PRB1618014 KB1208596	Global text search in Next Experience UI does not work for newly created search sources	The newly created sys_search_source records are marked as inactive (active=false) and there is no base instance way to modify this flag.	Refer to the listed KB article for details.
App Template Framework PRB1627952	Remove sharing records created by fix script	Duplicate records are created.	<ol style="list-style-type: none"> 1. Open a San Diego instance with AES + app templates installed. 2. Upgrade to Utah and install US1 version of AES. <p>Expected behavior: Only the sharing records shipped in the AES store app bundle should remain.</p> <p>Actual behavior: Duplicate sharing records are created (the ones created by the glidefix upon platform upgrade and the ones shipped in AES).</p>
Automated Test Framework (ATF) PRB1590648 KB1212119	Client Test Runner runs out of memory when running for longer durations due to a	Users observe a small spike in memory usage.	

Problem	Short description	Description	Steps to reproduce
	GlideAutomate memory leak	Wait	
Configuration Management Database (CMDB) PRB1595340	Highly connected CIs cause significant performance drop for CIUtils when collecting related CIs	In cases where a CI has a high number of relationships in the cmdb_rel_ci table, the CIUtils.servicesAffectedByCI method can run very long, on the order of an hour or more. The script include calls to the CMDB java layer, which is where performance improvements are needed.	
Configuration Management Database (CMDB) PRB1606520	A reconciliation rule doesn't work with a filter condition		
Configuration Management Database (CMDB) PRB1621380	Query builder does not properly support internal sources	NLQ queries are not hidden from the list view.	<ol style="list-style-type: none"> 1. Create a query using CMDB Query builder, export the record XML file. 2. Change the source value to something other than QB, to indicate it is an internal query. 3. Include this query XML in a scoped app zip file. <p>Such queries should not show up in QB saved queries, but observe that they do. Also for such internal queries, the result limit should be bypassed, but it is not.</p>
Contextual Search PRB1594709	The 'Search as' feature of the contextual search resets the session domain to a user's default domain		<ol style="list-style-type: none"> 1. In an instance with Domain Separation, find the Table Configuration for Incident (Platform) and enable 'Search as' based on the Caller field. 2. Create an incident with ACME Employee as caller. 3. Navigate to the 'TOP' domain and access the incident. 4. Open the contextual search and access the Search as tab.

Problem	Short description	Description	Steps to reproduce
			<p>5. Refresh the page.</p> <p>6. Check the domain picker.</p> <p>Expected behavior: The domain picker shows 'TOP'.</p> <p>Actual behavior: The domain picker is reset to 'Global'.</p>
Core Platform PRB1619263	UserLabelLoader - related query is slow and should route to RR	The query is slow.	
Core Platform PRB1620355	Calling JSUtil.nil or JSUtil.notNull on an array allocates 6 GB of unnecessary garbage memory		
Currency Administration PRB1628325	Incorrect conversions with session currency en.IN	If a currency search is performed on a currency matching system locale, a conversion is performed that is not required. This produces invalid search results when using session currency en.IN. The system will then convert that value back to INR as a search amount, causing an invalid configuration.	
Discovery PRB1610226	The 'Parse Command Output', a step that uses an applicative credential does not work	When the user runs a 'Parse Command Output' and attempts to use applicative credentials, the step throws an error similar to this: 'Failed to retrieve remote data: DebugResultDTO is null'.	<ol style="list-style-type: none"> 1. Use a computer that has some application running on it (ex. Apache Web Server, MySQL Database, etc.) 2. Run a Discovery against that device and get the PID of the application accordingly. 3. In the Credentials Table, create an Applicative Credential with the type as 'Apache Web Server [cmdb_ci_apache_web_server]'.

Problem	Short description	Description	Steps to reproduce
			<p>Name and password can be any value.</p> <ol style="list-style-type: none"> 4. Save these credentials and then check the ecc_queue table to make sure that a 'credentials_reload' probe was created to sync credentials to MID Servers. 5. Once credentials are synced, open the appropriate pattern relevant to the Application and OS (for example, Apache on UNIX based OS) and add a test step somewhere early in this pattern that is of type 'Parse Command Output'. 6. In the 'Parse Command Output' step, insert the following value in 'Set Command Details': 'echo hello \$ \$username\$\$'. 7. Debug this pattern and run the newly created step. <p>While running this step, observe an error that looks like: '**DebugResultDTO is null**'.</p>
<p>Discovery PRB1627715</p>	<p>'Should Pull Events' check-box doesn't appear for Azure Service Accounts after adding the option into the service_account_field_options table</p>	<p>service_account_field_options is a table used to add fields that the user wants to add to the SA form. A hardcoded check for GCP is stopping the pulling of events that should be pulled for Azure, even after adding them to the table.</p>	<ol style="list-style-type: none"> 1. Add shouldPullEvents in service_account_field_options for Azure. 2. Navigate to CDU or COW. 3. Select an existing service account or create a new account. <p>Notice that the shouldPullEvents flag doesn't show up for azure datacenter. The field shouldPullEvents is used for GCP alone. No datacenters other than GCP can use this field to update the service_account. The code changes are restricted to GCP alone.</p>
<p>Discovery PRB1629140</p>	<p>A Discovery schedule is canceled with a 'Too Many IPs Excluded: 2174320' error, even if no IP exclusion lists are defined</p>	<p>Discovery Schedule gets cancelled with message in the discover status log 'Too Many IPs Excluded: 2174320', even if no IP exclusion lists are defined. Note that the number could be anything greater than or equal to 500000.</p>	

Problem	Short description	Description	Steps to reproduce
Edge Encryption PRB1631391	Transactions get stuck on the MID Server when javax library - XMLEventWriter in Edge code is handling a large content parameter value or umlaut character	The payload has a content parameter with a very large value, and it has a special character for the description. This causes the transaction to get stuck on the MID Server. This occurs when edge encryption is active.	<ol style="list-style-type: none"> 1. Execute a REST message via MID server. 2. Observe that the execution hangs and there are error messages in the agent logs.
Field Administration PRB1625789	Dot-walked decimal fields can appear in the incorrect locale format and after saving, the value is corrupted	Dot walked reference fields using comma delimiter are displayed with a dot.	<ol style="list-style-type: none"> 1. Set the system property 'glide.system.locale' to 'fr.FR' (or any other locale using comma delimiters for decimals). 2. Create a new Decimal field within the sys_user table. 3. Within any available sys_user record, set the value of the Decimal field, ensuring there is a comma in place (for example, 43,21). 4. Within the incident table add the field created in step 2 on the form by dot-walking on the caller reference field. 5. Create a new incident, and populate the caller with the sys_user record used in step 3. <p>Notice that the dot-walked field added to the form in step 4 is displayed as 43.21, instead of 43,21.</p>
Field Administration PRB1635290	Issues with Agent App Notifications when the Direct Push method is used for the branded app	In Branded Mobile, when the Direct Push method is used for notification, the user observes an error banner. APIs (fetch/read/unread APIs) do not work for the Direct method. This issue is only in iOS.	<ol style="list-style-type: none"> 1. Log in to Branded App in IOS mobile. 2. Trigger the notification using Direct Push method. 3. When the notification is received in mobile, click the notification. <p>Expected behavior: The API does not fail in the Branded App in iOS mobile.</p> <p>Actual behavior: The API fails in the Branded App in iOS mobile and a client error banner appears.</p>
Flow Designer	Converting catalog variable to	In the flow action there is a custom script to convert the catalog	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
PRB1631203 KB1226143	toString () via custom script throws error 'catalog variables that don't exist or are inactive'	variable to toString(). Converting catalog variable to toString () via a custom script throws an error.	
Flow Designer PRB1633864 KB1223582	The Dynamic Choice type list for action used inside a flow does not populate with any options	This issue in Flow Designer has been observed for any input of type 'Dynamic Choice' that has its Choice option set to 'Dropdown with -- None --' under the 'Advanced' section when an input is expanded.	Refer to the listed KB article for details.
Form Administration PRB1632463 KB1218131	batchedGlideAjax can set sysparm_aggregation_size incorrectly, and when it's a large number, it can cause AJAXXMLHttpRequest to run the app node out-of-memory	Request parameters can have this incorrect sysparm_aggregation_size value. This should be a small number, equal to the number of requests/processors that batch. This can be set as part of a random string, or a very large number instead. When the AJAXXMLHttpRequest java loops through the parameters, it keeps raising to the large number, even when there are no parameters for more than a few. An object in memory is created for each, ending up using most of the app node memory, and the CPU used for garbage collection because of this uses nearly all the CPU, making the app node unusable while it runs.	Refer to the listed KB article for details.
GRC Platform Plugins	Update base instance		

Problem	Short description	Description	Steps to reproduce
PRB1633996	Properties for Profiles plugin		
Health Log Analytics (Family) PRB1617634	Elasticsearch data input uses an API which violates security constraints	The API is used to fetch relevant indices from data input in the MID. The API requires the cluster:monitor privilege for the licensed elastic, which is not permitted for all users.	
Incident Management PRB1603774 KB1212983	The Major Incident Management Workbench doesn't load in SanDiego if the 'Incident Management Best Practice' plugins are inactive	After upgrading to San Diego, in any instance where the various 'Incident Management Best Practice' plugins are inactive, the Major Incident Management Workbench does not load.	
Knowledge Management PRB1619708 KB1204172	One of the Knowledge Bases (KBs) isn't loading from the \$knowledge.do page in a domain separated instance	The current implementation tries to evaluate all categories regardless of user access. Thus, it tries to evaluate categories in which the user doesn't have access, and fails.	<ol style="list-style-type: none"> 1. Create a Knowledge Base in 'global' domain. 2. Create a few categories under the newly created Knowledge Base in different domains. 3. Create a user in any one domain in which a category has been created. 4. Open /\$knowledge.do page and select the newly created Knowledge Base. <p>Observe that the page loads indefinitely and an error appears in the console.</p>
LDAP integration PRB1573064	The 'LDAP security_stats.do' API times out during every request		
List Administration PRB1614180 KB1217354	Switching quickly between filters in legacy Agent Workspace and HR Workspace can generate	When clicking frequently between lists in HR Agent Workspace, the user is faced with an error: 'Can't display this list. Try contacting your system administrator.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
	a 'Can't Display this List' error	Method invocation failure...'	
List Administration PRB1620781	The horizontal scrollbar in Workspace's lookup (reference search) modal appears at the bottom of the list instead of the bottom of the modal	In Tokyo, when opening a lookup modal in a Workspace, if that modal has more columns in it than would fit in the size of a modal, a horizontal scroll bar should show up at the bottom of the modal to indicate the ability to view the other, obscured columns. Instead of it appearing at the bottom of the modal, it appears at the bottom of the list view. This is both a regression from previous behavior and a potential accessibility issue.	<ol style="list-style-type: none"> 1. Open a workspace in Tokyo, and find a field with a lookup button that opens the modal. 2. If needed, edit the list view of that modal in the regular UI to include enough columns that it will require the need for horizontal scrolling. (At this point the user can also take a look at the functionality in the main platform UI and see how it sits at the bottom of the window instead of needing to be scrolled to). 3. Reload the Workspace and open that same lookup modal. <p>The scroll bar should be at the bottom of the modal, like it would appear on its own pop-up window, but instead it is at the bottom of the list, which means in longer lists it can be completely hidden until scrolled down to.</p>
MetricBase PRB1593907	A Clotho XMLStats request never returns if Clotho becomes unresponsive, leading to semaphores exhaustion on Glide	If Clotho becomes unresponsive after the client has connected but before the connect endpoint's response is sent, then XML stats will stall while waiting for it to send a response back. The request is retried every minute, which leads to the exhaustion of the semaphores on the glide side, rendering glide unresponsive.	
Mobile Platform PRB1599341 KB1223622	A grouplist with a card template configuration doesn't display the title of the grouplist	In the Agent Mobile app, a grouplist with card template configuration does not display the title of the grouplist.	Refer to the listed KB article for details.
Mobile Platform PRB1604609	V2 to V1 transform issue: The autofill variable		<ol style="list-style-type: none"> 1. Log in to Now Mobile as admin. 2. Navigate to the Timesheets applet. 3. Create Time Sheet by clicking the top-right button (with + icon) on the

Problem	Short description	Description	Steps to reproduce
	doesn't work if the value is 0 in an action item input form screen		<p>header, and selecting a required date.</p> <ol style="list-style-type: none"> 4. Navigate back to 'My Active Timesheets' and click the created time sheet. 5. Create a time card using any function instance (such as Add from Category) in the top right ellipses. 6. Click the time card, and add hours. Leave one day with 0 hours. Save. 7. Click the time card again. <p>Notice that the day in which 0 hours was saved is empty.</p>
Mobile Platform PRB1606825	The 'Parameter' section's description isn't available in V2 User Client's metadata, and the section label isn't translated properly		<ol style="list-style-type: none"> 1. Configure an Input Form Screen. 2. Add an Input Form Section. 3. Set its Description to be a valid string. 4. Use the Rest API Explorer to get the V2 User Client Response. 5. Search for the description. <p>Expected behavior: The description should be available as part of the Section Metadata.</p> <p>Actual behavior: The description is missing.</p>
Mobile Platform PRB1632682	'Offline Update Action Sync' doesn't work on a record that has previously been synced at least once	A record that was updated offline and synced can't be updated again. This occurs on Tokyo instances.	<ol style="list-style-type: none"> 1. Configure a declarative action item of type 'Update', with one item parameter that sets the value of a text field. 2. Using the action item from the previous step, configure a function (sys_sg_button) with a 'Record' context available offline. 3. Create a UI parameter for the function with the input type set as 'text'. 4. Create a mapping between the UI parameter and the item parameter. 5. Create a button instance under a screen that displays the record. 6. Verify the action works correctly when online. 7. Download the offline cache.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 8. Switch to offline mode. 9. Execute the same action with a different value. Notice the action is reflected correctly in the UI. 10. Switch back to online mode. Notice the sync is successful. 11. Switch back to offline mode. 12. Download a fresh offline payload after waiting at least three minutes for the minimal reuse time of an offline payload to pass, or removing the latest record from the sys_sg_offline_result table for the user. 13. Perform an additional update on the same record, which was updated in step 9 with a different value. Notice the value is correctly reflected in the mobile client UI. 14. Switch back to online mode. 15. Look at the record, both in mobile and in the web interface of the instance. Expected behavior: The record should be changed according to the action that was performed in step 13. Actual behavior: The record isn't updated.
<p>Next Experience UI16 Theming PRB1615715</p>	<p>After upgrading to Tokyo, the checkmark on checkboxes on the form is no longer visible even though it's checked</p>	<p>The checkbox does not show a tick mark, instead shows as blank/empty.</p>	<ol style="list-style-type: none"> 1. Log in to a Tokyo instance. 2. Navigate to sys_ux_theme table and create a new custom theme. 3. Copy the sys_id of the record created above. 4. Navigate to sys_properties table and create a new property with the following details: <ol style="list-style-type: none"> a. Name: glide.ui.polaris.theme.custom. b. Type: string. c. Value: sys_id copied from step 3.

Problem	Short description	Description	Steps to reproduce
			<p>5. Navigate to any table that has checkbox fields (for example, sys_user) and open any record.</p> <p>6. Click any checkbox and notice that it does not appear even if it is checked.</p> <p>Expected behavior: The checkbox should show a tickmark.</p> <p>Actual behavior: The checkbox does not show a tickmark, instead shows as blank/empty.</p>
Next Experience Unified Navigation PRB1629342	Multiple confirmation pop-ups appear while navigating away from RITM/Change/ Incident and any other forms	The native browser navigation pop-up and dirty form pop-up both appear while navigating away from a RITM/change/ incident and any other forms after making an unsaved change.	<ol style="list-style-type: none"> 1. Log in to any Tokyo instance. 2. Navigate to RITM/Change request/ Incident list and open the window. 3. Change any value on RITM and do not save or update. 4. Search any RITM using Global Search Option. <p>Observe two different confirmation pop-ups stating work has not been saved.</p>
Next Experience Unified Navigation PRB1633813	A user menu is positioned to the opposite side and partially off-screen when there's no utility menus		<ol style="list-style-type: none"> 1. Open any base instance. 2. Hide all base instance utility menus (for example, `glide.product.help_show` should be false). 3. Open the user menu and notice that it appears on the opposing side of the screen.
Now Experience UI Builder PRB1599538	Event mappings that are mapped to the client script 'Execute - Client Script' aren't copied to the newly duplicated variant		<ol style="list-style-type: none"> 1. Navigate to a UIB page that has event mappings in the client script. 2. Create a duplicate of the page. <p>Notice that event mappings mapped to the client script 'Execute - Client Script' are not copied to the newly duplicated variant.</p>

Problem	Short description	Description	Steps to reproduce
Now Experience UI Builder PRB1606467	Component configuration panel stuck on loading		<ol style="list-style-type: none"> 1. Open UI Builder then create a page using blank template. 2. Add a component to stage. 3. Click the component to open the config panel for the component. <p>Expected behavior: Component configuration panel is editable.</p> <p>Actual behavior: Configuration panel is stuck on loading.</p>
Now Experience UI Builder PRB1632083	Unable to load a viewport although the page is visible in Workspace and in some track instances	The middleware's pageState is null, and the stage component prevents rendering for that scenario.	<ol style="list-style-type: none"> 1. Open UIB with the Automation Center plugin installed. 2. Open the landing Page. 3. Open the executions viewport in editor. <p>Expected behavior: The executions viewport should open in the UIB editor.</p> <p>Actual behavior: It shows a blank grey screen.</p>
On-Call Scheduling PRB1590913	When the user uses the REST API on four specific 'on-call escalation' tables, it takes a long time to process	The following tables take a long time to load: on_call_escalation_con_attempt, on_call_escalation_level, on_call_escalation, on_call_escalation_comm. It takes about 35 min to return 35k rows even though the only field being requested to return is sys_id. For comparison, there are other tables that return 200k+ rows in a minute.	
On-Call Scheduling PRB1595628	The time format HH:mm:ss z Z is not supported on the on-call calendar		<ol style="list-style-type: none"> 1. Navigate to sys_properties, and update the property glide.sys.time_format with the value 'HH:mm:ss z'. 2. Navigate to the On-Call Calendar and create a time-off for an all-day event. <p>Expected behavior: The start time of the created timeoff event starts with 00:00.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: The start time of the created timeoff event does not start with 00:00.
Performance Analytics Dashboards PRB1609928	Export to PDF of Responsive dashboard does not show data table for Reports	After exporting the home page as a PDF, the data in it is truncated.	<ol style="list-style-type: none"> 1. On a Rome instance, choose any dashboard as the home page. 2. Make sure 'Choose data table' is checked so that both pictorial and data representation are provided. 3. Choose the 'Export to PDF', 'Portrait', and 'Avoid page break inside widget' options. <p>The exported PDF brings in the data.</p> <p>Observe that once the instance is upgraded to San Diego, the 'Export to PDF' option on the same dashboard with the same options, truncates the data.</p>
Performance Analytics Dashboards PRB1615883	Moving dashboard changes two or more times via update set deletes sys_portal_page and its references, causing a broken tab	The sys_portal page is reinserted. However, the pa_tabs and sys_grid_canvas entries that reference the sys_portal page are null, causing a broken tab.	<ol style="list-style-type: none"> 1. Create a new dashboard containing two tabs and one widget on each tab. 2. Create a new Update Set and unload the dashboard to it, using the dashboard's Unload UI action (from the dashboard records's hamburger menu). 3. Get the XML from the update set and inspect it to ensure that all expected records are there. 4. On a fresh instance, load the XML and inspect the newly imported dashboard records. <p>Observe that some records are missing (for example, sys_portal_page records) even though the import process reports no errors.</p>
Performance Analytics PRB1614207	Platform Analytic Workspace page is not available on instances upgraded from San Diego to Utah		<p>Click the Workspaces tab and select Platform Analytics Workspace.</p> <p>Notice that the page is not available.</p>

Problem	Short description	Description	Steps to reproduce
Performance Analytics PRB1629700 KB1224514	The migration from dashboard viewport to advanced dashboard does not work as expected	In Tokyo, 'Advanced dashboards' was introduced as part of 'Inline editor', and the existing 'Dashboard Viewport' component was deprecated. To help users move from 'Dashboard Viewport' to 'Advanced dashboards', a fix script is provided. After upgrading from San Diego to Tokyo, the user observes the new 'Advanced dashboards' instead of 'Dashboard viewport', but the fix script leaves dashboards in a broken state.	
Service Catalog PRB1587013	The tab display name is missing when ordering from the Order Guide	After upgrading to San Diego, the tab display name is missing when viewed in Firefox and Safari. This issue does not occur in MS Edge or Chrome.	<ol style="list-style-type: none"> 1. Navigate to the Self Service Catalog. 2. Select New AD Client and adding Software in the Order AD Services category. 3. Fill in the Owner Variable. 4. File Select the use Case Variable. 5. Create AD client and add Software and Standard client installation. 6. Click Choose Options. <p>Notice that the third tab title is blank.</p>
Service Management Virtual Agent Topic B PRB1620647	vaContext isn't accessible from topics in scoped apps	The base instance script including VATopicsHelper is showing that the error of 'vaContext' is not defined.	
Service Portal PRB1593363	The pointer on the announcement on the portal changes to a clickable pointer instead of a normal pointer even	The pointer on the Announcement on the Portal changes to a clickable pointer instead of normal pointer even when the 'Click target' is selected to '--None--'. Additionally, there are two frames; one for	<ol style="list-style-type: none"> 1. Navigate to any existing Service Portal announcement. If there are none, then create a new announcement (announcement.list) and enter the mandatory fields. <ol style="list-style-type: none"> a. For 'Click target', select '--None--'. b. For 'Behavior' and 'Dismiss', select any of the 'User can dismiss' options.

Problem	Short description	Description	Steps to reproduce
	when the 'Click target' is selected as 'None'	the Title and another for the dismiss options 'x'.	<ol style="list-style-type: none"> 2. Navigate to any San Diego or base instance. 3. Navigate to Service Portal <a href="https://<instancename>/sp">https://<instancename>/sp. 4. Navigate anywhere outside the frames. 5. Hover over the announcements. <p>Expected behavior: The pointer should not be clickable one. As in Quebec releases, there should be one frame.</p> <p>Actual behavior: The pointer changes to a clickable pointer instead of normal pointer. Also notice that there are two frames, one for the Title and other for the dismiss options 'x'.</p>
Service Portal PRB1613576	Tokyo upgrade: An error displays after loading the 'csm_ticket' page in French	The error does not appear for the English language. It only appears in French.	<ol style="list-style-type: none"> 1. Navigate to a Tokyo base instance with the plugin 18N: French Translations installed. 2. Navigate to /csm portal and click Cases > All cases and open any existing case. <p>Observe the error as 'Une erreur JavaScript s'est produite dans la console du navigateur' for French. Notice that the error does not appear for the English language, only French.</p>
Session Management PRB1616523	Wrapper ends JVM due to Java-Level Deadlock	Several nodes are restarted automatically daily.	
Sidebar (Family Release) PRB1624480	Remove the scheduled job - Index collab chat attachments	The scheduled job - Index collaboration chat attachments should not be there. This job could cause issues on the AIS engine.	<p>Request one Utah instance.</p> <p>The scheduled job - Index collaboration chat attachments are there.</p>
Sidebar (Family Release) PRB1626816	CollabChatUnread creates too many sys_amb_message and the instance performance	CollabChatUnreadResponser was replaced from 'per user' to a single collab-chat-unread-responder. It only sends out an AMB message to users who were members	<ol style="list-style-type: none"> 1. Have x number of users log in to the instance and use the sidebar. 2. As one of the users, send one message in the chat. <p>Notice that there are x number of CollabChatUnreadResponser in the</p>

Problem	Short description	Description	Steps to reproduce
	is downgraded	of the chat when last_sent_message was updated. In Tokyo, a CollabChatUnreadResponders is created for each logged in user, including non-members. An AMB message is sent to all logged in users when a collab-chat record is changed. In the fix, the AMD message is only sent to members of the changed chat that has a last_sent_message change.	system. Also, notice that one sidebar message will generate x number of sys_amb_message.
Software Asset Management PRB1541927 KB1172407	The Microsoft publisher overview takes more than 70s to open in License Workbench (Software Asset Management Classic) and License usage view (Software Asset Workspace)	Users experience latency when opening the Microsoft publisher overview in the License Workbench (Software Asset Management classic application) and License usage view (Software Asset Workspace). This issue occurs when users manage licenses for many Microsoft products, generating a large number of requests each time the publisher overview is opened. This large number of requests can cause long load times of 30 seconds or more that reach the data broker timeout. Any requests that do not make it through before the timeout result in 503 errors.	
Software Asset Management PRB1561507	Opening Office 365 and its editions in the License Workbench dashboard takes		Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
KB1219890	approximately 10s		
Syntax Editor PRB1614474 KB1217516	The 'Find Next/Find previous' functionality doesn't work on script include	When the user clicks 'Toggle full screen', the 'Find Next / Find Previous' functionality doesn't work on script include.	
UX Framework PRB1592204	The 'Save as' list action doesn't work for most lists in Service Operation Workspace	Using the 'save as' feature doesn't work. It doesn't create a list under 'My Lists'.	<ol style="list-style-type: none"> 1. Log in to a San Diego instance with the sn_sow plugin installed. 2. Launch Service Operations Workspace. 3. Under 'Lists', navigate to Change > Open. 4. Click the gear icon. 5. Click Save as. 6. Give it a title. 7. Click Save. 8. Open My Lists. <p>Actual behavior: There is no list created under 'My Lists'.</p> <p>Expected behavior: There is a list created under 'My Lists'.</p>
UX Framework PRB1617364 KB1208047	The mini calendar added in UIB displays in the Turkish language for English users	The month displayed is in Turkish.	Refer to the listed KB article for details.
UX Framework PRB1633411	uxf-tab-set does not refresh the tabs when a repeater is used		<ol style="list-style-type: none"> 1. Click the Purchase vertical tab. 2. Click Contracts. 3. Click Cases. <p>Expected behavior: The content of cases tab should load with the tab's heading as 'procurement case'.</p> <p>Actual behavior: The content loads fine but the heading still shows the older tabs.</p>

Problem	Short description	Description	Steps to reproduce
Virtual Agent Designer PRB1632731	Republish fails in Tokyo for topics published before Tokyo if the topic includes FDIH nodes	In VA Designer, republish fails in Tokyo for topics published before Tokyo if the topic includes FDIH nodes. The failure happens when the server attempts to read records from sys_cs_topic_api_usage but cannot because the format is outdated.	<ol style="list-style-type: none"> 1. On a San Diego instance, create a topic with an FDIH action. The action should have at least one input. 2. Publish the topic. 3. Upgrade to Tokyo instance. 4. Open the same topic and republish it. <p>Observe that publishing fails with an error message about MismatchedInput.</p>
Virtual Agent PRB1600566	FetchMessages GraphQL fails when MultiOutput rich control is used	Messages are not rendered on agent workspace. FetchMessages fails with an exception.	<ol style="list-style-type: none"> 1. Enable Dynamic Translation. 2. Modify greetings topic to include MultiOutput rich control before topic selection. 3. Initiate conversation with a Live Agent. Live agent and requester should be in different languages. 4. As an agent, accept the work item. <p>Notice that messages are not rendered on Agent Workspace. FetchMessages fails with an exception.</p>
Virtual Agent PRB1617076	Topics aren't executed when selected from a topic list header after switching to the detected language		<ol style="list-style-type: none"> 1. Start a VA conversation. 2. Enter some utterance in a different language ≠! Ongoing Conversation. 3. Select Yes in custom control. 4. Select 'I want Something Else' from topic Picker list. 5. Click Show me everything and click any of the topics from Topic List Header. <p>Expected behavior: The selected Topic is executed.</p> <p>Actual behavior: The fallback topic is executed.</p>
Virtual Agent PRB1620711	Agent messages aren't received by the requester		<ol style="list-style-type: none"> 1. Install DTVA. 2. Install DTAC. 3. Disable DTAC from agent chat toggle. 4. Send a message.

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: The message is received by the requester.</p> <p>Actual behavior: The message is not received by the requester (or delayed).</p>
<p>Virtual Agent PRB1633495</p>	<p>Aggressive message fetching breaks when a dynamic picker control that references a record number is used along with DT</p>	<p>Error messages appear in GraphQL fetch.</p>	<ol style="list-style-type: none"> 1. Set up DT. 2. Modify greetings topic to use dynamic picker rich control before live agent transfer. 3. Include a valid incident record number as one of the options in the script. 4. Initiate a conversation with live agent. <p>Notice the error messages in GraphQL fetch.</p>
<p>Virtual Agent Web Client PRB1601507 KB1203828</p>	<p>Skipping a pre-chat survey does not work during an upgrade</p>		<ol style="list-style-type: none"> 1. Enable Pre-chat survey (Service Desk Pre-chat Survey). 2. Initiate a chat. 3. Skip the first question. 4. Skip the second question. <p>Expected behavior: Question should be skipped</p> <p>Actual behavior: The 'This message is unable to be sent' message appears. The conversation continues and the entered text is taken as the answer to the second question.</p>
<p>Visual Task Boards PRB1619214</p>	<p>Auto Focus of Card is missing when a card moves from one lane to another in Kanban UIB component</p>	<p>When sort is enabled and the user moves from one lane to another, an empty destination placeholder is visible. But when dropped, the card is moved to a different position based on the order.</p>	<ol style="list-style-type: none"> 1. Set up Kanban component with cards and lanes in UIB. 2. Move a card from one lane to another. 3. If card's new position is not in the view, the page is not focused to that card place. <p>Observe that when sort is enabled and the user moves from one lane to another, an empty destination placeholder is visible. But when dropped, the card is moved to a different position based on the order.</p>

Problem	Short description	Description	Steps to reproduce
Visual Task Boards PRB1620970	In sn-vtb, the lane header and placeholder colors are not customizable		<ol style="list-style-type: none"> 1. Install the sn-vtb plugin. 2. In UIB, create a page and add the Kanban board component. 3. Add the JSON for lanes and cards, and give the template name for card, lane and all the placeholders as sn-vtb-card, sn-vtb-lane, sn-vtb-card-src-placeholder etc. <p>Expected behavior: It should be possible to modify the lane header background and placeholder colors.</p> <p>Actual behavior: Notice that the color of lane header and placeholder is not customizable.</p>
Visual Task Boards PRB1622370	Color theming uses sn-vtb for Kanban UI	Colors for lane header, lane/card placeholder do not match the Next Experience theming. They also do not match the dark theme.	
Visual Task Boards PRB1622371	The TimeAgo field in sn-vtb-card is not hideable	The TimeAgo field template is mandatory and cannot be hidden. It is possible to replace TimeAgo with a generic text slot.	TimeAgo field template is mandatory and cannot be hidden. It is possible to replace TimeAgo with a generic text slot
Visual Task Boards PRB1626511	A drop zone is created when moving a card from one lane to another lane	If a classic visual task board is sorted by column, and the user moves a card from one lane to another lane, a visual drop zone is created along with a message indicating that the the card will be placed based on the sorting of the column.	<ol style="list-style-type: none"> 1. Create a VTB board on Epics. 2. Sort by global rank. 3. Move an epic from one lane to another lane. <p>Observe that a visual drop zone is created and a message is shown that this card will be sorted based on rank when placed in the destination lane.</p>
Visual Task Boards PRB1627135	Option to remove the hyperlink for a work item ID in sn-vtb-card	The sn-vtb card template has a work item ID slot that is a hyperlink, but there is no option to remove that hyperlink.	

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 5 Hotfix 2](#) 
- [Tokyo Patch 5 Hotfix 1](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4a](#) 
- [Tokyo Patch 4](#)
- [Tokyo Patch 3 Hotfix 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1 Hotfix 1](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 5 Hotfix 3

The Tokyo Patch 5 Hotfix 3 release contains fixes to these problems.



Build information:

Build date: 02-17-2023_1725

Build tag: glide-tokyo-07-08-2022__patch5-hotfix3-02-14-2023

 **Important:** For more information about how to upgrade an instance, see [.](#)

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

 **Note:** This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Mobile Platform PRB1591772	The user observes a 'could not load applet launcher' error upon log in	The error displays and JavaScript does not load.	<ol style="list-style-type: none"> 1. Open the mobile (requestor) app. 2. Log in to an instance. 3. Tap on any screen in the app. <p>Expected behavior: Screen will display.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: Observe the error: 'Error running script. received result: null'.
Mobile Platform PRB1640873	Now Mobile App does not work after Tokyo upgrade	This occurs on Android devices using older versions of Chrome.	Log in to an instance with Now mobile. Observe that ALP is not loaded properly.
Activity Stream PRB1639830	Activity stream stays in an infinite loop when hidden from the page, causing the page to crash	It may take a while for the page to crash. This depends on the hardware configuration.	<ol style="list-style-type: none"> 1. Open SOW. 2. Create an interaction with a short description. 3. Save. 4. From the interaction, click Create Incident. <p>When saving, the user is on the 'Overview' tab section in the form and observe that Google Chrome crashes. It may take a while for it to crash, depending on the hardware configuration.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 5 Hotfix 2](#) 
- [Tokyo Patch 5 Hotfix 1](#)
- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 5 Hotfix 1

The Tokyo Patch 5 Hotfix 1 release contains fixes to these problems.

Build information:

Build date: 01-19-2023_0443

Build tag: glide-tokyo-07-08-2022__patch5-hotfix1-01-18-2023

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) ↗.

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) ↗.

Fixed problem

Problem	Short description	Description	Steps to reproduce
Mobile Platform PRB1632682	'Offline Update Action Sync' doesn't work on a record that has previously been synced at least once	A record that was updated offline and synced can't be updated again. This occurs on Tokyo instances.	<ol style="list-style-type: none"> 1. Configure a declarative action item of type 'Update', with 1 item parameter that sets the value of a text field. 2. Using the action item from the previous step, configure a function (sys_sg_button) with a 'Record' context available offline. 3. Create a UI parameter for the function with the input type set as 'text'. 4. Create a mapping between the UI parameter and the item parameter. 5. Create a button instance under a screen that displays the record. 6. Verify the action works correctly when online. 7. Download the offline cache. 8. Switch to offline mode. 9. Execute the same action with a different value. Notice the action is reflected correctly in the UI. 10. Switch back to online mode. Notice the sync is successful. 11. Switch back to offline mode. 12. Download a fresh offline payload after waiting at least 3 minutes for the minimal reuse time of an offline payload to pass, or removing the latest record from the sys_sg_offline_result table for the user. 13. Perform an additional update on the same record, which was updated in step 9 with a different value.

Problem	Short description	Description	Steps to reproduce
			<p>Notice the value is correctly reflected in the mobile client UI.</p> <p>14. Switch back to online mode.</p> <p>15. Look at the record, both in mobile and in the web interface of the instance.</p> <p>Expected behavior: The record should be changed according to the action that was performed in step 13.</p> <p>Actual behavior: The record isn't updated.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 5](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 5

The Tokyo Patch 5 release contains important problem fixes.

Tokyo Patch 5 was released on January 12, 2023.

- Build date: 01-06-2023_1054
- Build tag: glide-tokyo-07-08-2022__patch5-12-21-2022

i Important: For more information about how to upgrade an instance, see [here](#).

For more information about the release cycle, see the [ServiceNow Release Cycle](#).

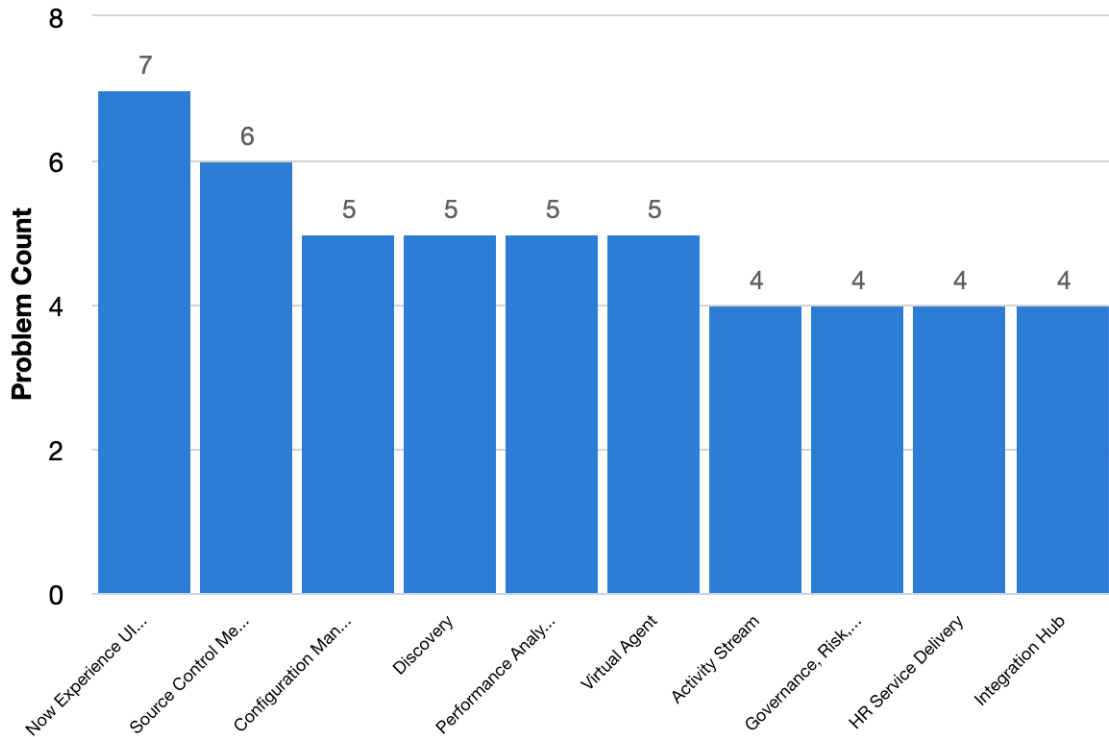
i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#).

For a downloadable, sortable version of the fixed problems in this release, click [here](#).

Overview

Tokyo Patch 5 includes 143 problem fixes in various categories. The chart below shows the top 10 problem categories included in this patch.

Top 10 problem categories



Security-related fixes

Tokyo Patch 5 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform®. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Tokyo Patch 5, refer to [KB1220796](#).

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
Agent Experience Presence PRB1623113 KB1207622	Issue when typing in the description field or other string field (4000 characters)	The cursor jumps forward and text is scrambled.	<ul style="list-style-type: none"> On any Tokyo instance, navigate to Agent Workspace. Open any incident record and start typing in the description field. <p>Expected behavior: The user can type without any issues.</p> <p>Actual behavior: The cursor keeps jumping forward and text is jumbled.</p>

Problem	Short description	Description	Steps to reproduce
<p>Knowledge Management</p> <p>Knowledge Management</p> <p>PRB1066223</p> <p>KB0656057</p>	<p>On an incident form (new or existing), when attempting to preview a KB article from the contextual search results, the preview loads with an empty white page and a horizontal scroll bar at the top of the window</p>	<p>Issue reproducible in both a Mac and Windows on Chrome.</p>	<p>Refer to the listed KB article for details.</p>
<p>Access Control</p> <p>PRB1583002</p> <p>KB1124038</p>	<p>The authorization for a script execution property doesn't use inherited or multiple roles</p>	<p>The script does not run if the role is inherited or if multiple roles are displayed in the system property. The documentation states the value is 'TextBox with a specified comma-delimited list of allowed roles.'</p>	<p>Refer to the listed KB article for details.</p>
<p>AI Search UX</p> <p>PRB1618423</p> <p>KB1209437</p>	<p>Caching issue with search contexts in Next Experience</p>	<p>Global Search results are not displayed in Next Experience.</p>	<ul style="list-style-type: none"> Bring up a track/aisearch zboot. <p>Notice SOW shows up on context list even though it is mapped to zing - Bug. Observe that it goes away on clearing cache.</p> <ul style="list-style-type: none"> Perform search with SOW as selected search context. <p>Expected behavior: Only shows contexts that match AI search.</p> <p>Actual behavior: No search results are returned.</p>
<p>AI Search UX</p> <p>PRB1597899</p>	<p>Global search error: 'Page Not Found'</p>	<p>The search result page button Go to list view gives an error.</p>	
<p>Software Asset Management</p> <p>PRB1563138</p>	<p>Software product lifecycle records remain active</p>	<p>Software product lifecycle records remain active when content services inactivates the</p>	<p>Refer to the listed KB article for details.</p>

Problem	Short description	Description	Steps to reproduce
KB1119891	When content services inactivate lifecycle records	lifecycle record. If the 'content_active' field for a lifecycle is updated, the corresponding 'Active' field should also be updated in the Software Product Lifecycles [sam_sw_product_lifecycle] table.	
Knowledge Management PRB1617456 KB1202407	While navigating to the Knowledge Portal from the Service Portal, the page never loads	When going to Knowledge Portal from main Service Portal, it completely locks up and never loads.	Refer to the listed KB article for details.

All other fixes

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1607006	The email contents in the activity stream of a UR case are not visible in Dark theme	The email text contents should be visible in the activity stream.	<ol style="list-style-type: none"> 1. Log in to an instance as Admin and enable dark theme. 2. Create a UR Case for Abel Tuter. <p>Expected behavior: The email text contents should be visible in the activity stream.</p> <p>Actual behavior: The email text contents are not visible in the activity stream.</p>
Activity Stream PRB1611006	The pin button is missing on the sidebar activity stream tile		<ol style="list-style-type: none"> 1. Open an incident record from the CWF workspace. 2. Create a sidebar discussion and observe that the tile is posted on the activity stream. <p>Expected behavior: The pin button should be available for the sidebar tile in the activity stream.</p> <p>Actual behavior: The pin button is not visible for the sidebar tile in the activity stream.</p>

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1626398	Scrolling is broken when the number of total events minus the number of 'unseen' audit events is less than 200	The problem occurs when there are many events in the activity stream (200 or more is the threshold).	<ol style="list-style-type: none"> 1. Create a record with a large number of activity stream events of any kind, but not exceeding 199. 2. Make more than five field changes to any field. 3. Remove that field from the list of available fields from the 'Filter Activity' menu on ui16 for this record type (click the funnel at the top right of the activity stream list in ui16). 4. Navigate to the record on Workspace. <p>Notice that only the first 50 appear even if the user scrolls to the bottom.</p>
Activity Stream PRB1631934	sys_trigger rule does not apply to incident records	The ScriptEngines are cached and the AssignmentEngine has an instance variable that is getting overridden.	
Agent Chat PRB1625505	The Agent Chat window is blank due to a failure in processing a picker control that does not have a matched value	Messages should be shown in the chat window but it appears blank.	<ol style="list-style-type: none"> 1. Have a picker control in a topic. 2. Have an agent available in one browser. 3. Run the topic from the web client and force the value of one of the options to be something different in Chrome Inspect. 4. Select that option. <p>Observe that the topic fails and requester is redirected to Live agent.</p> <ol style="list-style-type: none"> 5. Accept the work item from the live agent. <p>Observe that the chat window is blank.</p>
Agent Chat PRB1625524	Cannot read properties of null (reading 'GlideInboxAWA_Query') when running ATF test	This error occurs when a case record is opened.	<ol style="list-style-type: none"> 1. Create an ATF test for Workspace that opens a case record. 2. Run the test. <p>Observe the error: 'Cannot read properties of null (reading 'GlideInboxAWA_Query') when running ATF test'.</p>

Problem	Short description	Description	Steps to reproduce
AI Search Glide PRB1600243	GLIDE_USER_AGENT in glide-ais is set to 'Glide/21.0/Java' in San Diego	ENE Glide AIS (glide-ais) module sends HTTP requests to AIS Service and includes a 'User-Agent' header.	
AI Search PRB1603581	The 'View all results' link is broken		<ol style="list-style-type: none"> 1. Perform a migration of all workspaces. 2. Perform a search with global context. 3. Change the context to SOW or any other workspace and click the 'View all results' link. <p>Expected behavior: Search is performed with the selected search context and results are returned.</p> <p>Actual behavior: The search is not performed.</p>
AI Search PRB1613180	Update the 'Go to list' view from global search		
AI Search PRB1624379	The 'enableLabelTranslation' property doesn't work for search facets in Service Portal	The facet option value for which the sys_ui_message table record is created is not translated.	<ol style="list-style-type: none"> 1. Navigate to AI Search enabled Service Portal. 2. Edit the SP 'faceted-search' widget to enable the 'enableLabelTranslation' property for sn-search-facets. 3. Change the language for the instance to anything other than English. 4. For any untranslated values, create a record in the sys_ui_message table. <p>Expected behavior: Facet option value for which the sys_ui_message table record is created is translated.</p> <p>Actual behavior: Facet option value for which the sys_ui_message table record is created is NOT translated.</p>
Application Manager PRB1626113	The user is unable to get the latest customization version until the scheduled	When the user publishes a new customization version to the app repo from one of their instances, the latest version is	

Problem	Short description	Description	Steps to reproduce
	job runs on their instance	missing/unavailable from the test instance. They are able to see the version after the scheduled job to fetch Store updates runs.	
Authentication PRB1595695	KMInstanceTypeDetector properly detects non-prod DC instances	SDetector, datacenter instances do not have the glide.installation.production property set to true, which causes KMInstanceTypeDetector to improperly classify them as unknown.	<ol style="list-style-type: none"> 1. Provision a DC instance. 2. Set this property to false: glide.installation.production. 3. Generate a key pair using ensureAll. <p>Expected behavior: The Key Pair uses an external generator (for example, Vault).</p> <p>Actual behavior: The Key Pair is generated internally by KMF. Certificates don't contain 'vault' in their issuer.</p>
Automated Test Framework (ATF) PRB1614953	ATF page wait mechanism doesn't wait for any pages in ATF Cloud Runner because GlideAutomate is too strictly controlled	ATF Cloud Runner will sometimes fail a test that runs with Custom UI steps because it doesn't wait for the page to be calm.	<p>Run a Service Portal test through ATF Cloud Runner.</p> <p>Expected behavior: Service Portal tests run without intermittent issues.</p> <p>Actual behavior: The test will sometimes fail because ATF does not actually validate that the page has become calm.</p>
Condition Builder PRB1583672 KB1122374	Duplicate sequential requests are made to fetch choices when the same field is used multiple times in a filter, with a performance impact for CMDB sys_class_name specifically	When condition builder is used to query multiple identical or similar queries in PickList, it sends all calls separately, and sequentially. When the choice list returned is identical, these are duplicate and unnecessary, and just add to the time. This causes significant delay on pages where a large number of the query is used.	
Condition Builder PRB1616531	Accessibility issues with base instance Widgets and Scripts	Errors occur when running the wave accessibility tool in the 'My list filter' widget	

Problem	Short description	Description	Steps to reproduce
		on the 'csm_my_lists' page.	
Configuration Management Database (CMDB) PRB1588204 KB1124541	The OnRecordSec implementation causes query builder script issues	The script function is broken as the sys_trigger job does not clean up data from the table.	<ol style="list-style-type: none"> 1. Populate some data in qb_query_status and qb_saved_query by saving some queries in query builder UI. 2. Adjust the QB table cleaner job so it can run within short reasonable time. 3. Let the table cleaner job run or execute it directly. <p>Observe that the job fails to clean up the table.</p>
Configuration Management Database (CMDB) PRB1608834	Payload Merger throws null point error (NPE) when there is a marker from the merged partial payload		<ol style="list-style-type: none"> 1. Create a Discovery source. 2. Modify the lookup rule on hardware for the network adapter from name, mac_address to ip_address, and mac_address. 3. Import the attached partial payloads and partial payloads indices. 4. Modify the linuxServer.json in app-cmdb-enhanced-ire-tests to the input payload text. 5. Comment the payload1 in the verifyUniqueCompletePayloadMerge test in PayloadMergerIT. 6. Run the test case verifyUniqueCompletePayloadMerge. <p>Observe that there is a NPE.</p>
Configuration Management Database (CMDB) PRB1614383	Query Builder expensive queries need to run on read replica	Expensive queries are running on the primary db that could be run on the secondary.	
Content Experiences (Backports Only) PRB1619001	iframe elements are removed when saving, preventing embedded videos from being used	The EmpExHTMLSanitizerConfig is using the HTMLSanitizerConfig policy that does not include iframes.	<p>Must have Content Publishing and Employee Center 27.X.</p> <ol style="list-style-type: none"> 1. Navigate to Content Publishing > Content Library. 2. Click New, and select Rich Content. 3. Add a Video block and select it on the canvas.

Problem	Short description	Description	Steps to reproduce
			<p>4. Under Properties change Provider to YouTube or Vimeo.</p> <p>5. Save the content and target the content to the ESC portal.</p> <p>Expected behavior: The created content once rendered in the Portal should include the embedded video.</p> <p>Actual behavior: The embedded video is missing.</p>
Continuous Integration/Continuous Delivery (CI/CD) API PRB1628578	DB columns are dropped during source control app customization installation	DBs are dropped during source control app customization installation.	
Core Platform PRB1608252	Missing important information in the scheduled job 'Completed' log message		<p>1. Look at the scheduled jobs starting and completion log message in the localhost logs.</p> <p>2. Verify that it has the expected run time (next action), actual run time, and created time attributes.</p> <p>Expected behavior: Important attributes are present in the log message.</p> <p>Actual behavior: These important attributes are missing in the log message.</p>
Customer Service Management PRB1618080	Slow query on Case/Interaction form account search in Workspace		<p>1. Navigate to Agent Workspace.</p> <p>2. Click Create Case/Interaction.</p> <p>3. Click the Account field.</p> <p>Observe that a query is triggered which takes more than six seconds with 500k Accounts. After creating an index on 'customer_account' in the number column, this query takes only four minutes.</p>
Database Persistence PRB1625868	Secondary database should log 'registrar is full' only when		

Problem	Short description	Description	Steps to reproduce
	debug mode is enabled		
Dev-PAR-Unlimited PRB1620766	Activated/de-activated ACLs are marked as customer customization from Tokyo onwards	ACLs should not be logged as customer customization.	<ol style="list-style-type: none"> 1. Install the RVA store app. 2. Set a few RVAs as inactive. 3. Remove the logged entries from the customer update table 4. Click Activate ACLs. <p>Expected behavior: ACLs are not logged as customer customization.</p> <p>Actual behavior: ACLs are logged as customer customization.</p>
Discovery PRB1602123	MID Server or MID Cluster selection isn't available while discovering cloud resources		<ol style="list-style-type: none"> 1. Navigate to Discovery Schedule > Cloud Discovery > Select the Cloud Provider. 2. There is no option to select the specific MID cluster for the Discovery. <p>Observe that the MID Selection option is only available for AWS Cloud Provider.</p>
Discovery PRB1603003	Inefficient check for duplicate IP addresses causes high DB CPU usage and adds latency to the ASYNC: Discovery - Sensors jobs	The code that checks for duplicate IP addresses (CIs that have network adapters with IP addresses that are the same) isn't scalable. This causes high DB CPU and latency for Discovery.	Run Discovery with duplicate IP addresses.
Discovery PRB1608469 KB1182402	The 'Windows - ADM' probe doesn't launch	On San Diego, if no Powershell or admin share access is detected, Windows Discovery doesn't launch Application Dependency Mapping (ADM). Thus, no application patterns launch for running processes.	Refer to the listed KB article for details.
Discovery PRB1619125	Discovery Automation tests are failing at Discoverdatacenter	The API for initializeDataCenterDiscovery has been changed to support extra parameters like MID	

Problem	Short description	Description	Steps to reproduce
	API due to new support for MID cluster selection	selection and MID cluster selection, so backward compatibility should be give for the existing automation tests to run.	
Document Viewer PRB1601057	When a content type/ attachment extension is received in uppercase, the attachment isn't viewable in Agent Workspace	The user is using a custom SMTP that is sending the content type in uppercase (for example, IMAGE/PNG). The corresponding attachment record is created in the sys_attachment. When the attachment is viewed in Agent Workspace it is not viewable (when the content type in sys_attachement is in capitals).	
Embedded Help PRB1631796 KB1220161	The Take a tour button does not appear after upgrade	The Take a tour button is missing from the 'Help' panel even though the tour is available on the UI page.	Refer to the listed KB article for details.
Employee Experience Framework PRB1629295	Fixed user defects		
Employee Service Management PRB1609101	Catalog items with desktop-only availability are not displayed on the portal when setting the 'glide.sc.mobile.include_desktop_only_items' property to false	Catalog items with Desktop only availability should be displayed only on desktop and not on now mobile.	

Problem	Short description	Description	Steps to reproduce
Field Encryption PRB1596484 KB1156978	After a San Diego upgrade, attachments automatically encrypt when dragged and dropped	The system doesn't ask whether to encrypt or not.	<ol style="list-style-type: none"> 1. Navigate to any San Diego instance where KMF plugin is installed. 2. Navigate to EFC and create a record of type attachment on incident. 3. Create a Module access policies to grant access to the crypto module. 4. Log in as that encrypted user 5. Navigate to incident.LIST and open a record. 6. Drag and Drop an attachment. <p>Notice that the attachment automatically encrypts.</p>
Flow Designer PRB1621868	Placing all draggable pills (displayed in side panel) into the label cache creates an unnecessarily large XML record, causing flow XML to grow	The error occurs when the flow exceeds 10M when saved after only changing the trigger.	<p>Set the trigger in a flow that only creates actions. Or, change the trigger for a flow that has trigger settings.</p> <p>Observe that this conflicts with the flow size (REST Payload) limit and the flow cannot be saved. If only the condition is changed, the capacity can be saved without expanding.</p>
Flow Designer PRB1622803	Action includes unnecessary pill labels in the label cache	Flow Designer Action includes unnecessary pill labels in the label cache.	<p>Issue 1:</p> <ol style="list-style-type: none"> 1. Create a new action. 2. Add one input of type string. 3. Add a script step and add input variable. 4. Add three output variables of type string. 5. Add an action output of type String. 6. On inspection view of 'Chrome Devtools', click 'Network' tab. 7. Save the action and click the network tab. <p>Observe that the label cache includes step's extended outputs. It shouldn't be in the label cache unless it's added by hand. Since there's no garbage collection, the label cache keeps on growing.</p>

Problem	Short description	Description	Steps to reproduce
			<p>Issue 2:</p> <ol style="list-style-type: none"> 1. Open any existing action. 2. Click the + icon and create a new action. 3. Add a single input to the action. 4. Save the action and observe the Network tab. <p>Observe that the payload has all label cache items from existing action that was opened.</p>
Governance Risk, and Compliance PRB1625749	GRC: Advanced risk not getting upgraded to 14.x with Tokyo upgrade from Rome		<ol style="list-style-type: none"> 1. Install GRC apps on a Rome instance. 2. Upgrade to a Tokyo instance. <p>Observe that 'GRC: Advanced risk' and 'GRC: Risk' are not upgraded to 14.x.</p>
Governance Risk and Compliance PRB1449982	Two 'close' icons display inside the 'Filter' field		<ol style="list-style-type: none"> 1. Open the empmchiang1 webpage in Edge Chromium/Chrome Browsers. 2. Log in with valid credentials. 'UAT Enterprise Service Management' page will open. 3. Click the Assessment Setup button in the left pane. 4. Click the Questionnaire Templates submenu button. 5. Click the New (Designer) button. 6. Navigate to the 'Questions' tab present on left pane with tab key. 7. Click it. 8. Navigate to the Filter field. 9. Search anything. Some filtered questions will appear. 10. Verify that two close icons are appearing inside the Filter field or not. <p>Expected behavior: Two close icons should not be there inside Filter field.</p> <p>Actual behavior: Two close icons are appearing inside Filter field.</p>



Problem	Short description	Description	Steps to reproduce
Governance Risk and Compliance PRB1509545	Vendor contacts can't update their profile picture in Vendor Portal		<ol style="list-style-type: none"> 1. Impersonate a vendor contact. 2. On the vendor portal open 'My profile'. 3. Click the image to upload a photo. 4. There will be errors in the console and the image doesn't change. <p>Observe the message 'Photo Upload Failed'.</p>
Governance Risk and Compliance PRB1538833	The double route created for side bar on the business process form creates an issue for all CMDB objects on the CMDB workspace	The CMDB team commented sidebar for CMDB tables should be an opt in feature where they have to create required metadata manually.	
HR Service Delivery Case Management for Lifecycle Events PRB1608477	Dictionary in the incorrect plugin: sn_jny	Plugin ordering is not guaranteed, so dictionaries should exist in the plugin for which the table belongs to.	<ol style="list-style-type: none"> 1. Install both plugins on an instance before the dictionary file is added and before the dictionary exists in its origin plugin. 2. Upgrade the instance after the dictionary file is added. <p>Notice that the table may be installed in the wrong scope.</p>
HR Service Delivery PRB1592951	Journey HR services are created in the lifecycle events scope	When creating a service from the 'manage hr catalog' page, the service is created in the scope of its COE, which doesn't work for Journeys.	<ol style="list-style-type: none"> 1. Install Journeys (with all of its dependent plugins). 2. Navigate to 'manage HR catalog' and create a service with the LE COE. 3. Navigate to HR service configuration and open the newly created service. 4. Set the fulfillment type to journey and select a journey config. 5. Attempt to save the record. <p>Notice that the record cannot be saved.</p>
HR Service Delivery	Family RCAs related to Journeys (JA/ JD)		<ol style="list-style-type: none"> 1. Install JD 2.0, JA 6.0 and dependencies. 2. Test out Journey template feature.

Problem	Short description	Description	Steps to reproduce
PRB1597761			Observe that the family RCA being generated is in a requested state.
Incident Management PRB1603193	Some Business Rules on the Incident table could compromise OT Incident's user experiences	Resolved OT Incidents are getting closed automatically.	
Instance Data Replication (IDR) PRB1629098	Make futures synchronous to avoid batch timeout errors	Currently IDR sends data to Kafka asynchronously. One of the common cases for out-of-order issues results from having one data replication queue record resolving into multiple futures timing out when sending to Kafka.	<ol style="list-style-type: none"> 1. Create a 300MB+ video. 2. Create a Producer Replication Set with Include Attachments set to True 3. Sync with a consumer. 4. Set the following properties: <ul style="list-style-type: none"> a. glide.mq.kafka.producer.delivery.timeout.ms=101 b. glide.mq.kafka.producer.request.timeout.ms=100 5. Send over one record. 6. Disable the Heart beat and Producer Job. 7. Upload video to the newly created record ten times. 8. Enable the Producer Job. 9. Wait for Attachments to be synced. <p>Expected behavior: All records should make it over.</p> <p>Actual behavior: Out of Order Error on Consumer.</p>
Integration Hub PRB1611824	Async RESTMessageV2 executions are not tracked correctly from FDIH		
Integration Hub PRB1622217	Flow execution stuck in In Progress indefinitely after Tokyo MID tries to get plan from Utah node		<ol style="list-style-type: none"> 1. Prepare two nodes Tokyo TD instance. Configure two MID server for each of nodes. 2. Activate com.glide.hub.integrations.enterprise plugin. 3. Upload attached Update Set. Update Set includes,

Problem	Short description	Description	Steps to reproduce
	while the multi-node instance is upgrading		<ol style="list-style-type: none"> a. Flow that have REST Action on MID. Name=TestFlowRestOnMID. b. Connection and Credential Alias. Make sure add connection alias. c. sys_trigger record that will trigger flow. Change it to repeat in each of 3 minutes, and make sure the Upgrade Safe is set true. <p>4. Once confirm the flow is being triggering in 3 minutes interval, upgrade first node to Utah (I tested on Master).</p> <p>Observe that after the first node upgrade is completed, flows triggered during upgrade, some has In Progress due to Tokyo MID server (on node 2) and Utah node version compatibility.</p> <p>5. Upgrade second node.</p> <p>When both nodes and MID servers upgrade are successful,</p> <p>Expected behavior: All the flows that got into In Progress state should be completed with some delay.</p> <p>Actual behavior: These flows stay in the In Progress state indefinitely.</p>
Integration Hub PRB1624011	Read/write errors are thrown with concurrent user sessions on IH	Under a high load, the mid-server turns a three second round trip into a 39 second one.	<p>Perform concurrent transactions on a mid-server with more than 300 concurrent users.</p> <p>Under high load, it is the mid-server that is turning a 3 second round trip into a 39 second duration instead. The mid-server also takes longer to complete than the Flow does, leading to abnormal averages where the average flow during this test is 15 seconds, and the average midserver duration is 21 seconds.</p>
IT Operations Management PRB1607317	sm-dropdown component is not getting enabled once disabled	If the user has passed the readOnly as true, the list is disabled. The next time the user has passed the readOnly as false, the list is not	<ol style="list-style-type: none"> 1. Navigate to Discovery Schedule. 2. Navigate to Cloud Discovery. 3. Select AWS.

Problem	Short description	Description	Steps to reproduce
		changed to enable. It is always disabled.	Even if the instance is migrated to pattern, the MID Selection Dropdown is not enabled.
Language and Translations PRB1622299	Incorrect translations seen in Alignment Planner Workspace in Tokyo release	The correct translations in the realm of Alignment Planner Workspace and Business Planner features are: 'Goal' and 'Target' are 'Objetivo' and 'Meta', respectively.	<ol style="list-style-type: none"> 1. Navigate to any Tokyo instance with Alignment Planner Workspace installed. 2. Log in as an Admin user in Brazilian Portuguese. 3. Open Alignment Planner Workspace. 4. Select the Organization Type 'Enterprise' and Organization 'Acme Inc'. 5. Click Goals (Metas). 6. Fully expand the grid. <p>Expected behavior: Observe that 'Targets' (Metas) is nested under 'Goals' (Objetivos)</p> <p>Actual behavior: Everything is a 'Target' (Meta).</p>
List Administration PRB1549888	The 'Group by Document ID' option doesn't group records properly	Both the issues are available in Agent Configurable Workspace.	<ol style="list-style-type: none"> 1. Log in. 2. Navigate to Configurable Manager Workspace. 3. Click the 'Channels' module from the left vertical bar. 4. Select the 'Queued work' tab. 5. Navigate to the 'Document ID' column. 6. Click Filter options. 7. Select the 'Group by Document ID' line. <p>Expected behavior: The app should display all the unique records grouped separately.</p> <p>Actual behavior: The app displays 'Document ID: interaction (0)'.</p>
List Administration PRB1602712	When editing work notes in the list on the dashboard in Next Experience, the 'Edit'		

Problem	Short description	Description	Steps to reproduce
	window opens too far to the left		
List Administration PRB1612471	The list takes a long time to load on large tables such as cmdb_ci	Agent Workspace and Native UI run slowly when the user filters/sorts lists with CI (cmdb_ci_ip_address, etc).	<ol style="list-style-type: none"> 1. Navigate to a cmdb_ci table with at least few a million records. 2. Run adhoc queries with operators such as 'Contains'. <p>Observe an unusually long run-time when filtering/sorting lists or columns such as 'Short description', 'Date', etc.</p>
MID Server PRB1620218 KB1204953	MID Server fails to start if 'mid.log.command_audit.enable' MID property is set	On San Diego instances, the mid.log.command_audit.enable property is configured and set to 'true'. This creates a race condition with Bootstrapping logic, causing incomplete MID Server initialization and failure to start.	<ol style="list-style-type: none"> 1. On San Diego, configure MID Server property 'mid.log.command_audit.enable' and set to 'true'. 2. Restart MD Server. <p>Check MID Server logs for the following log entries (You might have to restart MID Server several times to get this to kick in): 11/08/22 00:24:15 (494) StartupSequencer SEVERE *** ERROR *** Failed to load remote properties: null.</p>
Mobile Platform PRB1582885	Sample Map is showing blank in check part availability and WOT	The sample map appears blank.	<ol style="list-style-type: none"> 1. Log in as an Agent. 2. Click Inventory > Check part availability. 3. Select Model as '3com Cat 5 Cable (10ft)'. 4. Set Radius as 5000000. 5. Click Search. 6. Select any stockroom card on map. <p>The agent is navigated to the Available part screen with stockroom details.</p> <p>Expected behavior: The sample map shows with basic details.</p> <p>Actual behavior: The sample map is blank.</p>
Mobile Platform PRB1603041	An exception is thrown while building a Details screen with multiple button	Buttons and data may be missing from the screen.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
KB1172388 	Instances referencing the same button		
Mobile Platform PRB1612760	The UserClientV2 API fails after a Tokyo upgrade when the map screens are configured in the old style and contain a data item	After upgrading to Tokyo, the UserClientV2 API fails with a NullPointerException when the map screens are configured in the old style and contain a data item. As a result, Now Mobile and Agent apps do not work as expected.	
Next Experience Unified Navigation PRB1614760	In a module's URL from an argument, sysparm_stack doesn't work for multiple conditions after a San Diego upgrade		
Next Experience Unified Navigation PRB1622768	Instances with huge number of domains (60000+) experience a freeze when initial page loads in Next Experience UI		<ol style="list-style-type: none"> 1. Enable domain separation on an instance with Next Experience UI that has 60000+ domains. 2. Reload the page after domains have been created as admin. <p>Expected behavior: Page loads and user is able to interact with the page normally.</p> <p>Actual behavior: Page freezes for a few seconds then works properly on initial load.</p>
Now Experience UI Builder PRB1605010 KB1179989 	UI Builder freezes the browser	The browser freezes when opening UI builder and then opening the Unified Navigation App under 'My experiences'.	Refer to the listed KB article for details.
Now Experience UI Builder	The UI Builder Side Navigation	In UI Builder, the Side Navigation of the Edit Experience Settings shows no icons.	<ol style="list-style-type: none"> 1. Log in to a Tokyo Instance. 2. In the filter navigator, navigate to UI Builder.

Problem	Short description	Description	Steps to reproduce
PRB1615868	Icon shows 'No Results Found'		<ol style="list-style-type: none"> 3. Create an experience in Global scope, add a simple page, and save it. 4. Under the UI Builder header, click Menu and open 'Edit Experience Settings'. 5. Navigate to the Side Navigation. 6. Add a page and fill in the details. Note: The icon shows 'No Results Found'. 7. Add other details and save the page. 8. Reload the page and note that icons appear. <p>Expected behavior: 'No results found' should not show in the Icons menu.</p> <p>Actual behavior: 'No results found' appears under icons.</p>
Now Experience UI Builder PRB1620380	Users should not be able to enable the Grid Editor via feature flag	Gridlar should not be available for users to 'opt in' to use in UI Builder.	Open UIBuilder Tokyo release. Navigate to the visual editor (any page). Navigate to the 'Developer' section of the main menu. Observe that the following is available in the UIB developer menu, but it shouldn't be: Pre-release features > Enable CSS grid area editing.
Now Experience UI Builder PRB1621079	[Tokyo]: User is unable to choose 'Return fields' for 'GlideRecordQuery' of a data resource	In Tokyo, the 'Return fields' field doesn't automatically change to dynamic binding if its dependent 'table' field is configured with dynamic/context binding.	
Now Experience UI Builder PRB1621194	Disable the page management panel while the page is loading	On pages with a lot of composition, failure to disable the page management panel while the page is loading causes the browser to lock up.	
Now Experience UI Builder PRB1624151	Context bindings are broken in Page properties panel		<ol style="list-style-type: none"> 1. Navigate to visual editor for any experience's variant. 2. Open page properties panel.

Problem	Short description	Description	Steps to reproduce
			<p>3. Try to configure a context binding for any of the page properties.</p> <p>4. Save the page and reload.</p> <p>Expected behavior: The context binding should be displayed correctly.</p> <p>Actual behavior: The context binding is displayed in truncated mode.</p>
<p>Now Experience UI Builder</p> <p>PRB1625472</p>	<p>Making any change on a page in UIB changes the readEvaluation mode of a data resource</p>	<p>When the user opens the 'portfolio' page in UIB and selects data resources and clicks on any data resource, it shows an error message 'The definition for this data resource instance is not found'.</p>	<ol style="list-style-type: none"> 1. Navigate to Experiences. 2. Select 'Alignment Workspace App Config'. 3. Select 'Open in UI Builder'. 4. Open the 'Portfolio' Page. 5. Open any data resource and notice the error 'The definition for this data resource instance is not found'. 6. Do not refresh the page in UIB since refreshing the page does not show this error anymore. 7. Navigate to Menu > Developer > Open Page Definition. <p>Notice that look_up_portfolio_plan has readEvaluationMode as EAGER.</p> <ol style="list-style-type: none"> 8. Inside UIB or in the platform classic, navigate to any client script belonging to this page and make a change (for example, adding a comment) and save the client script. 9. Refresh the portfolio page in UIB or the refresh the portfolio macroponent in classic form. <p>Notice that look_up_portfolio_plan's readEvaluationMode is changed to EXPLICIT.</p>
<p>Now Experience UI Builder</p> <p>PRB1626743</p>	<p>Fields configured for 'Returned fields' in a data resource do not retain names</p>	<p>After adding fields to the 'Returned fields' configuration for a data resource in UI builder and then closing UI Builder, upon reopening the experience, the field names are no longer populated and are</p>	<ol style="list-style-type: none"> 1. Create a new experience and new page for the experience in UI Builder. 2. Open the page in UI Builder. 3. Select the Data icon from the left navigation bar. 4. Create a new 'Look Up Records' Data Resource.

Problem	Short description	Description	Steps to reproduce
		replaced with 'Enter a name'.	<ol style="list-style-type: none"> 5. Once created, select the new Data Resource from the list in the 'Data resources' section. 6. Select 'User [sys_user]' table in the resource configuration. 7. Select + Add in the 'Returned fields' configuration and select the Name field and again for the User ID field. 8. Save the changes and close UI Builder. 9. Reopen UI Builder, the new experience and the new page. 10. Open the Data Resources section and select the resource created in the previous steps. <p>Expected behavior: 'Returned fields' should display the expected field names.</p> <p>Actual behavior: Fields in the 'Returned fields' configuration do not display the field name and previously configured field names are replaced with 'Enter a name'.</p>
<p>Now User Experience PRB1608169 KB1182008</p>	<p>Changing the logo in the 'My Company' core_company record modifies the glide.product.image.light system property without creating sys_update_xml, so the change may be overridden during the next upgrade</p>	<p>The banner image is replaced by a ServiceNow logo after upgrading to Tokyo.</p>	<p>Refer to the listed KB article for details.</p>
<p>Performance Analytics PRB1598227</p>	<p>sys_amb_message isn't fired when a record watcher is triggered, which results in real-time Score widget not updating</p>	<p>This issue is observed on a dashboard with a real time Score widget. When the data set changes, the widget is not updated with the correct count.</p>	<ol style="list-style-type: none"> 1. Turn on domain separation in an employee instance. 2. Create an incident in Default domain with 'Priority 1 - Critical'. 3. Create report in Global domain on incident table with the condition as Priority = 1 and created today.

Problem	Short description	Description	Steps to reproduce
	when domain separation is enabled		<ol style="list-style-type: none"> 4. Add the report on a dashboard in Global domain with realtime enabled. 5. The report will show the score as 1. 6. Update the priority of the incident, created in step 2, to Medium. 7. Navigate to the dashboard with the real time widget. <p>Expected behavior: The widget should show count 0.</p> <p>Actual behavior: The widget still shows count as 1.</p>
Performance Analytics PRB1626490	KPI details Component (added inside a tab) triggers event: UXF_TAB_SET#TAB_SELECTED	The issue of multiple refresh and execution of the 'UXF_TAB_SET#TAB_SELECTED' event when loading the KPI details page occurs due to the 'NOW_TABS#SELECTED_ITEM_SET' event not being correctly handled in the 'TABS (now-uxf-tab-set)' component which is used as the Parent component in the page.	
Performance Analytics PRB1629817	The same filter behaves differently in Tokyo and Utah build	The root cause is incorrect filterProperties used in macroponent.	<ol style="list-style-type: none"> 1. Log in to the instance. 2. Open manager workspace (now/experience/manager/home). 3. Open the Countries filter. <p>Expected behavior: It should show list of countries even on Utah and latest build as it shows on Tokyo.</p> <p>Actual behavior: It shows HR cases instead of countries (see engineering details for the configurations).</p>
Platform Analytics PRB1581661	Sharing permissions cannot be changed on the dashboard after a user is added	Once a user is added (shared with), it isn't possible to change their permissions. The share must be removed and then added again with the desired permissions.	<ol style="list-style-type: none"> 1. Create a dashboard in Platform Analytics Workspace. 2. Share the dashboard with a user. 3. Open the share dialog again and try to change the permissions (for example, allow sharing, editor etc.)

Problem	Short description	Description	Steps to reproduce
			Observe that any edits made are not reflected after saving and opening the share dialog again.
Predictive Intelligence PRB1603236	Deploy the script to de-activate the ml_training_request_schedule post-clone, as part of the PI plugin	The script must de-activate the ml_training_request_schedule instance.	Clone the existing instance and observe that ml_training_request_schedule records are copied to cloned instance in active state. Expected behavior: Training jobs should not be triggered for copied records. Actual behavior: Training jobs are triggered for the copied jobs.
Predictive Intelligence PRB1623070	Reference Cascade Rules on dictionary records are not triggered when repairing the plugin	Reference cascade rules do not exist on dictionary records for solution and other fields on ml_cluster_summary, ml_cluster_detail, ml_cluster_sol_update and other ml tables. Hence, when the ml_solution record is deleted, the other tables where this record is referenced, such as sys_attachment records, won't be deleted. This leaves behind orphaned attachments that can be large in size and take considerable disk space.	
Process Optimization PRB1614551	Empty values are not shown on graph and Finding rules do not work on [empty] nodes	Until San Diego, empty activity labels were working correctly in the process graph. However, since Tokyo, empty activity labels are ignored, resulting in a wrong model.	<ol style="list-style-type: none"> 1. Create a case with multiple assignees. Leave some of the assigned to fields empty. 2. Create a single model. 3. Activity definition is 'Assigned to'. 4. Create a finding rule: <ol style="list-style-type: none"> a. The start condition is 'Start process'. b. The stop condition is [empty]. c. Assigned to is [empty]. 5. Mine model.

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: The model has an empty node.</p> <p>Actual behavior: The model does not show an empty node.</p>
Project Management PRB1608090	When creating a project task, the Planning Console generates a TypeError	The Planning Console throws a TypeError reading: 'Cannot read properties of undefined (reading 'appendChild')'.	<ol style="list-style-type: none"> 1. Create a new Project. 2. Create a new Project Task on 2022-08-02 with a 'Start No Earlier Than' Constraint. 3. Try to add a new task. <p>Observe that an error message is thrown.</p>
Resource Management PRB1591007	'Recalculate Resource Cost' doesn't update the planned cost	When rolling up, the decimal is ignored so it's not present on the requested_allocation record. The planned cost considers this decimal, which leads to a discrepancy.	
Service Catalog PRB1611613	Service Catalog item fails in the San Diego version of the Service Portal	The user cannot request catalog items in Service Portal.	<ol style="list-style-type: none"> 1. Create a new sys_property - glide.sc.disable.question.cache and set the value to true. 2. Perform a cache flush. <p>Expected behavior: Item must be displayed without any error.</p> <p>Actual behavior: Cannot request catalog items in Service Portal.</p>
Service Mapping PRB1614707	When opening more than one tab of service mapping (from Service Dashboard), the service name doesn't change		<ol style="list-style-type: none"> 1. Create several operational services. 2. Open 'Service Operations Workspace' experience. 3. Navigate to Service Dashboard. 4. Click a service and, on the opening dialog, click the Service Map button. 5. Click a different service and, on the opening dialog, click the Service Map button. <p>Expected behavior: The correspond service name is in the header of the opened Service Map tabs.</p> <p>Actual behavior: User gets the same service name of the first service map</p>

Problem	Short description	Description	Steps to reproduce
			they opened regardless of the service that was picked.
Service Portal PRB1512519	The screen reader doesn't narrate 'Rejected' and 'Approved' statuses of the page	The screenreader should announce the status of an action being taken.	<ol style="list-style-type: none"> 1. Navigate to the Service Portal home page to see approvals. 2. Navigate to the Approve button / Reject button present under the Approvals section and select one. <p>Expected behavior: Screen reader narrates the Rejected status and Approved status of the page.</p> <p>Actual behavior: Screen reader does not narrate the Rejected status and Approved status of the page.</p>
Service Portal PRB1588732	An option for the end user to decide to apply encryption for attachments from the platform isn't working in some San Diego releases		<ol style="list-style-type: none"> 1. Navigate to an affected instance. 2. Navigate to a /sp Service Portal. 3. Open an incident record. 4. Click the 'Paper clip' icon. <p>Expected behavior: The option to select no encryption or a crypto module should be available.</p> <p>Actual behavior: The option is not available.</p>
Service Portal Widgets PRB1602506 KB1212871	On clicking the Info icon on the 'Bank account proof' text, the modal displays to upload docs, which should happen after a user clicks on the Required-upload button		Refer to the listed KB article for details.
Software Asset License Management PRB1629574	'SAM-SaaS License Management' and 'SAM Playbook' have 'Process Automation Experience Demo'	SAM SaaS License Management and SAM Playbook have an incorrect dependency for 'Process Automation Experience Demo'.	

Problem	Short description	Description	Steps to reproduce
	listed as a dependent application		
Software Asset Management PRB1592964	The software lifecycle report should display only active lifecycles		
Source Control Menu for Dev Studio PRB1606321 KB1194468	Mime type of git bundle misidentified causing attachment rejection		Use the attached git bundle, attach to any form and note the attachment is rejected. Expected behavior: File attaches successfully Actual behavior: File is rejected with mime type mismatch error pop-up and node logs contain 'MIME type mismatch for file:' message
Source Control Menu for Dev Studio PRB1618256	When a change with upper case characters is made in the update name, selective commit is not able to commit the file		
Source Control Menu for Dev Studio PRB1618790	Slow search while retrieving content for a git diff	When filtering is on, there can be long seeks in the JGit library retrieving the content on which to apply the regex. The wait times can sometimes be more substantial than the time saved by filtering out the unnecessary updates. Adding a flag to disable and a threshold, though leaving the default behavior as is for now.	Apply remote changes for a complex app. Notice it will take hours to load.
Source Control Menu	All update sets in scoped application are deleted		1. Create a scoped app, create multiple update sets (ups-1, ups-2, ups-3) in the application. Each

Problem	Short description	Description	Steps to reproduce
<p>for Dev Studio</p> <p>PRB1620264</p>	<p>after committing changes for the same update set from two browsers at same time in dev-studio</p>		<p>update set has changes (for example, sys_script_include).</p> <ol style="list-style-type: none"> 2. Open studio, select 'Commit changes' from the source control menu. 3. In the 'Select files to commit to source control for ...' dialog, select files from ups-1 and then click 'Continue', but don't click the Commit Files button. 4. Open another studio window, select Commit changes from the source control menu. 5. Select the same set of files as in step 3 and click Continue. Don't click the Commit Files button, but don't click the Commit Files button. 6. Navigate back to the studio window that was on hold at step 3, add the commit message and click the Commit Files button. 7. After the commit at step 6 completes, navigate to the studio window that was on hold at step 5, add the commit message, and then click the Commit Files button. 8. After the commit completes at step 8, check the sys_update_set list. <p>Expected behavior: Observe that ups-2 and ups-3 are not deleted.</p> <p>Actual behavior: Observe that ups-2 and ups-3 are deleted.</p>
<p>Source Control Menu for Dev Studio</p> <p>PRB1621758</p>	<p>Source control operation fails with org.eclipse.jgit.errors.RepositoryNotFoundException or java.io.FilePermission</p>	<p>When an empty git directory is created on a node the system is RepositoryNotFoundException. The user needs to open an incident and get someone to delete the directory.</p>	<p>Steps to create an empty git directory:</p> <ol style="list-style-type: none"> 1. Have an app linked to SC and make a change. 2. On the file system, remove the folder with that sys_repo_config id. 3. Update the credentials to an invalid password. 4. Commit the change and transport exception. <p>Notice now that the git folder is and empty.</p> <ol style="list-style-type: none"> 5. Fix the credentials.

Problem	Short description	Description	Steps to reproduce
			Any git operation fails with org.eclipse.jgit.errors.RepositoryNotFoundException: repository not found.
Source Control Menu for Dev Studio PRB1628551	CustomizationRegistry retains references to objects in memory	CustomizationRegistry remains in memory (with references to other objects in the rhino scope) when it should be cleaned up.	Enter a CollisionDetector in the global rhino context. Observe that CustomizationRegistry is used in the same scope/thread.
Subflows PRB1622255	Cancelling the subflow doesn't cancel the calling flow	Flow cancellation started from the subflow transaction does not properly cancel a flow in Tokyo.	
Syntax Editor PRB1613193	Major Incident Communication records: The HTML field editor in modal no longer opens in full screen	When composing emails via communicate tasks within major incident records, within the HTML editor field, the Fullscreen icon does not open the field full screen within the modal.	<ol style="list-style-type: none"> 1. Create a major incident record. 2. Fill out the mandatory fields and click Save. Additional UI actions should appear. 3. Click View Workbench. 4. Click the 'Communicate' tab. 5. Create a Communication Task by clicking Add. 6. Fill out the mandatory fields, then click Next then Save. A new communication task should appear in the workbench. 7. Click Compose. A modal should appear. 8. Navigate to the HTML editor and click the full screen icon. <p>Notice that the editor does not expand to full screen within the modal.</p>
Syntax Editor PRB1618793	When creating a new flow, the user observes the error 'Unknown error occurred while processing request,	The error is thrown after saving a new flow.	

Problem	Short description	Description	Steps to reproduce
	check logs to get more information.'		
Table Administration and Data Management PRB1623192	The function field does not work properly for operations with currency fields	The user should be able to multiply / divide currencies in Report function fields. However, the function fails and displays 'Function has returned an invalid result' when clicking 'Configure function field'.	
Table Administration and Data Management PRB1631253 KB1216793	The activity formatter does not work as expected on the sc_task table after upgrading to Tokyo	In Tokyo releases, history is not properly built for the sc_task table on instances with a shard DB. This prevents comments, work notes, and field value updates from appearing in the Activity Formatter and record history. The updates are captured in sys_audit and sys_journal field, but not the sys_history_set.	Refer to the listed KB article for details.
Upgrade Center PRB1621188	NPE when upgrade monitor tries to fetch upgrade duration	A validation check is performed without null checking an upgrade history record, which causes the user to observe a stream of NPEs in the logs due to polling.	<ol style="list-style-type: none"> 1. Request two instances on Tokyo or later, say 'instance1' and 'instance2'. 2. Navigate to sys_update_set_source table on instance2 and add instance1 as a source. 3. Set properties glide.war and glide.war.assigned to 1.zip and 2.zip respectively on instance 2. 4. Open the upgrade monitor page on instance 2. <p>Observe the mentions of NPE in the engineering details in the node logs of instance 2.</p>
Virtual Agent Designer PRB1596883	The sys_cs_topic table is missing the required attribute com.glide.script	The com.glide.script.TranslatedTextXMLSerializer attribute is currently required for translated fields to be picked up in translated text	<ol style="list-style-type: none"> 1. Create an update set. 2. Make it the current update set. 3. Navigate to Conversational Interfaces > Virtual Agent > Designer. 4. Open a topic. 5. Navigate to the 'Languages' tab.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 6. Click a language then click Edit. 7. Unlock the translations. 8. Edit the translations. 9. Click Publish Translations. 10. Click the topic buttons Save and Publish. <p>Translations aren't captured by the update set.</p>
Virtual Agent Designer PRB1627586	Topics with scripted bot response variation output strings using <code>gs.getMessage</code> or <code>gs.getMessageLang</code> show as partially translated in English		<ol style="list-style-type: none"> 1. Create a new topic. 2. Drag in a new bot response. 3. For the prompt field, use script, empty out the script contents (including the commented example) and return <code>gs.getMessage('Hi there')</code>. <p>There should be nothing else in the function body.</p> <ol style="list-style-type: none"> 4. Publish the topic. 5. Navigate to the Languages tab of the topic and note that the English translation is marked as Partially translated. 6. Navigate to the script and remove the <code>gs.getMessage</code> from the return value so it just shows as <code>return 'Hi there'</code>. 7. Publish the topic again. 8. Navigate back to the languages tab. <p>Observe that English shows as complete.</p>
Virtual Agent PRB1607977	Users can't see the file name when uploading in a Virtual Agent topic	The field is greyed out.	
Virtual Agent PRB1612875	VA welcome message displays a bot profile avatar that isn't configured	After creating a customer branding with a new bot profile, the Virtual Agent Welcome Message does not use the	<ol style="list-style-type: none"> 1. On a Tokyo base instance, create a new user for the branding bot. 2. Navigate to Conversational Interfaces > Settings > General > Branding > Create New.

Problem	Short description	Description	Steps to reproduce
	for that portal branding	correct bot profile avatar.	<ol style="list-style-type: none"> a. Branding Name (ex: Anything) b. Bot Profile: Select [live_profile] from step 2 c. Save. <p>3. Navigate to Service Portal > Agent Chat.</p> <p>4. Open an existing Service Portal Agent Chat Config.</p> <p>5. Update server script branding_key to point value of Branding Key from Branding configured in step 3 and Save.</p> <p>6. Navigate to target portal.</p> <p>7. Open Chat, and if necessary, close out of an existing conversation.</p> <p>8. Begin a new conversation.</p> <p>Expected behavior: The greeting message, 'Hi, I'm your Virtual Agent. Let me know how I can help you today.', should display a custom branding avatar.</p> <p>Actual behavior: Base instance (or unexpectedly any other configured Branding photo on the instance) is used.</p>
Virtual Agent PRB1617029	Virtual agent admin is not able to view non-global topic blocks while creating a topic		<ol style="list-style-type: none"> 1. As an Admin, create a topic block in another scope apart from global. 2. Log in with a user with virtual agent admin role. 3. Create a topic and use the topic block node. <p>Observe that the above created topic block is not present in the topic block list.</p>
Virtual Agent PRB1622001	MS Teams uninstallation fails when a custom URI is provided in glide.servlet.uri under sys_properties_list.do		<ol style="list-style-type: none"> 1. Log in to an instance as an admin user. 2. Install a Teams prod bot. 3. Link the user and start a conversation.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> Under sys_property table change the URI for glide.servlet.uri. From Channels and Integration page, click Uninstall for the bot. <p>Observe that the bot is not removed and an error is displayed.</p>
Virtual Agent PRB1622514	VA chat refreshes the whole browser instead of refreshing the chat iframe on session timeout		
Virtual Agent Web Client PRB1610205	A screen reader doesn't announce the role and state of the toggle button present beside 'Notifications'	Users who rely on screen readers for navigating through the page will be affected if NVDA will not announce the role for toggle buttons present.	
Web UX Runtime PRB1605773	The interaction record isn't created when the Take a tour button is selected	If the Take a tour UI action is available on insert, then there's a scenario where the interaction record isn't created when clicking on it. The issue is only reproduced in Configurable Workspace, not in Legacy Workspace.	
Web UX Runtime PRB1625571	When two parallel record tabs are opened and when the modal in the two pages are opened, the modal renders as previously opened		<ol style="list-style-type: none"> Create a new tab for the record page. Add a modal to the page and send in some props to render. Open two record tabs in parallel and open the modal in the first one. Navigate to the second tab and open the modal. <p>Observe that the modal shows that it was opened previously.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 4 Hotfix 3](#)
- [Tokyo Patch 4 Hotfix 2](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3 Hotfix 3](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2 Hotfix 4](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 4 Hotfix 3

The Tokyo Patch 4 Hotfix 3 release contains fixes to these problems.

Build information:

Build date: 01-03-2023_1509

Build tag: glide-tokyo-07-08-2022__patch4-hotfix3-12-28-2022

i Important: For more information about how to upgrade an instance, see [.](#)

For more information about the release cycle, see the [ServiceNow Release Cycle](#) [↗](#).

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) [↗](#).

Fixed problem

Problem	Short description	Description	Steps to reproduce
Embedded Help PRB1631796	The Take a tour button does not appear after upgrade	The Take a tour button is missing from the 'Help' panel even though the tour is available on the UI page.	<ol style="list-style-type: none"> 1. Upgrade a Tokyo instance to the latest version. 2. Open the incident page and attempt to play the tour from the help panel. <p>Expected behavior: The Take a tour button appears in the 'Help' panel when the tour is available on the UI page.</p> <p>Actual behavior: The Take a tour button is missing from the 'Help' panel</p>

Problem	Short description	Description	Steps to reproduce
			when the tour is available on the UI page.
Table Administration and Data Management PRB1631253 KB1216793	The activity formatter does not work as expected on the sc_task table after upgrading to Tokyo	In Tokyo releases, history is not properly built for the sc_task table on instances with a shard DB. This prevents comments, work notes, and field value updates from appearing in the Activity Formatter and record history. The updates are captured in sys_audit and sys_journal field, but not the sys_history_set.	Refer to the listed KB article for details.

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 4 Hotfix 2](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 4 Hotfix 2

The Tokyo Patch 4 Hotfix 2 release contains fixes to these problems.

Build information:

Build date: 12-20-2022_0122

Build tag: glide-tokyo-07-08-2022__patch4-hotfix2-12-14-2022

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Subflows PRB1622255 KB1209294	Cancelling the subflow doesn't cancel the calling flow	Flow cancellation started from the subflow transaction does not properly cancel a flow in Tokyo.	Refer to the listed KB article for details.
Agent Experience Presence PRB1623113 KB1207622	Issue when typing in the description field or other string field (4000 characters)	The cursor jumps forward and text is scrambled.	Refer to the listed KB article for details.
Database Persistence PRB1625868	KagamiQueryRegistrar should log 'Kagami query registrar is full' only when debug mode is enabled		<ol style="list-style-type: none"> Update the following properties: <ul style="list-style-type: none"> ◦ glide.db.kagami_query_registrar.capacity to 1 ◦ glide.db.kagami_query_registrar.sleep_between_w to 10000 Run multiple queries back to back. <p>Expected behavior: You should not see those logs unless if you enable this property: glide.db.kagami_query_registrar.debug</p> <p>Actual behavior: Notice severe logs in the localhost log with 'Kagami query registrar is full, drop count=[....]'.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 4a Hotfix 1

The Tokyo Patch 4a Hotfix 1 release contains fixes to these problems.

Build information:

Build date: 02-01-2023_2239

Build tag: glide-tokyo-07-08-2022__patch4a-hotfix1-01-31-2023

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Next Experience UI16 Theming PRB1623594 KB1226945	With Next Experience enabled, list editing in a grouped list displays the incorrect cell editor	The wrong cell editor displays. It opens the editor for the previous cell. The cell editor for the Short description field should display.	Refer to the listed KB article for details.

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 4a](#)
- [Tokyo Patch 4](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 4

The Tokyo Patch 4 release contains important problem fixes.

Tokyo Patch 4 was released on December 15, 2022.

- Build date: 12-05-2022_2132
- Build tag: glide-tokyo-07-08-2022__patch4-11-23-2022

i Important: For more information about how to upgrade an instance, see .

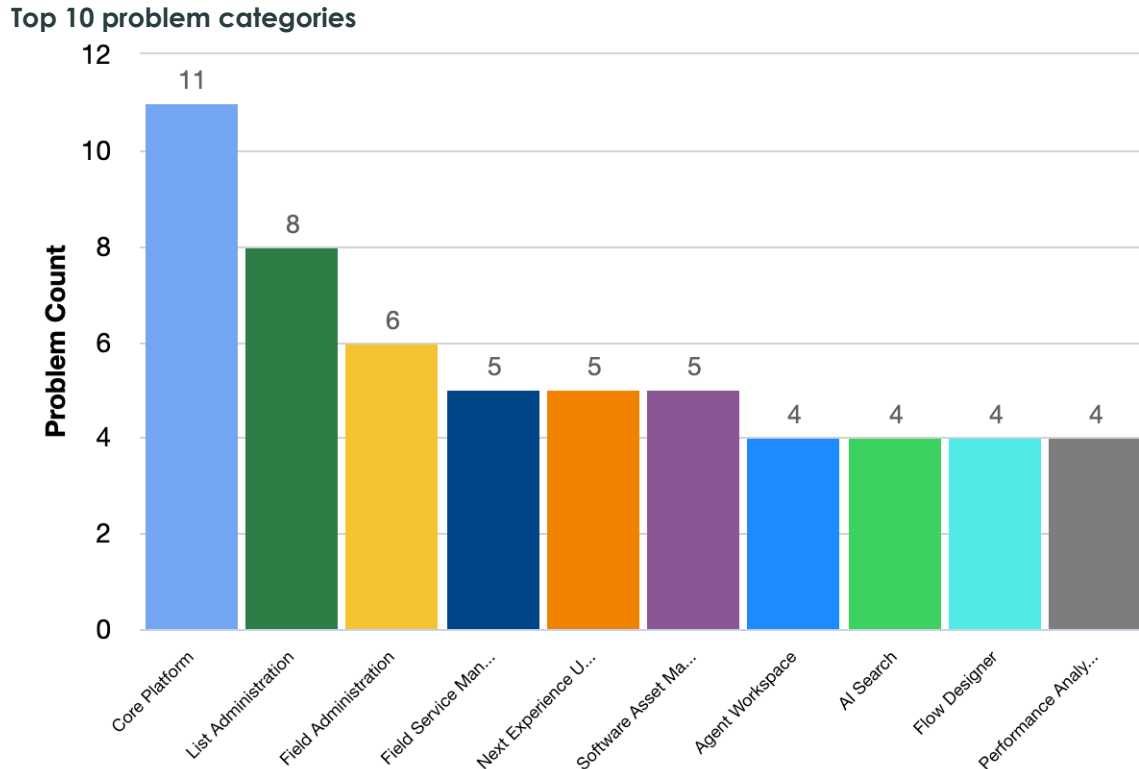
For more information about the release cycle, see the [ServiceNow Release Cycle](#).

Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#).

For a downloadable, sortable version of the fixed problems in this release, click [here](#).

Overview

Tokyo Patch 4 includes 133 problem fixes in various categories. The chart below shows the top 10 problem categories included in this patch.



Security-related fixes

Tokyo Patch 4 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform®. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Tokyo Patch 4, refer to [KB1209844](#).

Changes in Tokyo Patch 4

[Add a workspace](#)

You must wait until Tokyo Patch 4 to promote apps built in Workspace Builder from a non-production to a production instance.

[Building workspaces in AES](#)

You must wait until Tokyo Patch 4 to promote apps built in Workspace Builder from a non-production to a production instance.

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
<p>Core Platform</p> <p>PRB1366702</p> <p>KB0817507</p>	<p>Performance can be slow when displaying a form with a table choice list</p>	<p>Poor performance when creating or updating variables fields within record producers. The response times suggest issues on the server side.</p>	<p>Refer to the listed KB article for details.</p>
<p>Field Administration</p> <p>PRB1605807</p> <p>KB1176069</p>	<p>In Agent Workspace, when typing words continuously with little speed in the On Description field, letters are missing and flicker</p>	<p>Issue is replicable in all the workspaces on Tokyo instances. It's not replicable in San Diego.</p>	<ol style="list-style-type: none"> 1. Navigate to any Tokyo instance. 2. Navigate to Agent Workspace. 3. Open any incident. 4. In the description, type words continuously with little speed. <p>The letters are missing and start flickering.</p> <p>Expected behavior: On typing words continuously, the letters shouldn't be missed.</p> <p>Actual behavior: On typing words continuously with little speed, the letters are missing and start flickering.</p>
<p>List Administration</p> <p>PRB1573795</p> <p>KB1174498</p>	<p>List view timestamp displays values as '52y ago'</p>		<ol style="list-style-type: none"> 1. Set the system property <code>glide.sys.date_format</code> to a value like <code>'dd.MM.yyyy'</code>. 2. Within the general settings, set the Date/Time to 'Both' or set the user preference <code>glide.ui.date_format</code> to the value: <code>{"timeAgo":false,"dateBoth":true}</code>. 3. Navigate to Agent Workspace. 4. Open an incident list view. 5. Ensure a timestamp field is present on the list. <p>Some of the records have a timestamp value of '52y ago'.</p>

Problem	Short description	Description	Steps to reproduce
List Administration PRB1585578 KB1204182	The related list filter's right-click context menu displays grayed out menu items for related lists defined by the sys_relationship, and there's no way to override	Grayed out items include 'Open new window', 'Copy URL', and 'Copy query'.	Refer to the listed KB article for details.
Performance Analytics PRB1578239 KB1122862	Dashboards don't load if the breakdown source contains elements with quotes	For SAFe dashboards, if a breakdown source contains elements that have double quotes (""), the dashboard page never loads successfully. An empty page displays. When opening the console in the browser, the following error message can be seen: 'Uncaught TypeError: Cannot read properties of undefined (reading 'dashboardsOverview')'.	Refer to the listed KB article for details.

All other fixes

Problem	Short description	Description	Steps to reproduce
Access Control PRB1581854	Archive table ACLs can slow down other form loads when there's a significant number of archived tables in the instance	The performance problem takes place when the property glide.security.enable_archive_table_acls is set to true.	<ol style="list-style-type: none"> 1. Ensure glide.security.enable_archive_table_acls is set to true. 2. Open an instance with many archived tables. 3. Verify if any forms demonstrate issues.
Agent Chat PRB1612843	Suppress any impersonation events from Agent Chat	When Agent Chat impersonates to check if agents have the right access to work on a corresponding record, these calls are logged in the sys_events table. They're flagged in	<ol style="list-style-type: none"> 1. Transfer a work item or accept a work item. 2. Check sys_events for impersonation logs.

Problem	Short description	Description	Steps to reproduce
		user impersonation reports. Impersonation reports are used for compliance reasons and any application impersonation checks shouldn't appear in impersonation reports.	
Agent Workspace PRB1581195	Custom fields on records from extended tables can't be updated from the 'Preview Panel' on Agent Workspace	If a record from an extension of an existing table record (such as sn_hr_core_case_global_mobility ---- extends ---- sn_hr_core_case) has a custom field applied to it on its workspace view, the custom field can't be updated correctly when opening the record from the 'Preview Panel' in the workspace list.	<ol style="list-style-type: none"> 1. Navigate to Agent Workspace. 2. Navigate to the 'My Work' list. 3. Remove all list filter terms except 'Active is true'. 4. For any incident in the list, click the 'Open Preview' icon at the left side of the row. 5. In the preview pane, modify the 'Caller' and 'Short description'. 6. Click Update. 7. Click to open the record in a form. <p>Expected behavior: Both values save.</p> <p>Actual behavior: 'Short description' saves. 'Caller' not only doesn't save (work loss), but the previous value was cleared out (data loss).</p>
Agent Workspace PRB1604316	A Choice field value clears on Agent Workspace when using a client script, but works fine on platform	The value for 'Tax Years' clears on clicking anywhere in the form.	
Agent Workspace PRB1610740	In Agent Workspace, list translations aren't maintained	The sorting direction hint on lists in Agent Workspace doesn't give a full translation when switched to a non-English language.	<ol style="list-style-type: none"> 1. Navigate to any list record in Agent Workspace. 2. Click the header column on any row. <p>A hint label states either sorted in ascending order or sorted in descending order.</p> <ol style="list-style-type: none"> 3. Verify if the hint is fully translated. <p>Expected behavior: The text is fully translated.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: The text isn't fully translated.
AI Search Glide PRB1606541	External content ingestion hits a 'SEMAPHORE_EXCEEDED' error if a flow passes an invalid batcher ID to a spoke action	The acquire method is called before the batcher ID is checked, so the Semaphore doesn't release.	<ol style="list-style-type: none"> 1. Enable AI Search. 2. Activate the External Content for AI Search plugin. 3. Activate the ServiceNow IntegrationHub Enterprise Pack Installer plugin. 4. Install or side-load store-app: ih-ais-actions (any version after 2.0). 5. Create a sample flow. 6. Navigate to Flow Designer. 7. Find the flow 'Test AIS Bad batcher'. 8. Click Test > Run test. 9. In a new tab, navigate to System Logs > Errors. <p>Expected behavior: Only errors for bad_batcher.</p> <p>Actual behavior: There are also errors for 'EXCEEDED SEMAPHORES'.</p>
AI Search PRB1602664	Changes to sys_ux_page_properties aren't picked up until a cache flush	Every time AI Search is enabled or turned off for Next Experience, the user has to do a hard reload and clear the cache. Until then, the changes aren't impacted. Logging in and out doesn't solve the issue.	
AI Search PRB1603620	In Rome, AI Search isn't auto-indexing on a new article created from an article template with a name more than 27 characters	When KB articles that use a template are created, they don't appear to be automatically indexed by AI Search. They don't display in the results when searching on a portal with AI Search enabled. Zing searches show the new article immediately without any further action.	<ol style="list-style-type: none"> 1. Ensure that AI Search is enabled on Portal on the instance. 2. Ensure that the Knowledge Management Advanced plugin is enabled. 3. Create a basic template. 4. Add the created template table name as a child table in the kb_knowledge indexed source. 5. Create a knowledge article off that template. 6. Approve it.

Problem	Short description	Description	Steps to reproduce
			<p>7. Give it an easily searchable short description.</p> <p>8. Navigate to Portal.</p> <p>9. Attempt to look up the article created.</p> <p>Expected behavior: The article displays in the AI Search results.</p> <p>Actual behavior: The article doesn't display in the AI Search results.</p>
AI Search PRB1610555	ExactMatch on Service Portal should be turned off	Even for a basic user who has only a knowledge role, all the articles display as an exact match. This happens only when AI Search is enabled.	<p>1. Navigate to any Tokyo instance.</p> <p>2. Navigate to any portal where AI Search is enabled.</p> <p>3. In the instance, use ESC, EP, or SP.</p> <p>4. Enter any retired article with an exact match.</p> <p>Expected behavior: It should only display published articles as an exact match.</p> <p>Actual behavior: It displays draft articles as an exact match.</p>
AI Search PRB1613941 KB1204814	An internal server error is thrown for an exact match search of a record in a child table of a task	An 'Internal Server Error (500)' error is thrown.	Refer to the listed KB article for details.
API Access Policies PRB1613968	Scope value returns as empty when a new OAuth token is requested	Before, the scope value returned was 'useraccount'.	<p>Send a token request via any third-party application.</p> <p>Notice that the response displays the scope value as empty.</p>
API Access Policies PRB1614023	OAuth token expiration period and PA&Reporting performance issues	When a user schedules multiple exports close in time, all exports have the same token that has an expiration time. Not all the requests from the same user have the same timeout, as the expiration time is fixed	

Problem	Short description	Description	Steps to reproduce
		when the token is created. User incidents have some export requests not succeed because the token expired while waiting in the queue to export.	
Appsee - Platform Infrastructure PRB1613883	A long timeout from an instance to servers causes an application failure	The current UCM flow routs requests from the instance to the Appsee servers. When the Appsee server is down, this can cause a delay for all end-user requests from a ServiceNow application that integrates with Appsee (Next UI, Core UI, Portal, Mobile, and so on.).	
App Template Framework PRB1615771	Add a 'skip/allow' rule for sys_hub_flow_block		<ol style="list-style-type: none"> 1. Create an app. 2. Create a flow with an 'if' statement. 3. Attempt to templatize the app. <p>Expected behavior: The app is able to be made into a template.</p> <p>Actual behavior: A sys_hub_flow_block record is created, causing the templatization to be denied.</p>
Change Management PRB1613166	Change of behavior required in the 'Change POST' API, in which no arguments should create a default change request in the same UI form	It shouldn't give an error requiring the user to specify either a model or a type.	<ol style="list-style-type: none"> 1. Navigate to the REST API explorer endpoint 'Change POST'. 2. Submit. <p>Expected behavior: A default change request is created.</p> <p>Actual behavior: A change request can't be created with invalid parameters: {}.</p>
Change Management - Risk Assessment and Intelligence	Change Risk Assessment UIB/WEP has an initial landing page/screen that isn't		

Problem	Short description	Description	Steps to reproduce
PRB1591822	required, but is defaulted by Survey & Assessment Architecture as required		
Change Management - Risk Assessment and Intelligence PRB1602715	Calculating risk in 'Change' in UIB/WEP sites displays a notification with a link that doesn't function		<ol style="list-style-type: none"> 1. Navigate to SOW Workspace. 2. Select a change. 3. In the contextual sidebar, select the 'Record info' tab. 4. In the 'Risk Score' card, click Calculate Risk. 5. Refresh the page if no notification is seen.
Cloud Encryption PRB1603650 KB1192298	After the Cloud Encryption plugin is activated, it isn't possible to edit or delete records in the 'Scheduled Script Executions' table	Two business rules, 'Abort dare job deletion' and 'Abort dare job update', must be updated by adding a condition.	Refer to the listed KB article for details.
Cloud Provisioning and Governance PRB1599668 KB1203087	A race condition in the 'Discovery - Complete' Business rule keeps discoveries from being marked as complete	The business rule checks for records in 'sn_cmp_order' in the 'Processing' state and doesn't set the status to 'Completed' if any exist. If the status of the 'sn_cmp_order' record changes immediately after being queried, then the Discovery is never set to 'Completed'.	Refer to the listed KB article for details.
Condition Builder PRB1593115	NVDA isn't announcing the name and role for the combo boxes in the 'Advanced View' dialog	This issue is reproducible for all the screen readers.	<ol style="list-style-type: none"> 1. Ensure that the Software Asset Workspace plugin is added. 2. Launch any instance. The home page appears. 3. Select the 'Workspaces' tab button to expand the workspaces' dropdown.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 4. Select Software Asset Workspace. 5. Navigate to the 'License Operations' page, which is present at the left pane. 6. Under the 'Lists' tab, select Software Entitlements. 7. Navigate to the Filter button. 8. Navigate to the Advanced view button. 9. Activate it. 10. In the 'Advanced view' dialog, navigate to the fields. 11. Verify the announcement of NVDA while navigating. 12. Observe whether NVDA announces the name and role for the combo boxes or not. <p>Expected behavior: NVDA should announce the first as 'Field' combo box, the second as 'Operator' combo box, and the third as 'Value' field.</p> <p>Actual behavior: NVDA announces 'Blank' when navigating to the fields in the 'Advanced view' dialog.</p>
<p>Configuration Management Database (CMDB) PRB1591705 KB1169983</p>	<p>When users are using query builder and querying for more items, the Save and Run buttons at the top disappear</p>	<p>When users access query builder and query for a decent number of items, the page shifts down. The Save and Run query buttons are hidden.</p>	<p>Refer to the listed KB article for details.</p>
<p>Content Experiences (Backports Only) PRB1609659</p>	<p>HTML tags and attributes are stripped out when saving HTML content to the database</p>	<p>This causes accessibility and functionality for tabs and link block components not to work as expected.</p>	<ol style="list-style-type: none"> 1. Install Content Publishing and Employee Center v27.X. 2. Navigate to Content Publishing > Content Library. 3. Click New 4. Select Rich Content. 5. Add a link block. 6. Add text or any other block other than 'image'. 7. Add a tabs component.

Problem	Short description	Description	Steps to reproduce
			<p>8. Save the content.</p> <p>9. Target the content to the ESC portal.</p> <p>Expected behavior: The created content rendered in the portal should be fully functional and accessible.</p> <p>Actual behavior: The created content isn't fully functional. The link block section of the HTML is missing some tags and the tabs aren't accessible because the tab index, aria, and other attributes and tags that were there when was it created are now missing.</p>
Core Platform PRB1594596	Reduce string garbage in Compiler.createKey()	The substring() calls in Compiler.createKey() copy in memory profiling, but are pointless.	
Core Platform PRB1595925	There is UI script model memory inefficiency due to duplicate strings for scripts	Users can observe up to about 30 MB of duplicate string waste in the heap.	
Core Platform PRB1605090	ClassUtil.getShortClassName constant substring causes garbage		<p>1. Capture data for an instance.</p> <p>2. Filter for stack traces containing 'ClassUtil.getShortClassName'.</p> <p>Observe the memory allocations.</p>
Core Platform PRB1605578	StaticContentService performs redundant plugin and file checks related to the content path and authorization	This results in unnecessary garbage churn.	
Core Platform PRB1608496	String duplication in UIAction and ContextMenuItem objects causes unnecessary heap usage	The duplication happens because the cache keys rely on the domain or language, which may not always change the largest contributing string,	<p>1. Gather a heap dump.</p> <p>2. View the memory retained by the objects/classes UIAction and ContextMenuItem.</p>


Problem	Short description	Description	Steps to reproduce
		which is the script related to the object.	
Core Platform PRB1610066	The Log Export Service app doesn't have any insight into how many bytes the platform has exported per topic	This metric is necessary for licensing purposes.	<ol style="list-style-type: none"> 1. Set up Hermes, Logforwarding, and GCF. 2. Configure the log export service. 3. Verify that there are no GCF metrics sent. 4. Create a source to start sending logs through log forwarding. This starts populating GCF metrics after 5 minutes. 5. Verify data in gcf_external_staging. 6. Publish GCF metrics for the number of bytes of data pushed for each topic (logsSize and topicName). <p>Data should be calculated and aggregated for some period. Users shouldn't push counts for each time the platform sends data.</p>
Core Platform PRB1616161	LogHermesAppender producer client should be recreated when the system is reset	GCF stats from LogHermesAppender don't send metrics for all topics if it's forwarding logs to multiple topics.	<ol style="list-style-type: none"> 1. Set up Hermes. 2. Set up a log export service to export at least 2 sources. 3. Navigate to sys_logger_configuration. 4. Change one of the topic names to send to a unique topic. 5. Users may have to navigate to use the Hermes scripting API to first create a second topic. <p>GCF metrics are only sent for one of the topics.</p>
Database Persistence PRB1616047	A query should be skipped for dynamic routing table checkpointing	The secondary database plugin and dynamic category should be active.	
Data Classification PRB1598205	System tables/columns can be anonymized, resulting in	Users can do the following: 1. Classify columns from system tables (such as, sys_properties:	<ol style="list-style-type: none"> 1. Install the Data Privacy plugin. 2. Navigate to data_classification.list. 3. Create a data class 'dc'.

Problem	Short description	Description	Steps to reproduce
	an unstable or unusable instance	name); 2. Classify sys columns (such as, sys_created_on). Anonymizing these could be destructive and should exclude such tables/columns.	<ol style="list-style-type: none"> 4. Classify sys_properties:name under 'dc'. 5. Create data_privacy user with data_privacy_admin and data_privacy_clone_processor roles. 6. Log in as the above user. 7. Elevate to both the roles. 8. Navigate to dp_configuration.list. 9. Create a policy using the data class 'dc'. 10. Check 'Apply to all in data class'. 11. Assign the 'Remove' technique to the Name field. 12. Navigate to dp_job.list. 13. Create a job using the above policy. 14. Schedule a run. <p>sys_properties:name fields are empty and could break features.</p>
Discovery PRB1613976 KB1187172	The MakeAndModel API creates a duplicate model with an empty model number	Occurs in the Tokyo release.	Refer to the listed KB article for details.
Document Viewer PRB1583148 KB1204177	The sys_id displays as a file's title in docViewer	It should display the original file name in the title bar.	Refer to the listed KB article for details.
Embedded Help PRB1594725	After upgrading to the San Diego release, the overview's 'What's New' help menu doesn't work		<ol style="list-style-type: none"> 1. Connect with an admin user. 2. Navigate to system properties. 3. Set glide.product.show_what_is_new to true. 4. Clear the cache flush. 5. Log out. 6. Log in. 7. On the banner frame, right-click Help Sidebar.

Problem	Short description	Description	Steps to reproduce
			<p>8. Click Help from the top-right corner.</p> <p>9. Click What's New.</p> <p>Expected behavior: This should display the current Next Experience 'What's new' menu.</p> <p>Actual behavior: Nothing is opened.</p>
<p>Event Management</p> <p>PRB1603751</p> <p>KB1175121</p>	<p>A null point error (NPE) is thrown when starting trap listener for SNMPv3 credentials that have no authorization protocols</p>	<p>When configuring multiple SNMPv3 credentials for a trap listener, if one of the credentials doesn't have an authentication protocol, trap listener fails to start with an error: 'java.lang.NullPointerException'.</p>	<ol style="list-style-type: none"> 1. On any instance, create two dummy SNMPv3 credentials with just a user name. 2. Create SNMP trap listener. 3. Add both credentials created. 4. Start the collector. 5. Check the MID Server log for an NPE.
<p>Field Administration</p> <p>PRB1581370</p>	<p>When an Dictionary-Inactive field is in a template, that field changes to the first option in the field list and unexpectedly modifies the data when saving</p>	<p>When a dictionary is present in a standard change template and users set it to active = false, that selection in the template is replaced by the next one with its own default value.</p>	<ol style="list-style-type: none"> 1. Log in to a Rome instance. 2. Navigate to <code>std_change_record_producer.list</code>. 3. Open 'Reboot Windows Server'. 4. Navigate to the dictionary entry 'Backout plan'. 5. Set Active = false. 6. Navigate back to the template. 7. Refresh the page. <p>The backout plan has been replaced by 'Activity due' with the same value: 'There is no backout plan for this change template'.</p>
<p>Field Administration</p> <p>PRB1594210</p> <p>KB1191319</p>	<p>The 'List Choice' dictionary display value displays the backend value in Workspace</p>	<p>Labels should be displayed.</p>	<p>Refer to the listed KB article for details.</p>
<p>Field Administration</p> <p>PRB1595363</p>	<p>NVDA isn't announcing the name and role of selected columns</p>	<p>Issue is replicated throughout the application for the selected columns' sections.</p>	<ol style="list-style-type: none"> 1. Open any workspace. 2. Open the 'List' page. 3. Navigate to the List Actions button in the 'List' header.

Problem	Short description	Description	Steps to reproduce
			<p>4. Press Enter.</p> <p>5. Navigate to the 'Edit' column's menu item.</p> <p>6. Press Enter.</p> <p>7. Verify whether NVDA announces the name and role of the selected columns or not.</p> <p>Expected behavior: NVDA should announce the name and role of the selected columns.</p> <p>Actual behavior: NVDA isn't announcing the name and role of the selected columns. NVDA announces 'Section' for all the selected columns.</p>
<p>Field Administration PRB1598320</p>	<p>g_form.setValue isn't working in the 'onchange' client script</p>	<p>The issue is only seen when users tab out on updating the Aisle field. If a user clicks or uses 'Shift+tab', the issue isn't observed and the space is cleared.</p>	
<p>Field Administration PRB1610597</p>	<p>The Caller field improperly displays users in 'Recent Selections'</p>	<p>The form content is contained within a nested slot element in sn-form-data-connected. Elements in a slot are interpreted as a sibling of sn-form-data-connected, which breaks the algorithm that determines the domain.</p>	<ol style="list-style-type: none"> 1. Impersonate a parent. 2. Navigate to Base Agent Workspace > Incidents. 3. Select New. 4. In the short form, select Domain=Child1. 5. Click Next. 6. In the full form, click in the Caller field. <p>'Recent Selections' improperly displays 'Parent', which in reality isn't available under the Child1 domain.</p>
<p>Field Encryption PRB1594089 KB1180262</p>	<p>All encryption modules that the user has access to appear in the 'Attachment' pop-up, regardless of the encrypted field's</p>	<p>The 'Encrypt with Module' dropdown in the attachment dialog box displays all the modules that the user has access to. This impacts the users with access to multiple modules.</p>	<p>Refer to the listed KB article for details.</p>

Problem	Short description	Description	Steps to reproduce
	configuration type		
Field Service Management PRB1592899	A required questionnaire isn't enforced due to multiple languages being installed on the instance		
Field Service Management PRB1597552	Completed questionnaires aren't visible on Apple devices on the FSM Mobile Agent app	Issue is reproducible on iPads.	
Field Service Management PRB1597710 KB1196412	When dispatching a WOT from a previous assigned user to a new user from the dispatch tool, the dispatched WOT disappears from the workspace	The WOT must be already accepted and in the substate 'On route'.	Refer to the listed KB article for details.
Field Service Management PRB1600602	There's a fallback to straight-line travel calculations when Google returns a max integer and separate minor bug fix in DynamicSchedulingProcessor script includes	Previously, the FSM product team provided a custom code to fall back to straight-line calculation when Google Maps can't calculate the travel time.	
Field Service Management PRB1615057	Override capacity calculation gives the wrong date with the DST time zone	Users aren't able to create a capacity override when creating across DST dates.	<ol style="list-style-type: none"> 1. Open a Tokyo instance. 2. Ensure that CSM Demo Data and Capacity Based Scheduling plugins are installed.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 3. Create a capacity definition for an assignment group. 4. Add an override assignment rule with 14 days. <p>Users receive an 11-hrs mismatch on the start date due to the DST date.</p>
Flow Designer PRB1595319	Changed fields are missing for trigger simulations if the flow uses an application different from global	Works as expected for global scope.	<ol style="list-style-type: none"> 1. Log in to an instance. 2. Switch application scope. 3. Navigate to Flow Designer. 4. Create a flow. 5. Define the update record trigger. 6. Add a log action. 7. Save the flow. 8. Click the Test button. 9. Attempt to add changed fields. <p>Expected behavior: Users should be able to add changed fields.</p> <p>Actual behavior: Users can't add any changed fields.</p>
Flow Designer PRB1597481 KB1169262 	Flow stages display 'null'	In the SC Order Status and the Standard Ticket Header widgets, the stages for a submitted request read as '(null)'.	Refer to the listed KB article for details.
Flow Designer PRB1612339	Change read-only flows can't be deactivated	The Deactivate button is grayed out.	
Flow Designer PRB1615780	Flow Designer queries all scopes and returns a list of all scopes to the interface, which affects the performance of the subflow definition API	The API /api/now/processflow/flow/subflow_definition uses JSONUtil and Jackson to serialize some Java objects to JSON. When it does this, it invokes the method 'getScopes' on FDElemSecurity. 'getScopes' should be private or annotated	<ol style="list-style-type: none"> 1. Create two apps: app_common and app_one. 2. Create an empty flow in both apps. 3. Keep them open. 4. Create a user that has a delegated developer role and flow designer role for scope app_common.

Problem	Short description	Description	Steps to reproduce
		so it doesn't get serialized and isn't included in the JSON response. Scope checking shouldn't query the entire list of scopes, as this slows down the platform.	<ol style="list-style-type: none"> 5. Create flows/subflows in both scopes. 6. Open the created flows in step 1 as the created user. <p>Observe that getScopes is called a lot and has a slow query time.</p>
Guided Tours PRB1597535	Enabling Next Experience breaks guided tours on forms on San Diego		<ol style="list-style-type: none"> 1. Connect to any San Diego instance. 2. Make sure that the Next Experience UI is enabled. 3. Try creating guided tours on forms. 4. Observe that the page returns to the 'Create incident' page and doesn't let users create a guided form. <p>Expected behavior: Users should be able to create guided tours on forms in Next Experience.</p> <p>Actual behavior: Users are unable to create guided tours on forms in Next Experience.</p>
HR Service Delivery PRB1613910	Access to the API 'setWorkflow' from scope 'sn_hr_core' is refused because of the cross-scope access policy of the API	Users can't call setWorkflow from out of scope. The grCase that's updated is of sn_hr_er_case, which is under the sn_hr_er scope. Since the script include is from sn_hr_core, it can't call setWorkflow on the sn_hr_er scope.	<ol style="list-style-type: none"> 1. Ensure that Employee Center and Employee Center Pro plugins are on version 23.0.7. 2. Create a case: sn_hr_core_case_creation.do. 3. Select an employee. 4. Set 'COE' to 'Employee Relations Case'. 5. Set 'HR Service' to any service. 6. Populate the 'Description'. 7. Select Ready to Work. 8. Select Transfer Case from 'Additional Actions'. 9. Set to transfer with an existing case number and any HR Service. <p>A case is created but an error banner appears.</p>
Incident Management	Add a report range for a breached SLA to display		

Problem	Short description	Description	Steps to reproduce
PRB1555420	on the ITSM landing page's SLA donut		
Instance Scan PRB1600704	Executing a suite scan against a scoped app only scans the record from the same [sys_package], ignoring the scope	If a record from a scoped application doesn't have the same package ID as the [sys_app] record, it's not included in the scoped app suite scan.	
Integration Hub PRB1593233	Remote Process Sync (RPS) attachments send twice when the anti-virus changes state	With virus scanning in place, each addition of an attachment has two entries in the queue, 'Create' and 'Update'.	<ol style="list-style-type: none"> 1. From the RPS 'Properties' page, select the For outbound scheduled job. 2. Use the standard FlowAPI, not the quick API, to write a flow context to queue all outbound records written to the 'ih_sync_outbound_record' check box. 3. From the flow designer's properties, set the reporting level to 'Developer Trace'. 4. Set up an RPS sync with a capture of attachments on an incident record. 5. Trigger the capture by creating a matching incident. 6. Upload an attachment to the incident. 7. Navigate to the RPS outbound queue. 8. Notice the attachment insert record. 9. Navigate to the sys_attachment table. Notice that the attachment is in the state 'Pending'. 10. Download the attachment. 11. Refresh the table. Notice that the state is now 'Available Conditionally'.

Problem	Short description	Description	Steps to reproduce
			<p>12. Navigate to the RPS outbound queue.</p> <p>Notice the attachment update record.</p> <p>The flow was triggered twice for the attachment records.</p>
<p>Key Management Framework (KMF)</p> <p>PRB1591339</p>	<p>Key Exchange (KE) and Instance Data Replication (IDR) isn't working when a target instance has many deactivated, source instance, public, EJBCA, signver certifications present on the target instance</p>		
<p>Key Management Framework (KMF)</p> <p>PRB1620281</p>	<p>A race condition in a third-party cryptographic dependency can cause outbound calls to fail</p>	<p>The issue is reproducible on certain instances only. Those are either on San Diego or Tokyo. When an instance is affected, most, or all, of its nodes run into the exception. After the exception is triggered, it's thrown for each outbound call, causing almost all to fail.</p>	
<p>Knowledge Management</p> <p>PRB1614390</p> <p>KB1194889</p>	<p>The CSS in a KB's article body isn't working</p>	<p>The CSS present in a KB article body doesn't work when the article is published or when it's previewed. When editing the KB with CSS content, the CSS is visible in the article body. When the same is published, it disappears in the portal view.</p>	<ol style="list-style-type: none"> 1. Open the 'Knowledge' form view to create a KB article. 2. Click the Source code button on the TinyMCE editor. 3. Insert content along with additional CSS attributes (style tags) on the top. 4. Click the related link 'View Article'.

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: CSS should be visible in preview mode and also when published.</p> <p>Actual behavior: The CSS added doesn't reflect in the preview mode. The added CSS is missing when the source code is viewed.</p>
Legacy Workflow PRB1594288	A database update doesn't work with multiple records after 'Encrypted Workflow Scratchpad' is installed	Only one sc_req_item state is changed to 'Work in progress' instead of all.	
Legacy Workflow PRB1609966 KB1206359	A null point error in the Data Table widget appears when a user without wf_workflow access tries to view sc_req_item stages	When a user that doesn't have read access to the wf_workflow table tries to view a Service Portal page that uses the Data Table widget to display the sc_req_item table, a NullPointerException in the server-side script can cause the widget to be unable to display any rows. The server-side error is logged and appears temporarily in the UI.	Refer to the listed KB article for details.
List Administration PRB1540504	A screen reader doesn't announce category labels, such as 'Assign tag' or 'Remove tag'	Screen reader users are unable to understand the purpose of the controls if the screen reader doesn't narrate the label information.	<ol style="list-style-type: none"> 1. Enable NVDA/JAWS. 2. Open a URL in an Edge Chromium/ Chrome browser. 3. Log in with valid credentials. 4. Search for 'incident' in the filter navigator. 5. Search for 'All assessments'. 6. Select 'Check-boxes' for items in the table. 7. Navigate to the 'Actions on selected rows' control. 8. Expand it. 9. Turn on the screen reader.

Problem	Short description	Description	Steps to reproduce
			<p>10. Navigate to items under 'Actions on selected rows'.</p> <p>11. Note if the screen reader announces category labels (for example, 'Assign tag'. 'Remove tag') or not.</p> <p>Expected behavior: The screen reader should announce category labels (for example, 'Assign tag'. 'Remove tag') along with respective list items.</p> <p>Actual behavior: The screen reader announces category labels (for example, 'Assign tag'. 'Remove tag').</p>
<p>List Administration PRB1583548</p>	<p>List flag features (sys_ux_list) don't work in Configurable Workspace for non-English languages, such as French or Spanish</p>	<p>Issue is reproducible in San Diego.</p>	<ol style="list-style-type: none"> 1. Ensure access to CSM/FSM Configurable Workspace. 2. Have an extra language plugin activated. 3. Access any CSM/FSM Configurable Workspace list record. 4. Change a feature flag. 5. Access the list via CSM Workspace. The features are removed. 6. Change the language to the other installed language. 7. Refresh the list. 8. Verify if the features are back. <p>Expected behavior: The list should behave the same for English and non-English.</p> <p>Actual behavior: The features don't work in a non-English language.</p>
<p>List Administration PRB1593647</p>	<p>The 'select all' option is missing when 'group by' is used</p>		<ol style="list-style-type: none"> 1. Make sure that Next Experience is enabled. 2. Navigate to incident.list. 3. Group by any field. <p>Notice that the 'Select all' check box disappears.</p>

Problem	Short description	Description	Steps to reproduce
List Administration PRB1593903	NVDA doesn't announce the pagination for the first and last page's button's name	It announces them as 'Button'.	<ol style="list-style-type: none"> 1. Open any instance with applicable plugins installed. 2. Search for 'Agent Workspace for HR Case Management' in the filter navigator. 3. Navigate to 'Lists'. 4. Select an open employee relations case. 5. Navigate to the 'Interviews' tab. 6. Select the New button. The 'Create New Interview' form appears. 7. Navigate to an HR case input field. 8. Select Search for a record. An HR case modal dialog opens. 9. Run AXE. 10. Run NVDA+ in Chrome. 11. Navigate to the pagination section. <p>Expected behavior: Buttons must have discernible text. The screen reader should announce the appropriate meaningful name of pagination buttons. The button name should be visible for visual users.</p> <p>Actual behavior: Buttons don't have discernible text. NVDA doesn't announce the button's name. It only announces 'Button'. Purpose of the button isn't clear to screen reader users. For visual users, the button's name isn't visible. The tooltip is also not appearing when navigating with the keyboard tab key.</p>
List Administration PRB1597081 KB1157037	When using inline list edit, an incorrect date might be saved in the Date field	This happens only in the Europe/Stockholm time zone. This doesn't happen on the GMT time zone.	Refer to the listed KB article for details.
List Administration	In Tokyo, the Hide list action option in the	In San Diego, there's an option to hide list actions, but the same	<ol style="list-style-type: none"> 1. Open a UIB page. 2. Add a related list component.

Problem	Short description	Description	Steps to reproduce
PRB1600683	configuration isn't available in UIB	isn't displayed in the Tokyo version.	
Metric Intelligence (Family) PRB1615601	The class MetricScriptableApis couldn't be initialized	The class MetricScriptableApis couldn't be initialized during the installation of the 'Metric Intelligence' plugin. That harms most of the flows related to the Metric Intelligence feature.	
Mobile Platform PRB1611402	The Use Part/Remove Part function displays an invalid input if a filter is applied	After the Tokyo upgrade, users are unable to use 'Use Part/Remove Part' with filters applied to the list.	
Mobile Platform PRB1612680	The Date field isn't auto-filled in the mobile app	The auto-fill variable isn't working on the 'Date' type input on the input form screen.	<ol style="list-style-type: none"> 1. Log in to Now Mobile. 2. Click the 'More' tab. 3. Click the 'mjdatestest' tab. 4. The record with ID 3 displays the following value in the list view: '2022.10.05 호호호'. Click the record. <p>The '호호호' value is auto-filled but the Date field isn't. When users change the value, the values in the list view are updated, but the date value is still empty in the form.</p>
Mobile Studio PRB1599243	There are functional and ally issues in the new mobile card templates due to a missing template slot attribute record	There's a missing template slot attribute record.	<ol style="list-style-type: none"> 1. Create a card 'sys_sg_view_config'. 2. Associate 'Template 20' to the card. 3. Associate table 'Incidents' to the card. 4. Save the record. 5. Open the card on Mobile Card Builder. 6. Map fields to each of the elements slots on the card using the right-hand configuration. 7. Save the card. 8. View the card on Mobile Client.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 9. Verify the card displays with the expected elements. 10. Verify specifically that the text_04 element displays with 'Subhead 1 - 14 px semibold/medium'.
<p>Next Experience UI16 Theming</p> <p>PRB1607097</p>	<p>The 'Welcome' page's section overflows/is cut off</p>		<ol style="list-style-type: none"> 1. In any San Diego or Tokyo Instance where Next Experience is enabled, create a 'Welcome' page section with HTML content in the Text field. 2. Ensure there's at least some sentences with an 'h1' tag. 3. In system properties, create the property glide.ui.polaris.login.show_illustration. 4. Set the property to false. 5. Create the property glide.ui.polaris.login.show_welcome. 6. Set the property to true. 7. In incognito or a non-authenticated session, navigate to 'instance-name.service-now.com' where the previous steps were conducted. 8. Observe that the text from the 'Welcome' page content overflows onto the page. <p>Expected behavior: 'Welcome' page content stays the same as in previous releases.</p> <p>Actual Behavior: The above mentioned properties are required to be created/modified for 'Welcome' content to display, and even then it displays as distorted/overflowing on to page.</p>
<p>Next Experience Unified Navigation</p> <p>PRB1577768</p> <p>KB1120581</p>	<p>The 'Change Risk Assessment' form displays radio options horizontally instead of vertically</p>	<p>Assessment metric definitions that have long display values are placed vertically on the 'Risk Assessment' form for change request records. Others are horizontally placed.</p>	<p>Refer to the listed KB article for details.</p>

Problem	Short description	Description	Steps to reproduce
Next Experience Unified Navigation PRB1586331 KB1172413	The 'User profile' dropdown menu has an issue in Firefox	The 'User Menu' dropdown behaves unexpectedly after upgrading to the San Diego Next Experience UI. The dropdown menu intermittently appears below the contextual app pill and the upper left corner of the screen.	<ol style="list-style-type: none"> 1. Open Firefox. 2. Navigate to an instance. 3. Open the 'User Profile' menu. <p>Notice that the profile is on the left side of the screen (an intermittent issue).</p> <ol style="list-style-type: none"> 4. Open Chrome. 5. Repeat steps 2 and 3. <p>The profile is correctly displayed on the right side.</p>
Next Experience Unified Navigation PRB1599584	JavaScript field watcher isn't working in the new UI		<ol style="list-style-type: none"> 1. Log in to a Next Experience instance as an admin or maint. 2. From the navigator, open All > Incident > Open. 3. Open any incident. 4. Right-click the Short Description field label. 5. Select Watch. <p>Actual behavior: Nothing happens.</p> <p>Expected behavior: The JavaScript field watcher should open.</p>
Next Experience Unified Navigation PRB1605131 KB1177695	The module link type 'List Filter' doesn't behave as expected when Next Experience is turned on	When editing a module with the link type set as 'List filter', the link returns something unexpected when Next Experience is turned on. The module works as expected in UI16.	Refer to the listed KB article for details.
Next Experience Unified Navigation PRB1610768	'utilityMenuItemLeftPositions' and 'utilityMenuData' props are setting to the same thing		<ol style="list-style-type: none"> 1. Log in to a Next Experience enabled instance. 2. Enable developer tools.

Problem	Short description	Description	Steps to reproduce
<p>Now Experience Framework PRB1593870</p>	<p>In 'Focus' mode, NVDA's focus doesn't move to the 'Edit columns' menu item in the 'List Actions' menu</p>	<p>Issue is replicated throughout the application for the 'Edit columns' menu item in the List Actions menu button. This issue can be seen on other workspaces as well.</p>	<ol style="list-style-type: none"> 1. Open the any workspace URL in the # browser. The homepage appears. 2. Navigate to the 'Lists' tab. 3. Enter. 4. Navigate to the List Actions button. 5. Enter. 6. Verify whether NVDA's focus is moving to the 'Edit columns' menu item in the List Actions menu button or not. <p>Expected behavior: NVDA focus should move to 'Edit columns' menu item in the List Actions menu button in focus mode.</p> <p>Actual behavior: NVDA focus isn't moving to the 'Edit columns' menu item in the List Actions menu button in focus mode. NVDA focus is directly moving to the 'Save as' menu item after opening the List Actions menu button.</p>
<p>Now Platform Security PRB1581335</p>	<p>Dot-walk fields are visible on the 'Form' page</p>		<ol style="list-style-type: none"> 1. Install the Data Filtration plugin. 2. Create an IP Filter Criteria. 3. Create a data filter. <ol style="list-style-type: none"> a. table: cost_center b. data condition: Name = sales c. subject condition: IP Filter Criteria 4. Configure the 'Incident list' page to display 'cost_center.name = sales'. 5. Configure the 'Incident form' page to display 'cost_center.name = sales'. 6. As an ITIL user, navigate to incident.list. 7. View any incident with 'cost_center = sales'. 8. Select the incident number to open the 'Form' page.

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: Dot-walk fields restricted by data filters should be removed.</p> <p>Actual behavior: Dot-walk fields are visible.</p>
Now User Experience PRB1604130	The logo on the Next Experience header is truncated intermittently on Safari	On a San Diego instance with the small 'Now' logo, and with a custom logo configured that is wider than the 'Now' logo, the logo is truncated intermittently on page load. This only happens in Safari.	<ol style="list-style-type: none"> 1. Ensure that the instance has a custom logo that is wide. 2. In Safari, reload the page until the logo displays as clipped.
On-Call Scheduling PRB1587604	'Assign by Acknowledgment per Rota' isn't generating a message number or message counter for an SMS watermark in the 'Notify Message' table		<ol style="list-style-type: none"> 1. Update the user's business phone with a space in it. 2. Create an on-call schedule with the user with a phone number. 3. Create an escalation with SMS as the preference. 4. Create multiple incidents, escalating to a group with an on-call schedule. <p>Expected behavior: Escalation SMS should have a message number prefix.</p> <p>Actual behavior: Escalation SMS doesn't have a message number prefix.</p>
Orchestration PRB1615702 KB1194249	The Tibco JMS test connection doesn't work when using a custom connectionFactory name	An error displays: 'Unable to connect to JMS destination: Name not found: 'connectionFactory'.	Refer to the listed KB article for details.
Performance Analytics Dashboards PRB1610622	Dashboard throws the following error if the breakdown source has an accented letter: 'The entity 'iacute' was	The error message 'The entity 'iacute' was referenced, but not declared' is thrown when attempting to load a dashboard that has an accented letter in the name of a breakdown source.	<ol style="list-style-type: none"> 1. Navigate to a Tokyo instance. 2. Navigate to the 'pa_dimensions' table. 3. Create a breakdown source and include an accented letter in the Name field (i.e País, Región). 4. Navigate to 'pa_dashboards'.

Problem	Short description	Description	Steps to reproduce
	referenced, but not declared'		<ol style="list-style-type: none"> Open any existing dashboard record or create one. In the 'Breakdown Sources' related list, select Edit. Add the breakdown source that was created in step 3. Click the 'View dashboard' link under the related links. Observe the error message: 'The entity 'iacute' was referenced, but not declared.' <p>The letter that prefixes 'actue' reflects the accented letter included in the name of the breakdown source.</p>
Performance Analytics Dashboards PRB1616691	Unable to deploy the 'par_dashboard_user_metadata' file between different environments through a pipeline	It's observed that the 'par_dashboard_user_metadata' file is missing in the 'sys_app' file.	<ol style="list-style-type: none"> Login as an admin/AES user. Create an app. Create a workspace using a workspace UI template. Try to deploy this app through a pipeline to another environment. Observe the dashboard. <p>Expected behavior: The dashboard should load when users deploy an app in another environment.</p> <p>Actual behavior: The dashboard isn't loading.</p>
Performance Analytics Dashboards PRB1618630	Creating a technical dashboard sets the Active field of the 'UXF' page to false	It should be true.	<ol style="list-style-type: none"> Create a technical dashboard. Edit the page. Navigate to the settings. <p>Expected behavior: active = true.</p> <p>Actual behavior: active = false.</p>
Performance Analytics PRB1612538	The 'PAR' dashboard on Platform Analytics Experience is no longer usable after upgrading	All the widgets are resized too small and the dashboard is no longer usable.	

Problem	Short description	Description	Steps to reproduce
Performance Analytics PRB1614020	A tooltip doesn't display the correct value on the Workbench widget		<ol style="list-style-type: none"> 1. Navigate to the dashboard 'Customer Service (inactive)'. 2. Under the tab 'Cases by State', click Average age > Average re-assignment > Average age of last update > % not updated in 5d > % not updated in 30d. 3. Make the size of the Chrome window smaller so that the arrow displays to shift the widgets to the right. 4. Using the arrow on the right, shift the widgets to the left. <p>When pointing to the tile, it still displays the values/data of the previous widget on that position.</p>
Performance Analytics PRB1615045	Canvas13InteractiveFiltersOnNewChoiceFilter failing	The filters don't render.	<p>UIT .testNewChoiceFilter</p> <ol style="list-style-type: none"> 1. Run Canvas13InteractiveFiltersOnNewChoiceUIT.testNewChoiceFilter to see the failure. 2. After running the test, create a choice filter on the incident_sla and Incident function fields. 3. Add a filter to the dashboard.
Platform Performance PRB1612721	Agent Workspace's activity stream can cause excessive memory usage on application nodes when 'Expand all posts' is triggered and a record has hundreds of associated emails	Agent Workspace's activity stream can cause excessive memory usage on application nodes when 'Expand All Posts' is triggered and a record has hundreds of associated emails. When selecting this action, all entries in the activity stream are expanded, including all emails. This results in all emails being loaded into memory for previewing. The resulting increased memory usage can cause a performance impact to all users connected to the application node.	<ol style="list-style-type: none"> 1. Open any record with hundreds of associated sys_email records in Agent Workspace. 2. Ensure that the activity stream is configured to display associated emails for a record. 3. In the activity stream, click the 'Expand all posts' option available from the '...' menu. <p>During processing, the transaction consumes a large portion of memory. This leads to node level performance impacts for all connected users.</p>

Problem	Short description	Description	Steps to reproduce
Predictive Intelligence PRB1609103	RCA jobs give incorrect results on Tokyo	RCA results give numbers greater than what the model actually has.	<ol style="list-style-type: none"> 1. Navigate to a PO model. 2. Trigger an RCA job for a PO model.
Process Optimization PRB1605223	A previously mined project failed to load in Workbench, and a new process finding should be added	There are old/stale entries for finding categories that display.	<ol style="list-style-type: none"> 1. Mine a model. 2. Navigate to 'Process Configuration'. 3. Add a finding by including automaton as category. 4. Try to open the model mined in step 1. <p>Expected behavior: A change in a finding shouldn't break the existing project that is fully mined and working.</p> <p>Actual behavior: The model throws an error when the user selects/creates a customer category. It notifies that the customer category isn't supported and should be removed/deselected.</p>
Process Optimization PRB1608770	The 'Process projects' page should also have users like 'maint' and 'hopped'		<ol style="list-style-type: none"> 1. Create a model with a maint user. 2. Mine it. 3. Ensure that the mining is successful. <p>Expected behavior: The user should display on the 'Process projects' page.</p> <p>Actual behavior: The user doesn't display on the 'Process projects' page.</p>
Process Optimization PRB1615929	Workbench fails with an Error	Workbench fails to open with an error: 'Exception encountered processing path... No content to map due to end-of-input at [Source: (String)"; line: 1, column: 0]'.	<p>Upgrade from San Diego to Utah.</p> <p>Expected behavior: Workbench should open properly.</p> <p>Actual behavior: Workbench fails to open with an error.</p>
Reporting PRB1512026	A data source with '^ANQ' and related list conditions generate incorrect results in the	A report that uses the New Criteria button (a '^ANQ' condition) excludes previous conditions if the data source uses '^ANQ' and related list conditions.	

Problem	Short description	Description	Steps to reproduce
	reporting module		
Reporting PRB1595652	A report overlaps with other reports, partially blocking table data	In San Diego, the view of a table from a report is blocked off by a second report located below.	<ol style="list-style-type: none"> 1. Log in to a San Diego instance. 2. Navigate to sys_report.LIST. 3. Open the report 'Open Incidents by Assignment', which is a bar chart. 4. Click the Edit Report button. 5. Click the 'Configure' tab. 6. Ensure the 'Display Data Table' check box is checked. 7. Create a Service Portal page. 8. Drop the Report widget on the Portal page. 9. Configure the Report widget to use the 'Open Incidents by Assignment' report. 10. Repeat steps 8–9, placing the second widget instance right below the first widget. <p>Expected behavior: The table of the first widget isn't cut off. The table should be fully visible.</p> <p>Actual behavior: The table of the first widget is cut off.</p>
Reporting PRB1600482	Some of the configurations for charts don't save in Visualization Designer	The Save button is intractable after saving changes.	<ol style="list-style-type: none"> 1. Navigate to Platform Analytics Workspace. 2. Select the 'Data visualization' tab. 3. Add a visualization. 4. Add a data source. 5. Navigate to the 'Configuration/ Legend' block. 6. Toggle all the legend bars. 7. Change all the dropdown values. 8. Navigate to the 'Data label' block. 9. Toggle 'Show data labels'. 10. Navigate to the 'Colors' block. 11. Change the value to a 'Color palette'. 12. Save changes.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 13. Change the chart type to 'Single score'. 14. Navigate to 'Additional settings' in Configuration. 15. Toggle all the bars. 16. Navigate to 'Display settings'. 17. Change the score size to 'L'. 18. Save changes. 19. Change the charts type to 'Area'. 20. Navigate to 'Presentation Y axes and X axes'. 21. Toggle all the bars. 22. Save changes. 23. Change the charts type to 'Donut'. 24. Navigate to sorting. 25. Change the dropdown values. 26. Save changes. 27. Change the charts type to 'Pivot table'. 28. Navigate to 'Metric'. 29. Add several metrics. 30. Toggle all the bars. 31. Save changes. 32. Add the created visualization from the library to the dashboard. <p>Expected behavior: All the changed values stay after saving. The visualization is added to the dashboard with the configured values.</p> <p>Actual behavior: All the mentioned toggles, dropdowns, and values don't save: Charts display the default configuration; the changed values in the configuration panel reset; the visualization is added with the default configuration to the dashboard.</p>
<p>Seismic Framework PRB1595187</p>	<p>After deleting an attachment, a new attachment can't be added, and</p>	<p>When a user opens an incident or request item record and deletes the existing attachment, other attachments can't be previewed.</p>	<ol style="list-style-type: none"> 1. Log in to a San Diego instance. 2. Navigate to Agent Workspace. 3. Open any record (incident or request item).

Problem	Short description	Description	Steps to reproduce
	existing ones can't be previewed	Users are unable to add attachments after deleting an existing one from the preview. The issue isn't experienced when an attachment is deleted using the Remove UI action from the ellipsis.	<ol style="list-style-type: none"> 4. Add two or more attachments to the record. 5. Click the attachments to preview them. <p>The attachments can be previewed successfully.</p> <ol style="list-style-type: none"> 6. From the attachment preview screen, delete one attachment. 7. Preview any remaining attachment. 8. Observe that the preview is empty. 9. Try to add another attachment. <p>The 'attachment' icon appears with a 'File unavailable' message and a loading bar.</p>
Service Mapping PRB1605217	A null point error is thrown at <code>com.snc.sw.mapping.impl.compare.CompareHelper.extractHostNames</code>	A null check on every <code>rel.getSource/target</code> should be added.	
Service Mapping PRB1612925	Next Experience is enabled by default on a PAAS instance		<ol style="list-style-type: none"> 1. Request a PAAS instance on Tokyo. 2. Verify if Next Experience is enabled. <p>Next Experience shouldn't be enabled for a PAAS environment.</p>
Session Log PRB1612404 KB1196425	Possible performance impact after a Tokyo upgrade due to cache flush propagation for tables with large hierarchies	Users expect no log messages that start with 'Changed table'. There should be only one log message that starts with 'handleTableChangeCacheFlushMessage -' per <code>sys_cache_flush</code> record. However, there's one info log message that begins with 'Changed table -' per each child of <code>cmdb_ci</code> in each node's localhost logs.	Refer to the listed KB article for details.
Sidebar (Family Release) PRB1617279	The Collab Chat Server plugin should be free		<ol style="list-style-type: none"> 1. Navigate to plugins. 2. Search for 'Collab Chat Server'. <p>The plugin should be free.</p>

Problem	Short description	Description	Steps to reproduce
Software Asset Management PRB1572117	Microsoft License Statement (MLS) imports cause generic errors, such as invalid field values	Importing template customized results in one or many fields being invalid.	
Software Asset Management PRB1606839	Duplicate lifecycle reports display for SQL Server 2008 and 2008 R2	These are different versions and not supersets/subsets.	
Software Asset Management PRB1614324	Software lifecycle reports should be enhanced to display the lifecycle that is currently active for a piece of installed software on a given date		
Software Asset Management PRB1614635 KB1207272	Software model display names are overwritten by the 'Proactively fix the core company' scheduled job		Refer to the listed KB article for details.
Subscription Management PRB1574334	The user 'sn_ua.downloader' is added to user instances	It should be moved to the receiver plugin.	<ol style="list-style-type: none"> 1. Provision an instance on a San Diego build. 2. Check if the 'sn_ua.downloader' user exists in the sys_user table. <p>Expected behavior: The 'sn_ua.downloader' user shouldn't exist.</p> <p>Actual behavior: The 'sn_ua.downloader' user exists.</p>
Syntax Editor PRB1605763	Advanced options for images in the HTML editor (tinyMCE)	In Tokyo, advanced options to provide additional control over the appearance of an	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
KB1172469	are missing with the new version (v5)	image in an HTML text field aren't visible.	
System Archiving PRB1614589	sys_attachment records should be deleted when their archived parent record is destroyed	sys_attachment records aren't deleted when a parent archived record is destroyed after upgrading to San Diego.	<ol style="list-style-type: none"> 1. Pick a sys_email record. 2. Add a sys_attachment record to it. 3. Create or modify a sys_archive rule to archive the sys_email record. 4. Create a sys_archive_destroy rule to destroy the ar_sys_email. 5. Run it to destroy the ar_sys_email. <p>Expected behavior: The attached sys_attachment/sys_attachment_doc records should be deleted.</p> <p>Actual behavior: The attached sys_attachment/sys_attachment_doc records aren't deleted.</p>
UX Framework PRB1606758	Keyboard navigation on the side panel isn't working as expected		<ol style="list-style-type: none"> 1. Log in to an instance. 2. Navigate to base Agent Workspace. 3. Navigate to the side panel using the keyboard. <p>Expected behavior: Keyboard navigation first should land on the side panel icons. Then, it should navigate inside it, similar to San Diego.</p> <p>Actual behavior: Keyboard navigation first lands inside the panel section. Then, it navigates to side panel icons.</p>
UX Framework PRB1612961	A circular dependency on the sys_ux_macrocomponent field locks up instances	Templates API shouldn't fail with a 500 error when a circular dependency is encountered. There's also an issue when an instance is under heavy load, the instance becomes unresponsive until the 500 error is returned.	<ol style="list-style-type: none"> 1. Open any sys_uib_template record. 2. Open a macro component reference. 3. Change the macro component Extends field to reference itself. 4. Suppress REST batching. 5. Open the network panel. 6. Navigate to a page in UIB. 7. Observe the templates API call.

Problem	Short description	Description	Steps to reproduce
Virtual Agent Designer PRB1610910	A failure in OAuthTokenRetrieval causes a MID Server credential load refresh to fail with an error: 'http 408 response code (timeout)'	If a user's instance doesn't have internet connectivity, and has Glide Virtual Agent installed, then MID Servers are unable to refresh credentials. This occurs only on the Tokyo release. However, an upgrade from any version to Tokyo introduces this problem.	<ol style="list-style-type: none"> 1. Upgrade to the Tokyo release. 2. Install Glide Virtual Agent.

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 3 Hotfix 2](#)
- [Tokyo Patch 3 Hotfix 1](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2 Hotfix 3](#)
- [Tokyo Patch 2 Hotfix 2](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1b](#) [↗](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 3 Hotfix 4

The Tokyo Patch 3 Hotfix 4 release contains fixes to these problems.

Build information:

Build date: 01-11-2023_1517

Build tag: glide-tokyo-07-08-2022__patch3-hotfix4-01-11-2023

i Important: For more information about how to upgrade an instance, see [.](#)

For more information about the release cycle, see the [ServiceNow Release Cycle](#) [↗](#).

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) [↗](#).

Fixed problem

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1631934	The sys_trigger rule doesn't apply to incident records	The ScriptEngines are cached and the AssignmentEngine has an instance variable that is getting overridden.	

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 3 Hotfix 3](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 3 Hotfix 3

The Tokyo Patch 3 Hotfix 3 release contains fixes to these problems.

Build information:

Build date: 01-04-2023_0957

Build tag: glide-tokyo-07-08-2022__patch3-hotfix3-01-03-2023

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Lists PRB1585578 KB1204182	The related list filter's right-click context menu displays grayed out menu items for related lists	Grayed out items include 'Open new window', 'Copy URL', and 'Copy query'.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
	defined by the sys_relationship, and there's no way to override		
Table Administration and Data Management PRB1631253 KB1216793	The activity formatter does not work as expected on the sc_task table after upgrading to Tokyo	In Tokyo releases, history is not properly built for the sc_task table on instances with a shard DB. This prevents comments, work notes, and field value updates from appearing in the Activity Formatter and record history. The updates are captured in sys_audit and sys_journal field, but not the sys_history_set.	Refer to the listed KB article for details.

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 3 Hotfix 2](#)
- [Tokyo Patch 3 Hotfix 1](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 3 Hotfix 2

The Tokyo Patch 3 Hotfix 2 release contains fixes to these problems.

Build information:

Build date: 12-08-2022_1744

Build tag: glide-tokyo-07-08-2022__patch3-hotfix2-12-07-2022

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Mobile Platform PRB1611402	The 'Use Part/ Remove Part' function displays an invalid input if a filter is applied	After the Tokyo upgrade, users are unable to use 'Use Part / Remove Part' with filters applied to the list.	

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 3 Hotfix 1](#)
- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 3 Hotfix 1

The Tokyo Patch 3 Hotfix 1 release contains fixes to these problems.

Build information:

Build date: 11-21-2022_1758

Build tag: glide-tokyo-07-08-2022__patch3-hotfix1-11-19-2022

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Key Management Framework (KMF)	A race condition in a third-party cryptographic dependency can cause	The issue is reproducible on certain instances only. Those are either on San Diego or Tokyo. When an instance	

Problem	Short description	Description	Steps to reproduce
PRB162028	outbound calls to fail	is affected, most, or all, of its nodes run into the exception. When the exception is triggered, it's thrown for each outbound call, causing almost all to fail.	

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 3](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 3

The Tokyo Patch 3 release contains important problem fixes.

Tokyo Patch 3 was released on November 10, 2022.

- Build date: 11-03-2022_2313
- Build tag: glide-tokyo-07-08-2022__patch3-10-26-2022

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

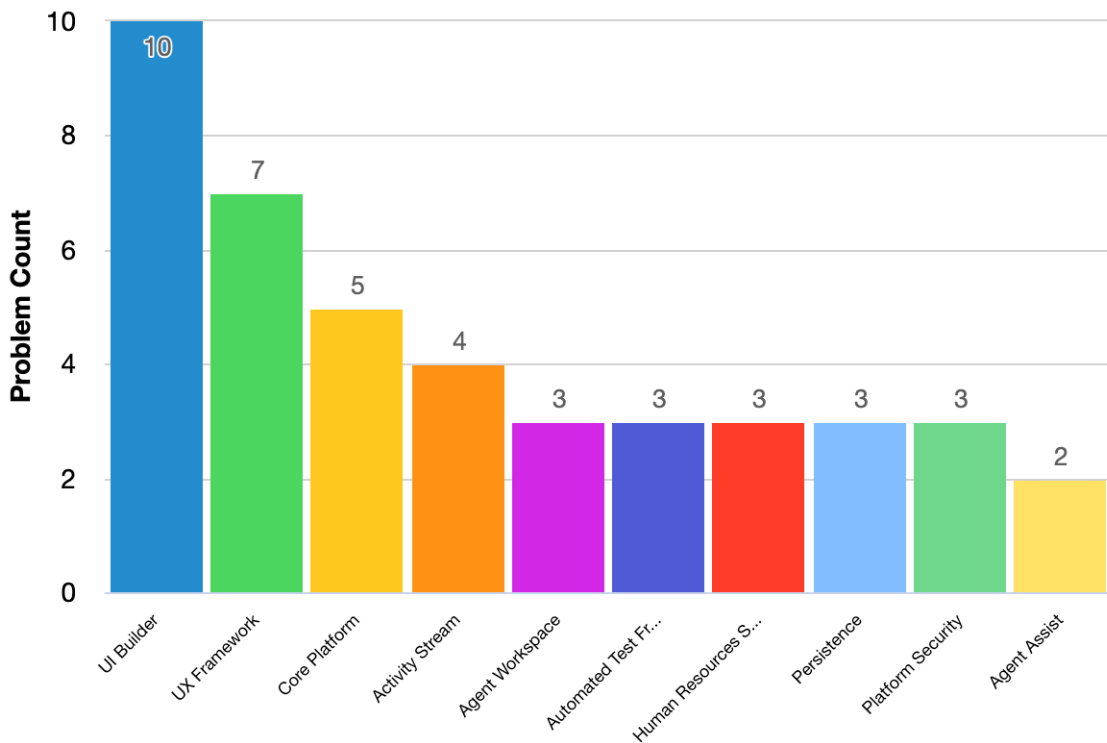
i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

For a downloadable, sortable version of the fixed problems in this release, click [here](#) .

Overview

Tokyo Patch 3 includes 100 problem fixes in various categories. The chart below shows the top 10 problem categories included in this patch.

Top 10 problem categories



Security-related fixes

Tokyo Patch 3 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform®. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Tokyo Patch 3, refer to [KB1193417](#).

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
HTML Editor PRB1603899	The default font in all the HTML fields is set to 'System Font' and the size is 12 pt	There isn't an option to change the font style and size of all the HTML fields in the instance.	<ol style="list-style-type: none"> 1. Navigate to a Tokyo instance. 2. Open any form that has an HTML field on the form layout. 3. Open a kb_knowledge.do form. <p>Notice the field: 'Article Body' (html) has a font style set to 'System Font' and the size is set to 12 pt.</p> <p>The HTML field should be set to Verdana and 8 pt.</p>
Internationalization	Customized messages are overwritten		Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
PRB1589909 KB1166342	after upgrading to San Diego patch		
Lists PRB1581406	Oracle error thrown when grouping a list by a column in the German language	When accessing an instance running on Oracle and set to the German language, the grouping by the 'Spalte in Tabelle' (Column on Table) column on the 'sys_schema_attribute' table causes an error to be thrown. This only happens when the language is set to German and the instance is running on Oracle.	
Service Portal PRB1602143 KB1175270	In Tokyo, the Knowledge Base (KB) 'Most viewed' and KB 'Category page' widgets aren't displaying the article view count, author name, and date	Issue is reproducible in Tokyo only.	Refer to the listed KB article for details.
Session Log PRB1612404	Possible performance impact after Tokyo upgrade due to cache flush propagation for tables with large hierarchies	Users expect no log messages that start with 'Changed table'. There should be only one log message that starts with 'handleTableChangeCacheFlushMessage -' per sys_cache_flush record. However, there's one info log message that begins with 'Changed table -' per each child of cmdb_ci in each node's localhost logs.	
Text Search PRB1590306	Global search results for request items display the catalog item	The first string field other than the number in the text search view should be the primary field.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
KB1123757	Same as the primary display field		

All other fixes

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1593635 KB1156544	Browser spell check changes aren't applied when posting comments/notes	If the Rich Text Editor (glide.ui.journal.use_html set to 'true') is enabled for Workspace forms, any corrections made to miss-spellings don't save to the 'Activities' stream unless the user makes another action within the editor. For example, entering a space or other character. If they just put focus onto the editor before posting the comment or note, this isn't enough. The uncorrected spellings are saved instead.	Refer to the listed KB article for details.
Activity Stream PRB1594109	For a new record, the activity feed isn't reflected after saving and needs a manual reload of the page to be reflected	The Activity field displays as empty after clicking Save , but if a user manually reloads the page, the activity feed is populated with the creation details.	<ol style="list-style-type: none"> 1. Activate Software Asset Workspace (com.sn_sam_workspace). 2. Create an SRP variant of a record page. 3. Create a record for the table. 4. Fill in the required fields. 5. Click Save. <p>The 'Activity' feed displays, but as empty.</p>
Activity Stream PRB1604653	Error displays in the dev console: 'getInitialRenderState isn't a function'	This was caused by an incomplete refactoring.	<ol style="list-style-type: none"> 1. Load an incident record or any page containing an activity stream. 2. Inspect the dev console. <p>Expected behavior: No errors related to the activity stream.</p> <p>Actual behavior: An error appears in the dev console.</p>

Problem	Short description	Description	Steps to reproduce
Agent Assist PRB1598649	The Search As field name disappears on Agent Assist when the configuration is loaded from local storage	The issue can occur because the configuration call returns a string instead of an object for the 'search_as_field' property. It should contain value and displayValue instead. Or, the user object in searchAsState on now-agent-assist is overwritten.	<ol style="list-style-type: none"> 1. Navigate to 'incident agent assist table configuration' for generic Workspace. 2. Select the Search As field as a caller. 3. Save the configuration. 4. Open legacy Agent Workspace. 5. Navigate to lists. 6. Incidents > All. 7. Select any non-closed incident. 8. Navigate back to the tab with lists. 9. Select another non-closed incident. <p>The name in the Search As field disappears.</p>
Agent Chat PRB1589587	Database (DB) view record doesn't match the existing service channel	Issue is related to the DB view record, which joins interaction, queue, and work item tables. DB view record joins the incorrect sys_id for a service channel.	
Agent Workspace PRB1593648	After checking the check box, the luminosity contrast ratio for the blue color text in a table is less than the standard ratio 4.5:1	This issue exists for all the workspaces.	<ol style="list-style-type: none"> 1. Open the homepage in an instance in an Edge browser. 2. Navigate to the Lists button. 3. Click Enter. 4. In 'Lists', look for 'Cases', or any other list with data in the table it displays. 5. Navigate to a check box present in any row of the table. 6. Select it. 7. Verify when the check box is checked whether the luminosity contrast ratio for the blue color text (for links) in the table is greater than or equal to the standard ratio 4.5:1 or not. <p>Expected behavior: Luminosity contrast ratio for the blue color text in the table when the check box is checked should be greater than or equal to the standard ratio 4.5:1.</p>

Problem	Short description	Description	Steps to reproduce
			<p>Actual behavior: Luminosity contrast ratio for the blue color text in the table when the check box is checked is 3.8:1, which is less than the standard ratio 4.5:1.</p>
<p>Agent Workspace PRB1595176</p>	<p>In both Chrome and Windows, CPU is high in the task manager after clicking Clear All in the activity filter</p>	<p>In Agent Workspace, the CPU usage is high when a user clicks Clear All after making field changes on the opening filter under the 'Activity' tab on any record. Rising CPU usage impacts system performance.</p>	<ol style="list-style-type: none"> 1. Navigate to an instance in San Diego. 2. Open Agent Workspace. 3. Opening any incident or case. 4. Open task manager from the browser window. 5. Navigate to the 'Activity' tab. 6. Open a filter. 7. Make a few field changes. 8. Click Clear all. <p>The CPU usage is high and it never comes down. Users can check this in both Chrome and Windows task manager. The CPU goes down to normal only on refreshing the browser again.</p>
<p>AI Search PRB1596577</p>	<p>Users are unable to override the Entity View Action Mapper (EVAM) configuration for AIS global search</p>		<ol style="list-style-type: none"> 1. Install the AIS global search store app. 2. For the AI Search Application for global search, change the EVAM configuration bundle for the search application configuration. 3. Verify if the EVAM configuration specified on the search app isn't honored. <p>Expected behavior: The EVAM configuration specified on the search application level is applied to AIS global search.</p> <p>Actual behavior: The EVAM configuration specified on the search composite data broker takes precedence.</p>

Problem	Short description	Description	Steps to reproduce
Application Portfolio Management (APM) PRB1606998	The 'Technology Lifecycle' page isn't loading properly when sorted on 'Database' under the 'By product classification' choice	If users select the By product classification option and then select Database , the 'Technology Lifecycle' page isn't loading. It continues to load. This impacts all users.	<ol style="list-style-type: none"> 1. Open any San Diego instance. 2. In the navigation type 'Technology Lifecycles', click Technology Lifecycles. 3. In the option pane on the top left, select By product classification. 4. Verify that the list is sorted accordingly. 5. From the list, select Database. <p>The page goes into indefinite loading and the result doesn't display.</p>
Archiving PRB1597276	GlideAggregate has a hard limit and doesn't rearchive records	GlideAggregate has a hard (default) limit when applying window in a query. Due to this, it isn't rearchiving records that are over the limit.	<ol style="list-style-type: none"> 1. Have a set of records that are archived and restored. 2. Ensure that these records are over the limit of the glideProperty 'glide.db.max.aggregates'. 3. Run the rearchive job. <p>It only rearchives until the limit set by the property.</p>
Archiving PRB1600136 KB1167964	A long-running scheduled job named 'Destroy Job Consumer #X Node - appYYYYYY' runs for many days	There are multiple of these long-running scheduler jobs that have been running for more than a day. They hog the scheduler workers. They have a sys_properties name 'glide.cmdb.data_manager.default_archive_time'.	Refer to the listed KB article for details.
Assessments PRB1604733	Issue with the assessment iframe for the risk_assesment evaluation method in Tokyo	Users observe an error message after clicking the 'Assessment' tab.	
Automated Test Framework PRB1596396	Failure to open an existing record in Agent Workspace	An error displays.	<ol style="list-style-type: none"> 1. Navigate to ATF > Tests. 2. Create a test. 3. Add Test Step: 'Open an Existing Record' with Form UI = Agent Workspace, Table = Incident. 4. Select any record.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 5. Add the same step 30–50 times. 6. Open the step. 7. Right-click the header. 8. Click Insert and Stay 30–50 times. 9. Run the test. <p>Expected behavior: The test passes without any error.</p> <p>Actual behavior: The test fails after sometime and stops with an error message on the console: 'Uncaught TypeError: testFrameWindow.CustomEvent.observe isn't a function'.</p>
Automated Test Framework PRB1600646	Parameterized testing isn't working in cloud runner due to a Glide code issue	Parameterized tests can't run in the ATF Cloud Runner store app.	<ol style="list-style-type: none"> 1. Add a new ATF test with 'Parameterized testing' enabled. 2. Add test data. 3. Run the test in cloud runner. <p>Parameterized tests are failing with a timeout.</p>
Automated Test Framework PRB1607653	Generated test suites can't run tests in parallel because they all touch the cloud user's login time on impersonation		<ol style="list-style-type: none"> 1. Ensure that Cloud Runner and Test Generator feature is configured. 2. Navigate to the 'Test Generator' page. 3. Generate tests, leaving the 'Advanced' check box cleared. 4. Navigate to the newly generated 'ATF-Generated Suite'. 5. Run Test Suite > Cloud Runner. <p>Expected behavior: When scrolling through the progress window during suite execution, there should be more than one test in a 'Running' state.</p> <p>Actual behavior: Only one test at a time is in a 'Running' state.</p>
Clone Issues PRB1608474	A clone for a target instance must be upgraded to a higher version	When a clone starts, it runs a check to see whether the source and target instances are on the same version. Sometimes the	<ol style="list-style-type: none"> 1. Trigger a clone from the source. 2. Target which are on different versions. 3. Authenticate the target.

Problem	Short description	Description	Steps to reproduce
		clone receives an error message stating that the target instance must be upgraded to a specific version to proceed with the clone.	Post-successful authentication, sometimes a message displays that the target instance must be upgraded before a clone request can be submitted.
Condition Builder PRB1599651 KB1177281	The list widget in UI Builder doesn't work with the 'updated before yesterday' condition	Adding a list widget with an 'Updated before yesterday' condition to a UI Builder page doesn't yield any results, even though results are returned in UI16.	Refer to the listed KB article for details.
Core Platform PRB1598431	sys_logger_configuration.level doesn't apply a log level filter for syslog and node log, used by Log Export Service	sys_logger_configuration.level and their level-filtering works. However, the clear named entry that is used by Log Export Service to export either 'Syslog' or 'Node Log' records don't look at the level when filtering which logs to match. Regardless of the level chosen, logs of all levels are exported.	
Data Privacy PRB1596680	Anonymization jobs aren't always recorded in a rollback context, leaving no way to revert without a database restore	Only one of the privacy configuration jobs support rollback and it's a flag the customer can un. All of the anonymization jobs that run outside of a post-clone activity must automatically be recorded in a rollback context.	<ol style="list-style-type: none"> 1. Elevate to the data_privacy_processor role. 2. Navigate to All > System Security > Data Privacy > Data Privacy Job. 3. Create a data privacy job. 4. Select a privacy configuration that doesn't support rollback. 5. Schedule the job for data anonymization. 6. After the job has run, the data is anonymized for the selected configuration. <p>Expected behavior: If a user made a mistake or just wants to undo the anonymization job, the user can use the Rollback button to do so.</p> <p>Actual behavior: The user can't undo this action and must work with support</p>

Problem	Short description	Description	Steps to reproduce
			to restore data from a backup, if available.
Data Privacy PRB1606826	Users are unable to activate the Data Privacy plugin	The Data Privacy plugin is a licensed plugin and should be visible to admins for activating the plugin. Admins are unable to view the plugin, as it isn't published.	<ol style="list-style-type: none"> 1. Log in to an instance as an admin. 2. Navigate to plugins table. 3. Search for plugin 'com.glide.data_privacy'. <p>Expected behavior: The Data Privacy plugin should be visible for admins to install.</p> <p>Actual behavior: The plugin isn't visible.</p>
Discovery PRB1591083 KB1123698	The AbstractDeleteStrategy script include generates 19 million lines of system logs every day and must reduce the logging		Refer to the listed KB article for details.
Email PRB1594364	If a custom URL is marked as an instance URL, the image attachment in Email Client is broken in Agent Workspace		<ol style="list-style-type: none"> 1. Find an instance with a custom URL marked as an instance URL. 2. Open an incident from Agent Workspace. 3. Click Compose Email. 4. Attach an image by copying and pasting. 5. Send an email. 6. Check the email from Outlook.
Email PRB1610935	IMAPReader throughput is slow compared to POP3Reader	The delay is considerable when IMAPReader is under a high-load.	
Flow Designer PRB1594519	SLA is canceled when running an ATF test		<ol style="list-style-type: none"> 1. Install the plugins com.snc.universal_request and com.snc.incident.universal_request. 2. Change the scope to 'Universal request'. 3. Open the test 'ATF Test: UR: Restrict or Unrestrict universal request'.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 4. Copy the test. 5. Run the ATF test. <p>The step, 'Click a UI Action', appears to fail on reporting a step result. The failure ends the test in a strange manner.</p>
Flow Designer PRB1599268	Dynamic inputs/outputs don't run the helper action, until after saving or a browser refresh		<ol style="list-style-type: none"> 1. Create a flow. 2. Add a 'Create Flow Data' action. 3. Configure Definition [Data Definition]. 4. Select Jake test. <p>Observe the dynamic template field Variables isn't selectable. The Dynamic input helper action didn't run.</p> <ol style="list-style-type: none"> 5. Add 'Get Flow Data Values'. 6. Map the flow data output of the previous step, as the flow data reference input. 7. Configure Definition [Data Definition]. 8. Select Jake test. <p>Observe the dynamic output doesn't generate data pills in the data panel. The dynamic output helper action didn't run.</p> <p>When the data definition changes (in this example), which is the dependent input for the helper action, the helper action should re-fire, refreshing the dynamic inputs/outputs. If a user clicks Save in the flow, the dynamic inputs/outputs helper actions run, and both display the template field picker, and data pills in the data panel.</p>
Forms and Fields PRB1599270	Changing a reference qualifier value and opening a record isn't displaying updated record values		<ol style="list-style-type: none"> 1. Log in to the instance. 2. Navigate to Base Agent Workspace. 3. Click the magnifying glass icon of the Caller field. 4. Choose Abel Tuter from the list.

Problem	Short description	Description	Steps to reproduce
			Open the record by clicking the i icon next to the Caller field. It still displays the previous value.
Graph API PRB1578240 KB1123186	Global text search input doesn't display when glide.ui.can_search has certain roles, such as snc_internal	Next Experience doesn't display the search bar when the property glide.ui.can_search has certain roles, such as snc_internal.	Refer to the listed KB article for details.
Human Resources Service Management PRB1578426 KB1123144	Needs proper error/exception handling of the 'HR Activity Set Trigger Check' workflow	The 'HR Activity Set Trigger Check' workflow currently lacks proper error/exception handling, so there are cases when an error/exception happens.	Refer to the listed KB article for details.
Human Resources Service Management PRB1585584	HR document templates don't append to an HR task	The document body saved in the 'draft_document' table has the special characters encoded to ASCII. When the document is signed, the system collects the signatures on a map with the key as 'userId'. Due to the difference in the draft document's body signature variable and the signature map key, the signature isn't replaced. Thus, the function execution ends without reaching the document generation part.	
Human Resources Service Management PRB1600141 KB1175815	Huge number of calls to the HR Report when users open HR Agent Workspace, which causes performance issues		Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
Inbound API Authentication PRB1609994	If no authorization header is in the request, the inbound rest API with basic authentication fails with a 401 error	When a user sends a request without any authorization header, and relies on the response header for a second request, it fails.	
Instance Data Replication feature PRB1593951	A producer Kafka client timeout during send can lead to errors		
Internationalization PRB1610112	The new translation loader must prevent apps with multiple dependencies from performing more than one cache flush	Flushing the list of caches once per plugin isn't possible when using the new translation loader with store apps. The new translation loader should change to use the strategy currently used for store apps. That is a max of one cache flush per interval (currently 1 hour).	
Key Management Framework PRB1589966	Vault token property shouldn't be deny-listed	An exception can be observed when a non-maint user calls some logic that uses Vault.	
Language and Translations PRB1603028	Has Breached, Active, and Task SLA field choices aren't translating to any language other than English		
Lists PRB1596538	Even if glide.ui.list.allowExtendedFields is enabled, the Extended field isn't added to the list layout	Issue is replicable in extended fields in Tokyo instance.	<ol style="list-style-type: none"> 1. Navigate to any San Diego instance. 2. Create a String field in an application model table. 3. Navigate to incident.list.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 4. Click List Layout from the list context menu. 5. Select Configuration Item > Expand > Model ID. 6. In an extended field, select the newly added field in step 2. 7. Save. 8. Navigate back. <p>The List view field isn't added. Even in 'List layout' added, the field is removed.</p>
Mobile Platform PRB1605187	Approval requests display empty values in mobile after a Tokyo upgrade	Any mobile screen that has a Sysapproval table > Document_id field, the values display as empty. For screens that use the Sysapproval field, the values are populated without any issues.	
Next Experience Unified Navigation PRB1590807 KB1124530	The homepage displays a 'Bad Request 400' error for a non-admin with a role specified in the <code>glide.ui.update_set_picker.role</code>	An error displays: 'A Bad Request (400) error has occurred. Please check that your instance is running and refresh.'	Refer to the listed KB article for details.
Performance Analytics PRB1343346 KB0748885	An incorrect Breakdown element is passed in redirection from the breakdown widget to Analytics Hub when elements have no scores	When clicking a data point from any series, it appears on a breakdown widget that not all its breakdown elements have scores. The Analytics Hub that opens displays the wrong breakdown filter on top.	Refer to the listed KB article for details.
Persistence PRB1312335	Users should be able to run a query with 2 related lists' conditions	Users should be able to run a query with 2 related lists' conditions. Currently, only 1 related list condition is executed independently even	

Problem	Short description	Description	Steps to reproduce
		when 2 are in the query.	
Persistence PRB1579967 KB1183912	There's a java.security.AccessControlException when opening connections after Glide startup	There are errors in the logsControlException	Refer to the listed KB article for details.
Persistence PRB1605848 KB1190118	'loadRow failure: java.lang.IllegalStateException: Sparse storage format has one field, sys_id:' error displays	Sparse storage errors can occur when large sys_ids are passed to GlideRecord queries. There must be over 800 sys_ids passed into GlideRecord.	Refer to the listed KB article for details.
Platform Secrets Management PRB1613225	Excessive logging from com.snc.core_authentication.CredentialBuilder	In com.snc.core_authentication.CredentialBuilder process every credential that doesn't have the SM format.	<p>1. Set up a MID Server. 2. Create multiple credentials.</p> <p>Expected behavior: Logs aren't flooded unless a specific property is toggled.</p> <p>Actual behavior: Logs are always flooded.</p>
Plugin Activation PRB1604901	Properties loaded through any plugin aren't correctly reflected on multi-node instances		<ol style="list-style-type: none"> 1. Open an instance with multiple nodes. 2. Log in to node 1 as an 'Admin' user. 3. Navigate to Scripts > Background. 4. Search for the plugin 'com.snc.skills_management', or any plugin with a sys_properties record. 5. Install it. 6. Log in to node 2 as an 'Admin' user. 7. Navigate to All > Plugins. 8. Search for the plugin 'com.snc.skills_management'. It should be installed already. 9. Navigate to Scripts > Background. 10. Try to print the property value for 'skills_management.migration'. <p>Expected behavior: The property value should print (successful from node 1).</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: No value prints (on node 2).
Scheduled Job Processing PRB1594588	Transaction has no start date in SchedulerThread	Scheduler thread (glide.scheduler) is transactional in San Diego+, but the transaction doesn't have a start date attached. This can cause issues when node memory remediation starts, potentially killing the glide.scheduler thread every time it runs. There may be downstream effects to the glide.scheduler thread being killed by memory remediation in this way.	
Search UX PRB1566463	Tooltip displays behind the typeahead suggestion's dropdown	After enabling AI search and placing it in the navigation bar, the tooltip displays behind the typeahead suggestion's dropdown.	<ol style="list-style-type: none"> 1. Navigate to a Rome instance. 2. Enable AI search in the instance. 3. Navigate to the Service Portal. 4. Input an AI search widget in the navigation bar of a page. 5. Navigate to the page were AI search is enabled. 6. Click the search bar. <p>The dropdown displays suggestions.</p> <ol style="list-style-type: none"> 7. Point to the 'magnifying glass' icon in the search bar. 8. Observe the tooltip displaying behind the dropdown. <p>Excepted behavior: The tooltip should display in front of the typeahead suggestion's dropdown.</p> <p>Actual behavior: The tooltip displays behind the typeahead suggestion's dropdown.</p>
Service Catalog PRB1605983	When associating content using Add content from		<ol style="list-style-type: none"> 1. Create a topic. 2. Click to add content from a catalog category.

Problem	Short description	Description	Steps to reproduce
	a catalog category link, empty catalog content is associated		<p>3. Add hardware from the list.</p> <p>4. Validate catalogs added.</p> <p>Expected behavior: Empty catalog content shouldn't be added to a topic.</p> <p>Actual behavior: Empty catalog content is added to a topic.</p>
Service Management Virtual Agent Topic B PRB1609616	Virtual agent suggestions for catalog items aren't working as expected in Now Mobile	It redirects to the 'SP' portal when requesting the catalog items from the Virtual Agent (VA) suggestions. It should redirect to the 'MESP' portal.	<p>1. Set up ITSM Virtual Agent.</p> <p>2. Change the 'Fallback Topic' to 'Search Fallback Topic'.</p> <p>3. Enable VA chat on Now Mobile.</p> <p>4. On an Android device, try searching for 'Create incident' in VA.</p> <p>5. Select Request this item.</p> <p>Expected behavior: It should open the catalog item on the 'MESP' portal.</p> <p>Actual behavior: The item is opened in the 'SP' portal, just like it's opened in the desktop.</p>
Service Management Virtual Agent Topic B PRB1614170	End users receive a 'Did any of this information resolve your issue?' message twice in VA Client when search results are 2 and 3		<p>1. Log in to the instance.</p> <p>2. Navigate to the URL.</p> <p>3. Open VA Client.</p> <p>4. Type 'How do I add Header & Footer in PowerPoint' when the conversation starts.</p> <p>The user receives a few KB results.</p> <p>5. The user is asked 'Did any of this information resolve your issue?'. Click Yes.</p> <p>6. The user is asked 'Did any of this information resolve your issue?' again.</p> <p>Expected behavior: 'Did any of this information resolve your issue?' should be asked only once, like any other keyword.</p> <p>Actual behavior: 'Did any of this information resolve your issue?' is asked twice.</p>

Problem	Short description	Description	Steps to reproduce
Service Mapping PRB1598849	The number of services returned from the Add to existing service action should be limited according to their operational status		
Service Portal PRB1606990	Fix self-closing tag issues for Service Portal widgets	Self-closing tags in sp_widgets lead to an undesired DOM structure.	
Service Portfolio Management PRB1606334	Availability is calculated for SLA commitments when associated to application services		<ol style="list-style-type: none"> 1. Associate a 'service_offering_commitment' type 'SLA' to an application service. 2. Create an outage with a start and an end date. 3. Look at the availability results. <p>Expected behavior: No results for the application service and SLA commitment.</p> <p>Actual behavior: Availability results appeared for that application service and SLA commitment.</p>
Software Asset Management Professional PRB1595143	A lifecycle report should ignore software models with empty products	This would be a performance improvement, not a functional behavior change.	
UI Builder PRB1592426	Users are unable to save a page due to a perceived duplicate event name	When users click the Save button, nothing happens. In the 'Network' tab, users can see that a business rule is preventing the save. An error displays.	<ol style="list-style-type: none"> 1. Navigate to a TD built from the main. 2. If it's a new TD, install Advanced AI Search Management Tools 3.1.2. 3. Open UI Builder. 4. Open the SearchDashboard app. 5. Change the page in the top left to 'queries'. 6. At the bottom of the page, select the Query Analysis Tab Set element.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 7. Click Edit Content. 8. Make any change. 9. Try to save the page. <p>Saving hangs. Note a failed network call, seemingly due to the 'Enforce Uniqueness on Event Name' business rule, despite not doing anything to create/warrant new events.</p>
UI Builder PRB1594487	When used with dependent controller, multi-controller in a parent page and extension point doesn't resolve bindings in UIB	Integration controller depends on a UI controller, which in turn depends on a data controller. UIB doesn't support multiple levels of dependencies for a parent page and also for an extension point.	
UI Builder PRB1596118	The configuration panel on UIB stops working after changing data sources		<ol style="list-style-type: none"> 1. Open any page in UIB. 2. Add a data visualization component. 3. Select a visualization bar chart. 4. Select a data source incident table. 5. Click Add data source. 6. Add one more data source, the problem table. 7. Save the page. 8. After saving the page, try to change one of the data sources. 9. Instead of the problem table, add the task table. 10. Click Apply. <p>The changes aren't applied.</p>
UI Builder PRB1596376	A user can self-bind in page props	Users shouldn't be able to make self-referencing context.props binding.	<ol style="list-style-type: none"> 1. Navigate to UIB. 2. Add the required params table and sys_id. 3. Click Save. 4. Navigate to the 'Screen' record. 5. Add a self-referencing context binding to one of the props.

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: Self-referencing bindings set in the screen record manually are changed to null values in UIB.</p> <p>Actual behavior: The user is able to self-bind page properties. This inconsistently throws the console error: 'Uncaught RangeError: Maximum call stack size exceeded'.</p>
UI Builder PRB1599835	If data broker doesn't exist, eventMappings and inputValues are wiped off from the 'Macroponent data' field	Even after installing the plugin that adds up those missing data brokers, this functionality breaks.	<ol style="list-style-type: none"> 1. Navigate to a macroponent that is using some data broker that isn't present in the system. 2. Edit this component. 3. Add any small CSS change. <p>Input values and event mappings are removed from this page.</p>
UI Builder PRB1600459	Inline scripts conversion fails on Tokyo build and UI builder fails to save any updates	Some inline scripts get converted as client scripts and some don't get converted. The conversion script fails.	<ol style="list-style-type: none"> 1. Try to make any change to any text. For example, update the 'Employee experience' title as 'Employee'. 2. Save. 3. After five minutes, observe the message 'Failed to save changes'. <p>In the console log, the network tab throws a response message 'Internal 500 server error'.</p>
UI Builder PRB1606392	Nested repeaters aren't resolving the value when the child repeater is bound to @item.value		<ol style="list-style-type: none"> 1. Navigate to a page in UI Builder. 2. Add a client state parameter named 'Data'. 3. Change it to type 'json'. 4. Paste. 5. Add a repeater on the stage. 6. Bind this repeater to @state.data.test. 7. Add a repeater inside this repeater. 8. Bind this repeater to @item.value.stage. <p>Notice that the repeater badge doesn't show up on Repeater 2 in the content tree.</p>

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 9. Save the page. 10. Click back on repeater one. Notice that there are two fields for data array now. 11. Try to add a button. 12. Try binding the label. <p>Expected behavior: Users should be able to bind the child repeater to an item.value property from the parent repeater and there shouldn't be two fields. Users should still be able to bind the button label to a property in @item.value.</p> <p>Actual behavior: Users can't do @item.value anymore, only @item.parent. @item.value is now undefined.</p>
UI Builder PRB1610742	Data broker definitions slow down the initial page load in UIB		<ol style="list-style-type: none"> 1. Open UIB. 2. Open Dev tools. 3. Observe the 'Network' tab. 4. Open a new page in UIB after having cleared the session cache. <p>Expected behavior: Data broker definitions load in less than a second.</p> <p>Actual behavior: Data broker definitions take up to 10 seconds to load with large definition sets.</p>
UI Builder PRB1612835	An error displays: 'Failed to create screen override'	Only one error displays in the log.	<ol style="list-style-type: none"> 1. Navigate to any domain separated instance. 2. Open UI Builder. 3. Select any experience. 4. Navigate to the homepage. 5. Change the domain. 6. Reload the UI Builder experience. 7. Click the Create Override button. 8. The UI page opens for confirmation. Click Create Override again.

Problem	Short description	Description	Steps to reproduce
			An error message displays: 'Failed to create screen override'.
UI Builder PRB1612857	Layout template definitions slow down the initial page load in UIB	This was reproduced on a San Diego and Tokyo instance.	<ol style="list-style-type: none"> 1. Open UIB. 2. Open Dev tools. 3. Observe the 'Network' tab. 4. Open a new page in UIB after having cleared the session cache. <p>Expected behavior: Layout template definitions load in less than a second.</p> <p>Actual behavior: Layout template definitions take up to 10 seconds to load with large definition sets.</p>
Usage Analytics PRB1607778	GCF definitions are missing in a GFC definition collection v2 table, which impacts the transfer of GCF definition data to big data	It fails to insert the records in a base/parent table due to a unique key constraint.	<ol style="list-style-type: none"> 1. Create an instance with at least two appnodes. 2. Upgrade one appnode to Tokyo. 3. Before the other node is upgraded to Tokyo, run the downloader job. 4. Upgrade the other node to Tokyo. 5. Start running the GCF job. <p>It ends up inserting the definitions into child tables. It keeps having exceptions to insert in a parent table.</p>
UX Framework PRB1557039 KB1124527	A new record form is visible at the bottom of the screen after closing the screen	In the new UIB framework layout system, after a modal is closed, its content is still displayed at the bottom of the page.	<ol style="list-style-type: none"> 1. Install Alignment Workspace apps, including sn=breakdown-grid. 2. Create planning hierarchy and planning org. 3. Navigate to Alignment Planner Workspace. 4. Switch to the 'Backlog' menu. 5. Click the New item button. 6. Close the modal dialog or create an item. 7. Scroll down the page.
UX Framework PRB1591728	The view rule doesn't apply to a standard record page when logged		<ol style="list-style-type: none"> 1. Log in to an instance as an admin. 2. From Workspaces, navigate to Asset Workspace.

Problem	Short description	Description	Steps to reproduce
	in for the first time		<ol style="list-style-type: none"> In Asset Workspace, select the third module, 'Asset estate', on the left side bar. Select the 'Consumables' tab. Open any record in the default view. Reload the page.
UX Framework PRB1592125	The 'Details' page for an incident record isn't loading on Agent Workspace		
UX Framework PRB1603701	'Record Information' appears empty on case creation	'Record Info' appears empty. The case focus lands on the 'Record Information' section rather than the 'Agent Assist' section when the case is created. Ribbon and secondary values don't appear in the correct locations as defined in the UX page properties.	<ol style="list-style-type: none"> Impersonate a CSM manager. Navigate to the Configurable Workspace (/now/cwf/agent/home). Navigate to the 'Case' section. Create a case. After the case is saved, navigate to 'Record Information' on the side panel. <p>Notice that record info appears empty when it should display the customer details, case details, timeline, SLA, and so on.</p> <p>Notice that the case focus lands on the 'Record Information' section rather than the 'Agent Assist' section.</p> <p>Notice that if, before step 1, the user changes the UX page properties of either ribbon location and secondary values of the record from the default value of the sidebar to the header, the ribbon, and secondary values don't appear in the correct locations as defined in the UX page properties.</p>
UX Framework PRB1609036	Tabs set with viewport tabs and dynamic tabs don't render	Related to the UXF demo apps plugin.	<p>Navigate to: <instance>/now/tabsets/tests/tabs-backward-compatibility.</p> <p>Expected behavior: The viewport and dynamic tabs should render.</p> <p>Actual behavior: The tabs don't render.</p>

Problem	Short description	Description	Steps to reproduce
UX Framework PRB1611756	A conditional on the first tab doesn't load content		<ol style="list-style-type: none"> 1. Create a page with 3 tabs. 2. Add a heading. 3. Create 3 state parameters named 'hideTabA', 'hideTabB', and 'hideTabC'. 4. Ensure to set 'hideTabA' to Boolean true. 5. Set the tab visibility to '@state.hideTabA'. <p>TabA is hidden and the other 2 tabs are displayed.</p> <ol style="list-style-type: none"> 6. On the button, set the state parameter to '!@state.hideTabA'. <p>On a click, it should unhide tabA.</p> <ol style="list-style-type: none"> 7. Navigate to runtime. 8. Click the button. <p>Expected behavior: TabA should unhide.</p> <p>Actual behavior: Although the tab is unhidden, it doesn't render the content. If a user repeats the steps for tabB and tabC, it works. The issue is only with the first tab.</p>
UX Runtime PRB1602610	sn-canvas-menu lacks theming hooks	The current sn-canvas-menu component has only one theme available, which is the background color.	<ol style="list-style-type: none"> 1. Create a UIB page using the portal app shell or the breadcrumb app shell. 2. Verify if there are missing theming hooks for font-size, text color, height of the menu, hover color, and underline color.
UX Runtime PRB1608536 KB1191913	The 'Close tab' interaction isn't closing the correct tab		<ol style="list-style-type: none"> 1. Install the Customer Service Management Demo data. 2. Side load the latest versions of cwf-workspace in an instance. 3. In that instance, choose a CSM Manager persona. 4. Navigate to Configurable Workspace in that instance. 5. Navigate to the 'Interaction' page.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 6. Click New. 7. Select chat. 8. Choose a contact. 9. Save. <p>Notice that the state is WIP (Don't close this interaction).</p> <ol style="list-style-type: none"> 10. Create another interaction with a different contact. 11. Close the interaction. <p>Notice that the interaction isn't closed.</p>
VA - Notifications PRB1604447	sys_notification_channel and sys_cs_notification_channel_configuration aren't populated with the proper notification provider when creating sys_cs_provider		<ol style="list-style-type: none"> 1. Create a sys_cs_provider record with the business rule 'Create Notification Channel and Destinat'. <p>This creates sys_notification_channel and sys_cs_notification_channel_configuration records.</p> <ol style="list-style-type: none"> 2. Verify if 'Notification provider' is populated for these records.
VA- Teams Adapter PRB1610458	Domain Controller (DC) mapping removal logic isn't generic for a bot uninstall	In the DC-mapping removal method, the type of the channel was hard-coded as 'teams_va'. Other channels or adapters thus aren't able to use the method for the corresponding bot.	<ol style="list-style-type: none"> 1. Install the Slack plugin. 2. Install the Slack bot. 3. Try to uninstall the bot. <p>DC mapping isn't cleaned up.</p>
Virtual Agent Platform PRB1600702	Focus loss is observed in a chat window when ending a conversation	Visible keyboard focus isn't provided.	<ol style="list-style-type: none"> 1. Navigate to an instance. 2. Open /esc portal. 3. Click Open Chat Window, found at the bottom-right corner of the page. 4. Select the Show me everything button. 5. Choose any topic. 6. Using the keyboard, Shift+Tab to move the focus to the End Conversation button. 7. Select it.

Problem	Short description	Description	Steps to reproduce
			<p>8. Users observe a modal to end the conversation. Select Yes with the keyboard.</p> <p>9. Observe the focus loss is observed on ending the conversation.</p> <p>Expected behavior: On ending the conversation, keyboard focus should come down to the bottom of the conversation. The keyboard focus should be visible to users.</p> <p>Actual behavior: On ending the conversation, focus loss is observed. The user isn't receiving anything about the focus order and where the focus moves to after ending the conversation.</p>
Virtual Agent Search PRB1590935	AI Search isn't working post-upgrade		<ol style="list-style-type: none"> 1. Take a DC on Rome. 2. Clone the AI Search fallback topic. 3. Upgrade the DC to Tokyo. 4. Post upgrade, verify that the AI Search doesn't work.

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 2 Hotfix 1](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1a](#) 
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 2 Hotfix 4

The Tokyo Patch 2 Hotfix 4 release contains fixes to these problems.

Build information:

Build date: 12-12-2022_0416

Build tag: glide-tokyo-07-08-2022__patch2-hotfix4-12-08-2022



Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#).

Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#).

Fixed problem

Problem	Short description	Description	Steps to reproduce
HTML Editor PRB1613193	The HTML field editor in modal no longer opens in full screen	When composing emails via communicate tasks within major incident records, within the HTML editor field, the Fullscreen icon does not open the field full screen within the modal.	<ol style="list-style-type: none"> 1. Create a major incident record. 2. Fill out the mandatory fields and click Save. Additional UI actions appear. 3. Click View Workbench > Communicate. 4. Click Add to create a communication task. 5. Fill out the mandatory fields, then click Next > Save. A new communication task appears in the workbench. 6. Click Compose. A modal appears. 7. Navigate to the HTML editor. 8. Click the Fullscreen icon. Notice that the editor does not expand to fullscreen within the modal.

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 2 Hotfix 3](#)
- [Tokyo Patch 2 Hotfix 2](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 2 Hotfix 3

The Tokyo Patch 2 Hotfix 3 release contains fixes to these problems.

Build information:

Build date: 11-15-2022_2238

Build tag: glide-tokyo-07-08-2022__patch2-hotfix3-11-14-2022

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Field Administration PRB1605807 KB1176069	In Agent Workspace, when typing words continuously with little speed in the Description field, letters are missing and flicker	Issue is replicable in all the workspaces on Tokyo instances. It is not replicable in San Diego.	<ol style="list-style-type: none"> 1. Navigate to any Tokyo instance. 2. Navigate to Agent Workspace. 3. Open any incident. 4. In the description, type the words continuously with little speed. <p>Letters are missing and start to flicker.</p> <p>Expected behaviour: When typing words continuously, letters shouldn't be missing.</p> <p>Actual behaviour: When typing the words continuously with little speed, letters shouldn't be missing or flicker.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 2 Hotfix 2](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 2 Hotfix 2

The Tokyo Patch 2 Hotfix 2 release contains fixes to these problems.

Build information:

Build date: 11-08-2022_1824

Build tag: glide-tokyo-07-08-2022__patch2-hotfix2-11-05-2022

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Flow Designer PRB1615780	Flow Designer queries all scopes and returns a list of all scopes to the front-end which affects performance of the subflow definition API	The API /api/now/processflow/ flow/ subflow_definition uses JSONUtil and Jackson to serialize some Java objects to JSON. When it does this it invokes the method 'getScopes' on FDElemSecurity. 'getScopes' should be private or annotated so it does not get serialized and is not included in the JSON response. Scope checking should not query the entire list of scopes as this will slow down the platform.	<ol style="list-style-type: none"> 1. Create two apps: app_common and app_one. 2. Create an empty flow in both apps and keep them open. 3. Create a user (dduser) that has a delegated developer role and flow designer role for scope app_common. 4. Create flows/subflows in both scopes. Open the created flows in step 1 as the created user. <p>Observe that getScopes gets called a lot and has a slow query time.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 2 Hotfix 1](#)
- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 2 Hotfix 1

The Tokyo Patch 2 Hotfix 1 release contains fixes to these problems.

Build information:

Build date: 11-03-2022_1039

Build tag: glide-tokyo-07-08-2022__patch2-hotfix1-10-14-2022

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

Fixed problem

Problem	Short description	Description	Steps to reproduce
Session Log PRB1612404	Possible performance impact after Tokyo upgrade due to cache flush propagation for tables with large hierarchies	Users expect no log messages that start with 'Changed table'. There should be only one log message that starts with 'handleTableChangeCacheFlushMessage -' per sys_cache_flush record. However, there's one info log message that begins with 'Changed table -' per each child of cmdb_ci in each node's localhost logs.	

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 2](#)
- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 2

The Tokyo Patch 2 release contains important problem fixes.

Tokyo Patch 2 was released on October 13, 2022.

- Build date: 10-07-2022_1443
- Build tag: glide-tokyo-07-08-2022__patch2-09-29-2022

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) ↗.

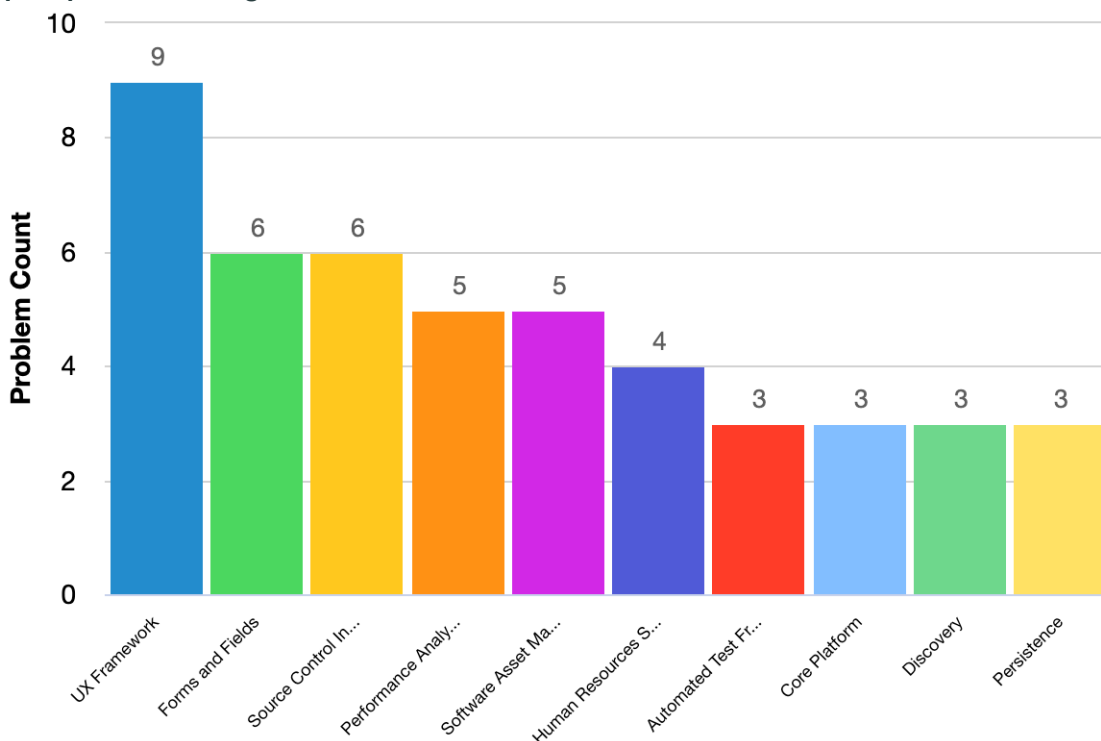
i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) ↗.

For a downloadable, sortable version of the fixed problems in this release, click [here](#) ↗.

Overview

Tokyo Patch 2 includes 107 problem fixes in various categories. The chart below shows the top 10 problem categories included in this patch.

Top 10 problem categories



Security-related fixes

Tokyo Patch 2 includes fixes for security-related problems that affected certain ServiceNow[®] applications and the Now Platform[®]. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Tokyo Patch 2, refer to [KB1181332](#) ↗.

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
Flow Designer PRB1606387	With Chrome version 105, Flow Designer causes unexpected behaviors due to unwanted characters that represent Byte order mark (BOM)	The slate editor does not handle unicode characters well, which represents Byte Order Mark (BOM). This causes a string to be appended with those characters and results in comparison failures.	<ol style="list-style-type: none"> 1. Log in to a San Diego instance on one computer with Chrome version 103. 2. Create a flow/subflow. 3. Add a variable. 4. Set the variable to a string. 5. Add an 'if' flow logic and save. 6. Log in to the same instance on a different computer. 7. Update Chrome to version 105. 8. Open the above flow and add an 'if else' flow logic. 9. Compare the variable created with the same string it was set to. 10. Test the subflow. <p>Notice that the comparison fails.</p>
Dashboards and Home Pages PRB1578807 KB1123932	The instance throws error and the source is 'com.glide.ui.ServiceErrorListener'	Several errors are observed in the system logs when a dashboard is opened with the Next Experience UI.	Refer to the listed KB article for details.
Antivirus Scanning PRB1596558 KB1168974	Invalid requests to antivirus servers impact attachment functionality	Invalid requests are continuously sent to SNAP servers and logged, which fills up disk space and sometimes causes nodes to crash.	Refer to the listed KB article for details.
Lists PRB1580179 KB1124455	The Create favorite action from the 'List' context menu doesn't work after upgrading to San Diego	A console error occurs.	Refer to the listed KB article for details.
Service Mapping PRB1577827	The discovery source of CIs set to 'ServiceWatch' as part of updates by	The population logic of manual, dynamic, and tag-based services changes the discovery sources of CIs, which can cause	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
KB1124476	Other sources should remain intact during manual, dynamic, and tag-based service population	issues. It is expected the the discovery sources of these CIs will remain intact.	

All other fixes

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1592391	Workspace: Records with large activity stream causes form to flicker/resize in Firefox	When using Firefox, when records with a large activity stream (900+ entries) are loaded in Agent Workspace, the view appears to flicker/resize.	
Activity Stream PRB1593800	The toggle Compose Settings and More Options buttons in the Activity Stream do not have aria-labels	In order to add aria-labels to the correct DOM elements, a configAria object must be passed into the corresponding NDS components.	
Agent Chat PRB1586262	Chat loses focus when scrolling through chat history		<ol style="list-style-type: none"> 1. Navigate to portal and click the virtual agent icon. 2. Type 'live agent' and start a live chat (or initiate a topic that directs to a live agent). 3. As a second user, that belongs to the appropriate chat group, navigate to Agent Workspace in a separate window. 4. Accept the chat initiated in step 1. 5. Type a response to the user from the workspace chat. 6. Scroll through the chat history. Notice that the focus is lost. 7. Click back into the input box, attempt to type again, and scroll up. Notice that the focus is lost again.

Problem	Short description	Description	Steps to reproduce
Agent Workspace PRB1576829	A removed filtering condition persists	The removed condition no longer appears in the Condition Builder but the filtering of the condition persist.	<ol style="list-style-type: none"> 1. Navigate to record that contains a Caller field and open the reference list for that field. 2. Expand the filter and add the condition 'Last name contains L'. 3. Run that condition set. 4. Open the filter again, remove that filter condition, and run the empty filter set. <p>Expected behavior: The single filter condition that was removed is no longer filtering the reference list and there is no badge in the accordion container.</p> <p>Actual behavior: The removed condition no longer appears in the Condition Builder but the filtering of the condition persists on the list and the badge showing '1' persists in the accordion container.</p>
Agent Workspace PRB1596432	Templates add extra text to additional comments	In Agent Workspace, when applying a template that fills in 'additional comments', the comments appear as '2022-08-11 16:40:18 - Service-now: (Additional comments)'. When the user clicks Additional Comments and then focuses on another field, it gets reverted to regular text. Note that in U16 when applying the same template, the text shows up normally and never contains the string in question.	<ol style="list-style-type: none"> 1. Navigate to incident.do and click the three dots to enable templates and click the + sign to create a new template. 2. Add a field Additional comments, insert some text, and click Submit. 3. Navigate to Agent Workspace > Lists > My Lists > New List. 4. In the list search, search for Incident and click All > Create 5. Click New to create a new Incident. 6. Click the right hand side to see available templates and click Apply to apply the template that was created in step 2. <p>A message appears stating that the template was applied and all the fields were updated.</p> <ol style="list-style-type: none"> 7. Scroll down in the details to 'Additional Comments' and notice that the text appears with the date and the user who added the comment.

Problem	Short description	Description	Steps to reproduce
			<p>8. Click the text box and click some other field.</p> <p>Notice that it changes to regular text.</p> <p>Expected behavior: The text appears without the date and the user who added the text.</p> <p>Actual behavior: The text appears with the date and the user who added the text.</p>
AI Search PRB1597771	Performing a Zing exact match search for a record in a child table of a task returns an internal server error		<ol style="list-style-type: none"> 1. Create a table (for example, u_child_table) extending task. 2. Create a string type field (for example, u_test_field) on u_child_table. 3. Add the u_test_field to the default list layout for u_child_table. 4. Add few records in the table. 5. Ensure that the records are created with the same number prefix as the task table (for example, TASK123456). 6. Clear the instance cache (cache.do). 7. Perform a global search using the number of the record created in step 5. <p>Observe that an internal Server Error (500) error is thrown.</p>
AI Search PRB1598062	Problem task should be included in a base instance as an indexed source	The problem task (problem_task) should be included in the base instance as an indexed source in the AI Search Indexed Sources plugin, so that there is a predictable sys_id.	
Application Installation Engine PRB1605097	Installation of App Customization Removes Updates on Dependency Applications	When performing the app customization installation, changes to the dependent applications are being cleared. The AppCustomizationInstaller sets a context	<p>Instance 1</p> <ol style="list-style-type: none"> 1. Create (or reuse) an application (A) (needs more than one version). 2. Upload both versions to the store.

Problem	Short description	Description	Steps to reproduce
		<p>flag that declares the installation is a customization. When the installation upgrades the dependent application, the check to see if collision detection is required returns the wrong result due to the customization context.</p>	<p>3. Create a second application (B) and make it depend on A (latest version).</p> <p>4. Upload to the store.</p> <p>Instance 2</p> <p>1. Create an app customization on B.</p> <p>2. Upload to app repository.</p> <p>Instance 3</p> <p>1. Install A - lowest version.</p> <p>2. Make updates to A with an update set.</p> <p>3. Install B with the customization.</p> <p>Expected behavior: The file is skipped because of the sys_update_xml.</p> <p>Actual behavior: The update made to A gets removed.</p>
<p>Archiving PRB1545688</p>	<p>Archiving causes data corruption in archive log records when the table name is longer than 37 characters</p>	<p>The archive table name 'ar_u_table_name_over_thirty_seven_char_ab' for archive cannot be inserted in the archive log because the length of to_table column is 40.</p>	<p>1. Create a table where the table's name is over 37 characters long (For example, 'u_table_name_over_thirty_seven_char_ab').</p> <p>a. Add a string column to the table and named (name).</p> <p>b. Check the display and mandatory checkboxes.</p> <p>c. Save the column.</p> <p>2. Create at least one record in the table.</p> <p>3. Create a table that contains a reference to the first table.</p> <p>4. Configure the list and form for the second table to include the reference field.</p> <p>5. Create a record in the second table without a reference to a record in the first table.</p> <p>6. Create a record in the second table with a reference to a record from the first table.</p> <p>7. Observe the list for the second table, the form for either record created in the second table, and the results from the Show XML button from both records.</p>

Problem	Short description	Description	Steps to reproduce
			<p>8. Create an archive rule for the first table, check the 'retain references' checkbox, and set a condition that will match the record in the first table.</p> <p>9. Activate and run the archive rule.</p> <p>10. Navigate back to the list for the second table.</p> <p>Observe the broken display at the reference field and the corruption in the archival log records.</p>
ATG Infrastructure PRB1599955	Conflicting version of the Commons-math3 library used in the ml-lib project		
Authorization Legacy ACLs PRB1593734	Data leaks to a parent table when a data filter is applied to a child table field that does not exist on the parent	Data leaks to parent table when data filtration is set up for a child table and cascading is on.	<p>1. Create a data filtration rule on an incident table.</p> <ul style="list-style-type: none"> a. The data condition is 'caller is Abel Tuter'. b. The subject condition is 'login user has admin role'. c. Set cascading to 'True'. <p>2. Log in as an ITIL user to view an incident record whose caller is Fred Luddy.</p> <p>Observe that the record is not visible.</p> <p>3. Log in as an ITIL user to view a task record whose caller is Fred Luddy.</p> <p>Expected behavior: The task record is not visible.</p> <p>Actual behavior: The task record is visible.</p>
Authorization Legacy ACLs PRB1596964	A user with the security_admin role cannot add a security_admin role to a group		<p>1. Log in as an admin.</p> <p>2. Elevate permissions for a session.</p> <p>3. Open any group record.</p> <p>4. View the Roles related list.</p> <p>5. Click Edit.</p>

Problem	Short description	Description	Steps to reproduce
			<p>6. Locate the security_admin role add the role to the group.</p> <p>7. Save.</p> <p>Expected behavior: A user with the security_admin role is able to add a security_admin role to a group.</p> <p>Actual behavior: The user cannot add the role to the group.</p>
Automated Test Framework PRB1598396	disable parameterized testing in cloud runner and The Tokyo ATF parallel tests within suites feature logs 'reschedule' syslogs frequently enough to cause instance outages, and throws unhandled exceptions	There is excessive logging from ATF to the syslog table when ATF Cloud Runner is rescheduling parallel tests within suites during test runs, and if the suite contains parameterized tests, then exceptions will be thrown that hang ATF Cloud Runners for up to two weeks.	<p>1. Run a suite containing 1000 tests through the Cloud Runner store app.</p> <p>2. Verify that the tests are all scheduled at once.</p> <p>Observe that the rescheduling tool can potentially log millions of entries while attempting to schedule them.</p>
Automated Test Framework PRB1600343	Testing fails with the error 'Error ending impersonation in the UI session' and the wrong created_by user on records	A user runs a suite of tests through the cloud runner and some of the tests fail, which destroys those cloud runner browsers and ultimately leads to remaining tests timing out.	<p>1. Create a suite of tests that impersonate various existing users and then validate data tied to the user creating it (record query, record validation steps).</p> <p>2. Run a suite of these tests in parallel, so that there are at least enough tests running that different impersonations occur on at least one BOS browser.</p> <p>Observe the error when ending impersonation in the UI session.</p>
Automated Test Framework PRB1603135	Cloud Runner is shown as an option for 'Pick a browser'	The Cloud Runner store app is not available and should not be shown as an option.	<p>1. Navigate to the 'Basic UI Test' ATF test record.</p> <p>2. Click Run test.</p> <p>Notice that Cloud Runner is an option.</p>

Problem	Short description	Description	Steps to reproduce
Benchmarks Application PRB1598014	Page scope message should mention the indicator category than the generic Benchmark Application		<ol style="list-style-type: none"> 1. Create a Benchmark indicator from an application scope. 2. Navigate to the Benchmark set up page. 3. Opt-in for Benchmarks. 4. Choose a random application scope not used in step 1. <p>Observe that the page scope message does not mention the indicator category.</p>
Change Management PRB1598071	The Model State table of the State Transition Model is not extensible	As part of the State Transition Model, the user can create multiple states for a State Model. Ideally the user should be able to extend the state model to add fields and add features on top of it. However, this table is not extensible.	
Column Level Encryption PRB1597484	Instances activating CLE for the first time are incorrectly using Encryption Context rather than Encryption Module	Instances activating CLE for the first time should be using Encryption Module and not Encryption Context.	<ol style="list-style-type: none"> 1. Provision an instance on Tokyo or later instance. 2. Activate CLE starter. <p>Expected behavior: Encryption module is used.</p> <p>Actual behavior: Encryption context is used.</p>
Configuration Management Database (CMDB) PRB1601479	Add a read ACL to the sn_cmdb_editor role so users have read access to records in CMDB workspace	Users with ITIL or Asset roles can only access the cmdb_health_result table. In order to access those records in CMDB workspace, an additional check must be added to assess whether the user has an ITIL or Asset role along with the sn_cmdb_admin / sn_cmdb_editor / sn_cmdb_user roles. The ITIL role contains the sn_cmdb_editor	<ol style="list-style-type: none"> 1. Run CMDB Health jobs as an admin. 2. Impersonate a CMDB editor. 3. Navigate to CMDB Workspace. <p>Notice that the user can see cards related to Stale CIs in the 'Important actions' section.</p> <ol style="list-style-type: none"> 4. Click the View Stale CIs button. <p>Expected behavior: The user can view the Stale CIs.</p> <p>Actual behavior: The user doesn't have read access to the table, so no records appear.</p>

Problem	Short description	Description	Steps to reproduce
		role on base instance. Adding a read ACL to sn_cmdb_editor will help reduce the checks in CMDB workspace use cases, and will also help to decouple dependencies on roles like itil_admin, itil, etc. in the future.	
Core Platform PRB1597780	Message Archival: Unnecessary DB table optimizations occur when messages are archived and expired messages are deleted	There are two jobs which are running as a part of Message Archiver: Message Archival and Expire Archival. In both these methods, compaction is not optimized.	<ol style="list-style-type: none"> 1. Run tests in MessageArchiverIT. 2. Notice that the logs generated by testArchiverNoArchival() indicate table compaction.
Core Platform PRB1602744	When Log Protection is enabled, the calls to check if a child table's parent is a protected table perform a DB query instead of checking the cache	The calls to check if a table is a protected table should all be cached so the user should not see DB queries being run against protected_table_configuration	<ol style="list-style-type: none"> 1. Navigate to a Tokyo instance. 2. Enable protected tables. 3. Open a 'Debug SQL' window. 4. Navigate to an incident, open a record, and click Update. 5. In the debug window, search for 'protected_table'. <p>Observe that there are queries against protected_table_configuration where table=task.</p>
Dashboards and Home Pages PRB1580562 KB1172996	Multipivot report PDF export and printer friendly preview lose color after an upgrade	After upgrading to San Diego, the printer friendly version loads the overview in color. However, after exporting it to PDF, it turns black and white.	
Data Privacy PRB1604800	Write-access to all system properties is turned off after activating the Data Privacy plugin		<ol style="list-style-type: none"> 1. Log in to an instance as an admin. 2. Navigate to the sys properties table. 3. Open the ais_enablemlframework property. 4. Verify that the Value field has write access.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 5. Install the plugin com.glide.data_privacy. 6. Navigate to the sys properties table. 7. Open the ais_enablemlframework property. <p>Expected behavior: The Value field should have write access.</p> <p>Actual behavior: The field only has read access.</p>
Discovery PRB1570052	When debugging a pattern extension/connection section in top down mode, if a match step fails in an earlier extension section, the debug mode will stop		<ol style="list-style-type: none"> 1. Debug an extension/connection section for a top down pattern (in top down mode). 2. Have a match step fail in an earlier extension section. <p>Expected behavior: The rest of the extension section is skipped and the next one runs without issues.</p> <p>Actual behavior: Debug mode stops.</p>
Discovery PRB1595753	MID throws an error if the logon service is created by domain user with administrative privileges		<ol style="list-style-type: none"> 1. Start the MID service. 2. Stop the MID service and assign the Logon user to a domain user with administrative privileges. 3. Restart the MID. 4. Log in to an instance navigate to the MID server page. 5. Try to restart MID from the instance. <p>Expected behavior: No errors should be thrown on the instance side.</p> <p>Actual behavior: MID throws an error on the instance.</p>
Discovery PRB1600849	SncIPAddressV4 no longer supports hostname resolution and breaks on a Tokyo version	Existing code that uses SncIPAddressV4.getString() breaks in Tokyo.	

Problem	Short description	Description	Steps to reproduce
Email PRB1542689	Normal mail scripts do not work as expected in email templates content from HR (sn_hr_core_email_content)	Users are unable to use normal email layouts for HR Content emails triggered in an HR Lifecycle Event. It is always missing the email_layout field in the (sn_hr_core_email_content)_email_content table. When the mail template is used, and sends an email out of an HR Lifecycle Event, an error appears in the log and the subject is not replaced.	<ol style="list-style-type: none"> 1. Create an HR Email Template (sn_hr_core_email_template). 2. Create a mail script. 3. In the mail script, use the 'email' object to set the subject (email.setSubject('Test')). 4. Call the mail script in the HR Email Template. <p>Expected behavior: When calling mail scripts, the API of the mail scripts should be able to get the email subjects through the objects provided to mail scripts.</p> <p>Actual behavior: When the mail template is used, and sends an email out of an HR Lifecycle Event, an error appears in the log and the subject is not be replaced.</p>
Employee Taxonomy Framework PRB1591931	The taxonomy topic security evaluation takes along time if translations are active	This is the root cause of many megamenu performance issues.	
Field Service Management PRB1598251	Users are unable to accept or assign a Work Order Task as an external manager	An error message asks for the territory to be selected even if it is already selected.	
Financial Management PRB1597767	The fiscal calendar is not generated when using a custom date format	Users cannot generate a fiscal calendar when using a custom date format on the 'glide.sys.date_format' System Property.	<ol style="list-style-type: none"> 1. Navigate to the 'glide.sys.date_format' System Property and change the type to string and value to 'dd-MMM-yyy'. 2. Search for 'Fiscal Calendar' in the left navigator. 3. Click Generate. 4. Choose 'Standard' for Fiscal Calendar Types. 5. The following are the Fiscal Calendar Configuration: <ul style="list-style-type: none"> a. Fiscal Unit = Month b. Start Month = 01

Problem	Short description	Description	Steps to reproduce
			<ul style="list-style-type: none"> c. Start Day = 01 d. Start Year = 2022 e. End Year = 2023 f. Prefix for Year = FY g. Prefix for Quarter = Q h. Prefix for Month = M <p>6. Click Generate Calendar.</p> <p>7. Click Ok on the pop-up message.</p> <p>Observe the following error in red: 'There was an error while generating the fiscal periods for the provided inputs.'</p>
<p>Forms and Fields</p> <p>PRB1592773</p>	<p>Calendar months do not get translated in configurable workspaces, but do in base Agent Workspace</p>		<ul style="list-style-type: none"> 1. Navigate to a base instance with a language plugin (for example, German) enabled. 2. Configure a workspace page using UI builder & selecting CMDDB workspace experience. 3. Add the Calendar component to the page and click Save. 4. Open the page. 5. Switch the Language to Non-English (for example, German). 6. Reload the page. <p>Notice that the months on the calendar are not translated.</p>
<p>Forms and Fields</p> <p>PRB1595731</p>	<p>Journal field tooltips are badly formatted in lists</p>	<p>Entries are not separated with new lines. This also affects field hints in forms.</p>	<ul style="list-style-type: none"> 1. Log in to any San Diego instance with Next Experience enabled. 2. Open the incident record and add few additional comments / worknotes. 3. Open the list layout of the incident record and filter for the incident in step 2. 4. Add Comments and Work notes to the list layout. 5. Hover over the text in the Comments and Work notes field. <p>Expected behavior: The comments are visible in the overlay segregated with new lines.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: The comments are clubbed in the overlay which makes them difficult to read.
Forms and Fields PRB1599099	A record is created when there are errors in the form after SRP uptake	Records should not be created until the user corrects the entered data.	<ol style="list-style-type: none"> 1. Navigate to '<instance_url>/now/softwareasset/operations/'. 2. Click Licensing > Software lifecycle averages. 3. Click New to insert a new record. 4. Select Type as Product. 5. Select any option from the Product list. 6. Enter decimal values in the Average end of life period(months), and Average end of support period(months) fields. 7. Click Save. <p>Expected behavior: A record cannot be created until the user corrects the entered the data.</p> <p>Actual behavior: A record is created.</p>
Forms and Fields PRB1599265	Tags do not appear after escalating a case	Tags should appear in the Case form.	<ol style="list-style-type: none"> 1. Log in to an instance. 2. Impersonate any one of the following personas: CSM Manager, CSM Agent, or Consumer Agent. 3. Navigate to a configurable workspace. 4. Navigate to the Case section in the related list and click the New button. 5. Provide the details, save the Case, and Click the Escalate Case button. 6. Once filled Escalated form, return to the Case form and observe the tags. <p>Expected behavior: Tags appear in the Case form.</p> <p>Actual behavior: Tags do not appear in the in Case form.</p>
Forms and Fields PRB1599860	'Password (2 Way Encrypted)' is not editable after		Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
KB1170607	Upgrading to San Diego		
Human Resources Service Management PRB1577602	Replace the use of the formModal key from nowRecordFormBlob with now-modal	formModal from nowRecordFormBlob is passed to the create-employee-document component in the contextual side panel. This needs to be replaced with UIB now-modal as formModal key from nowRecordFormBlob is being removed in order to remove circular references.	
Human Resources Service Management PRB1595955	Unnecessary RCAs for profile page access are hitting sn_ja_ja_planUtils()	An ACL check for isUserManager() that is triggering unnecessary RCAs that are hitting sn_ja_ja_planUtils().	
Human Resources Service Management PRB1596842	HR case search results for the Employee field are not readable	The issue is caused by the change in background color between San Diego and Tokyo.	<ol style="list-style-type: none"> 1. Log into the instance as Admin user. 2. Navigate to 'All HR cases'. 3. Click the New button, or navigate directly to the 'sn_hr_core_case_creation.do' form page. 4. Search for an employee. <p>Observe that the search results are not readable.</p>
Human Resources Service Management PRB1597922	The HR condition 'All Active Users' has issues with the User Column field	Users observe the issue with the base instance HR condition record 'All Active Users'. The value of user_column field is set to 'user' which is incorrect, since the table field which is set to 'sys_user' in this record does not have any column with the name 'user'.	
Operational Intelligence for Event Mgmt	The default retention policy is eight days which means MI	The retention policy consists of retention policy schedules, which define the granularity at which	

Problem	Short description	Description	Steps to reproduce
PRB1574092	Models are calculated with limited and partially corrupted data	data is stored. As new data comes in, the data that is older than the scheduled duration (eight days) is pushed to the next schedule using the 'Retention policy aggregator' which is 'average' by default. If data is requested at a higher granularity than exists in the retention schedule, NaNs are returned.	
Operational Intelligence for Event Mgmt PRB1602907	Changing the cluster name causes a gap in metric data and results in failure when attempting to register new metric in the M2CI table		<ol style="list-style-type: none"> 1. Send a new metric. 2. Change the cluster name. 3. Send the payload again. <p>Observe that an error about attempt to insert new record into M2CI table appears in the instance log.</p>
Performance Analytics PRB1590924	Adding both durationFormat and 'numberFormat' to metrics causes the number formatted fields to display in the duration format	numberFormat works, but after adding the durationFormat, the non-duration formatted unit fields are also formatted in the duration format.	
Performance Analytics PRB1591547	When updates are made to a data range in seconds, minutes, months, or years, the data doesn't change		<ol style="list-style-type: none"> 1. Create a dashboard. 2. Create an element on the dashboard. 3. Add the data source 'All components'. 4. Navigate to Configuration > Data range. 5. Change the period to a month. 6. Save. 7. Navigate to Configuration > Data range. 8. Change the period to a second.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 9. Save. 10. Navigate to Configuration > Data range. 11. Change the period to a minute. 12. Save. <p>Expected behavior: When changes are made to the data range to second, minute, month, or year, the data should be different depending on the selection.</p> <p>Actual behavior: When changes are made to the data range to second, minute, month, or year, the data doesn't update.</p>
<p>Performance Analytics PRB1595291</p>	<p>The user is unable to edit the Advanced Dashboard even with the proper role due to a cross-scope issue</p>	<p>The user has view access but not edit access and an error message appears.</p>	<ol style="list-style-type: none"> 1. Create an Advanced Dashboard within the app scope. 2. Share the dashboard with edit access to a specific role. 3. As the user with the above role, try to log in and access the Dashboard. <p>Observe that the user is able to view the dashboard but unable to edit it. The page displays a message reading, 'This dashboard is in the Issue Auto Resolution for HR application, but Global is the current application. To edit this dashboard, use the application picker to select the correct scope.'</p>
<p>Performance Analytics PRB1598645</p>	<p>Deleting messages causes the messages not to load thereafter</p>		<ol style="list-style-type: none"> 1. Set up a collaborative chat. 2. Send a few messages including emoji's back and forth between two agents. 3. Delete a few messages from the non-sender side and reload the collaborative chat. <p>Notice that none of the messages load and observe the error.</p>
<p>Performance Analytics PRB1600229</p>	<p>PA targets load slowly with Next Experience enabled</p>	<p>Loading becomes slow when Next Experience is enabled and there is a large number of active targets.</p>	<p>Refer to the listed KB article for details.</p>

Problem	Short description	Description	Steps to reproduce
KB1177654 ↗			
Persistence PRB1590903 KB1159157 ↗	Instant Alter breaks replication between MariaDB v10.4 and v10.2	In the Now Platform, Glide has a feature (which is enabled by default) that detects a database's capability to perform instant alter. When Glide detects that a database supports this functionality, it will attempt to perform instant alter rather than online alter whenever possible. If the primary database supports instant alter, but the secondary does not, replication between the databases will break. For example, MariaDB version 10.4 supports instant alter, but version 10.2 does not. This feature should only be enabled when both sides (primary and secondary) are on a database version that supports instant alter.	Refer to the listed KB article for details.
Persistence PRB1599601	Use StringBuilder instead of String.format	String.format is causing unnecessary performance overhead.	
Persistence PRB1605568	Dot-walking with the IP address column produces an incorrect join SQL	The IP address column does not handle dot-walk references correctly during 'join'.	
Predictive Intelligence PRB1590116	The classification and clustering visualization chart does not load	This issue is caused by the removal of older highcharts versions.	Navigate to the ML Solution page for a classification model. Notice that the Solution Visualization tab is empty. In the browser console, notice an error message.

Problem	Short description	Description	Steps to reproduce
Process Optimization Application PRB1597497	When a user is deleted from a project, the project landing page throws an error that causes projects not to load	When a project exists with a deleted user, the Analyst Workbench throws an error.	<ol style="list-style-type: none"> 1. Create a project. 2. Delete the user on the project. 3. Navigate to Analyst Workbench. <p>Observe that the project page keeps loading for about one minute and an error occurs.</p>
Process Optimization Application PRB1602836	The zoom controls button on the Now Diagram component is not hidden when configured to hide	A vertical pill appears on the bottom right of the screen, where as nothing should show up if showZoomControls is set to false.	<p>Log in to an instance and navigate to the CEO Dashboard.</p> <p>Observe that the toolbar button is visible on the bottom right as a thin vertical white colored pill.</p>
Project Portfolio Management PRB1600754	Conversion and Association of RIDAC records is not working		<ol style="list-style-type: none"> 1. Install PPM Standard plugin. 2. Install Project Workspace store application. 3. Navigate to Workspace > Project Workspace. 4. Create a new Project. 5. Navigate to RIDAC view. 6. Right-click any RIDAC record and select either Associate or Convert RIDAC option. <p>Actual behavior: Conversion and Association of RIDAC records is not working.</p> <p>Expected behavior: Conversion and Association of RIDAC records should work fine.</p>
Project Portfolio Management PRB1605268	Users with the role IT_Project_Manager and Teamspace_Manager are unable to create RIDAC Elements		<ol style="list-style-type: none"> 1. Log in to the Application. 2. Create a Project. 3. Navigate to Project Workspace. 4. Click the RIDAC list. 5. Click Add Risk. 6. Enter the mandatory fields and click Submit. <p>Expected behavior: Risk is created.</p> <p>Actual behavior: Risk is not created.</p>

Problem	Short description	Description	Steps to reproduce
Search UX PRB1592086	Text on the Genius search results is scrambled in mobile view	When viewing Service Portal search results that contain 'Genius Results' on a mobile device, text displays overlapping with other text.	On mobile view, navigate to Service Portal with Genius Results enabled and configured search for any term. Notice that the Genius Result's top line of text overlaps with itself.
Server Side Scripting PRB1591638	Source map generation adds an extra source	Using Class keyword in ECMAScript 2021 Mode Script Include, generates a 'sourceMap' error when trying to use it.	
Service Catalog PRB1599044	MRVS disappears if ordered from the wishlist		<ol style="list-style-type: none"> 1. Create a Catalog Item with a MRVS. 2. Click Try it and add a row in MRVS. 3. Add this item to the wishlist. 4. View the wishlist and order this item. <p>Observe that on the variable editor of the requested item, the MRVS is blank.</p>
Service Mapping PRB1591821	Log refactor in SaOperationsWrapper is needed in order to reduce running time		<p>Navigate to SaOperationsWrapper script include and observe the logs.</p> <p>Open the map, preview the map, and check logs that are heavy and not necessary unless debugging.</p>
Service Portal PRB1602320	The Close button on magnified images is not in the tab index	Images within the chatbot have the option to magnify, with an X button to close the magnified image. This button has no text control and is not in the tab index.	<ol style="list-style-type: none"> 1. Open Agent chat. 2. Open an image within the chat bot window in 'magnified' view. 3. Try to select the X button using the tab key or with a screen reader. <p>Observe that the button is not selectable because it is not in the tab index.</p>
Software Asset Management Professional PRB1585929	If a software suite parent is an installation, the potential savings is 0	Several scripts related to removal/reclamation candidates check whether installations within a software suite are components using '!installGr.getValue('inferred_suite')'. If an installation is a component, the potential savings is 0	<ol style="list-style-type: none"> 1. Create a Microsoft Office software model with an entitlement. In the entitlement, specify the license cost and add components such as Word or Excel. 2. Create a direct software installation for Microsoft Office. 3. Run reconciliation. <p>Observe that the Microsoft Office installation is stamped with an</p>

Problem	Short description	Description	Steps to reproduce
		since the potential savings is based on the suite parent. In Tokyo, the inferred suite of a suite parent is stamped to the suite parent itself. Therefore, the suite parent is considered a component and has a potential savings of 0.	<p>inferred_suite of Office (new behavior in Tokyo).</p> <p>4. Create a removal candidate for the Microsoft Office installation.</p> <p>Expected behavior: The potential savings should match the license cost.</p> <p>Actual behavior: The potential savings is 0.</p>
Software Asset Management Professional PRB1590751	Recon fails for partial clustering scenarios	Recon fails for partial clustering scenarios in Tokyo (Reg Pass1). The same scenario with same exact dataset passes in San Diego.	
Software Asset Management Professional PRB1593843	A line of code in the 'Set Product Display' script produces an error	In the 'Set Product Display' script, DOM object is used to hide a reference icon on the Software Model form of the Software Asset Management classic application (Classic UI16 view). When the 'glide.ui.clickthrough.popup' system property is set to 'true', the parameter in this DOM object changes, causing the client script to fail.	
Software Asset Management Professional PRB1594767	When importing MLS entitlements, the Software Asset Management application does not account for the PO number , Purchase date , and Included in license summary fields, which may lead to		<p>1. Log in to a San Diego instance.</p> <p>2. Import MLS with items.</p> <p>3. Notice that duplicates are shown, even where the PO numbers are unique with separate entitlements.</p> <p>Expected behavior: Different entitlements should not have duplicates.</p> <p>Actual behavior: Field information is considered unique because the PO number is not taken into account when evaluating for duplicates.</p>

Problem	Short description	Description	Steps to reproduce
	duplicate entitlements		
Software Asset Management Professional PRB1599714 KB1165309	CPU count null value causes an error in Per Core license calculators	Reconciliation of SQL Server installations created on a CI with missing data for cpu_count or cpu_core_count will lead to a technical error in Per Core license metric rights calculations.	Refer to the listed KB article for details.
Source Control Integration PRB1593450	Apply stash fails with the error 'The stash preview has unresolved conflicts. To commit this stash you must address all problems'	'The stash preview has unresolved conflicts. To commit this stash you must address all problems' error is thrown when there is a sys_update_preview_problem record whose status is 'empty/NULL'.	<ol style="list-style-type: none"> 1. In studio, select Manage Stashes. 2. Select the stash and Apply. <p>Expected behavior: 'Apply stash' completes successfully. Actual behavior: 'Apply stash' fails with the error 'The stash preview has unresolved conflicts. To commit this stash you must address all problems'.</p>
Source Control Integration PRB1598110	The clean up of incoming bundles is not working as expected when a new incoming bundle is received	There should not be an incoming.bundle after processing is completed, but there are multiple incoming.bundle attachments for some users.	<ol style="list-style-type: none"> 1. Navigate to sys_attachment. The table=sys_repo_config and the table ID is the repo ID. 2. Rename the golden.bundle to incoming.bundle. 3. Apply remote changes. <p>Expected behavior: There is no incoming.bundle file attached to the repo. Actual behavior: The incoming.bundle file is still there.</p>
Source Control Integration PRB1600905	A delegated developer with the right permission is not able to Publish app customizations to app repo		
Source Control Integration PRB1602304	When applied from stash, some preview problems are not displayed in studio		<ol style="list-style-type: none"> 1. Create a new field. 2. Add it to a form section along with other fields.

Problem	Short description	Description	Steps to reproduce
	and are automatically skipped		<ol style="list-style-type: none"> 3. Remove the newly created field (the sys_ui_section should still reference the field). 4. Remove the sys_update_xml for the delete. 5. Stash the form section change and click Apply. <p>Expected behavior: The fields are restored to the form from the stash.</p> <p>Actual behavior: Preview problem is automatically marked as skipped and form changes are missing.</p>
Source Control Integration PRB1604717	UpdateSetAccessHandler prevents adding files from a global update set into a global application once that app is linked to source control	When a global app is linked to source control and glide.ui.vcs.collision_avoidance=true (default value) users are no longer able to add global files to the application. The UI dialog reflects a message saying 'successfully added files to application' and corresponding claims are generated, but record update is incorrectly blocked by the UpdateSetAccessHandler.	<ol style="list-style-type: none"> 1. Make update to a file while in the Global scope. It should be tracked in the Default Global update set but reproducible with any current global update set. 2. Create a global app and link to source control. 3. Via studio, select 'Add Existing Files', select the file from the list, and click Add. <p>Notice the message, 'Successfully added file'.</p> <p>Expected behavior: The file is visible in Studio files explorer and Application File list on the sys_app form.</p> <p>Actual behavior: The file is not visible in studio and not listed in sys_app related list.</p>
Source Control Integration PRB1606037	Importing an application that contains 17500 files takes nine hours	The LogCommand takes too long for this number of files.	<p>Import from SC an application with 17500 files</p> <p>Expected behavior: Importing takes less than one hour.</p> <p>Actual behavior: Importing takes roughly nine hours.</p>
Tectonic Build Tools	Repair of plugin 'com.sn_themes' results in the log error:	This affects four plugins.	<ol style="list-style-type: none"> 1. Log in to a San Diego instance. 2. Navigate to v_plugin.list.

Problem	Short description	Description	Steps to reproduce
PRB1595848	Invalid plugin name		<ol style="list-style-type: none"> Open the plugin com.sn_themes and click Activate/Repair. Navigate to sys_plugin_log.list and filter for the status as Error. <p>Expected behavior: There is no error when activating / repairing the com.sn_themes plugin.</p> <p>Actual behavior: There is an invalid the plugin name error when activating / repairing the com.sn_themes plugin.</p>
UI Builder PRB1594491	Inherited controller on subpage shows ID in the data shelf	'Integration Controller' is dependent on a 'UI Controller' which in turn is dependent on a 'Data Controller'. UIB doesn't support multiple levels of dependencies.	
UI Builder PRB1594758	The configuration panel resets every time the chart type is changed		<ol style="list-style-type: none"> Open any page in UIB and add a data visualization component. Select the visualization bar chart and data source incident table. Save the page. Change the chart type. <p>Observe that after changing the chart type, the config panel is reset.</p>
UX Framework PRB1592142	Service worker persists after being disabled		<ol style="list-style-type: none"> Enable Next Experience. Navigate to any instance URL. Uncheck 'Active'. Navigate to home and open up the dom (inspect element on page). Navigate to applications tab and click Service worker. <p>Expected behavior: root.js should be deregistered.</p> <p>Actual behavior: root.js is still registered.</p>
UX Framework PRB1593611	Service Worker renders a white screen while trying specific list/form		

Problem	Short description	Description	Steps to reproduce
	actions and calling the slushbucket		
UX Framework PRB1597494	Old viewport tabs no longer sync with stage when selected		<ol style="list-style-type: none"> 1. Place a tabs component. 2. Convert to viewport tabs. 3. Add tabs to the tabs component. 4. Select a non-default tab from the right panel. <p>The selected tab on stage the is default tab.</p>
UX Framework PRB1597833	Vol_Event elementId is overridden by 'Controller id' when an event is bubbling up through a controller	Events bubble with controller.elementId instead of their original elementId.	<ol style="list-style-type: none"> 1. Navigate to 'Experiences'. 2. Create a new page using SRP template, and give it the name = 'record'. 3. Once on the page, click the Related Lists component from the tree. 4. Navigate to the 'Events' tab on that component. <p>Notice an even mapping for 'Preview Record' mapped to 'RECORD#NAV_ITEM_SELECTED'.</p> <ol style="list-style-type: none"> 5. Open 'UI controller record page' from the 'Data Broker' section. <p>Observe a mapping for 'RECORD#NAV_ITEM_SELECTED' inside 'internal_event_mappings' that is being handled by a Client Script.</p> <ol style="list-style-type: none"> 6. Open that Client Script (name 'previewRecordsRouteMapping'). 7. Inside the client script, as a first line, add a 'console.log('event.elementId coming from controller handling = ', event.elementId);'. 8. Save. 9. Navigate back to UI Builder for the same page, add a new client script called 'Another Client Script for Related List Preview Record' on the page, and add it an another event handler on the 'Preview Record' for 'Related Lists'. 10. Inside the client script add a 'console.log('event.elementId

Problem	Short description	Description	Steps to reproduce
			<p>coming from source component = ', event.elementId)';</p> <p>11. Run the page and inspect the console.</p> <p>Expected behavior: The elementId should be persisted when controller handles it.</p> <p>Actual behavior: Observe two console.log statements from #3.5 and #5:event.elementId coming from source component = list_relatedevent.elementId coming from controller handling = rpCtrl</p>
UX Framework PRB1599132	The second click form load time has degraded by 500ms	The degradation is observed in Tokyo, in comparison to San Diego.	
UX Framework PRB1599923	Standard Record Page: Unable to open a declarative action modal upon clicking a button after having previously opened it	The issue is observed when the modal is closed via script.	<ol style="list-style-type: none"> 1. Navigate to a standard record page. 2. Click the New button in the 'Assets' related list. 3. Complete the 'Create New Facility asset' form by selecting a stockroom and clicking the Save button. 4. Navigate back to a seismic tab with the 'Assets' related list for the model in step 1 and click the New button. <p>Expected behavior: Clicking the New button should redirect the user to the form for 'Create New Facility asset' as before.</p> <p>Actual behavior: Notice that nothing happens and the user is not redirected to the form.</p>
UX Framework PRB1603208	The side bar shows the '...' (more) icon instead of the expanded tab icon list after a scripted screen condition with a glideRecord	After adding one scripted screen condition with GlideRecord query on one tab in extension point, the tab bar starts showing the '...' icon.	

Problem	Short description	Description	Steps to reproduce
	call is added to the screen		
UX Framework PRB1603701	Record Information appears blank on Case Creation	Record Info appears blank, the case focus lands on the Record Information section rather than the Agent assist section once the case is created, and Ribbon and Secondary values do not appear in the correct locations as defined in the UX page properties.	<ol style="list-style-type: none"> 1. Impersonate a CSM manager. 2. Navigate to the Configurable workspace (/now/cwf/agent/home). 3. Navigate to the Case section and create a new case. 4. Once the case is saved, navigate to 'Record Information' on the side panel. <p>Notice that record info appears blank when it should show the customer details, case details, timeline, SLA etc.</p> <p>Notice that the case focus lands on the Record Information section rather than the Agent Assist section.</p> <p>Notice that if, before step 1, the user changes the UX page properties of either Ribbon location and secondary values of the record from the default value of sidebar to the header, the Ribbon and Secondary values do not appear in the correct locations as defined in UX page properties.</p>
UX Framework PRB1608603	Allow UI controllers to depend on other UI controllers in UX Runtime		
UX Runtime PRB1596511	Blue indicator does not display on the interaction tab	The blue indicator does not display when a new message is received, when the agent is on another interaction tab with active chat.	<p>Plugins affected: com.glide.interaction.awa, sn_hr_agent_ws</p> <ol style="list-style-type: none"> 1. Impersonate a system administrator as an agent. 2. As an end user, initiate chats from two incognito windows. 3. As an agent, accept both the chats. 4. Send a message to one interaction while on the other interaction. <p>Expected behavior: The blue indicator of a new message from the end user does display.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: The blue indicator of a new message from the end user does not display.
VA- Conversation Server PRB1603143	After submitting catalog items on the UI Builder page in Teams, the conversation errors out		<ol style="list-style-type: none"> 1. Enable AI Search. 2. Start a conversation on Teams. 3. Search for the catalog item 'Request Adobe'. 4. Submit the catalog request in the pop up. <p>Observe that the conversation errors out.</p>
Virtual Agent Platform PRB1596880	Autopilot will error out if the end user sends a chat while Autopilot is being engaged	The issue is observed when an agent is about to start Autopilot and the end user is about to send a chat. This can cause Autopilot to fail and lead to a 'I'm having technical issues and won't be able to continue this conversation' error.	<ol style="list-style-type: none"> 1. As the end user, start the chat, select the three dots, and click Contact Live Agent. 2. As the agent, accept the chat so that both agents can type to each other. 3. As the agent, select an auto-agent topic, have it in the text bar, but do not send. 4. As the end user, enter text but do not send. 5. As the agent, click Send. 6. As the end user, click send. <p>Expected behavior: Autopilot does not error out and fail.</p> <p>Actual behavior: Observe that the error 'I'm having technical issues and won't be able to continue this conversation.' appears and Autopilot fails.</p>
Virtual Agent Platform PRB1597483	Simulations for Agent zero predictions do not work as expected in Issue Auto Resolution for ITSM		<ol style="list-style-type: none"> 1. Log in to a Tokyo instance. 2. Set up Issue Auto Resolution (IAR) for ITSM - Active and trained Agent zero solution. 3. Set up and run simulation for incidents. <p>Expected behavior: The simulation should work for incident configuration.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: The simulations have an error while running because of AutoResolutionProcessor refactoring.
Virtual Agent Platform PRB1599535	'Interaction.user_language' is missing at the end of a conversation		<ol style="list-style-type: none"> 1. Start a conversation via web client. 2. End the conversation. <p>Expected behavior: 'Interaction.user_language' should be populated.</p> <p>Actual behavior: 'Interaction.user_language' is empty.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 1 Hotfix 1

The Tokyo Patch 1 Hotfix 1 release contains fixes to these problems.

Build information:

Build date: 12-29-2022_1054

Build tag: glide-tokyo-07-08-2022__patch1-hotfix1-12-28-2022

i Important: For more information about how to upgrade an instance, see [here](#).

For more information about the release cycle, see the [ServiceNow Release Cycle](#).

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#).

Fixed problem

Problem	Short description	Description	Steps to reproduce
List Administration PRB1614180 KB1217354	Switching quickly between filters in legacy Agent Workspace and HR	When clicking frequently between lists in HR Agent Workspace, the user is faced with an error: 'Can't display this list. Try contacting your	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
	Workspace can generate a 'Can't Display this List' error	system administrator. Method invocation failure...'	

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo Patch 1](#)
- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo Patch 1

The Tokyo Patch 1 release contains important problem fixes.

Tokyo Patch 1 was released on September 21, 2022.

- Build date: 09-16-2022_1610
- Build tag: glide-tokyo-07-08-2022__patch1-09-01-2022

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

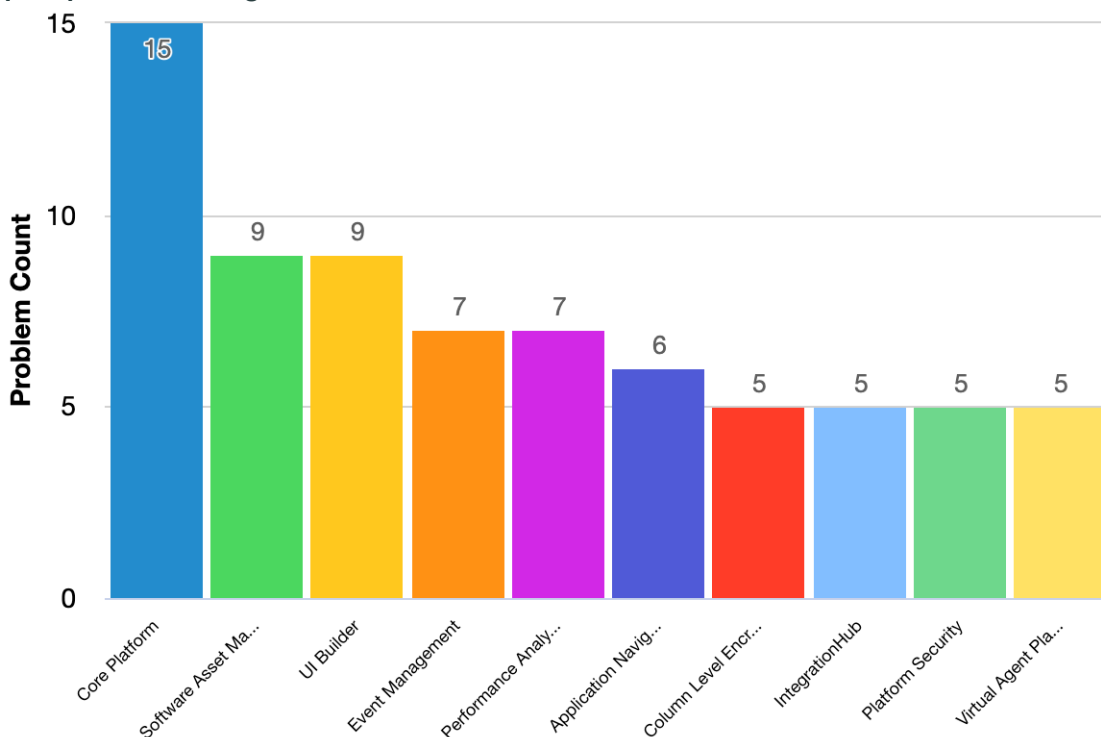
i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

For a downloadable, sortable version of the fixed problems in this release, click [here](#) .

Overview

Tokyo Patch 1 includes 186 problem fixes in various categories. The chart below shows the top 10 problem categories included in this patch.

Top 10 problem categories



Security-related fixes

Tokyo Patch 1 includes fixes for security-related problems that affected certain ServiceNow® applications and the Now Platform®. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Tokyo Patch 1, refer to [KB1158221](#).

Changes in Tokyo Patch 1

AI Search reference

Character length limit for stop word and synonym dictionary terms. AI Search ignores dictionary terms that exceed this length limit.

Circle of Trust

The Circle of Trust (COT) is a prerequisite for Code Signing that creates secure communication between your non-production and production instances to ensure that only authorized users can access the Code Signing feature.

Data privacy

Use data privacy to remove personally identifiable information (PII) from user data in a production instance and anonymize data in non-production instances. Once anonymized, the user data is no longer considered regulated private information.

Option to show the applied filter elements next to the indicator name. If a filter cannot apply to a visualization, the element(s) do not show. Toggle off to hide the filter elements and show only the indicator name.

Platform Security

Updates to the Platform Security landing page. Secure the instance, encrypt your data, authenticate users, and view your current compliance levels based on application security standards.

[Secrets Management](#)

Use ServiceNow Secrets Management for granular management of access to your passwords to fit your business needs.

[Stop words](#)

By default, AI Search ignores stop word terms that exceed 256 characters in length. You can override this default limit by adding the `query.maxDictionaryTermLength` system property. The integer value of this system property indicates the maximum allowable character length for stop word and synonym dictionary terms.

[Synonyms](#)

By default, AI Search ignores synonym terms that exceed 256 characters in length. You can override this default limit by adding the `query.maxDictionaryTermLength` system property. The integer value of this system property indicates the maximum allowable character length for stop word and synonym dictionary terms.

[ServiceNow Vault](#)

Use the ServiceNow Vault product set of data security tools that protect sensitive information from unauthorized access, corruption, or theft throughout its entire life cycle. Apply protections like encryption, secrets management, and data privacy for the redaction and auditing of sensitive information. The ServiceNow Vault Homepage provides a single, visible place to find and navigate to the ServiceNow Vault data security products.

Notable fixes

The following problems and their fixes are ordered by potential impact to customers, starting with the most significant fixes.

Problem	Short description	Description	Steps to reproduce
<p>Authentication</p> <p>PRB1510514</p> <p>KB0966872</p>	<p>Users do not receive the <code>snc_internal</code> role on their first single sign-on (SSO) login</p>	<p>The <code>snc_internal</code> role is not added for the user when the user logs in using single sign-on (SSO) for the first time. It works as expected for non-single sign-on logins.</p>	<p>Refer to the listed KB article for details.</p>
<p>Cloud Provisioning and Governance (CMP)</p> <p>PRB1594463</p> <p>KB1156521</p>	<p>When a child account is retired, the main account and its resources are retired, causing unintended data loss issues</p>	<p>When a child service account is retired, the business rule 'Cascade Update Logical Datacenter State' also retires the main account. After the main account is retired, all child service accounts are also retired. If there are custom relationships for a Cloud Service account, the upstream CIs also are</p>	<p>Refer to the listed KB article for details.</p>

Problem	Short description	Description	Steps to reproduce
		retired. Retiring of service accounts then triggers cascading effects to other associated assets, retiring them as well.	
Reporting PRB1589945 KB1123648	Scheduled reports containing chart visualizations may produce the error 'Export failed using AVP servers' with an empty PDF	The generated pdf has an error message. There is no way to set up a timeout that could be changed per instance, to specify a different timeout when exporting scheduled reports. That makes some instances fail due to high volume traffic that makes the request timeout.	Refer to the listed KB article for details.
Software Asset Management Professional PRB1584404 KB1123038	The scheduled job SAM - Deduplication consumes all worker nodes on instances and leads to performance issues	The scheduled job 'SAM - Deduplication' occupies all worker nodes leading to no available resources on instances. This causes performance issues on the instances.	<ol style="list-style-type: none"> 1. Run the 'SAM - Deduplicate Install' table. 2. Check that the asset_job_log is in progress. 3. Run the scheduled job again before the first run finishes. 4. Check that the new in-progress job is inserted while the other one did not complete.

All other fixes

Problem	Short description	Description	Steps to reproduce
Activity Stream PRB1593924	'NOW_ACTIVITY_COMPOSE_CONNECTED' #INITIAL_STATE_REQUESTED isn't restoring the correct property value	COMPOSE_CONNECTED is not correct 'on' and 'off' state in this payload.	
Advanced Work Assignment PRB1589888	AWA does not work when sys_user_has_skill has duplicate records for the same user, skill, and skill level		

Problem	Short description	Description	Steps to reproduce
<p>Advanced Work Assignment PRB1598441</p>	<p>AWA routing is delayed due to rebuilding the cache for a cmn_skill table that has millions of rows</p>	<p>When users have millions of rows in a cmn_skill table, and when a cmn_skills table changes, the AWA process tries to rebuild the cache. This takes a few minutes, thus delaying assignments.</p>	<ol style="list-style-type: none"> 1. Load many rows into a cmn_skill table (around 100 thousand). 2. Change the cmn_skill table in a different thread. 3. Try to route/assign with AWA. <p>AWA takes a lot of time to build the cache for records in the cmn_skill table.</p>
<p>Agent Chat PRB1591606</p>	<p>Users can't transfer a queue for agent-initiated chats, and the chats don't sort correctly in the 'Ongoing' tab</p>		<ol style="list-style-type: none"> 1. Open conversational messaging server (async chat channel). 2. Ensure that there is more than one queue. 3. For agent-initiated components, in the sys_cs_channel, set mweb = messaging. 4. Log in as two agents on two different browsers. 5. On one browser, navigate to a workspace. 6. Click the + sign to create a chat type of interaction. 7. Populate 'Opened For' with Abel Tuter. 8. Save. <p>On save, a Compose Message button pops up.</p> <ol style="list-style-type: none"> 9. Click the button on the pop-up. 10. Select Abel Tuter. 11. Enter the message. 12. Submit. 13. Click the link to open the agent-initiated chat. 14. On the first browser, click Quick Action to do a queue transfer. <p>Expected behavior: Users should be able to transfer to the other queue that is there for the async chat channel. Agent-initiated chats should sort on last updated.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: In the 'Ongoing' tab, if users have an agent-initiated and regular ongoing conversation, a new agent-initiated message doesn't sort at the top. If a user just received a message, it should move to the top of the ongoing list. It does not.
Agent Chat PRB1593053	Attachments are copied from an interaction to a task when the relationship between the two is indirect	The following shouldn't result in transferred attachments or messages about the created task from the interaction: (1) A task is created via a form action in a form for another record in a subtab underneath an interaction, and (2) An existing task is opened/viewed due to an action taken while viewing an interaction form (or subtab under an interaction form).	
Agent Chat PRB1593738 KB1156809	After upgrading to Tokyo, the 'Available' presence state is set to false	If a user has an AWA service channel configured and the presence state record for the 'Available' state is not modified, the 'Available' state record may become false after upgrading.	Refer to the listed KB article for details.
Agent Workspace PRB1596114	Users can't change the field selection in Group by or Metric fields in the UI Builder of Agent Workspace		<ol style="list-style-type: none"> 1. Add a data visualization via UI Builder in Agent Workspace. 2. Open the Agent Workspace. 3. In the top right, open the user menu by clicking Configure Workspace under the 'Avatar' icon. 4. On the next page, click r on the top right. The scope may have to be switched. 5. On the UI Builder, navigate to Menu > Create page. 6. On the left side menu, navigate to Components.

Problem	Short description	Description	Steps to reproduce
			<p>7. Drag 'Data visualization' into the page created above.</p> <p>8. Click Add data source on the right side menu.</p> <p>9. Select Data sources as the incident table.</p> <p>10. Set the visualization type as 'Horizontal bar'.</p> <p>11. Set Group to 'Category'.</p> <p>Expected behavior: The Group by field should change to 'Category'.</p> <p>Actual behavior: The Group by field doesn't change to 'Category'. The field displays as empty and the Apply button doesn't work.</p>
AI Search PRB1592198	When setting up sort options in the AI search application, the 'no_index' validation uses an incorrect query, which leads to an incorrect validation result	Setting up sorting for an indexed field can result in a false-positive error that says the field is not indexed.	
AI Search PRB1594577 KB1125149	Facet options are not always translated to the user session language	On the Service Portal, the facet text displayed by the Faceted Search widget is not translated to the session language. It only displays in English.	Refer to the listed KB article for details.
AI Search PRB1597691	Issue with displaying global as the selected search context	Returns a 400 error.	
App Core: Family PRB1595983	Updating versions for the base instance App Shell Agent Workspace	The update should help fix the layout definitions and clean up unused slots.	

Problem	Short description	Description	Steps to reproduce
	app version 1.0.1 to include Tokyo fixes		
App Core: Family PRB1596419	Updating versions for the base instance Common Page Templates app version 1.0.1 to include Tokyo fixes	This augments performance, helps usability, and supports communication of passing data.	
Application Navigator & Banner Frame PRB1581822	The Responses UI action doesn't work on the platform UI when Next Experience is on	The Responses UI action doesn't work on a platform UI complaint case form.	<ol style="list-style-type: none"> 1. Ensure that Next Experience is on. 2. Log in as an admin. 3. Using the platform UI, navigate to sn_templated_snip_note_template.do. 4. Create a response template: <ul style="list-style-type: none"> ◦ Name: Hello ◦ Short Name: Hello ◦ Table: Incident ◦ Condition: Empty ◦ Template body: This is a test 5. Right-click the form header. 6. Save the response template. 7. On the 'Channels' related list in the response template created, click Edit. 8. Add all the channels (Email, Form, Chat). 9. Click Save. 10. Navigate to the 'Incident' list. 11. Open any incident. 12. Click the Responses UI action. <p>Expected: The response templates modal should display.</p> <p>Actual: Nothing happens when users click the button.</p> <ol style="list-style-type: none"> 1. Turn off Next Experience. 2. Try again.

Problem	Short description	Description	Steps to reproduce
			The Responses UI action works. The feature works on UIB Workspace and Legacy Workspace, but doesn't work on the Platform Core UI when Next Experience is on.
Application Navigator & Banner Frame PRB1588615	Script type modules don't open in admin configured menus		<ol style="list-style-type: none"> 1. Add an admin configured menu. 2. Add a module 'Script Debugger' to the menu. 3. Try to click the 'Script Debugger' module under the test menu. <p>Expected behavior: The script debugger should open.</p> <p>Actual behavior: No change.</p>
Application Navigator & Banner Frame PRB1590419	The requests component on a landing page displays an invalid date when the format of dates on the instance is different	Use of GlideDate does not consider the format changes. GlideDateTime does.	<ol style="list-style-type: none"> 1. Log in to a Next Experience enabled instance with the date format dd-mm-yyyy. 2. Impersonate a user that has outstanding requests with a due date. If requests do not have due dates, add a due date to one of the requests that appear on the landing page. 3. Navigate to the landing page and look at the requests component, specifically the request with a due date. <p>Expected behavior: The due date is displayed correctly.</p> <p>Actual behavior: The due date is invalid.</p>
Application Navigator & Banner Frame PRB1592192	In the overflow menu, navigating from the filter input does not work	When the user is in the overflow menu and tries to navigate by using the filter input, nothing happens.	<ol style="list-style-type: none"> 1. Log in to Next Experience. 2. Resize the window so that one or more of the header menu's items drop into the overflow (three dot) menu. 3. Open the overflow menu. 4. Navigate to a menu with a filter. 5. Click the filter.

Problem	Short description	Description	Steps to reproduce
			<p>6. Search for a menu item that is known to be in that menu.</p> <p>7. Press Enter.</p> <p>Expected behavior: The user is navigated to the first highlighted and matched menu item.</p> <p>Actual behavior: Nothing happens.</p>
<p>Application Navigator & Banner Frame</p> <p>PRB1592483</p>	<p>After upgrading to Tokyo, the icon in the Currency field used to select a value from the catalog is not displayed</p>	<p>The Currency field does not display an 'arrow' icon next to the currency symbol, meaning it is not immediately obvious that other selections are available via the list.</p>	<ol style="list-style-type: none"> 1. Log in to an instance. 2. Navigate to 'Maintain items'. 3. Click New to create a catalog item. 4. Navigate to the 'Pricing' tab. <p>Notice the Price and Recurring price fields have a currency symbol.</p> <ol style="list-style-type: none"> 5. Click the currency symbol. <p>In San Diego and Tokyo, there is no 'arrow' icon in the field where the currency symbol is displayed.</p>
<p>Application Navigator & Banner Frame</p> <p>PRB1592621</p>	<p>The drop indicator isn't aligned when reordering a scrollable list of favorites</p>	<p>Appears only to affect reordering favorites below the scroll container height.</p>	<ol style="list-style-type: none"> 1. On BT1, using the navigator, add at least 25 favorites. 2. Open the 'Favorites' panel. 3. Click the button to edit the favorites. 4. Scroll to the last favorite. 5. Drag it up somewhere in the middle of the list. <p>Expected behavior: The drop indicator should mark the location of the drop target.</p> <p>Actual behavior: The drop indicator doesn't render in the correct place.</p>
<p>Application Portfolio Management (APM)</p> <p>PRB1594391</p>	<p>Users are able to see invalid timelines in the Technology Portfolio Management (TPM) UI with Software Asset Management</p>	<p>Users are able to see invalid timelines with any of the following combinations: (1) Without full version, s/w version, any edition; (2) Without full version, s/w edition, any version; (3) Without full version,</p>	

Problem	Short description	Description	Steps to reproduce
	Professional (SAMP)	any s/w version and edition; (4) Without full version, s/w version, edition.	
Appointment Booking PRB1591548	A lock query takes more time during performance testing of the appointment booking flow in an instance	A query takes around 12 seconds during a load test with 10 thousand users during appointment booking in the CSM portal.	
Archiving PRB1591870	Archived records are not destroyed in two cases: (1) sys_attachment_doc are not purged for and (2) when multiple sys_archive rules exist	Records are not destroyed as expected in two cases. Sys_attachment_docs are not purged for destroy rules when their parent record is destroyed. Also, having multiple sys_archive rules (even if some are not active) for the same table can cause records archived under one rule not to be picked up and destroyed when those from another rule are.	<p>sys_attachment_doc not purged for destroy rules:</p> <ol style="list-style-type: none"> 1. Create a sys_archive rule that targets a single incident. 2. Ensure that the incident has an attachment. 3. Create a sys_archive_related rule from the parent rule that targets sys_attachment records. 4. Run the sys_archive rule. <p>The incident and sys_attachment records both move to their respective 'ar_' tables with entries added into the sys_archive_log table. The relevant sys_attachment_doc records are not altered.</p> <ol style="list-style-type: none"> 5. Create a sys_archive_destroy rule for the ar_incident table. 6. Check the 'Destroy Related' check box. 7. Run the sys_archive_destroy rule. <p>The ar_incident, ar_sys_attachment, and sys_archive_log entries are deleted. The underlying sys_attachment_doc records remain.</p> <p>Expected behavior: sys_attachment_doc records should be deleted when their parent (ar_)? sys_attachment record is destroyed.</p> <p>Actual behavior: sys_attachment_doc records are orphaned.</p>

Problem	Short description	Description	Steps to reproduce
			<p>Having multiple sys_archive rules:</p> <ol style="list-style-type: none"> 1. Create two separate rules for the same table. 2. Archive records with both of them. <p>Some GlideRecord scripting might be necessary. Changing the sys_archive.archive field for some records would re-create this scenario.</p> <ol style="list-style-type: none"> 3. Create a sys_archive_destroy rule for the table. 4. Run the destroy rule. <p>Expected behavior: All of the archived sys_email records (ar_sys_email) and their entries in sys_archive_log should have been deleted.</p> <p>Actual behavior: Only records belonging to one of the sys_archive rules were deleted.</p>
Archiving PRB1598703	sys_journal_field records aren't destroyed when their parent record is archived and then destroyed		<ol style="list-style-type: none"> 1. Create an incident with work notes. 2. Archive the incident with a sys_archive rule. 3. Destroy the archived incident with a sys_archive_destroy rule. <p>Expected behavior: The record in sys_journal_field should be deleted as it has no meaning without its parent record.</p> <p>Actual behavior: The work notes record in the sys_journal_field table is not deleted.</p>
Asset Management PRB1584519	The 'Stock available' client script is changed on an instance after upgrading from Quebec to San Diego	The 'Stock available' client script gets changed on an instance after upgrading from Quebec to San Diego causing differing behavior from releases.	

Problem	Short description	Description	Steps to reproduce
<p>Asset Management PRB1585265 KB1123912</p>	<p>The Consume UI action appears twice on the 'Consumable' form on Asset Workspace</p>		<ol style="list-style-type: none"> 1. Enable Asset Management Workspace and Service Operations Walkup Experience Workspace. 2. Navigate to Asset Management Workspace from the 'Workspaces' list. 3. Click the 'Asset estate' module. 4. Click the 'Consumable assets' tab. 5. Apply the following filter: 'State = In StockSubstate = Available'. 6. Open any consumable asset that is in the state 'In Stock' and Substate='Available' in the form view. <p>The Consume UI action appears twice on the 'Consumable' form on Asset Workspace.</p>
<p>Asset Management PRB1589995 KB1124087</p>	<p>Consumables aren't reserved in agent stockroom, and instead create a record with a '0' quantity when the agent accepts the WOT</p>	<p>Because of this, the agent can't use the part. An error is thrown: 'Invalid Quantity'.</p>	<ol style="list-style-type: none"> 1. 'Reserve parts in agent stockroom' configuration should be set to true in the field service's 'Configuration' page. 2. Add any consumable in an agent stockroom with a state as 'Available' and a quantity of '100'. 3. Create a WO/WOT. 4. Create a part requirement for that WOT with that same consumable as above, with the quantity as '10' and the 'Mandatory' box checked. 5. Assign the same agent as in step 1 to the WOT. <p>10 consumables move to the 'Pending transfer' state and the remaining 90 are in the 'Available' state.</p> <ol style="list-style-type: none"> 6. Access the WOT as an agent. 7. Accept the WOT. <p>The 10 consumables in the 'Pending' transfer state are not moved to the 'Reserved' state. The records stay and another record with 0 consumables 'Reserved' is incorrectly created.</p>

Problem	Short description	Description	Steps to reproduce
Authorization/ Legacy ACLs PRB1579295	ACL over table returns false for a positive condition	The list loads properly for an asset manager user.	<ol style="list-style-type: none"> 1. Impersonate a user as a procurement user. 2. Navigate to proc_po.LIST. <p>Expected behavior: Displays the records of the proc_po table.</p> <p>Actual behavior: Access is prevented to the requested page.</p>
Automated Test Framework PRB1585947	ATF cloud runner experience should be removed from the UIB homepage		<ol style="list-style-type: none"> 1. Navigate to a UI Builder module on an instance. 2. Verify if sn_atf_tg is part of the list of UIB pages. <p>sn_atf_tg should not be part of the list of UIB pages.</p>
Automated Test Framework PRB1598396	ATF parallel testing posts too many logs to syslog and can lead to outages for heavy users, as well as throw exceptions that break ATF in Cloud Runner	There is excessive logging from ATF to the syslog table when ATF Cloud Runner is rescheduling parallel tests within suites during test runs.	<ol style="list-style-type: none"> 1. Run a suite containing 1000 tests through the Cloud Runner store app. 2. Verify that the tests are all scheduled at once. <p>The rescheduling tool can possibly log millions of entries while trying to schedule them.</p>
Cloud Encryption PRB1584171 KB1123877	Changing the system language to non-default English prevents key rotation for Cloud Encryption		Refer to the listed KB article for details.
Cloud Encryption PRB1593690	A new capability should be defined to assist GCS workflows to support CE requirements		

Problem	Short description	Description	Steps to reproduce
Column Level Encryption PRB1589193 KB1123957	CLE migration jobs should be scheduled for retry if KMF isn't ready on an upgrade	If KMF isn't set up, the migration is aborted altogether without scheduling the jobs for retry.	Refer to the listed KB article for details.
Column Level Encryption PRB1591361 KB1123954	Users should be able to select 'Encrypt attachments' or not by default on the UI	Users should be able to select from a list of crypto modules when uploading an attachment or select 'none' as an option for uploading the file. A system property controls the visibility of this list, but the property it is set to false by default.	Refer to the listed KB article for details.
Column Level Encryption PRB1591610	An instance shouldn't automatically set as 'opt_in' for CLE starter	The value should be 'opt_out', and the property should not exist. Encryption context should be available on upgrade without any manual steps.	
Column Level Encryption PRB1592711 KB1124174	The 'Encrypt' check box does not appear on the attachment pop-up modal	When uploading an attachment to a form, the 'Encrypt' check box is not displayed when the attachment pop-up modal is displayed the first time. This happens when there are no other attachments on the form.	Refer to the listed KB article for details.
Condition Builder PRB1537044 KB0999496	The Reference field in the condition builder, with the 'My Lists' configuration, no longer has a way to see all the records	In Agent Workspace, support agents are unable to select the values from the Reference field as it is not displaying all the choices. No list lookup is available.	<ol style="list-style-type: none"> 1. Log in to a Quebec or Rome instance. 2. Navigate to Agent Workspace. 3. Navigate to 'mylist'. 4. Create a list. 5. Select the source table as 'incident'. 6. Create a filter using the assignment group.

Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: In Agent Workspace, the Reference field should have a list lookup to augment the auto-complete.</p> <p>Actual behavior: In Agent Workspace, the Reference field is not displaying the complete choice values.</p>
Contract Management PRB1591262	The Life_cycle_contract file with the same sys_id is duplicated in both the 'app-cmdb' and 'app-itam' repositories	The sys_id is 'c6b261453a310102a2cdddeeff7b12f4'.	
Core Platform PRB1587832	Opening a form with attachments causes the system to check the first 20+ chunks of each attachment each time to determine if the icon is encrypted	This check has some expensive overhead if encryption is enabled, causing high CPU issues.	<ol style="list-style-type: none"> 1. Enable the Column Level Encryption plugin. 2. Navigate to an incident. 3. Add an attachment. 4. Refresh the form.
Core Platform PRB1590816	Inefficient initialization of a full qualified name in ScopedName adds to heap buildup	ScopedName calls string.format() to create a string of the form '<name>.<scope name>'. Because format() expects a regular expression, even though there is no regex used, the creation of pattern matcher creates unnecessary objects.	<p>Get a JFR trace on a busy system.</p> <p>One of the contributors to heap garbage is created within the matcher called from ScopedName.</p>
Core Platform PRB1591343	A system user is loaded from jar resources constantly to run scheduled jobs	The system user object should be returned from the FrequentUser cache whenever possible.	<ol style="list-style-type: none"> 1. Set a breakpoint in User.java at this method: 'getUserByID(String id, Boolean ignoreDomain)'. 2. Wait for a scheduled job to start. 3. Trigger the breakpoint (should only take a few seconds).

Problem	Short description	Description	Steps to reproduce
			Observe that the ID is 'system' for many of the executions.
Core Platform PRB1592602 KB1124427	The custom response header allows malformed names	The NGINX load balancer used in ADCV2 has strict header validation. If NGINX detects an invalid header, it throws a 502 (Bad Gateway).	Refer to the listed KB article for details.
Core Platform PRB1592719	sysevent_queue xml stats display incorrect information for the flow_engine queue		<ol style="list-style-type: none"> 1. On the instance, generate the traffic for the flow_engine queue. 2. Invoke XML stats endpoint /xmlstats.do?include=sysevent_queue. 3. Review the attributes from the response. <p>Expected behavior: The numbers match based on activity in the flow_engine queue.</p> <p>Actual behavior: All the attributes display 0, which is incorrect.</p>
Core Platform PRB1596283 KB1156855	A new DB-backed image (db_image) is not available until the cache is cleared with cache.do	The uploaded image is not available until the cache is cleared.	Refer to the listed KB article for details.
Core Platform PRB1596698	ATF Test Generator and Cloud Runner aren't functioning when using a required shortname endpoint URL		
Dashboards and Home Pages PRB1578799	The homepage deprecation's help tool doesn't convert all homepages	Some homepages ('User' populated, 'Selectable' is true, 'View' is empty) are not chosen to be converted to a dashboard.	<ol style="list-style-type: none"> 1. Run the script provided by the plugin 'Homepage deprecation help tool'. 2. Navigate to 'Homepage migration status'.

Problem	Short description	Description	Steps to reproduce
	to a dashboard		<ol style="list-style-type: none"> 3. Compare with the table <code>sys_portal_page</code>. 4. Observe that the following homepages are not chosen to be converted to a dashboard: <ol style="list-style-type: none"> a. 'User' populated. b. 'Selectable' is true. c. 'View' is empty. <p>Expected behavior: The homepages are chosen to be converted to a dashboard.</p> <p>Actual behavior: The homepages are not chosen to be converted to a dashboard.</p>
Design System PRB1577794	New behavior defers to 'now-dropdown-list'	The defer behavior consolidates the 'now-dropdown-list' performance enhancements done in San Diego.	
Data Privacy PRB1604800	Write-access to all system properties is turned off after activating the Data Privacy plugin		<ol style="list-style-type: none"> 1. Log in to an instance as an admin. 2. Navigate to the sys properties table. 3. Open the <code>ais_enablemlframework</code> property. 4. Verify that the Value field has write access. 5. Install the plugin <code>com.glide.data_privacy</code>. 6. Navigate to the sys properties table. 7. Open the <code>ais_enablemlframework</code> property. <p>Expected behavior: The field Value should have write access.</p> <p>Actual behavior: It has only read access.</p>
Discovery PRB1585317	A slow memory leak is observed when longevity testing	Monitored the instance on the heap memory. JAVA memory isn't increasing as early, which leads to out-of-memory errors. It	

Problem	Short description	Description	Steps to reproduce
		eventually restarts the MID.	
Discovery PRB1600849	SncIPAddressV4.Editing() no longer supports hostname resolution and breaks on a Tokyo version	Editing() that uses SncIPAddressV4.getString() breaks in Tokyo.	
Dynamic Translation PRB1597688 KB1162402	IBM translator throws an error when the input request passes the source language as empty	For example, if the input request body contains no source language, IBM throws an error: 'Given source language is not supported'.	Refer to the listed KB article for details.
Edge Encryption PRB1594533	The upgrade for the Edge proxy doesn't overwrite the existing keystore.jceks	Users are unable to use the new keypair for validation.	
Email PRB1598539	List-type items are not added to 'to', 'cc', and 'bcc' recipients in the classic Email Client	Issue appeared in Tokyo.	<ol style="list-style-type: none"> 1. Create an email template with a list item in any of the to/cc/bcc fields. 2. Add a few users in the watch_list for a record. 3. Try composing an email from the three dots menu from the top of the record. <p>Expected behavior: Users added in the watch_list must be added in the recipient section of the composed email.</p> <p>Actual behavior: No users from the watch_list are added to the recipient section of the composed email.</p>
Event Management PRB1331589	The 'VCenter connector' server sticks in an attempt to receive deleted alarm properties	Users receive a 500 error when trying to receive deleted alarm properties: 'The object 'vim.alarm.Alarm:alarm-15434' has already been deleted or has not been completely created'.	

Problem	Short description	Description	Steps to reproduce
Event Management PRB1575933 KB1118078	SolarWinds metric collection may fill the drives with too many temporary files with HTTPResponse, causing an out of memory error on the MID Server	MID Server's drive disk space fills often in the Windows temporary folder in a format HTTPResponse. The issue occurs when the metrics collection is enabled on a SolarWinds connector and the files are of a large size.	Refer to the listed KB article for details.
Event Management PRB1582488	A copy hash goes out of synchronization during an impact calculation	Impact jobs become stuck, and the last_impact_batch_copy_job hash resets to zero.	Manually reset the copy value to 0 (or any small number), or fail the copy job in the code. Observe that the other impact jobs are stuck and don't run, and the last_impact_batch_copy_job hash resets to 0.
Event Management PRB1588902	Incorrect dependencies found for the base instance app sn_em_metric (on-prem instance)	This issue can be observed on on-prem instances.	<ol style="list-style-type: none"> 1. Open a San Diego instance. 2. Mark the instance as on-prem. 3. Set the sn_appclient.app.install.offline property to true. 4. Open the 'All applications' page search for the application 'sn_em_metric'. 5. Try to install the application. <p>The incorrect dependency is found in the pre-installation pop-up.</p>
Event Management PRB1589611	Support for unsigned values of long type in OID DataType for SNMP trap processing	One of the hardware events is not listed in the 'Events' tables, but users can see it in MID server logs with the following error: 'Trap.0 SEVERE *** ERROR *** (32950)SNMPTrapListener - SNMPTrapListener: (snmp_trap_collector): Failed to create trap event from trap: ..java.lang.NumberFormatException: For input string: '3506897408'.	

Problem	Short description	Description	Steps to reproduce
Event Management PRB1591833	Missing <code>evt_mgmt.ignore_empty_event_fields</code> attribute in the 'All Property' table		<ol style="list-style-type: none"> 1. Upgrade to Tokyo. 2. Navigate to the 'All Property' table. 3. Search for <code>evt_mgmt.ignore_empty_event_fields</code> by name. <p>Expected behavior: <code>evt_mgmt.ignore_empty_event_fields</code> should be present.</p> <p>Actual behavior: <code>evt_mgmt.ignore_empty_event_fields</code> is not present.</p>
Family App Core: Appointment Calendar PRB1596315	Updating versions for the base instance Appointment Calendar app version 1.0.1 to include Tokyo fixes		<ol style="list-style-type: none"> 1. Open UI Builder. 2. Add 'Appointment Calendar' to a page. 3. In the properties, change the locale property to 'fr'. <p>The language doesn't change to French.</p>
Family App Core: Calendar PRB1596309	Updating versions for the base instance Calendar app version 1.0.1 to include Tokyo fixes		<ol style="list-style-type: none"> 1. Open UI Builder. 2. Add 'Calendar' to a page. 3. In the properties, change the locale property to 'fr'. <p>The language doesn't change to French.</p>
Flow Designer PRB1592520	In Flow Designer, after saving, data isn't retrieved or vanished for the array of (Array.Object) type		<ol style="list-style-type: none"> 1. In Flow Designer, for any spoke, select Create PO Action. 2. Enter the required data in the fields. 3. For data in the PO Line field, ensure that the data is an 'Array.Object' type. 4. Save. 5. Verify that the data is retrieved for the PO Line field. <p>Expected behavior: Data should be retrieved for the PO Line field of the 'Array.Object' type.</p>

Problem	Short description	Description	Steps to reproduce
			Actual behavior: Data is not retrieved for the PO Line field of the 'Array.Object' type.
Forms and Fields PRB1597376	Time picker inputs display in the wrong order in a right-to-left (RTL) language like Hebrew (RTL instead of LTR)	In San Diego, the 'calendar' icon displays the timestamp from RTL instead of LTR. However, it displays LTR after selection.	<ol style="list-style-type: none"> 1. Activate the Hebrew language plugin or change the text direction of any already-installed non-English sys_language record to 'Right-to-left'. 2. Open any record having the Date/time field. 3. Click the 'calendar' icon to select the date/time. <p>Expected behavior: The time picker in the 'calendar' icon should display the hour/minute/second inputs left-to-right.</p> <p>Actual behavior: The time picker in the 'calendar' icon displays the hour/minute/second inputs right-to-left.</p>
Health Log Analytics Glide PRB1591443	Missing files in the plugin for Slack and Teams	As part of the Slack and Teams' notification feature, there are files that must be published as part of the plugin.	<ol style="list-style-type: none"> 1. Activate Slack and Teams' plugins. 2. Check that they do not contain the Post Alert Notification action.
Human Resources Service Management PRB1591672	The le_request field should be removed from the sn_ja_plan table in the Lifecycle Events plugin in the 'if/JA' folder		
Integration Hub PRB1578900	The Active Directory (AD) spoke 'IsUserInGroup' fails to create a group in AD when there is a special character in the group name	This spoke doesn't work properly for groups with special characters, such as '#'. Even after applying the correction, the spoke won't find groups such as '#TC HES Camera block policy', and thus fails.	<ol style="list-style-type: none"> 1. Log in to an instance. 2. Navigate to Flow Designer. 3. Select the 'Actions' tab. 4. Select the action name 'Is User In Group'. 5. Enter in the group name/TC HES Camera block policy field: '#TC HES Camera block policy'. 6. Enter a user name.


Problem	Short description	Description	Steps to reproduce
			<p>Expected behavior: The output variables' status is set to 'Success' and the answer is set to 'True'.</p> <p>Actual behavior: It fails with the answer set to 'False'.</p>
IntegrationHub PRB1595686	Scope access to ih_sync configuration tables is restricted due to a change in core actions	The ability to insert and update records in ih_sync global tables from application scope was facilitated by the IHub 'create' or 'update' core actions. This ability no longer works.	Use, create, or update a core action in Flow Designer to insert or update RPS configuration records where the flow exists in an application scope.
Internationalization PRB1589393	The instance does not respond while installing an AES plugin		<p>Install AES/Employee Center/any other plugin.</p> <p>Observe that the instance goes down due to multiple cache flushes.</p>
Internationalization PRB1591521	Setting the session language doesn't take immediate effect when using the gs.getSession().setLanguage() method		<ol style="list-style-type: none"> 1. Install a language. 2. Open an incognito window. 3. Navigate to localhost:8080/sp/[language code] (localhost:8080/sp/ja). <p>The page should be in the target language.</p>
Key Management Framework PRB1586449	KeyExchange attempts to generate a key pair when ServiceNow LDAP PKI is enabled	When a Key Exchange feature runs the ensureAllInstanceInitialKeysExist API, and if EJBCA is enabled, it attempts to generate an asymmetric key-pair on the HashiCorp vault locally without validating.	
Key Management Framework PRB1590347	Cleanup duplicate crypto spec		<ol style="list-style-type: none"> 1. Remove spec from cm_glide_encrypter. 2. Put a break point in GlideRecord. 3. Insert a string reason function at 'grmv.ensureValues();' Line 5057(around), with condition 'tableName.equals("sys_kmf_module_crypto_spec")' with suspend type set to 'thread'.

Problem	Short description	Description	Steps to reproduce
			<p>4. In Chrome, log in as an admin.</p> <p>5. Run '(new SNC.KMFGlideEncrypterAPI()).generateGlideEncrypter' in global from a background script.</p> <p>Step 5 should hit a breakpoint and stop.</p> <p>6. In FireFox, log in as maint.</p> <p>7. Run '(new SNC.KMFGlideEncrypterAPI()).generateGlideEncrypter' in global from a background script.</p> <p>Step 7 should also hit a breakpoint and stop.</p> <p>8. Release both breakpoints by clicking the Resume program button twice.</p> <p>Expected behavior: There should be 2 specs generated for cm_glide_encrypter.</p> <p>Actual behavior: Only 1 crypto spec of each type should exist.</p>
Language and Translations PRB1579617 KB1122414	Some events get stuck with the queue 'localization' after a San Diego upgrade and cause performance alerts	There is a small backlog of events (about 10) in the queue 'localization' that are not processed. This issue applies to San Diego instances where there are no language plugins installed. The cause of the backlog of events in the queue 'localization' would be due to the missing sys_trigger record: 'localization events processor'.	Refer to the listed KB article for details.
Language and Translations PRB1592863	Twenty-two Tokyo translations should be merged with other versions		
Language and Translations	When a guest user is removed, the default	The user cannot set another language, such as Ja (Japanese).	<p>1. Log in.</p> <p>2. Check a guest user.</p>

Problem	Short description	Description	Steps to reproduce
PRB159645	language picker sticks as En		<p>Expected behavior: A guest user should be there as a previous version.</p> <p>Actual behavior: The guest user is removed after comparing with a previous version. It impacts the default language picker in the login page, as there is a dependency on the guest's language.</p>
Language and Translations PRB1588010	The Japanese translation for 'sys_created_on' and 'sys_updated_on' in the sn_vul_entry table are incorrect		<ol style="list-style-type: none"> 1. Install the Vulnerability Response (sn_vul) and Japanese (com.snc.i18n.japanese) plugins. 2. Navigate to sys_documentation.list. 3. Filter with the following conditions: <ul style="list-style-type: none"> ◦ Table: sn_vul_entry ◦ Language: ja ◦ Element: sys_created_on <p>The labels are incorrect.</p>
Language and Translations PRB1566543	The Japanese translation of 'true' and 'false' is changed to an improper value		<ol style="list-style-type: none"> 1. Log in to an instance with the I18N: Japanese Translations plugin. 2. Check the Japanese translation of 'true' and 'false'. <p>Expected behavior: 'True' and 'false' should not be changed as they are a sensitive system value.</p> <p>Actual behavior: The values are translated.</p>
Lightstep Team Bridge Helper PRB1556702	Migrating app logic to the app causes inconsistencies with global dependencies	Migrating app logic to the app caused inconsistencies with global dependency versions. All business logic was removed from global scripts and replaced by functions that perform just the global operation.	
Lists PRB1591558	Sorting multiple columns in Agent Workspace produces	Lists should be sorted by the columns in primary and secondary order, but they are not sorted at all.	<ol style="list-style-type: none"> 1. Navigate to an instance. 2. In 'Platform' view, open any record with a related list (incident or category item).

Problem	Short description	Description	Steps to reproduce
	inconsistent results		<p>3. Add a sys_relationship record that is sorted by two columns.</p> <p>Observe that the list is sorted per the relationship record.</p> <p>4. Navigate to Agent Workspace.</p> <p>5. Open the same record.</p> <p>Expected behavior: In Agent Workspace, the relate list should be sorted by 'Sequence' and 'Child order ID' by default.</p> <p>Actual behavior: In Agent Workspace, the 'All Order Task' list is not sorted at all.</p>
<p>MID Server</p> <p>PRB1597275</p> <p>KB1158643</p>	<p>Checks that have certain OS plugins fail on a different OS agent</p>	<p>The util.metrics-http-curl check fails on a Linux agent in Tokyo.</p>	<ol style="list-style-type: none"> Navigate to 'HTTP Entry Points Metrics Policy'. Click the Edit in Sandbox UI action. Scroll down. Click the check instance: # util.metrics-http-curl. Under 'Related Links', click Test Check. Check that the instance is populated with the corresponding check: <ol style="list-style-type: none"> CI: a URL Proxy Agent: Choose a Linux agent No need to choose credentials Click OK <p>The following error message displays: 'Check failed to run. Response code: 3 error getting plugin for check: error fetching asset: Get : unsupported protocol scheme'.</p>
<p>Mobile Platform</p> <p>PRB1593467</p>	<p>A URL link in an HR task isn't rendered in the Now mobile app with the onboarding store app</p>	<p>After upgrading to Tokyo, users see only the first button or no buttons, instead of the proper button according to the condition.</p>	<ol style="list-style-type: none"> As an admin on platform, activate com.sn_hr_core, com.sn_hr_mobile, and com.sn_hr_lifecycle_ent plugins with demo data. As an admin on platform, navigate to the list view on sn_hr_core_case.list.

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 3. Pick an HR case in a 'Working in Progress' state. 4. Pick a 'New Hire Onboarding HR Service' with the subject set as the same person as the login user. 5. As an admin on platform, open that HR case. 6. In its HR tasks list, pick an HRT in the 'Ready' state. 7. Change its 'HR task' type from 'HR Service' to 'URL'. 8. Fill in the URL with a valid URL. 9. Complete the profile information. 10. Sign in to the Now Mobile app as the user. 11. Tap the 'My onboarding' card. 12. Tap 'Prepare for day 1' to show 'My Tasks'. 13. Tap 'Complete your profile information' to see that the to-do is empty. <p>Expected behavior: The URL link should be rendered in the to-do cell.</p> <p>Actual behavior: The URL link is missing.</p>
<p>Mobile Platform PRB1593646</p>	<p>On the Choice field, translated strings are cached and not calculated on demand</p>	<p>This occurs on an input form screen.</p>	<ol style="list-style-type: none"> 1. Create an input form screen. 2. Add a Choice field to the form. The choices are defined on the DB field. 3. Create the choice values in two languages (for example, English and French). 4. Log in with one of the languages used for the choices. <p>When a user logs out of one language and logs back in with the other language, the choices still display in the previous language.</p>

Problem	Short description	Description	Steps to reproduce
Next Experience UI16 Theming PRB1595346	Users can't turn exclude the dark theme on the core UI in Tokyo		<ol style="list-style-type: none"> 1. Open a Tokyo instance. 2. Set <code>glide.ui.polaris.dark_themes_enabled = false</code>. 3. Refresh. 4. Clear the cache. <p>Expected behavior: The dark theme should be excluded from core UI experiences.</p> <p>Actual behavior: The dark theme is on for the core UI.</p>
Next Experience Unified Navigation PRB1580814	An SVG attachment that doesn't include optional size tags isn't displayed in a form when the Next Experience UI is enabled	An SVG attachment that doesn't include optional size tags does not appear in a form when the Next Experience UI is enabled. The SVG image can be seen successfully when the Next Experience UI is turned off.	
Next Experience Unified Navigation PRB1588393 KB1123200 	The menu changes on a Firefox browser tab after a reload	When using Firefox to view the Next Experience Unified Navigation of the San Diego release, if the browser is reloaded, the header menu randomly switches between displaying the menus (All, Favorites, History, Workspaces) as expected. The three vertical dots, when clicked, display these headings below in a pop-up.	Refer to the listed KB article for details.
Next Experience Unified Navigation PRB1592698	When favoriting an application, the experience title star doesn't fill if on a module		<ol style="list-style-type: none"> 1. Navigate to a module. 2. Click the favorite star of the application that contains the module.

Problem	Short description	Description	Steps to reproduce
	that is in the application		<p>Expected behavior: Since everything in the application is starred, the experience title should display the star.</p> <p>Actual behavior: The experience title star is empty.</p>
Now Mobile Framework PRB1598571	Issue with dependencies when using surveys in the new widget	Survey performs as expected in Survey Designer when using the Preview button.	
Operational Intelligence for Event Mgmt PRB1591065	Metric binding cancels because the same combination of metric type and CI exists	The binding of the metric to CI is canceled when another agent monitors the same CI (proxy).	<ol style="list-style-type: none"> 1. Send the payload of metric registration like the agent sends. 2. Verify the metric is registered in M2CI table. 3. Change the agent ID in the metric identifier in the payload. 4. Send it again. <p>Observe that in the second event's processing notes, the binding is canceled.</p>
Performance Analytics PRB1578228 KB1122313	Homepage deprecation help tool does not populate 'Owner'	The Homepage deprecation help tool does not populate 'Owner' when converting a homepage to a dashboard. The tool creates a dashboard permissions record, which grants access to the user. However, because the homepage user is not assigned as the owner, the dashboard does not show up under 'Owned by Me' in the dashboard overview. Also, the tool defined the owner as an 'Editor', and not as an owner. When creating dashboards from scratch, the owner is assigned as the owner, and it	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
		displays under 'Owned by Me'.	
Performance Analytics PRB1590924	Adding both durationFormat and numberFormat to metrics causes the number formatted fields to display in the duration format	numberFormat works, but after adding the durationFormat, the non-duration formatted unit fields are also formatted in the duration format.	
Performance Analytics PRB1591547	When updates are made to a data range in seconds, minutes, months, or years, the data doesn't change		<ol style="list-style-type: none"> 1. Create a dashboard. 2. Create an element on the dashboard. 3. Add the data source 'All components'. 4. Configuration > Data range. 5. Change the period to a month. 6. Save. 7. Configuration > Data range 8. Change the period to a second. 9. Save. 10. Configuration > Data range 11. Change the period to a minute. 12. Save. <p>Expected behavior: When changes are made to the data range to second, minute, month, or year, the data should be different depending on the choice.</p> <p>Actual behavior: When changes are made to the data range to second, minute, month, or year, the data doesn't update.</p>
Performance Analytics PRB1593626	Unable to toggle off the display of filters applied on the page	There should be an On/Off toggle that lets the user decide if to display the element applied when a filter is used on the page.	<ol style="list-style-type: none"> 1. Build a UIB page. 2. Add a unified filter on the page. 3. Add an indicator scorecard on the page with the number of open indicators as a manual indicator added.

Problem	Short description	Description	Steps to reproduce
			<p>4. Open the page in runtime.</p> <p>5. Apply the filter.</p> <p>Expected behavior: It should let a user configure the component to hide the filter label.</p> <p>Actual behavior: When applying a filter on the indicator scorecards, the filter applied is displayed. The admin doesn't have any way to remove this label for cases when this is redundant.</p>
Performance Analytics PRB1594537	Updating versions for the base instance Platform Analytics Experience Bundle app version 1.0.1 to include Tokyo fixes		
Performance Analytics PRB1595780	X-axis extents don't match the absolute date range	numberOfPeriod and period aren't reset in a policy once the user selects an absolute date range.	<p>1. Add a data visualization on a page in UIB.</p> <p>2. Change the visualization type to 'Line'.</p> <p>3. Add an indicator data source.</p> <p>4. Select a period of the last 9 days in the 'Date' range section.</p> <p>5. Select Show absolute range in the 'Date' range section.</p> <p>6. Select the start date to be 2 days ago, and the end date as 1 day ago.</p> <p>Expected behavior: X-axis displays: '2 days ago - 1 day ago'.</p> <p>Actual behavior: X-axis displays '9 days ago - today'.</p>
Performance Analytics PRB1600229	Performance Analytics (PA) targets load slowly with Next Experience enabled	Loading becomes slow when Next Experience is enabled and there are many active targets.	<p>1. Ensure that Next Experience is on.</p> <p>2. Generate 20 thousand active targets.</p> <p>3. Collect some scores for the indicator 'Number of open incidents'.</p>

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 4. Create a PA time series widget on the same indicator. 5. Put it on the dashboard. 6. Perform a cache.do. 7. Open the browser debugging tool. 8. Monitor an angular.do transaction. 9. Refresh the widget. <p>The running time is roughly 1.8 minutes.</p> <ol style="list-style-type: none"> 10. Turn off Next Experience. 11. Perform a cache.do. 12. Repeat steps 7–9. <p>The running time is roughly 58 seconds. Notice a significant delay with angular.do transactions' time when Next Experience is on.</p>
Platform Level Encryption PRB1591569	Excessive growth on sys_audit table due to the 'Mass Encryption Job'	Audits enabled on the table sys_mass_encryption_job.context field cause excessive growth on an instance, causing disk issues.	
Platform Performance PRB1512625	The union replacement query 'rewrite' throws an access violation error as a subselect generated by the union optimization aliased as 'innerselect'	The subselect generated by the union optimization is aliased as 'innerselect', so mysql cannot differentiate between sys_id fields.	
Platform Security PRB1579089	KMFAutomationInterface().cleanUpDemoData() should only remove demo records	Records added to KMF tables that are not included in a demo data package shouldn't be deleted when demo data is cleaned via the KMFAutomationInterface().cleanUpKMFDemoData() API.	<ol style="list-style-type: none"> 1. Use KMF to generate a key for cm_glide_encrypter. 2. Run new SNC.KMFAutomationInterface() .cleanUpKMFDemoData() via background scripts. <p>Expected behavior: The Glide encryptor main key is not deleted.</p>

Problem	Short description	Description	Steps to reproduce
			<p>Actual behavior: The Glide encryptor main key is deleted.</p> <ol style="list-style-type: none"> 1. Use KMF to generate a key for cm_glide_encryptor. 2. Install demo data. 3. Run new SNC.KMFAutomationInterface(). cleanUpKMFDemoData(); via background scripts. <p>Expected behavior: Only the Glide encryptor main key from demo data is deleted.</p> <p>Actual behavior: The Glide encryptor main key is deleted.</p>
Platform Security PRB1583313	Issue with race condition on autogenerated keys		<ol style="list-style-type: none"> 1. Create a crypto module with autogen enabled. 2. Make multiple requests use the crypto module at the same time.
Platform Security PRB1592848	An instance is missing new service OIDs	Recent PKI additions have not yet been added to the enumeration in an instance, preventing some new use-cases on these services.	
Predictive Intelligence PRB1556027	Large table handling of ml_cluster_sol_update table from the ClusteringService.updateClusteringModel function	There is a function in the ClusteringService.updateClusteringModel that queries an excessive number of rows from the ml_cluster_sol_update table, causing excessive database activity and memory usage in the application server, and increases in the runtime of the jobs updating the clustering model.	<ol style="list-style-type: none"> 1. The ML Predictor should be installed/ configured. 2. Run the scheduled job to update the clustering model (there should be many rows already in the ml_cluster_sol_update table). 3. Review the warnings in the logs.
Predictive Intelligence PRB1583200	The Root Cause Analysis (RCA) workflow solution doesn't consider		<ol style="list-style-type: none"> 1. Set maxRowLimit on a total dataset. 2. Trigger RCA.

Problem	Short description	Description	Steps to reproduce
	maxRowLimit on a total dataset		<p>Expected behavior: RCA workflow solution should consider maxRowLimit on the total dataset.</p> <p>Actual behavior: RCA workflow solution doesn't consider maxRowLimit on the total dataset.</p>
Problem Management PRB1590498	A problem task type does not change from 'General' when a property is enabled		<ol style="list-style-type: none"> 1. Create a property, 'com.glide.applyQueryString.enforce_create_acl' with the value 'true'. 2. Create a problem task of root cause analysis. <p>Observe that the type displays as 'General'.</p>
Process Automation Designer PRB1581565	Condition builder loses changes with a pill value in it, but they appear after a page reload	Appears in some Rome and San Diego instances.	<ol style="list-style-type: none"> 1. Add a 'Wait for Condition' activity. 2. Fill in a table and Record field. 3. Add a condition (not condition to run) that contains a pill on the right-hand side. 4. Click Modify. 5. Save the activity. <p>If users reopen that condition field, it is empty. If users reload the page and reopen that condition field, the condition with the pill value is there. If users make the change and click 'Modify' and reopen that condition field, it is empty.</p>
Process Optimization Application PRB1589993	Process optimization mining fails on domain separated instances	Mining fails at stage 3.	<ol style="list-style-type: none"> 1. Request HOP access to a HI product instance. 2. Check the 'promin_model_def' project list. <p>The list should be zero after the Tokyo upgrade, but since the migration didn't happen, projects are present in the promin_model_def table.</p>
Process Optimization Application PRB1594957	Can't use external data for process optimization in Tokyo	In San Diego, users were able to import external data and use process optimization. But in Tokyo, process	<ol style="list-style-type: none"> 1. Feed data from an external source. 2. Verify if the mining was successful.

Problem	Short description	Description	Steps to reproduce
		optimization doesn't support external data.	<p>Expected behavior: Mining result should be correct.</p> <p>Actual behavior: Mined result is invalid and incorrect.</p>
Record Watcher PRB1588098	Regex inefficiency within WatcherConfig	Blacklist	<ol style="list-style-type: none"> 1. Profile Glide application. 2. Initialize some record watchers by loading forms.
Search UX PRB1591078 KB1124167	Recently viewed suggestions aren't updating or populating for a Zing search	When a user clicks the description or title of a search result, the recently viewed suggestions don't populate for Zing enabled instances.	<ol style="list-style-type: none"> 1. Enter any search term (email/windows/incident/request). 2. Click Enter or the 'View results' link. 3. Click any search result (any search source). <p>Recently viewed suggestions are not updating/populating for search sources (knowledge/incident/problem/change request).</p>
Service Management Virtual Agent Topic B PRB1592807	Requesting a catalog item other than the English language doesn't work		<ol style="list-style-type: none"> 1. Install the VA and NLU apps in a Tokyo instance. 2. Set com.snc.contextual_search.va_topic.top_result_experience to true. 3. Turn off the AI search option from the settings. 4. Turn off the fallback option to a search fallback topic. 5. Log in to an SP using any user. 6. Change the language setting to German/French, or any other language. 7. From the VA bot type below the category item name, observe the result.
Service Mapping PRB1576672	Service Mapping Recomputation jobs cause high memory, impacting performance	In the recomputation process when processing the manual connection endpoint, the code selects all EP records from the cmdb_rel_ci table and filters only the relevant record that caused memory issues when there are	<ol style="list-style-type: none"> 1. Create relations with CIs part of the service with more than 100k manual endpoints. These manual endpoints can be part of many other services. 2. Run recomputation. <p>Observe that no regression occurs.</p>

Problem	Short description	Description	Steps to reproduce
		tens of thousands of EP records in the cmdb_rel_ci table. The memory issue causes slow/stuck/incomplete recomputation for those services and also slows the instance.	
Service Mapping PRB1590992	After a scheduled job is executed, the start time of the job is updated to a random time in the next hour of the current start time	The connection analysis scheduled job start time is changed to some random time in the next hour on the first run of the scheduled job.	Upgrade the instances. Observe that the start time is reset back to the original time, which is 2020-10-15 10:43:35. When the scheduled job runs for the first time, it updates the start time of the job.
Service Portal PRB1592415	Users are unable to submit the form with the required HTML variable	Occurs in a regular form and with catalog items.	<ol style="list-style-type: none"> 1. Add an HTML field to the incident table. 2. Mark the HTML field as required. 3. Navigate to an incident in Service Portal. 4. Save the form. A required error message displays. 5. Fill in some value in the HTML field. 6. Submit the form. <p>Expected behavior: The form should submit.</p> <p>Actual behavior: An error displays and the form is not submitted.</p>
Software Asset Management Professional PRB1582902	For Office 365, the system incorrectly generates recommendations to downgrade E3 subscriptions to E1 subscriptions if the SCCM plugin is not installed and		

Problem	Short description	Description	Steps to reproduce
	no desktop usage is available		
Software Asset Management Professional PRB1583118	Creating an index on the cmdb_sam_sw_install table adds an extra hour to the Tokyo upgrade time	The index should be created post-upgrade instead of during the upgrade.	<ol style="list-style-type: none"> 1. Check out an instance. 2. Upgrade to Tokyo. <p>An extra alter is on the cmdb_sam_sw_install table, which takes another hour.</p>
Software Asset Management Professional PRB1583213	A total cost calculation throws a NaN error when creating a software entitlement in the Software Asset Workspace	When users set the date format to 'dd/MM/yyyy' and try to create a software entitlement in the Software Asset Workspace, the total cost displays as 'NaN'. This issue occurs only on Workspace and doesn't occur when using a standard interface.	<ol style="list-style-type: none"> 1. Ensure the system property 'glide.sys.date_format' is set to 'dd/MM/yyyy'. 2. Using the navigator, navigate to Software Asset > Software Asset Workspace. 3. Click the Create entitlement button near the top-right corner of the Software Asset Overview. 4. In the pop-up window, select 'Fill out the details in a standard form'. 5. Click Next. 6. Fill the 'Create New Software Entitlement' form with these details: <ul style="list-style-type: none"> ◦ Publisher part number: Select any value available ◦ License type: Subscription ◦ License metric: Per Core ◦ Purchased rights: Provide any value ◦ Unit cost: Provide any value ◦ Subscription period: Monthly ◦ Start date: Select any date (format is 'dd/MM/yyyy') ◦ End date: Select any date (format is "dd/MM/yyyy') <p>After filling in the details, users could observe that 'Total cost' displays as 'NaN'.</p>
Software Asset Management Professional	Software installs are not deleted on deletion of applications		<ol style="list-style-type: none"> 1. Install SQL server on the device. 2. Run Discovery.

Problem	Short description	Description	Steps to reproduce
PRB1589325			<p>It should create an application record in cmdb_ci_appl and install the record in the cmdb_sam_sw_install table.</p> <ol style="list-style-type: none"> 3. Delete the SQL install from the device. 4. Run Discovery. <p>It should update the application record to absent and the software install record should be removed from the install table.</p>
<p>Software Asset Management Professional</p> <p>PRB1591693</p> <p>KB1124239</p>	<p>Adobe and Office 365 integration profile options aren't available on the 'Interceptor' page on an upgraded instance from San Diego to Tokyo</p>	<p>The 'Adobe Cloud Integration Profile' and 'Office 365 Integration Profile' options don't exist on the 'Interceptor' page as the records in sys_wizard_answer are active = false.</p>	<p>Refer to the listed KB article for details.</p>
<p>Software Asset Management Professional</p> <p>PRB1592963</p> <p>KB1124280</p>	<p>The lifecycle report doesn't display installs in the product lifecycle full version is empty but the discovery model full version has a value</p>	<p>The underlying query for the lifecycle report must be updated to handle this scenario where the lifecycle report doesn't show end of life installs if the lifecycle full version is empty but the discovery model full version has a value.</p>	<ol style="list-style-type: none"> 1. Create a lifecycle with no full version. 2. Create a discovery model with a full version. 3. Tie some installs to it. 4. Ensure that the publisher, product, version, and edition match the lifecycle. 5. Generate the report. <p>The install count on the report is 0.</p>
<p>Software Asset Management Professional</p> <p>PRB1593371</p>	<p>The getOffice365ActiveUserDetail API doesn't pull usage and powerBIAPIStatus doesn't update correctly in custom properties</p>	<p>This is reproducible from the Detail</p>	<p>Use case 1:</p> <ol style="list-style-type: none"> 1. Collect usage for O365. 2. Check if getOffice365ActiveUserDetail API usage is coming in the samp_sw_usage table. <p>Use case 2:</p>

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 1. Create an integration profile (make sure powerBI is configured for this azure application). 2. Verify that the custom properties are empty. 3. Pull the subscriptions and activity. 4. Check the custom properties again. Observe that the powerBIAPISatus is not present. 5. Try to create a reclamation candidate for an E5-E3 downgrade. <p>The reclamation candidate is not created.</p>
<p>Software Asset Management Professional PRB1593801</p>	<p>'Page not found' displays in the drill down page when clicking Windows and SaaS via their donut slices in the 'Open issues records per suite' widget on the health check dashboard</p>	<p>SQL checks' drill down tables are loading correctly when clicked via the SQL donut slice.</p>	<ol style="list-style-type: none"> 1. Launch the application. 2. Navigate to the Software Asset Workspace. 3. Success portal > Health check dashboard. 4. Click either the Windows or SaaS donut slice present in the 'Open issues records per suite' widget. <p>Expected behavior: Drill down tables should be displayed with 'Windows' or 'SaaS' checks.</p> <p>Actual behavior: 'Page not found' displays on the drill down page.</p>
<p>Source Control Integration PRB1589768</p>	<p>Applying a stash does not bring back the stashed change</p>	<p>Users observe that the platform says it was successful in applying the stashed change, but the stashed change is not there. Also, users observe that committing the stash fails with the error: 'A file in the stash has been modified locally since preview was last run. Preview the stash again before committing'.</p>	<ol style="list-style-type: none"> 1. Set the glide.invalid_query.returns_no_rows to true. 2. In the studio dev branch, make a comment on the script on the dev branch. 3. Commit the change to source control. 4. Merge the dev branch with the main branch. 5. In the main branch, make a comment somewhere else on the same script from the dev branch. 6. Retrieve the remote change and stash the local change.

Problem	Short description	Description	Steps to reproduce
			<p>7. Review the stashed change and the local change is visible in the stashed record.</p> <p>8. Apply the stashed change.</p> <p>Expected behavior: The retrieved change and the applied stash change should have been merged.</p> <p>Actual behavior: The platform says it was successful in applying the stashed change, but the stashed comment is not there.</p>
<p>Source Control Integration</p> <p>PRB1591667</p> <p>KB1123890</p>	<p>A commit operation fails if sys_update_xml exists for the sys_app record for any developer other than the one who has made an edit in the sys_app record</p>	<p>Collision avoidance can sometimes be triggered on the sys_app (Custom Application) preventing commit operations when the app was modified by another user and collision avoidance is enabled.</p>	<p>Refer to the listed KB article for details.</p>
<p>Tables and Dictionary</p> <p>PRB1596416</p>	<p>Updates for PRB1551027 and PRB1570086</p>		
<p>UI Action</p> <p>PRB1580896</p>	<p>The UI actions Create Problem Task and Create Change Request aren't working</p>	<p>This feature is introduced with the San Diego release.</p>	<ol style="list-style-type: none"> 1. Ensure that the user has the CSM and FSM Configurable Workspace Foundation application. 2. Navigate to an instance installed with the CSM and FSM Configurable Workspace Foundation application. 3. Navigate to these UI actions: <ul style="list-style-type: none"> ◦ Create Change Request ◦ Create Problem Task 4. Check the 'Format for Configurable Workspace' check box. 5. Save. 6. Navigate to CSM Configurable Workspace.

Problem	Short description	Description	Steps to reproduce
			<p>7. Open any problem record in a 'New' state.</p> <p>8. Click More actions.</p> <p>9. Click Create Change Request or Create Problem Task.</p> <p>The UI action does nothing.</p>
UI Builder PRB1548908	updateTypeMethod isn't updating the property's metadata	There is more than one option of 'foo'. It expects only one 'foo'.	
UI Builder PRB1585195	Re-applying a preset on a component resets all non-managed properties to their default values without confirmation	Clicking the preset wipes all the component properties and not only the managed ones.	<ol style="list-style-type: none"> 1. Create a page with a now-image. 2. Apply the record preset (fill in any default values for the preset props). 3. Set a custom value on the component property 'height'. <p>This property is not configured by the preset and is empty by default.</p> <ol style="list-style-type: none"> 4. Save the page. 5. Reapply the preset by choosing it again in the dropdown. <p>The custom value for 'height' is wiped out by the default value (empty).</p>
UI Builder PRB1589690 KB1124064	A copied UIB page does not work and event mappings in the viewport subpage page are lost		<ol style="list-style-type: none"> 1. In UIB, create a page/variant with a viewport component. 2. Create a subpage in the viewport. 3. Create a page script in the subpage. 4. Create an event mapping for a event source mapped to the page script created before. 5. Duplicate the variant. 6. Navigate to the viewport sub- in the duplicated variant. <p>The event mappings mapped to page script are missing in the viewport subpage page of the duplicated variant.</p>

Problem	Short description	Description	Steps to reproduce
UI Builder PRB1589880	In tabs, the related list is hard-coded	It doesn't bind to the expected fields.	<ol style="list-style-type: none"> 1. Create a page in UIB. 2. Add tabs. 3. Add record controller. 4. Wire it to an incident with an active sys_id. 5. In tabs, create a related list. 6. Select a related list. 7. Observe the right panel's configuration properties. <p>Expected behavior: The related list should be bound correctly to a controller.</p> <p>Actual behavior: The tab just creates a regular related list.</p>
UI Builder PRB1590127	Updating from layout 2.0 to layout 3.0 from a list legacy template brings the user to an empty PMP and stage	The page is in a private scope as well.	
UI Builder PRB1590298 KB1124304	Scripted component visibility checks that involve data broker outputs aren't working properly	The customer information page is not loading in UI Builder.	<ol style="list-style-type: none"> 1. As an admin/UIB user, navigate to UI Builder. 2. Open an experience. 3. Create a page. 4. Add/associate some data broker to the page. 5. Drag a component onto the page. 6. Add a scripted component visibility condition involving data broker output. 7. Reload UI Builder. 8. Check the component. The component is not visible. 9. Open data brokers. The component becomes visible.

Problem	Short description	Description	Steps to reproduce
<p>UI Builder PRB1590375 KB1123883</p>	<p>The modal custom interface component doesn't display correctly</p>		<ol style="list-style-type: none"> 1. Open any UIB page. 2. Add a modal. 3. Click the body element. 4. Add a new event mapping. 5. Set the modal selected as 'custom_1'. 6. Save the page. 7. Delete the modal 'custom_1'. 8. Select the body element. 9. Click the event-mapping card between 'page ready' and 'open or close modal'.
<p>UI Builder PRB1592771</p>	<p>Subpages can't be viewed/edited in a Service Operations Workspace (SOW) experience</p>	<p>Trying to customize SOW apps subpages in UIB isn't possible. Everything hangs when trying to do so.</p>	<ol style="list-style-type: none"> 1. Install ITOM SOW container (Service Operations Workspace - ITOM Apps). 2. Open 'Service Operations Workspace' experience in UI Builder. 3. Choose Record Page. 4. Select Record SNC variant. 5. Pick Record page tabs at the bottom. 6. Click Edit. <p>Expected behavior: A new subpage tab opens and lets the user view and modify it.</p> <p>Actual behavior: A subpage view is opened but it hangs after a few seconds.</p>
<p>UI Builder PRB1596333</p>	<p>The User Interface Builder (UIB) prop's pane doesn't use a cache for toolbox components when used outside UIB</p>	<p>The prop's pane makes the network call to get toolbox components, but isn't caching the response data. That's happening in middleware, as UIB needs toolbox components in multiple places. This occurs in the platform analytics dashboard.</p>	<ol style="list-style-type: none"> 1. Add two visualization components to the stage. 2. Open the 'Network' tab of browser dev tools. 3. Select one of the components. 4. View the network call. 5. Select the other. 6. View the repeated network call.

Problem	Short description	Description	Steps to reproduce
UX Framework PRB1589646 KB1124263	Now Experience UI properties are not resolved for viewport subpages		<ol style="list-style-type: none"> 1. Create any UIB page. 2. Add a viewport subpage. 3. Open the main UIB page. The context.app is working fine. 4. Open the subpage page context.app. This does not work until the page is reloaded.
UX Framework PRB1593146	Eventually UI Builder and UX applications fail to load with the error message: 'Cannot find app <sys-id>'	When trying to open an experience from UI Builder, users intermittently receive a 'Cannot find app <sys-id>' error.	
UX Framework PRB1597530	The tab sets' 'hide tab' property doesn't honor value changes	The property works on the initial page render but not on subsequent changes to the value of the 'hide tab' property.	<ol style="list-style-type: none"> 1. Create a page in UIB. 2. Add a tab set to the page. 3. Add a state variable to the page, hideTab (Boolean), whose initial value is true. 4. Create a tab for the tab set added to the page. 5. Configure it so that the 'hide tab' property is bound to @state.hideTab. 6. Create a client script that updates the value of the hideTab state to false. 7. Add a button to the page. 8. On the button Click event handler, add the client script created. 9. Open the page. Notice if the second tab added is not displayed. 10. Click the button. Expected behavior: The second tab that added to the tab set should be visible. Actual behavior: The second tab is not displayed.

Problem	Short description	Description	Steps to reproduce
UX Runtime PRB1593910	The 'Extend session' and 'Session timeout' pop-ups are displayed for SSO users	After upgrading, users observe the 'Extend session' modal before getting the 'Session expired' modal.	<ol style="list-style-type: none"> 1. Configure SSO. 2. Navigate to sys_properties. 3. Set the value of glide.ui.session_timeout = 1. 4. Log out. 5. Log back in to the instance. 6. Wait until the 'Extend session' modal appears or wait until the session expires. <p>Expected behavior: The user should not see the 'Extend session' or 'Session time out' modals. If the session expires, it should redirect to the SSO IDP login page.</p> <p>Actual behavior: Users observe the modals. Instead, it should automatically redirect to the SSO IDP URL after the session expiration.</p>
UX Runtime PRB1595068	Admin users cannot update the value glide.ui.session_timeleft because the property is in sn-canvas-core scope, when it should be in global scope	The glide.ui.session_timeleft property value controls when to show the extend session modal before the session expires. However, admin users are unable to update the property and it is read-only. This is because it is created under the sn-canvas-core scope, which is a private scoped app. There is no way for users to change the property to update it to control the extended session's timeout modal pop-up timing.	<ol style="list-style-type: none"> 1. Log in as an admin user. 2. Navigate to sys_properties_list.do > glide.ui.session_timeleft. 3. Attempt to update the property. <p>Expected behavior: Glide.ui.session_timeleft should be in global scope, and it should be editable by admin.</p> <p>Actual behavior: Glide.ui.session_timeleft is in the sn-canvas-core scope.</p>
VA- Conversation Server PRB1591681	Agent handoff message is on the wrong language	Impacts the following plugins: DTAC, Glide Virtual Agent, Agent Chat, and Spanish Lang.	<ol style="list-style-type: none"> 1. Log in to an instance. 2. Impersonate a user. 3. Change the language preference to Spanish. 4. Navigate to Agent Workspace.

Problem	Short description	Description	Steps to reproduce
			<p>5. Make the agent online.</p> <p>6. As a user in English, try to connect to a live agent.</p> <p>If the issue is not reproducible for the first time connecting to a live agent, end the chat and try to connect again.</p> <p>Expected behavior: The 'Please Wait Connecting to a live agent' message is delivered to the user in Spanish.</p> <p>Actual behavior: The 'Please Wait Connecting to a live agent' message is delivered to the user in English.</p>
<p>VA-Web Client PRB1593620</p>	<p>Web Client's 'Support options' aren't respecting specified orders</p>		<ol style="list-style-type: none"> 1. Navigate to Conversational Interfaces > Settings. 2. Click Settings. 3. Click Branding Settings. 4. Click Default Branding. 5. Click the Create New Menu button / update the existing menu items' order. 6. Enter the required fields. 7. Specify the order for all the menu items. 8. Open the Web Client. 9. Verify the 'Support options' order. <p>Expected result: Web Client 'Support options' should respect the order.</p> <p>Actual result: Web Client 'Support options' are not respecting the order.</p>
<p>Virtual Agent Platform PRB1591013</p>	<p>An initial agent's response isn't translated to the requester's session language when Dynamic Translation for Virtual Agent (DTVA) and Dynamic</p>	<p>Impacts users with language detection, dynamic translation, and translation services enabled.</p>	<ol style="list-style-type: none"> 1. Start a live agent conversation with the user in Spanish and the agent in English. 2. Verify if the initial agent's response is or is not in the requester's session language.

Problem	Short description	Description	Steps to reproduce
	Translation for Agent Chat (DTAC) are enabled		
Virtual Agent Platform PRB1591556	A callback interaction displays as a 'Chat' type instead of as a 'Phone' for Web Client	Impacts several plugins.	<ol style="list-style-type: none"> 1. Set up an omnichannel callback. 2. Pick a user as a requester. 3. Request on Web Client chat as that user. 4. When that chat is concluded, request a callback for that same user. <p>Expected behavior: When a callback scheduling completes, an interaction with the type 'phone' is created for that user, using a new consumer account record linked to a callback-based channel user profile.</p> <p>Actual behavior: An interaction with type 'chat' is created, linked to a conversation reusing the requester's chat-based consumer account record.</p>
Virtual Agent Platform PRB1593211	Issue related to new columns in one_api_service_plan	The one_api_service_plan_feature table should have these columns: 'delay_output_processing' and 'return_request'.	
Virtual Agent Platform PRB1597868	Web Client times out while a user is actively engaged in a conversation	This issue exists in Rome onwards.	<ol style="list-style-type: none"> 1. Set the glide.ui.session_timeout to something low, like 2 minutes. 2. Activate Web Client on a portal, like /sp. 3. Browse to that portal. 4. Open Web Client. 5. Start typing messages into topic discovery over and over. <p>In ~2 minutes (depending on what the timeout is), users are presented with a timeout. A requester actively sending messages to Virtual Agent should not be timed out.</p>

Problem	Short description	Description	Steps to reproduce
Web Services PRB1582167	There is an accessibility issue with link colors in the test REST API Explorer	Most areas in the platform don't change color for visited links.	<ol style="list-style-type: none"> 1. Navigate to REST API Explorer with Next Experience off. 2. Verify if the sidebar links are grayed out. <p>The sidebar links shouldn't be grayed out. This should be the same with Next Experience on.</p>

Fixes included

Unless any exceptions are noted, you can safely upgrade to this release version from any of the versions listed below. These prior versions contain PRB fixes that are also included with this release. Be sure to upgrade to the latest listed patch that includes all of the PRB fixes you are interested in.

- [Tokyo security and notable fixes](#)
- [All other Tokyo fixes](#)

Tokyo security and notable fixes

The Tokyo release contains important problem fixes.

Tokyo was released on August 4, 2022.

- Build date: 07-26-2022_2149
- Build tag: glide-tokyo-07-08-2022__patch0-07-19-2022

i Important: For more information about how to upgrade an instance, see [here](#).

For more information about the release cycle, see the [ServiceNow Release Cycle](#).

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#).

For a downloadable, sortable version of the fixed problems in this release, click [here](#).

Security-related fixes

Tokyo includes fixes for security-related problems that affected certain ServiceNow[®] applications and the Now Platform[®]. We recommend that customers upgrade to this release for the most secure and up-to-date features. For more details on security problems fixed in Tokyo, refer to [KB1123086](#).

Important fixes in Tokyo

Problem	Short description	Description	Steps to reproduce
<p>Agent Workspace</p> <p>PRB1543824</p> <p>KB1064744</p>	<p>Changes are not saved properly on forms from database views that are opened in Agent Workspace</p>	<p>When a record from database view is opened in Agent Workspace, the URL points to the task table instead of the actual table. Changes then don't save as expected.</p>	<ol style="list-style-type: none"> 1. Create a list in the sys_aw_list table on any database view. 2. Navigate to Agent Workspace. 3. Find the newly created list. 4. Open a record from the list. <p>Observe that the URL points to 'Task' instead of 'Incident'.</p> <ol style="list-style-type: none"> 5. Try to update any field. <p>Expected behavior: The record points to the 'Incident' table and the update saves.</p> <p>Actual behavior: The record URL points to the 'Task' table and the updates don't save.</p>
<p>Agent Workspace</p> <p>PRB1504918</p> <p>KB0994311</p>	<p>Interaction is not linked to the incident record in Agent Workspace</p>	<p>Once a interaction is saved and if users create an incident using a record producer, the incident related list does not show the interaction record.</p>	<p>Refer to the listed KB article for details.</p>
<p>Agent Workspace</p> <p>PRB1552395</p>	<p>After performing a column sort or opening a record and switching pages on a simple list, records can't be opened</p>	<p>In Agent Workspace, when performing a column sort (or clicking a record to open it and switching pages afterwards) on a simple list component, there is an issue where records are no longer clickable afterwards. Lists opened by clicking 'View All' on a list type widget on the Agent Workspace landing page do not open the record when the record number is clicked.</p>	

Problem	Short description	Description	Steps to reproduce
Agent Workspace PRB1560832	List action buttons in Agent Workspace are cached and not translated, as language isn't part of the cache key	The translation of a button in the list (list action buttons) of Agent Workspace is not displayed. It can be seen after flushing the cache.	<ol style="list-style-type: none"> 1. Navigate to a Rome instance. 2. Open the Agent Workspace home. 3. Click the Lists button. 4. Verify that the Export and New buttons are in English. 5. Enable I18N debugging. 6. Reload Agent Workspace in a browser. 7. Verify that the Export and New buttons are in English and no debug code is pre-appended. 8. Flush the system cache (cache.do). 9. Reload Agent Workspace in a browser. <p>There is TRT debug code pre-appended to the Export and New buttons.</p>
Agent Workspace PRB1564426	User with ACL 'read' rights for sys_template unable to view group templates without 'write' or 'delete' access in San Diego		
AI Search Glide PRB1546254 KB1113579	Non-admin users are unable to search for catalog items or KB knowledges on Service Portal using AI Search	When a search source filter contains sc_catalogs for the sc_cat_item table or kb_knowledge_base for the kb_knowledge table, AI Search might filter more documents than it should.	Refer to the listed KB article for details.
AI Search PRB1584098 KB1123084	Performing a global search on a Next Experience instance returns an	The user observes an error reading 'Internal Server Error (500)' when attempting to perform a global search.	<ol style="list-style-type: none"> 1. Activate 'com.snc.cmdb_search' plugin. 2. Upgrade the instance to San Diego. 3. Enable Next Experience (glide.ui.polaris.experience = true).

Problem	Short description	Description	Steps to reproduce
	internal server error		<p>4. Perform a global search.</p> <p>An Internal Server Error (500) error is thrown. CMDB search results are not returned for the search.</p>
AI Search PRB1590107	The global search input box is unresponsive if white space is included in the exact match	The cause of the search box lock is because the search box is re-enabled based on a combination of the value returned by the exact match typeahead and the value the user entered. If white space is included in the search box, and the user executes the search before the typeahead request returns, then the conditions for re-enable aren't met.	<ol style="list-style-type: none"> 1. Copy an exact matchable term with a space at the end to the clipboard. 2. Disable caching. 3. Throttle the network to slow 3G. 4. Refresh the page. 5. Cope + enter immediately as the search box renders.
Antivirus Scanning PRB1554515	Default threads stick because of SNAP	Because of some SNAP servers' processing power, requests are queued and are stuck waiting for connection to the SNAP call. Users eventually may observe empty screens.	
Application Navigator & Banner Frame PRB1550845	The logo on a user's clone is cropped on the initial load		<ol style="list-style-type: none"> 1. Log in to a clone. 2. Ensure that Next Experience is enabled. 3. On the homepage, verify that the logo is cropped. 4. Refresh the page. <p>The logo is correct.</p>
Application Navigator & Banner Frame	For users without any roles and when SPEntryPage is enabled, post		<ol style="list-style-type: none"> 1. Access a San Diego instance. 2. Turn on Next Experience.

Problem	Short description	Description	Steps to reproduce
PRB1558108	Login doesn't redirect to the portal page		<ol style="list-style-type: none"> 3. Set the sys property 'glide.ui.polaris.experience' value to true. 4. Update the following sys properties to respective values: <ul style="list-style-type: none"> ◦ glide.entry.first.page.script = new ◦ SPEntryPage().getFirstPageURL(); glide.entry.page.script = new ◦ SPEntryPage().getLoginURL(); 5. Impersonate a user who doesn't have any roles. <p>Expected behavior: The page redirection should take the user without any roles to '/sp' and not display the platform Next Experience view.</p> <p>Actual behavior: The redirection happens for a user without any roles to '/now/nav/ui/home' URL post login.</p>
Approvals PRB1495662 KB0993912	Approval history on the task record is not populated when approvals are manually created from a script	Paris and Quebec are affected. New York is not.	Refer to the listed KB article for details.
Approvals PRB1512645 KB1118063	The 'Apply Change Approval Policy' state is set to 'canceled' when a group with a single user is present in the approval rule set	Base instance flows for Change Management use an action called 'Apply Change Approval Policy'. This action is sometimes approved, sometimes canceled. When it is canceled, the change request gets stuck because the Approval field is not updated with the 'Approved' value. The approval state is erroneously set to 'canceled' when a member of an approval group with only one member approves a change request.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
Archiving PRB1538297	ReArchiveJob.java triggers a slow query		
Archiving PRB1549282	ArchiveStatus.setEstimate runs after each chunk, which slows archiving		
Asynchronous Message Bus PRB1547744 KB1001693	AMBChannelPresenceReaper doesn't clean up sys_amb_channel_presence records from nodes that are no longer part of the cluster		<ol style="list-style-type: none"> 1. Log in to an instance in two browsers, one as an admin and one as an end user. 2. As the admin user, impersonate an agent. 3. Mark the agent as available. 4. End the impersonation. 5. Start the chat from the end user. <p>Expected behavior: The end impersonation should mark the agent as offline.</p> <p>Actual behavior: The agent is still online and available, so the end user's chat request goes to an available agent.</p>
Authentication PRB1565893 KB1120162	Generating metadata for an IDP record doesn't work due to KMF changes in the length of asterisks in the password2 field		<ol style="list-style-type: none"> 1. Create an IDP record on a San Diego instance. 2. Save the record. 3. Click the UI action Generate metadata. 4. Observe the error.
Authentication - SSO PRB1552703	Users are asked to log in via SSO, if SSO is enabled and auto-redirect IdP is set, when accessing public pages using 'nav_to.do' and the uri parameter	Users are asked to enter credentials when SSO is enabled, but the UI page is set to public.	<ol style="list-style-type: none"> 1. Enable SSO on the instance. 2. Set 'Auto Redirect IdP' on the identity provider record. 3. Navigate to any public page using a URL with 'nav_to.do' and the 'uri' parameter beginning with '/' or '%2F'. <p>Expected behavior: User should be redirected to the 'Public' page.</p> <p>Actual behavior: User is redirected to SSO for authentication.</p>

Problem	Short description	Description	Steps to reproduce
	begins with '/' or '%2F'		
Change Management PRB1547680	Unable to change the state of a change request record when change models are used		<ol style="list-style-type: none"> 1. Create a change request. 2. Save the record. 3. Set the State field to 'Canceled'. 4. Attempt to save the record. <p>The state does not change.</p>
Change Management PRB1558870	An AMB message sent for every update to every approval record	If there are many approvals, this can lead to semaphore exhaustion.	<ol style="list-style-type: none"> 1. Create a change request with approvals. 2. Add the change request to a CAB meeting. 3. Open the CAB meeting. 4. Open developer tools. 5. Find the AMB connection. 6. Look at the messages, usually under WS in Network. <p>Users may have to refresh the browser for it to appear.</p> <ol style="list-style-type: none"> 7. Run the CAB meeting. 8. Approve the change request. <p>There are messages sent on the AMB channel with the current users approval state for every record update to the approvals table.</p>
Cloud Provisioning and Governance (CMP) PRB1498250	The Release Automation Global [com.sn_sra.global] plugin adds a variable set called 'SRA common variables', which includes 3 variables that are references to tables that do not exist	This causes an exception when using conditions on reference variables in reporting condition builder.	<ol style="list-style-type: none"> 1. Activate the Release Automation Global [com.sn_sra.global] plugin. 2. Create a variable set: <ol style="list-style-type: none"> a. Type: Single Row b. Title: Test Variable Set 3. Add variables: <ol style="list-style-type: none"> a. Type: Reference b. Question tab: c. Question: Ref to Cost Center d. Type Specifications tab: e. Reference: Cost Center [cmn_cost_center]

Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 4. Navigate to Service Catalog > Maintain Items > Access. 5. Add Variable Set 'Test Variable Set' to item 'Access'. 6. Navigate to Reports > Create New. <ol style="list-style-type: none"> a. Report name: Anything b. Source type: Table c. Table: Requested Item [sc_req_item] 7. Add a condition: Variables > Access > Ref to Cost Center, is, 'Engineering'. 8. From the Save button drop-down, select 'Save as data source'. 9. Wait for a new modal to finish. 10. Navigate to System Logs > System Log > All. <p>Expected behavior: No NullPointerException errors.</p> <p>Actual behavior: Error in logs.</p>
Cloud Provisioning and Governance (CMP) PRB1520682 KB0996084	High growth rate and large tables on sn_cmp_cloud_	The sn_cmp_cloud_trail table displays as one of the top usage tables on some of the busy CMP user databases.	Refer to the listed KB article for details.
Column Level Encryption PRB1574839	The CLE migration job summary should reflect the correct job status and only run when KMF is running successfully on the instance		
Column Level Encryption PRB1581514 KB1123078	A user with access to an encryption module key cannot upload clear text attachments	A new property - com.glide.encryption.enable_attachment_key_ui is created. By default it is set to false, so the UI picker isn't shown. If the property is set to true, the new UI picker	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
	regardless of the encrypted field configuration	will be shown on tables that have multi-module encrypted field configuration, so that user can choose any key or the option not to encrypt an attachment.	
Condition Builder PRB1533693	The list filter does not show the correct options by ignoring the 'roles' and Available for filter fields on the sys_filter_option_dynamic table and checking the read ACLs instead	List filter (dynamic) is not listing the results for non-admin users.	
Configuration Management Database (CMDB) PRB1545008 KB1002376	When updating CMDBs, CMDB IRE does not update the Updated By [sys_updated_by] field, but does update Updated [sys_updated_on] and Most Recent Discovery [last_discovered] , breaking audit history of the record	A CI may have last been updated by User123, who may be deactivated. Discovery (or any other data source) is run and updates the CI, via the IRE APIs. The pair of updated by/on fields suggest that User123 updated the record, when they did not.	Refer to the listed KB article for details.
Configuration Management Database (CMDB) PRB1568266	Discovery source isn't updating in the CI when the 'discovery_source' value is passed as an input to IRE		

Problem	Short description	Description	Steps to reproduce
Contextual Search PRB1545548 KB1000915	An unlabeled button appears in the Record Producer results when 'show on new' is false	An unlabeled button that appears in the Record Producer search results when the show_on_new field of the search action configuration is set to false. The button should not be visible.	<ol style="list-style-type: none"> 1. Navigate to the employee center under Self-Service. 2. Search for general legal request. 3. Open that request. 4. Type 'Stock' into the summary description box. <p>Observe that the empty button appears on the contextual_search results for each request entry.</p>
Core Platform PRB1539950 KB1119866	Activating the slushbucket 'Save' job results in the Created/updated field's entry reading as 'System'	This can result in assignments failing, as the system is not supposed to grant scoped roles. It also removes audit visibility of the user doing the assignment. De-activating may result in a timeout when assigning users.	Refer to the listed KB article for details.
Core Platform PRB1549829 KB1002937	Domain separated instances experience 'UI Action with name = XXX on table YYY not found' errors when upgrading		Refer to the listed KB article for details.
Core Platform PRB1555251	Forced garbage collections (GC) are triggered every 15 minutes	It was observed that two full GCs are triggered every 15 minutes. These GCs take about three seconds, which is unnecessary.	<ol style="list-style-type: none"> 1. Navigate to sys_trigger.list. 2. Search for 'System - reduce resources' as the name. 3. Verify that all trigger types are inactive. 4. Verify that the state is ready with a red font. 5. Navigate to Homepage > Dashboards. 6. Open the performance dashboard. <p>Observe that each node still has metrics for a garbage collection activity.</p>

Problem	Short description	Description	Steps to reproduce
Core Platform PRB1563531 KB1113589	Unable to execute UI action xxxx against record belonging to the 'global' domain because the action is defined in domain 'YYYY'	Instances configured with domain separation (com.glide.domain) on versions of Rome and San Diego experience errors when attempting to execute UI actions defined in a non-global domain on records in a global domain.	Refer to the listed KB article for details.
Core Platform PRB1564659 KB1113577	Node fails to start after an upgrade	When upgrading, a node may appear down. Depending on how many nodes are affected in parallel, the instance may become unusable.	Refer to the listed KB article for details.
Customer Service Management PRB1482008	The 'getMyAccessibleAccounts' function in the 'CSQueryBRUtil' script include creates a many 'GlideSession' objects when the partner account has many related accounts	When a partner has many user accounts, this can result in many sessions to be created within the instance. This results in the instance nodes consuming a high percentage of available JVM memory.	
Customer Service Management PRB1561165 KB1119882	Multiple errors when accessing a newly created homepage	Error: 'null:-1:-1: null No source to compile'.	Refer to the listed KB article for details.
Dashboards and Home Pages PRB1499316 KB0965023	The dashboard has loading issues when the user clicks Back on the browser	Breakdown elements filtering does not function as expected on several reports and pa widgets when the user clicks Back on the browser. The issue is not consistently reproduced.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
Dashboards and Home Pages PRB1567440 KB1116146	On the latest version of Chrome and Edge browsers, the hamburger menu on the 'Dashboards & Reports' for the report widgets doesn't appear	The issue does not appear to occur in Firefox or Safari.	Refer to the listed KB article for details.
Discovery PRB1536277 KB0998780	ESXi server status remains as 'Retired' instead of 'Installed' after a Discovery run	There are multiple VCenterDatacentersSensor probes and it causes a mismatch in the install status.	Run Discovery schedule for Cloud Resources (Vcenter). For ESX servers, the status flip flops between retired and installed.
Discovery PRB1537516	'NetApp Storage Cluster-Mode' pattern fails with IRE errors	Errors display: 'MISSING_DEPENDENCY In payload no relations defined for dependent class [cmdb_ci_fc_port] that matches any containment/hosting rules: [cmdb_ci_fc_port >> Owned by >> cmdb_ci_computer]'	
Discovery PRB1544017 KB1000367	Classification probes are not launched due to previous classification probes' state not being updated from 'Classifying' to 'Active, couldn't classify'	When no Windows credential is working, the device history state for Windows Classify is left as 'Active'. As a result, when three or more ports are open on a target, not all the classify probes are launched.	Refer to the listed KB article for details.
Discovery PRB1550803 KB1123619	MakeAndModel API needs to match additional fields on cmdb_hardware	Currently, the MakeAndModel API only checks the 'manufacturer' and the 'name' field for finding an existing cmdb_hardware_product_model record. This could result in creation of	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
		unwanted duplicates, especially if the hardware asset normalization normalizes the model with a 'normalized product' and a 'normalized model', based on the 'manufacturer', 'name' and 'model number' fields.	
Discovery PRB1556574 KB1064478	Discovery home doesn't list errors due to duplicates present in the automation_error_category_stats table		Refer to the listed KB article for details.
Discovery PRB1558985 KB1080400	Users observe the network switch pattern error 'ServiceWatchProbe - java.lang.NullPointerException'		Refer to the listed KB article for details.
Discovery PRB1565583	During multi-paging, relationships for certain CI types are not properly created	The issue is observable if payload items are all correctly present and pattern step logic is valid, but relationships are missing during multi-paging.	
Discovery PRB1567441	The 'getBehaviorForUser' function call in DiscoveryScheduler can be called without set ranges, which can cause issues	There is an issue if a user has a behavior with multiple MID servers and load balancing is not used.	
Document Viewer PRB1567792	Document viewer downloads a file only in PDF instead of in the original format	Issue is present for any original file type, including .ppt, .xls, .doc, and so on.	<ol style="list-style-type: none"> 1. Navigate to a page in document viewer that has a file. 2. Click a file that is not typically in PDF format. 3. Click the Download button in document viewer.

Problem	Short description	Description	Steps to reproduce
Domain Support PRB1557126 KB1064504	Displaying a business rule for a domain isn't triggered in the San Diego release	In San Diego, a business rule created for a domain with 'Run On' set as 'Display' isn't triggered, unless in the Global domain.	Refer to the listed KB article for details.
Domain Support PRB1570672	The business rule doesn't trigger on a child table under domain		
Edge Encryption PRB1410428	An Edge post-upgrade test fails and rolls back the upgrade	Currently, the comm validation logic only tests the localhost. It could potentially miss important configuration options, such as load balancers, forward proxies, name resolution, IP reverse lookups, and so on.	
Email PRB1547429 KB1005102	The email client template adds extra lines in the 'td' tags		<ol style="list-style-type: none"> 1. Create an email client template on the 'incident' table with the content type 'HTML'. 2. Copy-paste the attached content in the body HTML field of the template. 3. Navigate to the 'incident' table. 4. Click the email link. <p>There are extra spaces in the content.</p>
Email PRB1548533	Inbound email is classified to an incorrect target record and doesn't run inbound actions as expected	When an inbound email subject contains a prefix that is a substring of other prefixes in sys_number, then the email classification is incorrectly mapped.	
Email PRB1588796 KB1123004	Slow processing of reply emails after a San Diego upgrade	After an upgrade in San Diego, users observe that processing of inbound email actions on some reply emails takes a long time.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
Event Management PRB1331589	The 'vCenter connector get' server sticks in an attempt to receive deleted alarm properties	Users receive a 500 error when trying to receive deleted alarm properties: 'The object 'vim.alarm.Alarm:alarm-15434' has already been deleted or has not been completely created'.	
Field Normalization PRB1519919 KB0996010	Field normalization triggers even if the field value is empty, which causes pending values to be created	Field normalization happens for the fields with empty values. This is an unexpected behavior.	Refer to the listed KB article for details.
Flow Designer PRB1496336 KB0962018	Flow actions that operate against RCA-protected tables are blocked	Flows built in Flow Designer can be blocked from executing successfully if they interact with a resource protected by Restricted Caller Access (RCA). This can happen with actions like 'Create Record/ Lookup Record', or through script actions. The flow may have errors. RCA isn't able to determine the source for flows in either case, so the user is not able to grant or deny access.	Refer to the listed KB article for details.
Flow Designer PRB1519011 KB0994747	Parallel approvals in Flow Designer only respect the approval decision of the first approval	When using multiple 'Ask For Approval' actions inside a 'Do the following in parallel' flow logic, users observe that the decision from the first approval applies to all of the approvals.	<ol style="list-style-type: none"> 1. Create a Flow. 2. Set the Trigger to Service Catalog. 3. Add a 'Do the following in parallel' Logic Step. 4. Add 2 'Ask For Approval' Actions to run in Parallel. 5. Set the Approvals to different Groups. 6. Set When to Approve to 'Anyone approves' for each Approval Action. 7. Use 'Test' on the Flow and select a Request Item.




Problem	Short description	Description	Steps to reproduce
			<ol style="list-style-type: none"> 8. Navigate to the Request Item and approve one of the Approvals. 9. Notice that all Approvals get set to 'No Longer Required'. 10. Check the Flow Context and see that both Approvals are set to 'Approved'.
Flow Designer PRB1551595 KB1005443	The 'Flow Designer:Cleanup Record Watcher' job removes a valid record watcher if a run_as user doesn't have read access on the sys_flow_context table		Refer to the listed KB article for details.
Flow Designer PRB1552753	Process automation event handler jobs are created on all nodes	Users have multiple jobs created on one node.	
Flow Designer PRB1559237	Updating an action updates the 'FDACTIONSTATUS' object	Updating 'FDACTIONSTATUS' places it within update sets and causes fields within to empty.	<ol style="list-style-type: none"> 1. Create an action. 2. Add an error condition. 3. Save. 4. Navigate to sys_complex_object. <p>The 'FDACTIONSTATUS' complex object updates, which shouldn't happen.</p>
Flow Designer PRB1566187	An email sent via the 'Send email' action contains an extra space	The new lines that generate when the email sends are converted into tags. If users are sending an email with HTML/CSS code, the implicit new lines resulting from the 'p' tags are converted into tags.	<ol style="list-style-type: none"> 1. Navigate to an instance. 2. Create a user with an email address. 3. Create a nomination record. 4. Submit. 5. Change the status under 'Review' to 'Open'. 6. Check the email in the inbox. 7. Check the Send Email action in the flow.

Problem	Short description	Description	Steps to reproduce
Forms and Fields PRB1480596 KB0967202	View reference lookup on the 'Workspace View Rule' form doesn't work when glide.invalid_query_returns_no_rows is true, due to the dependent field value 'table'	This is relevant to the Agent Workspace view rule and the itil role for ITSM modules.	Refer to the listed KB article for details.
Forms and Fields PRB1572854	Glide list fields create warning messages in the system log after upgrading to San Diego	A warning message displays when navigating to records that contain Glide list field elements. The warning message reads: 'com.glide.script.RhinoEcmError: Cannot convert null to an object. : Line(1) column(0) ==> 1: __ref__.getValue().indexOf(gs.getUserID()) != -1'. The message affects fields such as work_notes and watch_list on the incident.do form.	<ol style="list-style-type: none"> 1. Log in to a San Diego instance. 2. Open an incident.do record (/incident.do). 3. Navigate to the system logs. 4. Verify a warning message displays.
Forms and Fields PRB1574345	The Phone Number (E164) field isn't working for non-admin users	Issue can be observed in San Diego.	<ol style="list-style-type: none"> 1. Configure the 'Incident' table. 2. Create and add a column of field-type 'phone_number_e164'. 3. As an admin, open any incident record. 4. Input the value to the Phone Number field. 5. Verify the Phone Number field is validated and auto-corrected. <p>When a non-admin user tries to input the same, it is not validating and does not let users save the record. A message displays: 'Invalid phone number'.</p>
Forms and Fields	Inconsistent behavior with form view's (dmn_requirements) might varies	When Next Experience is active, the 'Description' field's	<ol style="list-style-type: none"> 1. Log in to an instance as an admin. 2. Open the incident form (incident.do).

Problem	Short description	Description	Steps to reproduce
PRB1576960	field size and resizing	depending on whether it is above or below the 'Risk of performing' field.	<ol style="list-style-type: none"> 3. Right click on the form header. 4. Select Configure > Form layout. 5. Using the fields on the right side of the slush-bucket, add a new field: <ul style="list-style-type: none"> ◦ Name: My text field ◦ Type: string ◦ Length: 4000 6. Click Add. 7. Add another field: <ul style="list-style-type: none"> ◦ Name: My HTML field ◦ Type: HTML 8. Click Add. 9. Save the new form layout. 10. Go back to the incident form. 11. Notice that the 'My text' field is just 3 or 4 rows tall. 12. Right-click on the form header. 13. Configure the form layout. 14. Swap the position of the 2 fields so that 'My HTML field' is before 'My text field'. 15. Save the form layout. 16. Notice that 'My text field' is as tall as the HTML editor.
Graph API PRB1563474	Async.eachSequence doesn't catch errors as it iterates through CompletableFutures, which can cause whenComplete never to return	The issue is observed when users stream a GraphQL response. It throws an error as it's processed.	
HTML Editor PRB1566670 KB1115940	The incidents/ change requests' form does not let users resize images that have been pasted into the HTML field	Clicking the image does not display the controls on the corners of the image for resizing.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
Human Resources Service Management PRB1548692	The global search in HR Agent Workspace is not working for the agent role		<ol style="list-style-type: none"> 1. Log in to a Rome instance where HR Agent Workspace is installed. 2. Log in as an admin. 3. Navigate to HR Agent Workspace. 4. Search with some keyword that returns a KB article. 5. Log in as an HR agent user. 6. Search with the same keyword <p>Results are not returned although related KBs exist. An HR agent user (without the sn_hr_ws.admin role) is not able to access HR workspace records in sys_search_source and m2m_search_context_config_search_source tables.</p>
Import / Export PRB1552612	A Japanese name in Excel adds 'u_[Japanese Name]' in the column name of the import set table	When including a Japanese name in an Excel header, 'u_[Japanese Name]' appears in the column name of the import set table, which is not supported.	
Import / Export PRB1565284 KB1113638	Scripted JDBC probes result in a null password error	Users receive the error 'java.sql.SQLException: java.sql.SQLException: ORA-01005: null password given; logon denied' using a direct JDBC probe.	Refer to the listed KB article for details.
Import / Export PRB1575866	A PDF with @page CSS in var HTML renders incorrectly in San Diego	This issue occurs when using sn_pdfgeneratorutils .PDFGenerationAPI() .convertToPDFWithHeaderFooter(html "incident", sysId, "TestFile", config).	
Instance Data Replication feature PRB1503098	Suspected out of memory risk when sending large attachments		<ol style="list-style-type: none"> 1. Set up a replication set with attachments. 2. Add a large attachment or multiple large attachments that are over 1 GB. Total size of attachments must exceed 3 GBs. <p>Replication stops.</p>

Problem	Short description	Description	Steps to reproduce
Integration Hub PRB1524529	When turned on, a sys property displays an Integration Hub (IH) licensing warning		<ol style="list-style-type: none"> 1. Confirm that the instance has the correctly configured IH licensing. 2. Confirm that the instance is in an 'Open' state. 3. Create the IH action. <p>The IH licensing warning still appears in Flow Designer.</p>
IT Operations Management PRB1545524	Show licensable CIs UI action might redirect to an incorrect URL	The UI action might redirect to itom_lu_licensable_cis_list and result in a 'Page Not Found' error. In this case, the URL is missing the '.do' appendix to work.	<ol style="list-style-type: none"> 1. In a ServiceNow instance, navigate to Report ITOM Licensable CIs > Show licensable CIs. 2. Verify if the URL that loads is missing the '.do' and results in a 'Page Not Found' error.
ITSM Service Portal PRB1559714 KB1121644	An 'org.json.JSONException' error is thrown in the logs when a variable is within a container and has read/write permissions set		Refer to the listed KB article for details.
Key Management Framework PRB1549168 KB1080301	Nodes running the clear Expiring Key Management Framework (KMF) cache entries may become unresponsive	There may be multiple days worth of high CPU usage.	Refer to the listed KB article for details.
Key Management Framework PRB1565957 KB1115784	The password2 submodule com_glide_certificates_glideencrypter should have proper module access policies		Refer to the listed KB article for details.
Key Management Framework PRB1570463	The default module access policy isn't functioning		Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
KB1117261 			
Key Management Framework PRB1573372 KB1117309 	KMF is not configured correctly, which impacts performance and hides encrypted fields	If the KMF plugin was not configured correctly after activation of the plugin, many sys_update_version records are generated for the sys_kmf_module_key_policy record for com_glide_cookie_hmac. This can also impact encrypted fields because the encryption keys are not populated in KMF. As a result, encrypted fields are not visible.	Refer to the listed KB article for details.
Key Management Framework PRB1584122 KB1123547 	The CryptoModule class shouldn't permit concurrent accesses to an unsynchronized instance of IKMFDecrypter	Fails with an error message.	Refer to the listed KB article for details.
Knowledge Management PRB1580632	Knowledge Base (KB) articles and categories lose visibility for some domains	Intermittently, some KB articles don't display for users and KBs on their domains on the platform view 'Knowledge. - Home page'.	<ol style="list-style-type: none"> 1. Log in to an instance. 2. Switch to a particular domain (like top/acme). 3. On the platform, navigate to Knowledge > Homepage. 4. Open a knowledge base that should have articles and categories visible for the user and their current domain. <p>Expected behavior: Users are able to see articles for the KB and categories.</p> <p>Actual behavior: 'No results found for the selection' displays. No categories display.</p>
Lists PRB1554279	The 'Tags' column in the list view breaks context menus and personalization	Adding the Tags field to a list column breaks the ability to interact with the list. The issue significantly reduces the ability to do work	

Problem	Short description	Description	Steps to reproduce
		on an affected table view. It prevents all users from opening context menus or from personalizing the list columns. Right-clicking the header or opening any hamburger icon doesn't display anything. Clicking the gear icon to personalize the lists does not open anything.	
Lists PRB1576307 KB1120480	Action on selected rows > Assign tag doesn't work since the San Diego upgrade	The Assign tag action accessed from the 'Actions on selected rows' option doesn't work for San Diego instances using the Next Experience UI. The page is refreshed but no tags are added to selected records.	Refer to the listed KB article for details.
Lists PRB1580179	The Create favorite action from the 'List' context menu doesn't work after upgrading to San Diego	A console error occurs.	<ol style="list-style-type: none"> 1. Log in to a San Diego instance. 2. Disable Next Experience. 3. Ensure that List v3 is active and enabled. 4. Open incident.list. 5. Open the 'List' context menu. 6. Select 'Create Favorite'. <p>Nothing happens and no window populates.</p>
MID Server PRB1544057	RemoteGlideRecord insert with binary data fails with 500 error due to a library issue	And ecc_queue XML file inserts via RemoteGlideRecord, and the node log reports an internal server error (500).	<ol style="list-style-type: none"> 1. Set up a MID Server on a Windows machine. 2. Navigate to the MID Server where it is installed. 3. Copy an ecc_queue file to mid/work/monitors/ECCSender/output_2. 4. After the file is copied, verify MID Server tries to send the payload in a SOAP message. <p>After the request reaches the instance, SOAP process throws the exception.</p>

Problem	Short description	Description	Steps to reproduce
MID Server PRB1547917 KB1001745	Before shutting down for an upgrade, MID server fails to confirm that the service user is able to start itself again, or report the issue, leaving the MID server in a down status	Before shutting down for an upgrade, MID Server fails to confirm that the service user is able to start itself again, or report the issue. If the upgrade process does have a problem launching the service using start.bat, then the MID server is left down, causing a MID server outage.	Refer to the listed KB article for details.
MID Server PRB1548158 KB1001926	In Rome, a 32-bit MID server installed on a 64-bit host machine fails AutoUpgrade	A 32-bit MID server on a 64-bit OS fails to upgrade, with a MID server Issue logged: 'MID is not supported on 32-bit host machine.'	Refer to the listed KB article for details.
MID Server PRB1565580	Threads executing commands on PowerConsole are waiting indefinitely, resulting in a lowered Discovery performance	During high Discovery volume, performance takes hours/days to execute a single classify probe or pattern. When taking a thread dump, the threads are in 'TIMED_WAITING' state with locks.	Run Discovery schedule, which uses PowerShell related probes on all 25 standard threads simultaneously.
MID Server PRB1567004	MID server ECC sender cache initialization fails on startup when there are many processing ECC queue records to set back to 'Ready'	There is an ECCSender backlog at the time of the restart, preventing any more being sent to the instance and growing the backlog further.	
MID Server PRB1586861	InstanceSoapClient doesn't recover if GetMIDInfo encounters an exception	If MID Server makes a SOAP call to GetMIDInfo scripted Soap Service and encounters an exception, it doesn't recover. All subsequent calls fail.	

Problem	Short description	Description	Steps to reproduce
Next Experience Unified Navigation PRB1539109	Next Experience does not function properly on a Platform-only instance after installing Unified Navigation Admin Configuration plugins and enabling Next Experience	Console log errors, broken menus, and other bugs are present.	
Next Experience Unified Navigation PRB1555503 KB1080252	Associating an empty core style record to the Next Experience theme displays a white screen		Refer to the listed KB article for details.
Next Experience Unified Navigation PRB1574869	The phone icon on the Next Experience header disappears intermittently	When Next Experience is enabled, the phone icon disappears.	<ol style="list-style-type: none"> 1. Impersonate a user. 2. Refresh the screen. <p>Notice that the phone icon on platform disappears intermittently with Next Experience on.</p>
Next Experience Unified Navigation PRB1580957	The 'cog wheel' icon on related tasks in San Diego in the Next Experience UI	The issue is experienced after a San Diego upgrade.	<ol style="list-style-type: none"> 1. Ensure that related lists are available for the task record. 2. Log in to the instance. 3. Browse problem.LIST or Incident.LIST from the filter navigator. 4. Open any record. 5. Click the 'Show Related Active Records' icon next to the Configuration Items field. 6. Verify if the cog wheel to the 'Personalize' list view is missing. <p>Expected behavior: The 'Personalize' list view should be available.</p> <p>Actual behavior: The 'Personalize' list view is missing.</p>

Problem	Short description	Description	Steps to reproduce
NotifyNow PRB1548004	Failed number checks against Twilio may result in Notify Numbers to become inactive	If an API request to Twilio to receive phone numbers fails, then it could result in the notify number to become inactive. This causes all subsequent sent SMS messages or calls to fail, as there are no registered Twilio numbers.	
Persistence PRB1266075 KB0728469	If all tables that are part of a database view are on the same gateway database, Glide should be able to redirect the query to the gateway	Database views that are connecting to tables that are sharded are not working. They are not honoring the gateway configuration and still look in the base database.	Refer to the listed KB article for details.
Persistence PRB1559725	After upgrading to Rome, instances with Oracle databases (DB) are experiencing DB connection leaks	The connection leaks result in latency when accessing the instances.	
Platform Licensing PRB1504320	Custom table auto-allocation to grandfathered and App Engine licenses override previous table mappings	When the license download process runs on an instance, the system attempts to automatically allocate custom tables to a grandfathered table subscription or an App Engine subscription when these subscriptions are downloaded for the first time. When re-downloading, that can retrigger this 'first time' logic and cause the custom table mapping to change or	

Problem	Short description	Description	Steps to reproduce
		be updated in a way that is not intended.	
Platform Licensing PRB1524248	Tables created in global scope that use an update set aren't counted as a custom table		<ol style="list-style-type: none"> 1. Log in to an instance as an admin. 2. Create an update set. 3. Create a custom table. 4. Navigate to ua_custom_table_inventory. 5. Navigate to the update set. 6. Mark it as complete. 7. Log in to another instance as an admin user. 8. Retrieve the completed update set. 9. Commit. 10. Navigate to ua_custom_table_inventory table. <p>The record isn't created for the imported custom table.</p>
Process Automation Designer PRB1558343	PD Pill Query calling SysMetaResolver is pulling back large amounts of choices and timing out		<ol style="list-style-type: none"> 1. Create a table that extends a task. 2. Add a field with a task reference. 3. Create a Process Automation Designer (PAD) with that table as the trigger. 4. Create an activity. 5. Select a pill from one of the trigger table's fields. 6. Open the dot walker. 7. Walk the trigger table to an activity in the jelly form. <p>Notice that it doesn't pass back the fields.</p> <ol style="list-style-type: none"> 8. Create an activity that has a pill that references that trigger that table's fields on the PAD. 9. Reload the page. <p>If this process takes long enough, it times out.</p>

Problem	Short description	Description	Steps to reproduce
Process Automation Designer PRB1571878	Data pills in ATFs are unavailable to all but those with an admin role	When a non-admin user is trying to use data pill, it disappears.	<ol style="list-style-type: none"> 1. Navigate to an instance. 2. Impersonate a non-admin user who has a 'atf_test_admin' role and/or a 'atf_test_designer' role. 3. On a base system, navigate to Automated Test Framework (ATF) > Tests > New > mytest > Save. 4. On the 'Test' form in the 'Steps' related list, click 'Add Test Step'. 5. Select Create a User > Submit. 6. On the 'Test' form in the 'Steps' related list, click 'Add Test Step'. 7. Select 'Record Query'. 8. Set the Table field to 'Incident'. 9. On the Conditions field, select from the dropdown 'Assigned to'. 10. To the right of the Assigned to field, click the 'Mapping' icon. 11. Create a User > BLANK PANE HERE <p>Notice that there is reference of an error in the console.</p>
Related Lists PRB1570497	The 'List Edit' window moves away from the cell when users have many fields in the related list	Occurs when there is a scroll bar to see the fields.	<ol style="list-style-type: none"> 1. Log in to the San Diego instance as an admin. 2. Open any incident. 3. Scroll down to the related list. 4. Add any incident or record to the 'Child Incidents' related list. 5. Scroll to the right. 6. Try to change any field. <p>The pop-up moves toward the area with the white screen in the back.</p>
Reporting PRB1570195	The reference interactive filter isn't loading when there is an invalid reference mapping	Error: 'Error getting default config for filters java.lang.NullPointerException'.	

Problem	Short description	Description	Steps to reproduce
<p>Search UX</p> <p>PRB1563403</p> <p>KB1113559</p>	<p>Global search displays a 'Bad Request 400 error' on a Next Experience enabled instance</p>	<p>When the user searches for a record, the correct result is returned. When the user searches for a term, an error appears in the console. This issue occurs on San Diego instances with Next Experience enabled.</p>	<ol style="list-style-type: none"> 1. Log in to any San Diego instance. 2. Enable Next Experience. 3. Create a role. 4. Add the role to global search property <code>glide.ui.can_search</code>. 5. Give this new role to 'Abraham Lincoln'. 6. Perform a search from global. <p>Expected behavior: Search returns proper results.</p> <p>Actual behavior: Search returns a 'bad request 400' error.</p>
<p>Seismic Framework</p> <p>PRB1553865</p>	<p>Tasks are delayed in Chrome when the browser isn't in the foreground</p>		<ol style="list-style-type: none"> 1. Create an Asynchronous Message Bus (AMB) subscription hook that regularly receives data. 2. Open Chrome to a page with the component. 3. Minimize the window. <p>Expected behavior: AMB data actions are fired soon (within approx. 100 ms) after the AMB message is received by the AMB client.</p> <p>Actual behavior: Actions aren't handled, up to 1 minute late.</p>
<p>Service Catalog: Seismic</p> <p>PRB1524152</p> <p>KB0998171</p>	<p>Catalog UI policies isn't working in Service Portal</p>	<p>After a Rome upgrade, catalog UI Policies isn't working in Service Portal when the variable internal name doesn't match the one in the catalog UI policy action.</p>	<p>Refer to the listed KB article for details.</p>
<p>Service Catalog: Service Portal Widgets</p> <p>PRB1527701</p>	<p>Tooltips in the 'SC Category Widget' in Portal stick</p>	<p>In a Rome version, the tooltips in the 'SC Category Widget' in Portal are becoming stuck when using the browser's back button.</p>	<ol style="list-style-type: none"> 1. Open Service Portal's home. 2. Open an instance with a category. 3. Select a category. 4. Refresh the page with the browser refresh button.

Problem	Short description	Description	Steps to reproduce
			<p>The tooltip displays (do not click anything).</p> <p>5. Click the browser back until at the original page.</p> <p>The tooltip still displays. This can be repeated and several tooltips still display even after users have left the selected category and go back to the 'sc_category' page.</p>
<p>Service Catalog: Service Portal Widgets PRB1566440 KB1116926</p>	<p>A slow query from the widget 'SC Category Page' (sc-category) getPopularItems() can cause outages</p>	<p>The widget 'SC Category Page' is a widget that comes with Service Portal. It has a method in the Script field named getPopularItems(). When the sc_cat_item or sc_item_produced_record tables are large, the resulting query from this method can suddenly become slow. If enough users attempt to access the widget at the same time, this can cause a full outage.</p>	<p>Refer to the listed KB article for details.</p>
<p>Service Catalog PRB1537388</p>	<p>The Remove button on the multi-row variable set is not translated</p>	<p>The Remove button is not translated for the multi-row variable sets in Service Portal. The Remove button appears in English for the first time, and when users click 'Remove all' again, the pop-up modal displays the Remove button in the correct language.</p>	<ol style="list-style-type: none"> 1. Install the Dutch or German language plugin. 2. Log in to a Rome instance. 3. Change the language to Dutch or German. 4. Navigate to Service Portal. 5. Add records in the multi-row variable set. 6. Click Remove All (Alles verwijderen if the language is Dutch). <p>The Remove button in the pop-up modal should appear in the selected language (for example, Dutch).</p>
<p>Service Catalog PRB1548356</p>	<p>The variable editor on sc_task breaks the form when</p>	<p>This works as expected when attaching in sc_req_item.</p>	<p>Refer to the listed KB article for details.</p>

Problem	Short description	Description	Steps to reproduce
KB1002361	attaching a file in Rome		
Service Catalog PRB1552749 KB1002940	Forms are broken when the attachment file of the attachment variable is missing or deleted		Refer to the listed KB article for details.
Service Catalog PRB1553442	sc_req_item stage displays have a 'Request Approved' stage at the end of the stages	A recent change to sc_req_item_stageGetChoices added 'Request Approved' to the list, which drives these displays.	<ol style="list-style-type: none"> 1. Order a new laptop from Service Catalog. 2. Approve the request level approval for a user. 3. View the 'sc_req_item' list. <p>The new laptop item has the 'Request Approved' stage at the end of the icon list.</p>
Service Catalog PRB1560651 KB1116181	A required check box on a catalog item prevents submissions in Service Portal	When submitting a catalog item with a required check box, the catalog item provides an error mentioning there is a required field. Checking the check box and submitting again, which should fulfill the requirement, instead provides the same notification that the required field hasn't been filled in.	Refer to the listed KB article for details.
Service Catalog PRB1561288	getDisplayValue of a NoneChoice returns the label '-- None --' instead of an empty string		<ol style="list-style-type: none"> 1. Create a 'Multiple Choice' or 'Select Box' variable. 2. Add it to a catalog item. 3. Order this catalog item. 4. Extract the displayValue of the created item using the RITM. <p>Expected behavior: The output of the script is an empty string.</p> <p>Actual behavior: The output of the script is '-- None --'.</p>

Problem	Short description	Description	Steps to reproduce
Service Mapping PRB1558500 KB1119884	Service Model's Blob Reaper's deletion phase is not batched, which causes the job to run for a long time and have a replication lag		Refer to the listed KB article for details.
Service Portal PRB1308754 KB0997111	A password reset link redirects the user to the 'SSO login' page		Refer to the listed KB article for details.
Service Portal PRB1554172	User's comments can be duplicated multiple times for Service Portal		<ol style="list-style-type: none"> 1. In a Chrome browser, simulate a slower network connection (about 28- kbits/sec). 2. Open an existing from the ticket widget. 3. Open a case/incident. 4. Post some long text from the portal side. 5. Before this text is posted, attach a file. <p>The system sends multiple requests to/for the same text multiple times.</p> <p>Expected behavior: Text and file are saved once.</p> <p>Actual behavior: Text may be saved several times (minimum 2 times).</p>
Service Portal PRB1556766 KB1064663	Help text annotations aren't properly displayed in Service Portal	Help text displays in web-based UI, but not in Service Portal.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
Service Portal PRB1558958	After upgrading to San Diego, the use of '<', '>', or '"' in the help text on a variable does not render correctly when displayed in the self-service portal		<ol style="list-style-type: none"> 1. Log in to any San Diego base instance. 2. Open any base instance catalog item and navigate to Variables > Enable help text. 3. Enter values containing '<>&\' 4. Check 'Enable help' and 'Always show help boxes'. 5. Open Service Portal. 6. Navigate to the corresponding catalog item edited in step 3. <p>Against the help text, observe the decoded values of the text entered.</p>
Service Portal PRB1564863 KB1116180	HTML source displays for a " character under the catalog item's variable help text	It renders as "".	Refer to the listed KB article for details.
Service Portfolio Management PRB1552378 KB1117916	The Duration field outages aren't calculated correctly when the start time is set to midnight	If a user has updated the system property glide.sys.time_format to 'h:mm:ss a', the outage Duration field is not calculated correctly if the outage starts at midnight.	Refer to the listed KB article for details.
Software Asset Management Professional PRB1555133 KB1117987	Reconciliation for Oracle publisher failed due to the following error: TypeError: Cannot read property 'max_size_on_cloud' from undefined	After upgrading from Quebec to Rome, a reconciliation run for Oracle publisher might fail with the following error: 'TypeError: Cannot read property "max_size_on_cloud" from undefined'. Some Oracle software models might not have the 'Maximum size of instance on cloud' metric attribute defined.	<ol style="list-style-type: none"> 1. Activate the SAMP plugin. 2. Populate some Oracle software installs and CIs that host the software. 3. Define some Oracle software models without the 'Maximum size of instance on cloud' metric attribute. 4. Run a reconciliation for Oracle. 5. Observe the error message.

Problem	Short description	Description	Steps to reproduce
Software Asset Management Professional PRB1557844	samp_pattern_normalization_rule should remove sys_class_name from entries	This is a known issue where the class name to be incorrectly updated to sam_server_pattern_normalization_rule.	<ol style="list-style-type: none"> 1. Pull CDS content for samp_pattern_normalization_rule. 2. Check sys_class_name.
Software Asset Management Professional PRB1560794 KB1112323	The Ran for field on reconciliation results displays incorrect data	When users run a certain publisher, sometimes it tags as 'All Publishers' or a different publisher than the one requested in the Ran for field.	Refer to the listed KB article for details.
Software Asset Management Professional PRB1578207	Variables are added to Software Catalog items after you upgrade to the San Diego release	After you upgrade to the San Diego release, the 'Create variable in Software Catalog Item' fix script runs and adds the requested_for_user and device_name variables to all items in the pc_software_cat_item table, which is undesirable for live catalog items when auto-allocation is not in use.	
Source Control Integration PRB1580920 KB1123909	Source Control directories clear and users are unable to see files	When working on an application that is tied to Source Control and the current branch is not the main, if the 'sys_repo_config current_branch' field clears, the directories clear with files missing.	Refer to the listed KB article for details.
Survey Management PRB1560717	Required option fields are always visible when completing a survey	A question that is marked as required and depends on another question is always displayed on the 'Survey' page.	
Tables and Dictionary PRB1320868	Instance upgrade leaves staged fields in 'Vulnerability	Failures during an upgrade impact a few columns in 'Vulnerability' tables to be in an incorrect	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
KB0721328	'Response' tables, which prevents UI visibility and use in scripts	state. This prevented the use of these attributes in business rules, schedule jobs, and UI visibility. As a result, vulnerability response functionality is impacted.	
Tables and Dictionary PRB1511474	Function fields still work when inactive	Function fields that have been deactivated still run. If users have a Function field where the function does not work, the errors display in the log even though the field is not active.	
Tables and Dictionary PRB1551027 KB1002412	Creation of a field fails when a field name is longer than 30 characters and matches an existing field with additional prefix text	When a field name is greater than 30 characters long, an alias for the field must be used due to limits on the maximum column name accepted in the backend database. During creation, an attempt is made internally to shorten the alias by removing any initial prefix text up to a first '_'.	<ol style="list-style-type: none"> 1. Create a standalone table. 2. Create a String field with the label 'Field 1'. 3. Set the column name to 'applicants_nationality'. 4. Verify the field's label is correctly displayed. 5. Create a String field with the label 'Field 2'. 6. Override the column name to be 'external_applicants_nationality'. 7. Save/Submit. <p>The second field's creation creates the sys_dictionary record, but displays the info message in the UI: 'Column name 'external_applicants_nationality' already exists'.</p> <p>The field label for 'applicants_nationality' appears empty. The field doesn't exist and has not been created correctly. The column label for the first field appears empty.</p>
Transaction and Session Management PRB1512733	The 'Forgot Password' flow isn't working for some users in scoped apps	The issue is observable in the Quebec and Rome releases.	Refer to the listed KB article for details.

Problem	Short description	Description	Steps to reproduce
KB1005035 ↗			
Transaction and Session Management PRB1568194	WebSocket memory leak when UpgradeProcessors don't clean objects aren't cleaned by Global Catalog (GC)	Websocket sessions are left in the 'OUTPUT_CLOSED' state. GC doesn't clear the sessions or upgrade processors.	
UI Builder PRB1578847	ui_builder_admin role does not allow users to delete variants and patch pages	The user is shown failed to delete variant and the network throws a 500 error.	
UI Policy/ Client Script PRB1519315	Users shouldn't be able to select 'None' in a list	It works correctly on the classic platform form view.	
UI Policy/ Client Script PRB1559669	Service Portal JS error when setting a non-dependent reference field if a dot-walked field is on the form		
Update Sets PRB1580642 KB1121754 ↗	The user observes a ReferenceError when exporting a retrieved update set post-upgrade	The user is unable to export a retrieved update set to XML after upgrading to San Diego.	Refer to the listed KB article for details.
Upgrade Engine Issues PRB1562998	Upgrade nodes are left out of synchronization during app installation	During app install and upgrade, the cluster message sent to other nodes does not force app artifact expansion. That can leave other nodes out of synchronization for the app content.	
Usage Analytics PRB1560548	An error message is reported in the logs: 'GCF definition		

Problem	Short description	Description	Steps to reproduce
	collection cache is null'		
Virtual Agent Platform PRB1542802 KB1096212	Installing the Slack production bot from the 'Messaging Apps Integration' page fails with an error	The error reads: 'Invalid permissions requested'.	Refer to the listed KB article for details.
Virtual Agent Platform PRB1563873 KB1120450	When upgrading, there is a fallback topic issue	On upgrading from Rome to San Diego, the older 'AI search fallback' topic does not work.	Refer to the listed KB article for details.
Virtual Agent Platform PRB1580415 KB1123166	The user is unable to submit an Item request lookup for a multiple choice variable if a choice selection is made through search	Search results are shown properly but clicking on the searched option is throwing the error message	Refer to the listed KB article for details.
Visual Task Boards PRB1543433	If a card is moved, filters on the sorted task board are no longer honored		<ol style="list-style-type: none"> 1. Create a new freeform task board. 2. Create 3–4 cards with any text (that can be filtered). 3. Add any 'sort' condition to the task board. 4. Filter the task board so some of the cards created within step 2 are filtered. 5. Attempt to move one of the cards that are remaining into a different lane. <p>The filtered cards are also displayed.</p>
Web Services PRB1565411 KB1117234	The scripted REST API response status sets to 0 when using StreamWriter	If users go above the output stream's buffer size, the response status code is sent first, then the body is streamed. In this case,	

Problem	Short description	Description	Steps to reproduce
		the status code that was sent (0) is the one received by the client.	
Workflow PRB1563939 KB1117994	There is a null pointer exception in the 'Simple List' widget after a San Diego upgrade	The 'Simple List' widget in Service Portal throws a null pointer exception for the sc_req_item table.	Refer to the listed KB article for details.

All Other Fixes

To view a list of all other PRBs fixed in Tokyo, refer to [All other Tokyo fixes](#).

All other Tokyo fixes

The Tokyo release contains important problem fixes.

Tokyo was released on August 4, 2022.

- Build date: 07-26-2022_2149
- Build tag: glide-tokyo-07-08-2022__patch0-07-19-2022

i Important: For more information about how to upgrade an instance, see .

For more information about the release cycle, see the [ServiceNow Release Cycle](#) .

i Note: This version is now available for use within the ServiceNow Government Community Cloud (GCC) environment. For more information about services available in isolated environments, see [KB0743854](#) .

For a downloadable, sortable version of the fixed problems in this release, click [here](#) .

All other fixes

Problem category	Number	Short description
Activity Stream	PRB1569279	A user is unable to open a new incident form during an upgrade
Activity Stream	PRB1566047	The activity template stream generates dynamic cached content
Activity Stream	PRB1560370	Activity Stream > Show email details fails to display single-line content from EmailDisplay processor

Problem category	Number	Short description
Activity Stream	PRB1555931	'Show more' always displays regardless of a comment's length
Activity Stream	PRB1547537	The 'Sent/Received' post-type in emails is missing in child tabs
Activity Stream	PRB1546322	Journal field @ mentions don't work in Korean without adding spacing
Activity Stream	PRB1544010	The email tile in the activity stream displays CC'ed recipients in the To field
Activity Stream	PRB1536175	In the Japanese translation, the label for 'Activity Stream' under 'Summary of item being approved' is cut off
Activity Stream	PRB1535007	Activity Stream displays different/duplicate updates when there are two users on concurrent sessions and one of them makes an update
Activity Stream	PRB1500408	A user's display name doesn't display in the activity stream when the user ID is an email address that doesn't match the user's email address
Advanced Work Assignment	PRB1575110	Memory leak in AWA Logger
Advanced Work Assignment	PRB1553616	Workload update entries are missing when the audit trail is enabled for the <code>awa_agent_capacity</code> table
Advanced Work Assignment	PRB1553614	Agent capacity changes are not consistently logged

Problem category	Number	Short description
Advanced Work Assignment	PRB1547892	The system starts the inactivity timer for the chat after a message in a private chat
Advanced Work Assignment	PRB1547117	AWA creates excessive queries in the cmn_skill table on some instances
Advanced Work Assignment	PRB1544651	AWA advanced analytics and AWA operations dashboard display no data to domain-constrained users
Advanced Work Assignment	PRB1534840	awa_group_queue_priority and awa_eligibility_pool records are not included in update sets
Advanced Work Assignment	PRB1590149	A shift-based assignment doesn't work when the same agent is in queues/eligibility pool/groups that overlap
Agent Assist	PRB1557765	The Agent Assist snippet differs from the contextual search snippet and displays CSS code
Agent Assist	PRB1546392	The Attach button in recommended articles adds articles to other comments
Agent Assist	PRB1546131	On slow virtual machines, a comment isn't automatically saved if the Attach button is clicked after typing
Agent Assist	PRB1579075	Agent Assist searches twice when a second instance of it is open
Agent Chat	PRB1561593	Adding a line break to a message that contains a URL corrupts the URL on the agent's side

Problem category	Number	Short description
Agent Chat	PRB1578505	When transferring a chat to another queue, the text box disappears from other active chats
Agent Chat	PRB1568478	An end user can't open a file that they attached
Agent Chat	PRB1560793	An agent session expires whenever a new incident is created from Connect/Agent Workspace's live agent chat and using the Create Incident quick action
Agent Chat	PRB1555735	A new record is created in the 'Interaction Related Records' table every time an incident record is opened
Agent Chat	PRB1553091	Post-Rome upgrade, a font family issue for Chat Survey in ESC Portal when choice data is used and the option has a two character string as a label
Agent Chat	PRB1552969	Agents can submit an empty chat message
Agent Chat	PRB1552652	On Agent Workspace, 'Send Private Message' isn't visible when a manager opens an interaction when help was requested by the agent
Agent Chat	PRB1548236	After upgrading from Paris or earlier, interactions that span daylight savings time can't be closed
Agent Chat	PRB1548185	Issue with the computation of the 'Average Handling Time' metric

Problem category	Number	Short description
Agent Chat	PRB1541848	When refreshing using a Firefox browser, a pending work item in the inbox disappears
Agent Chat	PRB1535773	Agents receive a 'New chat in your inbox' desktop notification after transferring the work item to another queue
Agent Chat	PRB1579107	Unrelated cases are associated with chats when accepting via AWA
Agent Chat	PRB1570671	The initial agent response is repeated after transferring to another agent
Agent Chat	PRB1559005	After upgrade from Paris or earlier, interactions spanning daylight savings time cannot be closed
Agent Workspace	PRB1553470	In Rome, Agent Workspace > At a Glance > Org Chart displays as 'null'
Agent Workspace	PRB1541824	Applying a template displays an incorrect name on the incident template message when impersonating
Agent Workspace	PRB1570792	The lookup window modal of the Location field with the 'tree_picker' attribute is empty after upgrading to San Diego
Agent Workspace	PRB1569013	The response template pop-up overlaps the chat title
Agent Workspace	PRB1567908	In an Agent Workspace request ticket, the remove row confirmation pop-up message 'Are you sure you want to remove row?' isn't translated into Japanese

Problem category	Number	Short description
Agent Workspace	PRB1564936	Clicking the 'Inbox' icon does not minimize the inbox status pane
Agent Workspace	PRB1563109	Highlighted values on the Tags field no longer work in the list view in Agent Workspace, but an admin can still configure it
Agent Workspace	PRB1562399	The Document ID field doesn't set in Agent Workspace
Agent Workspace	PRB1562171	Records on the child domain can view the display value of referenced fields that are in its parent domain when in Agent Workspace but not when in Platform
Agent Workspace	PRB1560862	List editing more than 20 rows only displays the change for the first 20
Agent Workspace	PRB1560609	A contextual side panel that uses now-iframe with a UI page does not resize properly
Agent Workspace	PRB1560514	Activity stream/compose is missing in Agent Workspace if the activity stream is configured to display no activity on the Workspace view
Agent Workspace	PRB1560218	The experience_restricted field is newly implemented in sysrule_view_workspace and is set to default to true
Agent Workspace	PRB1559151	Columns disappear after adding 'is one of' or 'is not one of' filters in Agent Workspace
Agent Workspace	PRB1557861	Plugin makes GraphQL requests with large payloads that cause long-running transactions

Problem category	Number	Short description
Agent Workspace	PRB1557781	After upgrading to San Diego, a field dependency isn't applied when applying a template
Agent Workspace	PRB1557175	Currency value is not displayed with expected precision on Agent Workspace
Agent Workspace	PRB1556336	Ribbon settings can't be restricted to only a configurable workspace
Agent Workspace	PRB1553643	The text on work item cards overflows
Agent Workspace	PRB1553421	Saving an email draft with an empty message and sending it later doesn't associate the email with the case and removes the target table and target record
Agent Workspace	PRB1552707	Issue with the PDF viewer for encrypted attachments in Agent Workspace and in web-based UI
Agent Workspace	PRB1551585	The clearValue function doesn't work in the AWS form reference fields if there is invalid text within the field
Agent Workspace	PRB1550555	In the compose section, the text input in 'Comments' isn't hidden when setting the action from 'visible' to 'false' using the UI policy
Agent Workspace	PRB1550182	The ATF 'Set Field Values' step doesn't recognize choices that have been cleared and added again using <code>g_form.clearOptions()</code> and <code>g_form.addOption()</code> in the Workspace UI
Agent Workspace	PRB1549094	On Agent Workspace, saving a required integer field with a

Problem category	Number	Short description
		float value gets saved as an integer value without a decimal separator
Agent Workspace	PRB1547228	Changes within the list on Workspace are not saved if the user is not an admin or ITIL
Agent Workspace	PRB1546152	Currency fields don't work correctly on the platform (reporting) or in Agent Workspace when using a language other than English
Agent Workspace	PRB1542507	The user menu tooltip overlaps with the user name tooltip on Agent Workspace
Agent Workspace	PRB1524212	Poor focus visibility on Agent Workspace tabs
Agent Workspace	PRB1522199	Agent Workspace displays a loading icon until the error message is closed
Agent Workspace	PRB1515591	In a Windows high contrast environment, the 'Active/ready' inbox icon is unreadable
Agent Workspace	PRB1509607	The system switches the views alone when clicking multiple times on 'Home', 'List', and 'Inbox' in Workspace
Agent Workspace	PRB1476303	There are two '<h1>'s on the 'Inbox' page
Agent Workspace	PRB1394925	Images pasted in the activity stream of TinyMCE display as attachments by the 'blob' name
Agent Workspace	PRB1584194	Live refresh doesn't work on single score reports on the Agent Workspace landing page

Problem category	Number	Short description
Agent Workspace	PRB1580380	When multiple emails are opened in User Interface Builder (UIB) workspace, recipients of one email are replaced by another email
Agent Workspace	PRB1580352	The user can't save the caller/ category/subcategory fields on incidents created from 'Quick Incident' in Agent Workspace
Agent Workspace	PRB1579938	Duplicates are witnessed when transferring attached files from an interaction to incidents/ problems in Agent Workspace
Agent Workspace	PRB1571570	When 'Split label' group actions are present, responsive design CSS fails to conform to screen width adjustments on an incident record within BaseAW
Agent Workspace	PRB1551133	Secondary values are hidden when users click the 'Form' button
Agent Workspace	PRB1485162	There is an issue with custom filters in Agent Workspace when applying the 'group by' and 'checkbox' filters on a field
Agile Development	PRB1549763	SAFe sprints can be deleted from the 'Program Increment SAFe Sprints' related list, which causes issues with opening the big room planning board's 'Planning' tab
Agile Development	PRB1567872	The personal backlog changes when a user navigates to the 'Sprint Planning' tab and then back to the 'Backlog' tab
Agile Development	PRB1565260	On the split story modal, users can click 'Submit' several times and several stories are created

Problem category	Number	Short description
Agile Development	PRB1565236	When users select an epic backlog in the scrum program's planning board, the board tries but fails to load the backlog
Agile Development	PRB1559414	SAFe board 'Features by SAFe epic' should have filtering
Agile Development	PRB1559081	Mismatch between comments and current behavior with the New UI action in the rm_task table in Agile Development
Agile Development	PRB1555721	Adding an 'Add OR Clause' to a backlog definition with a filter of 'Backlog definition is ...' displays discrepancies on an Agile Board
Agile Development	PRB1486002	The SAFe board's art planning board doesn't refresh the layout
Agile Development	PRB1581787	Users are unable to click through to open record references on the Agile board's 'Sprint Tracking' tab, such as 'Original Task', or other fields like 'Assignment Group'
Agile Development	PRB1580372	The getStoryDotGroup() method doesn't return all groups and the script include 'ScrumSecurityManagerDefault' must be updated
AI Search	PRB1560343	AI search displays 'Admin Home' catalog items in the Service Portal when they shouldn't be returned in the AI search results for admin users
AI Search	PRB1553255	The Close tab button for an opened 'Incident' tab overlaps with the 'Recently Searched/Viewed' dropdown

Problem category	Number	Short description
AI Search	PRB1579518	On Employee Center, users are unable to search Record Producer with a Japanese catalog name
AI Search Glide	PRB1553655	When a KB is updated with a new version, search suggestions results in /sp continue to point to the old version
AI Search Glide	PRB1578851	glide.ais.ha.enable_auto_failover shouldn't trigger a full cache flush when updating
AI Search Glide	PRB1574799	The search sources migrated by the Next Experience script that point to invalid tables cause 500 errors
AI Search Glide	PRB1569775	A requested field is removed from a response for the late binding table
AI Search Glide	PRB1567847	There are duplicate analytic payloads for genius result clicks
AI Search Glide	PRB1566479	The '(is) Dynamic' search source operator produces an incorrect query
AI Search Glide	PRB1562312	A search returns duplicate results
AI Search Glide	PRB1556642	Allow automatic failover, even if both connections have write = false
AI Search Glide	PRB1540876	Search source filters on strings are case-sensitive
AI Search Glide	PRB1537736	The AI Search late binding facet filter does not work for reference lists

Problem category	Number	Short description
AI Search Glide	PRB1533272	AI search warnings in the 'g_scratchpad' log are not defined
AI Search Glide	PRB1513080	Monetary values in Glide that use commas instead of periods to denote dollars to cents aren't indexable in AIS under the _m dynamic field
Antivirus Scanning	PRB1576798	Unable to validate keystore on local and user instances when SNAP is enabled
Antivirus Scanning	PRB1561780	Downloading a file attached to a knowledge article updates the update date of the knowledge article
Antivirus Scanning	PRB1548144	Issue with antivirus scanning
App Core: Experiences	PRB1554357	The 'Record' page makes unnecessary duplicate data resource executions
App Engine Studio Core (Family)	PRB1550269	403 access is denied to an application for Delegated Developer
Application Installation Engine	PRB1566439	The UpgradeSummaryRecovery job can pick up and reschedule defunct jobs in the sys_trigger table, which sometimes leads to node memory issues
Application Installation Engine	PRB1549728	The UI action from the 'Global Application File Management' package has an invalid override value
Application Installation Engine	PRB1547376	Customers might lose their sys_update_version customizations for certain files

Problem category	Number	Short description
Application Manager	PRB1568340	Free plugins display as 'Not Licensed' in the 'All applications' module
Application Manager	PRB1567019	The application filter for updates displays installed applications
Application Manager	PRB1562407	Users are unable to get the latest customization version until the scheduled job runs on their instance
Application Manager	PRB1552459	Long user wait time to use application manager due to long-running transactions on initial load
Application Manager	PRB1569940	The 'getDependentApps' method in the PluginDependency script include clears 'App Dependency Client Application Details' records
Application Navigator & Banner Frame	PRB1574670	Global search in Workspace breaks every second time
Application Navigator & Banner Frame	PRB1555833	JAWS/NVDA screen reader users are unable to select a notifications slider from the system settings
Application Navigator & Banner Frame	PRB1552047	The schema map from the tables and columns module is unresponsive in San Diego
Application Navigator & Banner Frame	PRB1551387	Domain picker's display logic does not match Platform's
Application Navigator & Banner Frame	PRB1550009	Leftover demo theme records should be removed
Application Navigator & Banner Frame	PRB1541686	Translation consistency issues in Next Experience when toggling languages

Problem category	Number	Short description
Application Navigator & Banner Frame	PRB1581259	The 'Language' dropdown selection doesn't update the user preference correctly
Application Navigator & Banner Frame	PRB1561665	Clicking a workspace URL in the unified navigation menu results in a 404 error
Application Portfolio Management (APM)	PRB1553859	More records display than expected in hardware models under 'Application Portfolio Management'
Appointment Booking	PRB1564967	There is an incorrect translation on the 'Walkup Appointment' confirmation page
Appointment Booking	PRB1563802	In San Diego, the 'arrow' icon on the sn-appointment-booking-select widget has a CSS issue causing icons to overlap
Appointment Booking	PRB1553912	Date/Time fields are unresponsive after initial selection on catalog items with the 'sn_appointment_variable_set' variable set in the portal
Approvals	PRB1551170	Manual approval in 'Ask for Approval' doesn't work properly when a sysapproval_group record with the approval set to 'requested' is inserted before 'Ask for Approval' starts
Approvals	PRB1566130	Excessive flow.fire events are created by 'SNC - Notify Flow (Approval)', which causes event handlers to back up
Approvals	PRB1538921	Approvers aren't set to 'No longer required'
Approvals	PRB1529652	The 'Approval Events (Non-Task)' business rule doesn't create the

Problem category	Number	Short description
		correct notification for KB articles created from a template
Appsee - Platform Infrastructure	PRB1554658	'getConsentDetails' for glide.appsee.auth_token throws a null pointer exception when there is a record for a user on the m2m_user_consent_info table and no corresponding record on the sys_user_preference table
Appsee - Platform Infrastructure	PRB1542358	The getConsentDetails call throws a 400 error on logging in
Archiving	PRB1559213	An archive rule that has an api_only value as 'null' doesn't run
Archiving	PRB1561159	Null pointer exception when archiving a table without a display element
Archiving	PRB1555148	The gs.log at line 8 of the sys_trigger 'Archive Reference Copy' should be deleted
Archiving	PRB1552941	A UI action script should be updated for 'Restore Record and Related Records' with the Global[global] table
Archiving	PRB1538344	For a scoped application, fields added after the archive table has been created aren't archived in the correct scope
Archiving	PRB1490785	Archiving isn't using the 'Reference table' rule for related records and is finding sys_archive_rules based on the table name, which causes unexpected records to be archived

Problem category	Number	Short description
Assessments	PRB1565491	Automated Test Framework (ATF) is unable to set the component on the survey form
Assessments	PRB1561911	The 'Assessment questions' page's layout is different after upgrading to San Diego
Assessments	PRB1561716	There's many large result set queries against 'asmt_assessment_instance_question' with 'instance=NULL' query
Assessments	PRB1558216	Labels are not provided for UI controls
Assessments	PRB1399440	Excessive delay from the asmt_metric_type business rules 'Create Business Rule on Remote table', 'Auto deletion rule for Assessments', and 'Auto business rule for Assessments' in GRC compliance applications
Assessments	PRB1586697	Console error for users without roles or any active assessments or surveys to take, when navigating to the My Assessments and Surveys module
Asset Management	PRB1565539	The CSDM life cycle statuses are missing
Asset Management	PRB1576614	When consuming the last consume consumable assets, the expense line doesn't populate with user or cost centers
Asset Management	PRB1574781	Can't source an asset due to an 'active TOL' error when creating a 'To:from' source request
Asset Management	PRB1573644	When creating CIs, the 'Unknown' model categories

Problem category	Number	Short description
		create every time and the count keeps increasing
Asset Management	PRB1568951	Service graph connector for Workspace One creates duplicate hardware models when the model is larger than 80 characters
Asset Management	PRB1565083	The 'Asset - Create asset delayed sync' scheduled job causes issues with 'Enforce CI verification' on the second run
Asset Management	PRB1554775	Transfer order line stage synchronizes to the stage of the last updated transfer order line task, even if they are closed
Asset Management	PRB1552079	Random assets are updated when using ITAM mobile app's receive function
Asynchronous Message Bus	PRB1548439	In Rome, AMB subscription calls stop the Virtual Agent from loading properly for guest users
Asynchronous Message Bus	PRB1414348	AMB isn't falling back to long polling on a websocket handshake failure after network disconnection
Audit History	PRB1552002	Exception occurs when generating audit data inserting a record, with the system property 'glide.sys.audit_inserts' set to true, and a business rule or engine accesses extended table
Authentication	PRB1573687	If adaptive authentication is enabled on the instance, multi-factor authentication (MFA) doesn't work as expected
Authentication	PRB1573249	sysparm_goto_url can be modified to redirect a user to an external website

Problem category	Number	Short description
Authentication	PRB1562448	Adaptive authentication doesn't work with a boolean 'AND' condition in policy inputs
Authentication	PRB1560338	A base instance grants write access to maint-only system properties
Authentication	PRB1555357	When a user is inactive and unlocked, the user-based MFA challenge is bypassed
Authentication	PRB1555018	User info with a full-width number becomes garbled when created through the function of enabling external users to self-register
Authentication	PRB1552408	Update sets cannot capture adaptive authentication policy inputs' relationship records due to a design issue in the table hierarchy
Authentication	PRB1540005	SSO single logout results in a URL to double up when the external logout redirect is an absolute URL and a custom URL is enabled
Authentication	PRB1489512	Even after selecting 'Remember Me' at the Service Portal login, a user is challenged with a login modal after a session timeout although the session is still active
Authentication	PRB1420640	Vanity URL supports different node pools but custom URL does not
Authentication	PRB1580664	Failing of secret key decryption causes incorrect Digest token.
Authentication	PRB1549367	The 'copied to clipboard' text toggles when a user clicks multiple times on the 'Copy

Problem category	Number	Short description
		code' button on the MFA 'Setup' page
Authentication - Local DB Login	PRB1555421	The 'Registration' tab field's name has a length issue in user registration configuration
Authentication - Local DB Login	PRB1545958	There is an extra space in the name of the scheduled job 'Poll LB For Certificate Status'
Authentication - SSO	PRB1569453	When an auto-provisioning user is true, the instance creates a user when an inactive user tries to log in
Authorization/Legacy ACLs	PRB1577314	The UI action Assign to me for Workspace doesn't have the 'sn_incident_write' role when ITSM Roles is installed
Authorization/Legacy ACLs	PRB1559460	A user has no function in the base system and is available for use, but is associated with the system mobile application and other modules
Authorization/Legacy ACLs	PRB1553155	An ACL from a scope can't have a condition or script on a table that is from a different scope
Automated Test Framework	PRB1548465	Set variable values step is not working for the 'list collector' variable for external users
Automated Test Framework	PRB1571610	The ATF 'ticking angular' check box isn't captured by GlideScreenshot
Automated Test Framework	PRB1560948	Glide lists don't work with set field value steps in Agent Workspace
Automated Test Framework	PRB1552626	The location dropdown box uses sn-record-picker in the 'Walk-up online checking experience'

Problem category	Number	Short description
		page, which is incompatible with ATF
Automated Test Framework	PRB1541068	GlideScreenshot and Assert Text on Page fails if styleSheets are delivered from a different domain (CDN)
Automated Test Framework	PRB1539992	Rescheduled ATF test suites and parameterized tests consume too much memory
Automated Test Framework	PRB1539494	ATF test suite is unable to recognize client-side warnings when 'parameterized testing' is enabled
Automated Test Framework	PRB1578418	Hovered and focused 'Category' and 'Step' elements no longer have a highlighted background
Change Management	PRB1553239	The 'Update Standard Change Version stats' business rule impacts the database's performance
Change Management	PRB1544298	A change form displays the error message 'ChangeRequestDiscovery undefined, maybe missing global qualifier'
Change Management	PRB1568686	If a moving to a state is blocked by change model state transition conditions, the Change Management REST API should feedback evaluateConditions
Change Management	PRB1568440	When the On-hold field is set to false, the State field becomes editable and all states display
Change Management	PRB1568388	In a change request, the 'Risk Details' pop-up displays with a gap of white space on the bottom

Problem category	Number	Short description
Change Management	PRB1564101	The resetChangeProjection method causes a recursive business rule call for 'Clear Projection Summary when New' on change_request
Change Management	PRB1563368	Models created on extensions of change requests shouldn't be applied to a change request
Change Management	PRB1563096	On change_task, custom fields with 'IN' or 'ON' strings are changed to an equal sign when used on the change task template form
Change Management	PRB1561886	A change request based on change models with the record preset model field set to a model causes the onChange client script to loop infinitely on the Set State field and 'Hide UI Actions' state
Change Management	PRB1558547	An invalid approval group provided to the CABApproval script causes an error
Change Management	PRB1558136	A user with sn_change_write cannot see the name of the approval groups on the 'Approvers' related list of a change record
Change Management	PRB1557747	In change approval policies, the non-required group approvals are skipped when there is still a required unapproved user policy
Change Management	PRB1556666	All agenda items aren't added when CAB is run for the second time with the same condition
Change Management	PRB1556586	A standard change created via Catalog ignores a custom

Problem category	Number	Short description
		default value for the change type
Change Management	PRB1555288	The 'Sync Affected CI Dynamic Group' business rule allows many records into the task_ci table
Change Management	PRB1554833	The 'Unauthorized Change' check box is not available if models aren't used
Change Management	PRB1553628	When using 'Change Approval Policy' and two group approvals are required, only the last group to approve creates an entry in the change request's approval history
Change Management	PRB1553319	The 'Sync Affected CI Dynamic Group' business rule inserts the same CIs if 'CopyChange' has copied those CIs from the source change request
Change Management	PRB1551521	A schedule created in one domain conflicts with the schedule in a change request that is created in another domain
Change Management	PRB1551307	A 'Script Include not defined' error message displays on the change request form during an upgrade
Change Management	PRB1551289	Record watcher switches the change request state to 'New' after approval rather than the valid state 'Scheduled'
Change Management	PRB1551245	The Add All button on the 'Add affected CIs' page displays an incorrect count
Change Management	PRB1551085	Blackout schedules that apply to change requests are still applied if the property

Problem category	Number	Short description
		'change.conflict.blackout' is turned off
Change Management	PRB1549717	The 'Minutes' label in Donut Timer isn't displayed nor translated in Cab Workbench
Change Management	PRB1546900	The State field displays as empty for change requests that have a state value set to inactive or not included in the list for the State field
Change Management	PRB1546179	Pinned change models on the change landing page don't stay pinned when the Clear Filter button is clicked
Change Management	PRB1537511	Change success scores don't update and stay as 500 even when there are recent valid change request records on the instance
Change Management	PRB1582974	The template description of a Standard Change Template is not updated as expected when using a Standard Change Proposal in a non-English languages
Change Management	PRB1582529	When models are used, fields are set by the model presets and therefore can't be unset regardless of the user's role
Change Management Conflict Detector	PRB1558267	The change conflict detection should cease execution when the tracker is canceled
Change Management Risk Assessment	PRB1557141	The modal dialog doesn't close after completing the change risk assessment and double-clicking 'Risk Assessment'
Change Management Risk Assessment	PRB1580285	'Risk and Impact remain unchanged' displays on an

Problem category	Number	Short description
		initial save/insert when the change matches a change risk assessment and the 'glide.ui.risk_calculate_rule' business rule
Clone-Product	PRB1538322	There is an empty record left in the 'Clone System Profile Exclusions' list following the deletion of a certain clone_profile_exclusions item
Cloud Provisioning and Governance (CMP)	PRB1545875	Incorrect company records are created when discovering Azure Cloud Discovery using CAPI
Cloud Provisioning and Governance (CMP)	PRB1551499	A cloud provisioning check fails if a user implements the group approval workflow and the group doesn't have a permission defined in Cloud Management permissions
Cloud Provisioning and Governance (CMP)	PRB1575303	To improve performance, the script used in the 'Cloud API Trail Compactor' job must be modified to query records where input parameters are present instead of all the records
Cloud Provisioning and Governance (CMP)	PRB1568352	Renaming a Cloud Catalog item breaks the Cloud Catalog client scripts, including Regex Validation set on cloud variables
Cloud Provisioning and Governance (CMP)	PRB1567011	Adding the SecurityGroup field via the template doesn't work as intended in the cloud user portal
Cloud Provisioning and Governance (CMP)	PRB1565151	sn_cmp.cloud_service_designer role is unable to manage operation attributes
Cloud Provisioning and Governance (CMP)	PRB1564276	The business rule 'Update Order Status' is slow due to an inefficient query

Problem category	Number	Short description
Cloud Provisioning and Governance (CMP)	PRB1563621	Option available to use response mapping for AWS
Cloud Provisioning and Governance (CMP)	PRB1545875	Incorrect companies records are created when discovering Azure Cloud Discovery using CAPI
Cloud Provisioning and Governance (CMP)	PRB1545481	RITM stage values result in the wrong values after installing Cloud Provisioning and Governance/Cloud Management plugins
Cloud Provisioning and Governance (CMP)	PRB1540909	The 'Execute Job Template' operation on Virtual Server might fail when executed a second time
Cloud Provisioning and Governance (CMP)	PRB1538303	The Google Cloud Platform (GCP) folder-level Discovery doesn't pick a few of the GCP projects
Cloud Provisioning and Governance (CMP)	PRB1533585	After provisioning, the network ACL resource displays an empty status
Cloud Provisioning and Governance (CMP)	PRB1566369	Scoped report view ACLs, <code>cmdb_ci_cloud_service_account</code> , <code>cmdb_ci_cloud_service_account.discovery_credentials</code> , don't follow cross-scope creation restrictions
Coaching	PRB1549774	Vendor information for app coaching isn't set to ServiceNow
Column Level Encryption	PRB1591447	Attachments mass migration should support gateway configurations
Condition Builder	PRB1534356	Users can only see a permission as 'Me' when saving a filter and are unable to select anything else

Problem category	Number	Short description
Condition Builder	PRB1559718	In Rome, Agent Workspace's list filter is incorrect on the date filter with the 'at or after' operator and the 'this week' value
Condition Builder	PRB1558071	The Condition Builder new report OR and AND buttons don't have visible text
Condition Builder	PRB1554511	The 'Is one of' operator in the Workspace 'My List' filter no longer works when using multiple lines
Condition Builder	PRB1553217	The 'is (dynamic)' operator shouldn't display when it has no options
Condition Builder	PRB1551694	NVDA/JAWS doesn't narrate the name for the dialog when the Microsoft External Customer dialog is opened when navigating using the down arrow
Condition Builder	PRB1550873	The caret symbol (^) multiplies when saving in Condition Builder and using 'matches regex' in an 'OR' condition
Condition Builder	PRB1544917	The Filter condition field displays the date/time format beside the Date or Date/Time field's conditions when accessibility is enabled
Condition Builder	PRB1544439	Users are unable to open menu items with instructions (space +shift) given by a screen reader (NVDA) when focus is on the 'All' link or any other filter condition
Condition Builder	PRB1538332	ITIL users can't filter by tags in Agent Workspace

Problem category	Number	Short description
Condition Builder	PRB1535500	Regex isn't working as expected, the database doesn't support the matching Regex condition and the option to use it in this query should be removed where it isn't supported
Condition Builder	PRB1531625	Not all elements within the 'Data Table from URL definition' widget are translated
Condition Builder	PRB1579987	The link in the 'Filter users' condition builder of the 'HR bulk survey creation' UI page doesn't work in San Diego
Configuration Management Database (CMDB)	PRB1549582	Unique Key violation detected by a database and a duplicate entry
Configuration Management Database (CMDB)	PRB1525638	Log warning in the work notes for CIs are not able to merge as related items in a duplicate remediator
Configuration Management Database (CMDB)	PRB1590331	The Edit button is not available on the 'Approvers' related list on BT1 after the upgrade
Configuration Management Database (CMDB)	PRB1535990	Issue with creating a record in the cmdb_rel_filter table, with the parent table cmdb_ci_db_oracle_instance/cmdb_ci from global scope and child table as cmdb_ci_orcl_options from the scoped application
Configuration Management Database (CMDB)	PRB1578201	'CSDM Data Synchronization' or 'Archive Event' job features are missing on all San Diego instances due to a sys_id collision
Configuration Management Database (CMDB)	PRB1577872	The 'Relationships' separator is missing for ITIL and itil_admin roles

Problem category	Number	Short description
Configuration Management Database (CMDB)	PRB1573448	After clicking the Remediate button on a de-duplication task, the next screen takes a long time to refresh
Configuration Management Database (CMDB)	PRB1572654	sys_object_source records are limited to maint only
Configuration Management Database (CMDB)	PRB1569886	There are two New UI actions on the application services related list on the 'Business Application' table
Configuration Management Database (CMDB)	PRB1568743	The default 'Related Items' list for duplicate CI remediator displays 'List' attributes in the 'Available' box, which can't be added, which can cause confusion
Configuration Management Database (CMDB)	PRB1567817	Query Builder performance issues
Configuration Management Database (CMDB)	PRB1563475	Identification and Reconciliation Engine (IRE) doesn't commit any records when duplicate relations are present in the payload with partial_commits=false and deduplicate_payloads=true
Configuration Management Database (CMDB)	PRB1563076	Data from a CMDB query-based report isn't visible to report viewers
Configuration Management Database (CMDB)	PRB1562160	CMDB health results for duplicates refer to a different table to the CIs class, and inclusion rules don't take effect, due to dot-walked fields in the inclusion rules filters
Configuration Management Database (CMDB)	PRB1561711	An existing record for life_cycle_mapping doesn't load values correctly on the form

Problem category	Number	Short description
Configuration Management Database (CMDB)	PRB1560654	Manual endpoints should be ignored from 'servicesAffectedByCI' in CIUtils
Configuration Management Database (CMDB)	PRB1560600	The incorrect Identification and Reconciliation Engine (IRE) payload sends
Configuration Management Database (CMDB)	PRB1559979	Users have to click the back button < on the form twice to go back to the previous view after clicking the button in the CI relation's formatter
Configuration Management Database (CMDB)	PRB1555775	There are errors when writing to the cmdb_health_result_count table and when using multiple domains
Configuration Management Database (CMDB)	PRB1554547	When opening the 'CMDB Query builder' page, users encounter a console error: 'Moment Time zone has no data for IST'
Configuration Management Database (CMDB)	PRB1553800	Issue with 'CMDB Data Manager Archive Policy'
Configuration Management Database (CMDB)	PRB1553711	CMDB Health Dashboard for Audit is not completing because the cert_audit_result table is filling many records
Configuration Management Database (CMDB)	PRB1549648	task_ci records filter in a new state for change requests only
Configuration Management Database (CMDB)	PRB1549581	Exception for an invalid integer value for the integer column 'col36'
Configuration Management Database (CMDB)	PRB1549027	Choices for Life Cycle Stage and Life Cycle Stage Status fields are not translated to languages other than English

Problem category	Number	Short description
Configuration Management Database (CMDB)	PRB1545245	IRE shouldn't match archived records using sys_object_source
Configuration Management Database (CMDB)	PRB1543206	A multi-source record isn't created with the correct domain
Configuration Management Database (CMDB)	PRB1543143	Application service's info request emails aren't sent
Configuration Management Database (CMDB)	PRB1539286	The 'Related Entry' table's dropdown only lists tables that reference cmdb_ci
Configuration Management Database (CMDB)	PRB1537714	There is an out of memory error due to an excessive number of orphan CIs in non-TPP instances
Configuration Management Database (CMDB)	PRB1501593	When an RTE definition is run and if the payload is empty, an error is logged in the import set logs
Configuration Management Database (CMDB)	PRB1489193	Query builder improvements for the left navigation
Configuration Management Database (CMDB)	PRB1479882	There is a high CPU load caused by CI notifications
Configuration Management Database (CMDB)	PRB1581873	CMDB Data Ingestion API removal breaks existing customer integrations
Configuration Management Database (CMDB)	PRB1545930	CIUtils.serviceAffectedByCI returns an incorrect number of CIs in the 'Impacted Services/CIs' related list
Configuration Management Database (CMDB)	PRB1544167	San Diego indexing takes 3 hours during upgrade

Problem category	Number	Short description
Configuration Management Database (CMDB)	PRB1519100	Dynamic CI groups aren't supported in QueryBuilder
Connect Chat	PRB1577003	German users can't see existing or old connect conversations
Connect Chat	PRB1563886	Focus doesn't move to the Close error message button when an error message appears
Contextual Search	PRB1566653	Incorrect table configurations are used in contextual searches for emails
Contextual Search	PRB1563765	The contextual search results on an incident form don't display correctly if the description/snippet is in the HTML format and starts with a table
Contextual Search	PRB1562943	Pre-formatting is lost on attachments
Contextual Search	PRB1561036	There are dual scroll bars in the contextual search window
Contextual Search	PRB1558078	When upgrading from Paris to Rome, the related search results on the incident form are not available
Contract Management	PRB1572523	The renewal contract cost_adjustment field truncates to the thousands place in French Canadian
Contract Management	PRB1556788	The retired 'Contract: Run Condition Checks' job remains with an active status in an instance
Contract Management	PRB1548528	In the Contract Management plugin, the Cancel button on

Problem category	Number	Short description
		the cost adjustment dialog isn't working
Core Platform	PRB1574653	The scoped logging.verbosity system property doesn't limit the logging output on San Diego
Core Platform	PRB1545118	Under certain circumstances, a cluster reaper mechanism can mark a node as offline even if the node is online
Core Platform	PRB1537135	Special characters like '' cause 'gs.xmlToJson(requestBody)' to fail
Core Platform	PRB1573703	Performance issues in instances with many user criteria
Core Platform	PRB1565487	There is a domain separation UI action issue where an overridden UI action is executed
Core Platform	PRB1564433	The db_image table is not scalable and causes excessive caching
Core Platform	PRB1559067	Users are unable to attach a file when the size is equal to the maximum file attachment size
Core Platform	PRB1553008	Slow scripts are recorded per record, not per script, and the source label should point to the UI action versus the case where the UI action was triggered from
Core Platform	PRB1552999	A MetricBase extension point conflicts with another extension point in a different namespace
Core Platform	PRB1552429	When target entity paths are unspecified and share fields, the condition in entity mappings isn't honored

Problem category	Number	Short description
Core Platform	PRB1551350	Auto-filling is not disappearing as expected when a nonexistent email ID is given in the To/CC field
Core Platform	PRB1551324	The 'Packages Call' item record doesn't display the proposed version if the script contains a long string without spaces
Core Platform	PRB1550604	Attachments with data present on the sys_attachment_doc table fail to load/download
Core Platform	PRB1549868	Users aren't able to 'access v_cluster_nodes.list' when it is sorted on the 'Used Mem' integer field
Core Platform	PRB1538075	When a bitmap (BMP) image is added to a user record, it appears inverted in the user's avatar
Core Platform	PRB1533266	Emails from ServiceNow that contain embedded KBs with videos display sanitized HTML iframe tags
Core Platform	PRB1530769	NowMQ events are processed before the event is persisted, which leaves stale records in the 'ready' state in the event queue
Core Platform	PRB1500029	The 'Related fields' filter on the sc_task_sla table displays an inaccurate list of records
Core Platform	PRB1416014	If the filter is 'Number - is one of - (more that 600 numbers)', the Demand field hyperlink displays an empty page
Core Platform	PRB1344646	getJournalEntry doesn't display the latest entry on exceeding

Problem category	Number	Short description
		the maximum size of journal entries
Core Platform	PRB1587509	The delegation script includes API unnecessarily evaluates all user criteria for a user
Core Platform	PRB1579666	ClusterSynchronizer creates many uniquely loaded classes which can lead to OOM:Metaspace errors
Core Platform	PRB1577369	A UI action's condition for a table extending task can cause a restricted caller access error because of missing object meta
Core Platform	PRB1570283	When an unauthenticated/guest session hits the session timeout manager, the session is updated with the property's integration session timeout
Core Platform	PRB1500386	There is a high execution count of sys_user_preference queries from VAM portal and the frequent user cache returns stale data after updating/deleting a user preference
CSM Communities	PRB1561094	A comment box isn't available on the activity feed on the Community Portal's homepage, if the Community - Post Question widget is removed
CSM Communities	PRB1560149	The community form in a non-community portal has unexpected characters in the Search field
CSM Communities	PRB1550217	There are missing translations in the 'Community Search' page
CSM Communities	PRB1583159	The title of the 'Data Table from URL Definition' widget changes

Problem category	Number	Short description
		when it is used with the 'My list filters' widget
CSM Communities	PRB1580108	User cannot update their bio when they log in for the first time to the Community portal
Currency	PRB1544490	Data integrity is broken between Currency fields and fx_currency_instance in recursive execution
Currency	PRB1548134	As per ISO 4217, the currency table 'fx_currency' should be updated
Currency	PRB1559505	UpdateMultiple can set incorrect values for currency elements while in single_currency mode
Currency	PRB1542893	If updated, AR reference currencies have empty display values
Customer Service	PRB1567994	The activity section has unordered comments on performing an action
Customer Service	PRB1565527	Close case option (case-ticket-action widget) doesn't display on the CSM portal after upgrading to San Diego
Customer Service	PRB1545368	waitTimeMessage doesn't display on the walkup portal
Customer Service Management	PRB1563416	The 'Approval Publication' business rule that aborts approval for publications in targeted communication doesn't work because of the scope
Customer Service Management	PRB1571901	A recipient list deletes after the publication is published

Problem category	Number	Short description
Customer Service Management	PRB1569448	The preferred_language field on the <code>csm_consumer</code> table doesn't display all the available languages
Customer Service Management	PRB1569119	In the CSM Standard Ticket Conversation widget, other users' avatars are empty when the initials for the first and last name are Japanese characters
Customer Service Management	PRB1566511	An associated email causes cases to redirect to an external URL in the portal
Customer Service Management	PRB1565043	The Contact field in the interaction form empties if it changes more than once
Customer Service Management	PRB1563480	After resizing the page to 400% zoom mode, an incident test dialog isn't clearly visible after clicking the Find Agents button
Customer Service Management	PRB1563135	The 'Asset Contact' related list doesn't display for a CSM agent or admin as expected
Customer Service Management	PRB1561674	While saving a form, a user may be redirected to after using the CTI button in Workspace
Customer Service Management	PRB1560079	Upgraded plugins don't display as a store app and are missing on an upgraded instance
Customer Service Management	PRB1559044	Hyperlinks under 'My team's cases' on the landing page don't work on some customer instances
Customer Service Management	PRB1558957	The 'Set account type by parent account' business rule has invalid behavior

Problem category	Number	Short description
Customer Service Management	PRB1558732	Installing the customer service plugin results in a plugin activation
Customer Service Management	PRB1555429	Customer Service Management contacts don't have an user ID
Customer Service Management	PRB1553180	'My List' doesn't display from the CSM header when logged in as an admin
Customer Service Management	PRB1552879	The Unblock UI action is not working in Agent Workspace or Customer Workflow Workspace
Customer Service Management	PRB1552575	The 'Update Task Work Notes' business rule creates an empty task when a record is created in the sn_openframe_phone_log table without adding a reference to any task
Customer Service Management	PRB1547921	A URL link isn't clickable on an Agent Workspace list
Customer Service Management	PRB1545858	AccountManagerRelationshipUtil should be extendable based on feasibility
Customer Service Management	PRB1542008	Users are unable to create activity types
Customer Service Management	PRB1579229	Users are unable to update one ACL with the 'sn_customerservice_case.watch_list' name and the 'read' operation
Customer Service Management	PRB1577209	When creating a case on default case type selector, the field values (Account/Contact/Consumer, Priority, short description) aren't copied over from the parent case

Problem category	Number	Short description
Dashboards and Home Pages	PRB1578388	Non-role users' homepage returns an error after logging in post-upgrade to San Diego from Rome: 'The page you are looking for could not be found'
Dashboards and Home Pages	PRB1577724	Breakdown elements on a dashboard aren't preserved correctly when the selected breakdown element is not in the first 100 elements fetched by an API or in the com.snc.pa.breakdown_element_ui_max_records property value
Dashboards and Home Pages	PRB1575647	If the breakdown source name contains the '&' character, the dashboard breaks
Dashboards and Home Pages	PRB1569382	The interactive filter doesn't work as expected for a list under certain conditions
Dashboards and Home Pages	PRB1567315	Switching between breakdown dashboards may lead to widgets not loading and showing java.lang.NullPointerException on breakdown dashboards
Dashboards and Home Pages	PRB1560580	When zoomed in on a dashboard with restricted roles, users toward the bottom of the share panel aren't visible
Dashboards and Home Pages	PRB1559633	Accessing reports on Internet Explorer 11 (IE11) throws a 'runReportFromBuilder is undefined' error on the console
Dashboards and Home Pages	PRB1513629	Screen readers (NVDA/JAWS) don't narrate the state for the 'Change Dashboard' control when navigating using the down arrow

Problem category	Number	Short description
Dashboards and Home Pages	PRB1557137	The labels on the dashboard do not reflect the correct name of the dashboard
Data Certification	PRB1564533	No 'alt' parameter for the 'Optional comment for checked elements' text box
Date and Time	PRB1582455	An incorrect date displays for the 'Date' field if the survey is entered by a user with a non-system formatted 'Date' field
Declarative Action	PRB1549710	The global sys_ui_action record has an invalid override value
Declarative Action	PRB1546188	The 'Open record' and 'Search for record' icons of reference fields display intermittently in variable editor on Agent Workspace
Delegated Development	PRB1531193	Incorrect error handling for the delegated development permissions API
Demand Management	PRB1556088	When a demand task is created from a demand, audit history records for multiple fields are created in the demand
Demand Management	PRB1553669	A pop-up with the text 'Bubble Chart' appears on the Demand Workbench and covers some demand score information
Demand Management	PRB1523470	The capital and operating budget aren't captured in the demand record's activity log
Dependency Views (BSM Map)	PRB1502761	Displaying a business service map with many related records can cause latency and semaphore contention

Problem category	Number	Short description
Design System	PRB1553347	In the Next Experience UI, special characters display incorrectly in most pages
Design System	PRB1556416	An on-blur event on the typeahead component causes a selected item to be replaced
Design System	PRB1547832	Users can't resize the viewport modal pop-up, and the 'Dismiss' icon overlays the Save button
Design System	PRB1532752	Internationalization is unavailable for NDS rich text component
Dev At Scale: Other	PRB1557835	False positives in upgrade skips for global applications
Dev At Scale: Other	PRB1555466	Updates in the dictionary from the app-customization package are incorrectly skipped if there is a local customization done to the same file
Dev At Scale: Other	PRB1554308	Conditional content customization is not honored when upgrading app-customization
Dev At Scale: Other	PRB1550594	Users are unable to commit an application to Source Control due to the source being too large, which causes slow processing and eventual timeout
Discovery	PRB1527910	The GCP Discovery execution fails for a schedule creation from a service account
Discovery	PRB1418654	Discovery table cleaner for any running processes leaves behind the orphaned application CIs and relationships

Problem category	Number	Short description
Discovery	PRB1565593	There is a ClassCastException when CertificateCaptureUtil parses certificate data
Discovery	PRB1562781	Discovery is stuck at the identifying phase
Discovery	PRB1544757	The CMDB-based delete strategy to use sys_object_source to detect stale records has a performance issue
Discovery	PRB1579194	There is an exception when creating an admin share temporary directory (C\$/temp) during Windows pattern execution, which causes a PowerShell session to close, which can then cause other expected steps to fail
Discovery	PRB1576756	If the PowerShell command times out, passwords display in plain text in pattern logs
Discovery	PRB1573659	The override behavior on IP ranges isn't honored
Discovery	PRB1570850	Out of memory error when a Discovery schedule is set to 'Auto Select MID Server'
Discovery	PRB1570136	Global IP exclusion doesn't work when calling the Discovery.discoveryFromIp() script include function
Discovery	PRB1570059	Out of memory error during Shazzam sensor processing when the batch size is below 256
Discovery	PRB1568887	Two processes satisfy the process classifier for vCenter, which

Problem category	Number	Short description
		creates and deletes the vCenter record
Discovery	PRB1568312	The nginx probe isn't able to discover load balancer pool members
Discovery	PRB1566949	Discovery isn't moving after the SNMP classify stage and displays an error in the payload
Discovery	PRB1563209	L2 relations aren't created while discovering a stacked switch
Discovery	PRB1561717	Pattern debug for a connection or extension section fails if a library reference step is configured with a pre-condition in the identification section
Discovery	PRB1560910	Windows ADM probes don't trigger when using Windows Remote Management (WinRM) protocol
Discovery	PRB1560860	If Windows' cluster and Windows' installed software probes process at the same time, some installed software records assign to Windows clusters instead of the main CI
Discovery	PRB1560602	The Windows' active connections session multi-sensor probe has a mismatched minor version with its sensor
Discovery	PRB1560366	In Rome and later instances, the GlobalIPExclusionUtil script include doesn't check for multiple IPs before attempting to remove duplicates
Discovery	PRB1558982	Serial mode processing is broken for multi-page orchestrator responses

Problem category	Number	Short description
Discovery	PRB1557739	Discovery of the ESX Server creates a new CI each time rather than updating an existing ESX Server CI
Discovery	PRB1557038	The export pattern action fails on any Discovery pattern
Discovery	PRB1553884	Processing 'sysevent' is impacted by CloudResourceDiscoveryCountHandler script include
Discovery	PRB1553093	The applicative credential type doesn't have the same number of characters as the CI type
Discovery	PRB1552404	Service accounts are not filtered by the Discovery schedule domain
Discovery	PRB1552385	Default behavior should be changed for SNMP Discovery to use 'all'
Discovery	PRB1551661	MID auto-upgrade isn't triggering, but it is expected to run every 60 minutes when the instance is upgrading
Discovery	PRB1551466	Duplicate entries are created in the 'Privileged Command Affinities' table when running 'discovery-regression'
Discovery	PRB1551415	Discovery fails with a 'cannot deserialize object' error on if there are enough related entries in the corresponding identification rule
Discovery	PRB1551167	Overwritten Discovery pattern is not triggered

Problem category	Number	Short description
Discovery	PRB1551082	Identification and Reconciliation Engine (IRE) time doesn't appear to be collected for Discovery performance metrics
Discovery	PRB1550097	Discovery passes an incorrect loopback address instead of the target address for resolving CyberArk credentials
Discovery	PRB1547988	The 'Resolved' port isn't listed when a report is inactive and a probe parameter is set to false
Discovery	PRB1547453	In the FixUnixFamilyModelForPatterns script include, the changeLVMPoolMemberName function must split the update into batches
Discovery	PRB1546397	ESX servers should be marked as absent instead of retired when they are unreachable during Discovery
Discovery	PRB1545780	Windows MID doesn't restart form the instance when installed on MID via a non-admin user
Discovery	PRB1545224	The cmdb_ci_docker_container table has two fields with the same name: Status [install_status] and Status [status]
Discovery	PRB1542318	'Unix - File Discovery' fails with the exception: 'syntax error at line 76 : (' unexpected
''
Discovery	PRB1532442	File information is ignored not persisted into cmdb_file_information when there is an error in the FBD payload

Problem category	Number	Short description
Discovery	PRB1530395	SoftwareMunger trims leading zeros for software packages and creates duplicate records when there are multiple data sources
Discovery	PRB1528479	If the virtual machine instance is no longer linked to an ESX host, the 'Virtual Computer Check' business rule doesn't delete 'Virtualized by::Virtualizes'
Discovery	PRB1444729	The 'Storage Pools' and 'Storage Volumes' CI relationships from 'Storage Server' are not created during Discovery
Discovery	PRB1579495	The SSHTerminalInteractiveCommand probe ignores Credential Affinity
Discovery	PRB1563884	The user encounters an error while exporting a pattern in Discovery
Discovery	PRB1579421	Performance issues on Discovery logs
Document Viewer	PRB1510588	When previewing a Japanese attachment file in a knowledge article, Chinese font is used instead of Japanese
Document Viewer	PRB1570277	FontCache causes high heap memory pressure on user instances
Document Viewer	PRB1570084	The 'Refresh Approvals' context menu doesn't work for group approvals
Document Viewer	PRB1566340	When the user tries to set '0' as the export limit for PDF and export twice, data is exported on the second export

Problem category	Number	Short description
Document Viewer	PRB1557823	FontCache causes high heap memory pressure on user instances
Document Viewer	PRB1553767	Out of memory errors generate in the HTML to PDF API when there's invalid HTML
Document Viewer	PRB1547457	The titles in an exported PDF in Arabic are broken
Domain Separation	PRB1565479	User changes on domain_audit_definition are overwritten by the upgrade
Domain Separation	PRB1562544	Upgraded instances do not remove the domain main attribute on sys_attachment docs
Domain Separation	PRB1547498	Updating the customer_contact.account field does not update the customer_contact.sys_domain field
Domain Separation	PRB1538848	Forms and lists in the Platform UI become unresponsive for non-admin users in a domain-separated instance
Dynamic Translation	PRB1551101	The dynamic translation displays '</br>' on the portal
Dynamic Translation	PRB1549600	The 'Create Favorite' pop-up window automatically opens
Edge Encryption	PRB1550210	Issue with how the Edge encryption proxy encrypts the sys_id in URLs
Edge Encryption	PRB1540231	Encryption prevents importing Word documents to knowledge articles

Problem category	Number	Short description
Edge Encryption	PRB1535275	Starting in Quebec, command-line installer help doesn't print help when using an 'h' switch or when a required parameter is missing
Elastic Search	PRB1562005	Frequently accessing the dynamic field data of document index tables may cause performance issues
Email	PRB1576634	Table options are turned off from the email client in San Diego
Email	PRB1579397	The option to resize an image doesn't display in the email client
Email	PRB1578480	The email client attachment dragged orange stripe doesn't go away and hinders the view of the 'Attachment' list
Email	PRB1576791	Email client doesn't display row options for adding rows
Email	PRB1573755	Email parsing issue when using the parse method of ParseAttachmentAsAnEmail.class
Email	PRB1570658	On the sn_publications_recipients_list form, the user field's sys_id selection is lost after a large entry submission
Email	PRB1569217	Email parser isn't working for all the use cases
Email	PRB1564440	The 'expire actionable notifications' scheduled job sets an incorrect State field value on the sys_cs_notification table
Email	PRB1562250	More limits are needed on several recipients

Problem category	Number	Short description
Email	PRB1561313	SMTPAddressFailedExceptions with a 451 error code aren't handled appropriately
Email	PRB1557510	Sender's name in an email displays as empty on Agent Workspace
Email	PRB1555896	The Notification preferences toggle button is editable via the 'My Notification Preferences' section even though messaging content isn't available
Email	PRB1553585	User with the 'delegate development' role can't create a provider content/action
Email	PRB1548574	Incident emails aren't identifying an invalid email domain
Email	PRB1544513	Email filters are executing more than once
Email	PRB1581091	There is an alignment issue in classic email client
Email	PRB1579801	Users are unable to view email addresses in the To/Cc/Bcc fields when pasting 10 or more email address in a 'Compose Email' form
Email	PRB1560951	The email subject doesn't populate using the email template 'sn_hr_le_case.ess.ur_case_commented'
Embedded Help	PRB1567838	Internal seismic calls login outbound HTTP calls, which cause influx
Embedded Help	PRB1555918	On a San Diego instance, there is an error in the system

Problem category	Number	Short description
		log: 'Method failed: (/seismic/version.json) with code: 404'
Embedded Help	PRB1554763	On the toggle help sidebar, the group role is missing the 'Help options' element
Employee Experience	PRB1540929	Category items don't display under the topics on the 'Support' tab
Employee Experience	PRB1512731	The ServiceNow chat widget doesn't close the chat session for the end users
Employee Experience	PRB1555723	Unable to delete a record from the 'sp_favorite' table in 'sn_ex_sp' scope in Employee Center
Employee Taxonomy Framework	PRB1575192	Users are unable to change a topic's name from one case to another case, such as from sentence case to lower case
Employee Taxonomy Framework	PRB1558482	Adding a topic to the content doesn't work when glide.ui.escape_all_script is false
Employee Taxonomy Framework	PRB1547186	Clone taxonomy doesn't work when 'glide.ui.escape_all_script' is false
Event Management	PRB1564380	Change impacting alerts numbers to be the same on Operator Workspace, Service Map, and Related Alerts
Event Management	PRB1565938	The event rule transform breaks when the content is complex
Event Management	PRB1554560	Service Analytics purges old observation data, and the daily job generates a query causing high memory on the database

Problem category	Number	Short description
Event Management	PRB1569222	Operator Workspace takes too much time to load the service map
Event Management	PRB1568077	Closed alerts aren't removed from em_alert_trigger_queue and remain there in a processing state
Event Management	PRB1564953	The last_impact_batch_calc_job-2 hash goes out of synchronization
Event Management	PRB1563591	cmdb_ci_service_auto services aren't displaying on Operator Workspace when filtering by service groups
Event Management	PRB1560317	HLA Kafka data input requires providing keystore in the data input, in SSL communication to Kafka, even when there is no need to do so
Event Management	PRB1556100	'Start MI Context' fails even though MetricBase is installed
Event Management	PRB1555440	CmdbCiLookup.getCi causes inefficient large table handling against the ci_type of matching rule, which causes slow event management processing
Event Management	PRB1554241	Service group tree takes a long time to load
Event Management	PRB1553810	Field normalization causes values on the related list in an unrelated table to display incorrectly
Event Management	PRB1552180	PRTG connector is missing some events
Event Management	PRB1546954	Excessive syslog growth due to there being no property to

Problem category	Number	Short description
		disable the debug on the event management script include: EvtMgmtCalculateImpactedCis
Event Management	PRB1543439	Non-admin users without the image_admin role have issues with the 'Operation Workspace' page to load successfully
Event Management	PRB1543401	There is an HTTP/2 error code thrown from GRPC: 'PROTOCOL_ERROR'
Event Management	PRB1537743	'Service Analytics Alert Aggregation Learner' causes a node to run out of memory
Event Management	PRB1537454	Groups of 'OK' alerts close automatically
Event Management	PRB1534103	System Center Operations Manager (SCOM) connector date parses as broken with non-US locale
Event Management	PRB1532013	Services that aren't updated for more than 3 months don't have an impact tree
Event Management	PRB1513036	Post-binding scripts (Create and Update) run after the alert CI maint status is checked
Event Management	PRB1510198	The NNM connector status is active but doesn't receive alerts because a future time is set in the last signature
Event Processing	PRB1552782	Improvement to sysevent claiming behavior by non-generic event processors
Family App Core: Calendar	PRB1587730	Within the UI Builder, the Calendar component 'Drag end for new event' event does not trigger on drag, only on clicking

Problem category	Number	Short description
Field Normalization	PRB1547258	Field normalization auditing on newly inserted records prevents creating history records for initial values on fields normalized during the original insert of a record by the sys_audit record created by the field normalization
Field Normalization	PRB1546557	Potential deadlock in ChoiceListGenerator when ScriptableObject constructor is heavy
Field Service Management	PRB1568004	Dispatchers are unable to assign several tasks to the same agent on FSM when selecting 'Manual Assignment Method' for a task
Field Service Management	PRB1572678	Issue when changing an assignee on the 'wm_task' list
Field Service Management	PRB1573619	The Source UI action on a work order task triggers the Start travel UI action, which throws an incorrect message
Field Service Management	PRB1572135	The vertical scrollbar doesn't appear to scroll up/down
Field Service Management	PRB1570814	Errors from the showTaskRelatedListNewButton function in the SMTASK script include due to an incorrect assumption that only task-based tables call it
Field Service Management	PRB1568942	Unknown records display in user instances
Field Service Management	PRB1568725	Users are unable to reschedule appointments
Field Service Management	PRB1567907	In a Japanese environment, the scheduled state displays even though 'Use Scheduled state' is

Problem category	Number	Short description
		turned off from Field Service > Administration > Configuration
Field Service Management	PRB1561409	The dispatcher map doesn't work properly
Field Service Management	PRB1552745	The location doesn't update when 'Affected CI' is updated in a work order
Field Service Management	PRB1552394	Viewing work order tasks with an inactive Assigned To field causes a unique key primary key error
Field Service Management	PRB1552303	There are differences in a form on Service Portal and the backend
Field Service Management	PRB1551490	Duplicate work order tasks (WOT) are created for work orders when doing a bulk dispatch update in Field Service Management (FSM)
Field Service Management	PRB1549956	The preferred technician feature generates a null pointer error
Field Service Management	PRB1548012	Script include SMFilters uses dot-walking to the sys_id
Field Service Management	PRB1547945	The Find Agents button doesn't work on the wm_task table
Field Service Management	PRB1582564	The Satellite View on the map doesn't work
Field Service Management	PRB1580122	Multi-day Agent schedule check doesn't work correctly if the date format used on WOT has '/' as the date separator instead of '-'
Field Service Management	PRB1563844	There is a duplicate 'Task closed success' message when a WOT is marked as 'Closed-Incomplete'

Problem category	Number	Short description
Field Service Management	PRB1560364	A work order task closes as 'incomplete' when users create a follow-up task in a 'Draft' state that has the work order as its parent
Filters	PRB1547514	The 'OR' statement in a filter breadcrumb doesn't display when the value is set to 'None'
Finance Service Management	PRB1547445	The Cost Center field is not set in groomed table records
Finance Service Management	PRB1557076	The 'Ready for work (approval on)' business rule causes errors
Financial Management	PRB1513778	A default budget cost model doesn't bring the cleansed data into the itfm_gl_data_cleansed table
Flow Designer	PRB1567812	Create a flow which CRUD triggers on every update or with scheduled triggers
Flow Designer	PRB1549797	A parent flow error after a nudge on cleaning the completed subflow context
Flow Designer	PRB1541016	A large flow or subflow fails to compile with a StackOverflowError
Flow Designer	PRB1559430	If a user adds too many variables, the Create Catalog Task action has a problem
Flow Designer	PRB1554649	When calling from the scriptable API inForeground, an error is thrown when calling a subflow that calls a subflow with a mid-action
Flow Designer	PRB1579805	An incorrect label of data pill displays on cursor hover

Problem category	Number	Short description
		when the system language is Japanese
Flow Designer	PRB1574968	Template values are not recognized in Flow Designer
Flow Designer	PRB1574938	GlideRecordSecure with GlideRecord in the FlowContextRepository class getContext() method should be replaced and the record should be null
Flow Designer	PRB1573621	Subflow outputs are empty in the calling flow that is in waiting before an upgrade
Flow Designer	PRB1569250	When a process plan fails to serialize due to unserializable objects, the context is left in an 'IN_PROGRESS' state rather than the expected 'ERROR' state
Flow Designer	PRB1568215	Issue with flows and subflow visibility in scoped apps
Flow Designer	PRB1568207	Parentheses in a flow action's name aren't sanitized when the action's output is used in an inline script
Flow Designer	PRB1568166	The Flow Designer variable 'size' clears after saving
Flow Designer	PRB1567186	The Update action causes an error with domain separation
Flow Designer	PRB1566858	Email, scheduled, and 'Run if not currently running' triggered flows don't run after upgrading to San Diego if there are any contexts for that flow in a waiting state prior to the upgrade
Flow Designer	PRB1565800	Users are unable to use a flow variable with the name sys_id

Problem category	Number	Short description
Flow Designer	PRB1564836	The flow selected on a service level agreement (SLA) definition may not start due to domain restrictions
Flow Designer	PRB1564508	Unable to edit a Flow Designer action step's name after adding the step output variable
Flow Designer	PRB1563845	The flow context state isn't set to 'in_progress' after resuming from timer/WFC/Approval
Flow Designer	PRB1562788	The <code>sn_fd.FlowAPI.getRunner()</code> script works in global but doesn't work in a scoped app
Flow Designer	PRB1561321	Boolean inputs in the Make Decision field don't honor the configurations during the execution
Flow Designer	PRB1561134	Implement restricted listing of tables for the 'wait for' condition
Flow Designer	PRB1561107	Flow Designer is executing an old version of a flow
Flow Designer	PRB1560911	A user reference's text box abruptly updates to 'Manual User(s)' after a <code>sys_user</code> pill is dragged in Service Catalog
Flow Designer	PRB1560498	Input variables in an action test are truncated in Rome
Flow Designer	PRB1560403	An inactive catalog variable causes an error in an action's boolean input
Flow Designer	PRB1560242	Flow doesn't trigger in some domains
Flow Designer	PRB1558728	In Flow Designer data, data pill for trigger clears after saving

Problem category	Number	Short description
		when the system language is Japanese
Flow Designer	PRB1558529	The flow 'For Each Loop' interprets an Array.Objects object as a record in the third nested loop
Flow Designer	PRB1558005	Flow Designer crashes when array.object is used as the subflow input
Flow Designer	PRB1557139	Creating or updating choice values using mapping from another choice value is inconsistent
Flow Designer	PRB1556185	The list view filter on sc_req_item doesn't display the stage from the flow in the list of value options
Flow Designer	PRB1556180	In the 'Data Panel' tab, the data pills for an action are grayed out and unselectable
Flow Designer	PRB1555814	A flow remains in an 'In Progress' state after a node restarts
Flow Designer	PRB1555422	Unable to drag or rearrange the action order in subflows that have a script order signature
Flow Designer	PRB1555017	'Get Catalog Variables' fails intermittently when used in a subflow that is called several times from a parent flow with wait = false
Flow Designer	PRB1553815	A 'unique key violation' error is thrown when using the Currency field in subflows
Flow Designer	PRB1553657	Unable to see 'Attachment' variables in the left-hand side (Available) slush bucket of the

Problem category	Number	Short description
		'Get Catalog Variables' flow action
Flow Designer	PRB1553090	An 'Invalid requested for' error displays when submitting an item through <code>sn_fd.FlowAPI.getRunner().subflow</code>
Flow Designer	PRB1553034	DataStream action isn't working with aliases in the SQL query
Flow Designer	PRB1552755	The following error is thrown: 'Invalid query detected, stack trace below [Unknown field element in table sys_hub_action_type_base]'
Flow Designer	PRB1552148	A subflow that calls a subflow via quick API doesn't return outputs in the result
Flow Designer	PRB1550327	Toggling 'Error Handler' shifts the position of the stages in a flow
Flow Designer	PRB1550261	Flow throws an error when attempting to use an undefined input = 'current'
Flow Designer	PRB1550149	There is an issue with a flow when attempting to parse 'date/time' as a date
Flow Designer	PRB1548739	It takes too much time to load the drop-down when selecting a catalog item in the 'Template Catalog Items and Variable Sets [Catalog Items and Variable Sets]' in Flow Designer
Flow Designer	PRB1548221	Issues with the 'try catch' flow logic
Flow Designer	PRB1547298	A template value reverts after toggling a script

Problem category	Number	Short description
Flow Designer	PRB1546480	'Previous Display Value' displays the sys_id instead of the display value when using Reference fields
Flow Designer	PRB1544718	The 'domain_master=flow' attribute from the sys_hub_alias_mapping table should be removed
Flow Designer	PRB1544168	The 'Update Record' iteration runtime values are empty
Flow Designer	PRB1540848	Flows aren't triggering for certain table records
Flow Designer	PRB1539426	RITM notes display stage values in request_approved and waiting_for_approval
Flow Designer	PRB1538452	Flow Designer reports are published and shared with a public role
Flow Designer	PRB1536919	sys_flow_report_snapshot doesn't have a cleanup policy
Flow Designer	PRB1533251	The 'Make a decision' flow action returns an empty result
Flow Designer	PRB1525409	Pill-picker shouldn't let a user select Array.Object > Child object > Primitive when it is used outside of the 'For Each' iterator
Flow Designer	PRB1509906	A client code snippet for a subflow has a misplaced semi-colon
Flow Designer	PRB1582770	An SLA Flow started before upgrade that pauses and resumes after upgrade hits an error

Problem category	Number	Short description
Flow Designer	PRB1580343	Flow throws an inactive catalog variable error when the flow doesn't use any inactive catalog variables
Flow Designer	PRB1579132	Saving fails when saving an action with a complex object input in a flow
Flow Designer	PRB1561733	Users can't find subflows in Dynamic Subflow
Forms and Fields	PRB1569311	The required asterisk appears for a field that is set as read-only via the ACL
Forms and Fields	PRB1501448	A user-updated payload for any deleted form section or UI list contains global domain instead of the value from the original record
Forms and Fields	PRB1492901	In Agent Workspace, downloads are not initiated and completed when originated from sandboxed iFrames
Forms and Fields	PRB1574249	'None' is added in the Glide list of options when 'None' is selected
Forms and Fields	PRB1549612	Dropdown search for Reference fields is not working for Korean, Chinese, and Japanese characters
Forms and Fields	PRB1578221	Views that are set within workspace view rules (sysrule_view_workspace) aren't applied on custom workspaces within the preview pane
Forms and Fields	PRB1575659	When creating a record, the module name is missing in the

Problem category	Number	Short description
		layout header and 'New record' is bold
Forms and Fields	PRB1574197	Calling <code>g_form.getIntValue</code> on a Currency field returns 'NaN' in Agent Workspace
Forms and Fields	PRB1573469	When creating a request filter, the Primary field can't be updated other than 'Short Description' under Portal's settings
Forms and Fields	PRB1572594	If the field is read-only and empty, the HTML field doesn't display a tooltip on workspace forms
Forms and Fields	PRB1571818	Some choice fields are using incorrect roles
Forms and Fields	PRB1568302	The layout of the variable editor for a variable set is not working as expected
Forms and Fields	PRB1567190	The template doesn't update the Reference field to render as a choice field when <code>is_searchable_choice</code> is true
Forms and Fields	PRB1567006	<code>sysparm_this_url</code> parameter added to a <code>sys_attachment</code> URL isn't escaped during the form render and can break attachment access when a <code>tinyURL</code> is needed
Forms and Fields	PRB1566672	Updating/changing the file for the file_attachment field 'update' link doesn't delete the older <code>sys_attachment</code> record
Forms and Fields	PRB1566338	Multiple Web Content Accessibility Guidelines (WCAG) issues in the 'Tag Details' modal dialog

Problem category	Number	Short description
Forms and Fields	PRB1561340	Exporting a PDF in the printer-friendly version cuts off the text for a multi-line text field
Forms and Fields	PRB1560944	An incorrect label for the g_list field displays when there are multiple list fields that have the same choice value and different labels on the form
Forms and Fields	PRB1560311	Text typed in a journal is cleared/lost when another user updates the same record
Forms and Fields	PRB1560064	The workspace API 'g_form.addFormMessage' doesn't exist in Core UI(UI16)
Forms and Fields	PRB1559156	A parent is undefined in a related list UI action when evaluating the UI action condition for a second time
Forms and Fields	PRB1557360	Remove the 'View' option from the record tabs component configuration in UI Builder, as it has no action
Forms and Fields	PRB1556170	There is an error message redirect issue in platform UI when adding attachments with a MIME type mismatch
Forms and Fields	PRB1555175	Link text is not meaningful
Forms and Fields	PRB1554285	The URL encoded template feature doesn't work for script fields
Forms and Fields	PRB1553282	On classic Workspace, certain strings and tooltips aren't translated on templates and attachments' contextual side panels

Problem category	Number	Short description
Forms and Fields	PRB1553189	g_form.setValue sets 'undefined' on a second field if that field is named the same as the first, except with '_label' appended
Forms and Fields	PRB1552255	Document ID fields appear empty if displaying a colon
Forms and Fields	PRB1551526	The second field_name field on a form can populate with data in the form
Forms and Fields	PRB1551524	The 'Additional actions menu' ARIA label on a Core UI form isn't translated
Forms and Fields	PRB1551502	Functionality issue with the 'Add Tag' link in the 'more options' dialog on records
Forms and Fields	PRB1550768	In Workspace, when clicking a consumer email address in the ribbon, agents aren't able to find quick messages
Forms and Fields	PRB1549653	Keyboard shortcuts don't work in the activity stream of Agent Workspace
Forms and Fields	PRB1549140	NVDA doesn't announce when the UI16 field tooltip URL opens in a different tab/window
Forms and Fields	PRB1549017	NVDA announces the incorrect menu state in the 'More options' menu
Forms and Fields	PRB1547630	glide_list fields do not honor the 'No Email(no_email)' attribute on Workspace
Forms and Fields	PRB1546747	A check box is not exposed when in a dimmed state

Problem category	Number	Short description
Forms and Fields	PRB1546127	Setting a value via the reference lookup modal overwrites the glide_list field values instead of appending them
Forms and Fields	PRB1543878	The card titles of 'My Tagged Documents' can't be accessed using the tab key on the keyboard
Forms and Fields	PRB1543328	A multi-line string display's value can't be selected from a reference lookup of a reference field
Forms and Fields	PRB1542785	Reference fields that are named 'interface' don't open the reference list, but instead display null_list.do
Forms and Fields	PRB1541242	The 'Glide' list doesn't wrap correctly
Forms and Fields	PRB1503991	Users receive a 413 error: 'Unable to serve request because the request payload is too large'
Forms and Fields	PRB1589614	The text size of a newly created string field varies in the extreme
Forms and Fields	PRB1589294	Form layout 'annotation' sections overlap with field labels when navigating in Agent Workspace
Forms and Fields	PRB1588730	Text added on a checklist item disappears (is deleted) if you click on the text before adding the item
Forms and Fields	PRB1587063	In Agent Workspace, form sections don't honor the UI policy and the form appears distorted when the form section is hidden using the UI policy

Problem category	Number	Short description
Forms and Fields	PRB1586330	Setting choice field value to a choice that has been removed by a client script does not work as expected in Agent Workspace
Forms and Fields	PRB1582776	Adding comments to the Next Experience UI theme breaks loading the instance
Forms and Fields	PRB1581370	When an Dictionary-inactive field is in a Template, that field changes to the first option in the field list
Forms and Fields	PRB1575571	If there is an inactive and active record for the same table/element/value on the sys_choice table, the system evaluates the latest record only for non-English languages
Forms and Fields	PRB1547478	Variable editor isn't hidden on Workspace
Forms and Fields	PRB1588451	Clicking a blank URL field redirects browser to the same page
Forms Designer	PRB1502906	A form's design can update sys_choice records when no changes are made because of duplicate sys_choice records
Gateway Database	PRB1559484	Clone failure for gateway shard instance on San Diego
Gateway Database	PRB1500473	An error message displays when gateway sharding with the dynamic category enabled
Google Maps	PRB1328384	The '\$map_page_primary' map page doesn't translate a critical incident message

Problem category	Number	Short description
Governance, Risk and Compliance	PRB1543702	Read ACLs on core_company.* and core_company.name, which are part of the 'Vendor Core' [com.snc.vendor_core] plugin, restricts access to these fields for some users
Governance, Risk and Compliance	PRB1559939	A business rule admin is not able to read two fields on the sys_script table
Governance, Risk and Compliance	PRB1578380	After creating a remediation task and then clicking a 'Related Issue' link, the form doesn't refresh
Governance, Risk and Compliance	PRB1446448	Due to the removal of current from the global context in GlideController, current is undefined in business rules
Governance, Risk and Compliance	PRB1559471	Upgrading a Rome instance to San Diego fails to load Risk Management due to a sn_risk_pa:12.0.1 dependency not found
Governance, Risk and Compliance	PRB1549402	In any related list when performing an add operation, the pagination icon to go through the records is missing
Graph API	PRB1558947	Schemas with the same namespace name can collide if they are in different application namespaces
Graph API	PRB1540853	Users can't access lists when clicking through the list menu
Guided App Creator	PRB1574887	The 'Studio domain separation' check box isn't working
Guided Setup (Legacy)	PRB1546171	NVDA doesn't announce the 'Filter' label

Problem category	Number	Short description
Guided Setup (Legacy)	PRB1545554	The progress bar has the role of a link, which isn't allowed for a list element
Guided Tours	PRB1559632	The '<' symbol doesn't work as expected in a step in Guided Tours
Guided Tours	PRB1550030	_getTourData intermittently returns as undefined
Guided Tours	PRB1548259	The text input area is narrow when 'create conclusion' for a guided tour is in Japanese mode
Guided Tours	PRB1544507	Analytics API takes longer than expected when a user has more than 1 Lakh role, which eventually crashes Service Portal
Guided Tours	PRB1539964	The guided tours 'Welcome to the Vendor Portal!' dialog isn't visible after resizing the page to 400% zoom
HTML Editor	PRB1550220	The default tinyMCE font size of 11pt is not re-selectable in Workspace, so different sizes for the font should be included in the list
HTML Editor	PRB1591707	The image attributes (width/height) were set automatically in 'HTML insert image dialog' even after clearing it
HTML Editor	PRB1592452	Verdana font is not maintained in the HTML field when created or viewed from within nav_do
HTML Editor	PRB1562101	TinyMCE init fails when config.plugins isn't present
HTML Editor	PRB1559666	An HTML field value causes a JavaScript error

Problem category	Number	Short description
HTML Editor	PRB1553622	Selecting text in the HTML field and deleting text by single backspacing doesn't trigger a UI policy or client script
HTML Editor	PRB1548864	NVDA/JAWS doesn't narrate the role (button) and state (collapsed/expanded) for the Advanced Options control in the dialog
HTML Editor	PRB1541893	Tooltips in HTML fields in WHCM are missing boundaries
HTML Editor	PRB1538260	There is no option to create an attachment link in the Agent Workspace HTML field and rich text journal input
HTML Editor	PRB1501524	There is an issue with the bullet list in the knowledge content editor tinyMCE since the Paris release
HTML Editor	PRB1588754	Clicking insert link after using the Shift + Enter combination causes the link to not show up in the HTML field (TinyMCE)
Human Resources	PRB1557430	Large number of warnings and a user can't read 'vip' property from undefined
Human Resources	PRB1551185	The sn_hr_core_case.ess.general email template was downgraded
Human Resources	PRB1549976	Using encrypted field configuration with CLE on the 'sn_hr_core_profile' table causes errors due to the HR plugin business rule
Human Resources Service Management	PRB1569725	Journey Accelerator causes performance issues the LE Activity Configurations extension

Problem category	Number	Short description
		point by not implementing all methods
Human Resources Service Management	PRB1546386	Read ACLs on core_company.* and core_company.name, which are part of the 'HR' plugin, restrict access to these fields for some users
Human Resources Service Management	PRB1578982	The granular delegation user isn't able to see comments in Portal
Human Resources Service Management	PRB1578491	There is a failing widget error when submitting an order guide
Human Resources Service Management	PRB1574403	Audit trail doesn't capture the attachment's downloaded entry
Human Resources Service Management	PRB1573103	The HR mobile app onboarding doesn't create a user preference record, causing onboarding not to display on the mobile app
Human Resources Service Management	PRB1570768	On Playbook, completed notification activities display as pending
Human Resources Service Management	PRB1568442	Searching for custom fields doesn't work in HR Agent Workspace
Human Resources Service Management	PRB1568325	Duplicated HR case numbers are created after transferring the case
Human Resources Service Management	PRB1567714	Sign Document is available in the backend even if the PDF template doesn't have a signature configured
Human Resources Service Management	PRB1567062	Case creation getServicesForUser API might error when invalid tables are returned from the getAllExtensions API

Problem category	Number	Short description
Human Resources Service Management	PRB1566350	Approval requests trigger for all the approvers who have approved the case previously in HR Agent Workspace
Human Resources Service Management	PRB1565506	'User Segment Groups' don't work as expected when the bulk case request's HR service lists more than one HR criteria
Human Resources Service Management	PRB1563444	Child tasks are missing from the HR Playbook when the task count is greater than 10
Human Resources Service Management	PRB1563418	The rich text editor feature in HR Agent Workspace doesn't align with the HR portal comment's section
Human Resources Service Management	PRB1563207	In Rome, <code>current.update()</code> from the 'Replace variables in description field' business rule should be removed
Human Resources Service Management	PRB1562087	The amount of time worked isn't recorded for collaborators
Human Resources Service Management	PRB1561416	The 'Assigned To Me' module in the HR case display HR cases assigned to the user and unassigned cases that are assigned to the same group that the user belongs
Human Resources Service Management	PRB1560748	There are no workspace renderers for HR Agent Workspace for any other extended KB tables
Human Resources Service Management	PRB1560702	The calculation on the sn_hr_core_job.job_active field isn't correct when the system-wide date format is set to dd-mm-yyyy

Problem category	Number	Short description
Human Resources Service Management	PRB1560557	Issues with accessing an HR profile on HR cases
Human Resources Service Management	PRB1560428	New case creation does not work properly in AWS
Human Resources Service Management	PRB1560220	Audit doesn't display the full list of changes to a record
Human Resources Service Management	PRB1559390	Case creation page reference searches don't use ac_wait_time, which causes every keystroke to trigger a new search
Human Resources Service Management	PRB1558737	The dashboard values are not visible in the employee relations scope
Human Resources Service Management	PRB1557382	Issues with the report columns
Human Resources Service Management	PRB1554093	When creating an HR case, the list of user results flickers if the Name field is empty in sys_user records
Human Resources Service Management	PRB1552994	The 'true/false' check box in an HR case form is set to 'true' even when it is deselected before the case is submitted from the HR case creation page
Human Resources Service Management	PRB1552911	Issues with access to taks_sla tables after installation of the HR application
Human Resources Service Management	PRB1552896	The playbook ready activity's count displays as -1 sometimes
Human Resources Service Management	PRB1552486	The Payroll country field doesn't populate when an employee document is created from an HR profile

Problem category	Number	Short description
Human Resources Service Management	PRB1550856	In Employee Document Management, when selecting values for the 'Topic Detail' in the 'Move Attachment' pop-up, the choices repeat twice
Human Resources Service Management	PRB1550325	HR landing page components are not translated
Human Resources Service Management	PRB1548972	Issue in PDF template mappings when the user language is different than English
Human Resources Service Management	PRB1548943	Agent can't send a file to the customer, and adding an attachment fails with an 'File processing failed because of network issue. Please try uploading again' error message
Human Resources Service Management	PRB1548830	'View Block' in HR Agent Workspace is available but nothing happens when it's clicked
Human Resources Service Management	PRB1547526	Cannot submit a case on Agent Workspace when an employee's name is changed on HR case creation
Human Resources Service Management	PRB1547424	Some Content Operations and Experiences (COE) HR case forms don't display the 'Task > Parent' embedded list properly
Human Resources Service Management	PRB1547378	Lifecycle Event doesn't accept 'a@b.c' as a valid email address
Human Resources Service Management	PRB1546507	The 'Employee document audit field history' table doesn't display records when the Employee Document field is empty
Human Resources Service Management	PRB1544178	itext7 font issue for PDFs

Problem category	Number	Short description
Human Resources Service Management	PRB1543254	ATF steps include an unescaped HTML that prevents the record from unloading
Human Resources Service Management	PRB1543018	The HR sign document's drawn signature cuts off if generated a second time
Human Resources Service Management	PRB1542674	The fulfillment instructions message doesn't display the 'Refresh the page' link in Workspace
Human Resources Service Management	PRB1535695	Inconsistent 'Suspended Reason' choices list between platform and HR Workspace when choices are defined for certain COEs
Human Resources Service Management	PRB1535129	Info message from the 'Auto Assign' business rule displays an incorrect case number after a case is transferred with the same number
Human Resources Service Management	PRB1512668	Users are unable to select the article template when creating an article from the 'Knowledge' related list in an HR case from HR Agent Workspace
Human Resources Service Management	PRB1579757	The 'HR Take Survey' UI page passes the wrong parameter to the 'assessment_take2' UI page
Human Resources Service Management	PRB1562379	The LE builder UI is broken
Human Resources Service Management	PRB1496035	Keyboard users are not able to access 'Add/View HR Roles' on the user profile
Import / Export	PRB1555489	The Reference fields in the transform map always return the

Problem category	Number	Short description
		sys_id of the match instead of of the table configuration
Import / Export	PRB1573452	The ImportSetCleaner script include improperly deletes all execution context records when it runs for a single import job
Import / Export	PRB1567523	SQLIntegrityConstraintViolationException for parallel test runs in Automated Test Framework (ATF)
Import / Export	PRB1562584	The 'error' column on the sys_import_set_run table updates incorrectly on an error at the transform level
Import / Export	PRB1555870	Robust Transform Engine (RTE) script operation isn't working
Import / Export	PRB1550989	Data source execution errors with a JDBC connection don't display in the import sets or in the import set run
Import / Export	PRB1546296	When viewing a field map of a transform, the Date format field displays 'yyyy-MM-dd HH:mm:ss' regardless of the value in the field
Import / Export	PRB1523998	Boolean values exported as XML set to 'TRUE' when used with sysparm_display_value=true and when translated a boolean message [sys_ui_message]
Import / Export	PRB1507153	Export sets have no data cleanup for attachments saved to the MID Server, eventually causing performance problems for the MID Server
Import / Export	PRB1586475	The imported Excel file does not match the locally saved Excel file

Problem category	Number	Short description
Import / Export	PRB1460494	JDBCProbe doesn't close Statements and ResultSets in a finally block
Incident Communications Management	PRB1556059	Able to select a 'customer_contact' record in a major incident communication task as a recipient
Incident Management	PRB1573649	Add a parent_incident field validity check in Major Incident Management (MIM) business rule
Incident Management	PRB1573614	The email script 'incident_take_me_to_the_incident' doesn't translate the string 'Thank you' and always displays in English
Incident Management	PRB1560035	Trend operator doesn't work when used within Major Incident Management (MIM) trigger rules
Incident Management	PRB1558190	The Download Report PDF button on the 'Major incident' report page is not turned off when the OAuth entity record for the WebKit HTML to PDF is removed
Incident Management	PRB1550651	When moving tabs, sorting communication tasks revert to the original
Incident Management	PRB1547468	The On hold reason field isn't cleared in a situation where the business rule 'Clear On Hold Reason' doesn't trigger by design
Instance Data Replication feature	PRB1568796	Instance Data Replication (IDR) transformation runs twice when transforming within a hierarchy
Instance Data Replication feature	PRB1550808	Large table handling of 'idr_queue_stats' table caused

Problem category	Number	Short description
		by the getLastQueueStats function in QueueStatsDAO
Instance Data Replication feature	PRB1542090	Instance Data Replication (IDR) Producer error after reactivation/shard rotation
Instance Data Replication feature	PRB1536400	'sys_attachment' records aren't replicated when configured within DB shard/Gateway shard
Instance Data Replication feature	PRB1587233	A persisted offset can't insert correctly into idr_system_status when the name is too long
IntegrationHub	PRB1542264	An incorrect link is in the email content of CSD deploy software post-processing subflow step 2
IntegrationHub	PRB1492092	If the JSON payload key/properties has special characters, there is an issue with the parsing of JSON object in Flow Designer
IntegrationHub	PRB1567628	Updating an existing scoped flow with REST API trigger creates update set records in global scope
IntegrationHub	PRB1562257	When a flow executes over MID, and the action is processed on a different node than the one that created the mutex, it might not be cleaned properly
IntegrationHub	PRB1561259	A data source via REST fails with a 400 error code
IntegrationHub	PRB1557766	The flow action 'Create Group' fails with 'PowerShell execution error' when the Description field includes multiple lines
IntegrationHub	PRB1557032	A race condition resuming flow from an update process plan

Problem category	Number	Short description
		service, and releasing mutex in IPaaSActionProbe, results in an execution delay
IntegrationHub	PRB1548161	There is a spelling mistake in Order Client software
IntegrationHub	PRB1545698	Reconcile requested software updates the status of sn_client_sf_dist_req_software even with an 'Installed' status
IntegrationHub	PRB1542602	The AD 'Is user in group' flow action doesn't check spaces in the AD name
IntegrationHub	PRB1542277	Approval isn't coming as requested in the 'Client Software Lease Extend' subflow
IntegrationHub	PRB1540893	Rest requests fail because of a certificate that validates but has a warning about extra certificates being included
Inventory Management	PRB1553609	The Bulk Update button has issues on the 'TO' form for transfer order lines
ITSM Integrations - Email	PRB1564467	The manifest file isn't processed correctly
ITSM Mobile	PRB1574282	In classic Mobile, catalog items that contain 'Container start' and 'Container end' variables cause the form to display as empty
ITSM Software Asset Management	PRB1578317	ILMT integration fails after upgrade to San Diego
Key Management Framework	PRB1574477	KMF's 'Diagnostics' page should display 'Disabled' when a key isn't generated

Problem category	Number	Short description
Key Management Framework	PRB1567776	Error occurs during decryption using KMFDecrypter
Key Management Framework	PRB1581408	A crypto module's DefaultMAP may not always be created or updated
Key Management Framework	PRB1565976	A Business Rule on sys_certificate deletes existing certificate attachments on update
Knowledge Management	PRB1567878	Users with only-read access face a 'You do not have sufficient privileges to access this knowledge item' error message when accessing a published article using permalink in San Diego
Knowledge Management	PRB1548468	Missing a dependency from 'I18N: Knowledge Management Internationalisation Plugin v2' to 'Knowledge Management Advanced'
Knowledge Management	PRB1578445	A knowledge article rating isn't reflected properly when printing an article to PDF from the portal
Knowledge Management	PRB1578238	Calling functions from KBPortalServiceImpl inside KBPortalService results in empty return results
Knowledge Management	PRB1576757	The knowledge related articles widget can't be seen when a page loads with an outdated sys_id
Knowledge Management	PRB1573681	In the Knowledge Category widget, pointing to 'Author' and 'View Count' has broken in Rome and San Diego when using kb_search on Service Portal

Problem category	Number	Short description
Knowledge Management	PRB1573639	A button and confirmation message don't translate when requesting a translation task in a KB from Agent Workspace
Knowledge Management	PRB1570911	Users can't create a knowledge block directly from an article when using an HR knowledge base
Knowledge Management	PRB1570748	The portal header disappears when loaded inside an iframe
Knowledge Management	PRB1570522	A knowledge article with an empty anchor tag causes bookmark links to redirect to the homepage
Knowledge Management	PRB1569862	A line break appears within a word instead of at the end of a word in the Knowledge Result widget
Knowledge Management	PRB1567975	In Catalog, users are unable to create confirmed deflection entries in the ssa_deflection_metric table
Knowledge Management	PRB1567654	Category picker doesn't work for scoped knowledge bases, like KBs with an application field value
Knowledge Management	PRB1567280	Focusing to another part of a knowledge article isn't working when opening an article using a content item
Knowledge Management	PRB1567122	The Language field becomes read-only when in the 'Draft' state for articles that belong to the scoped HR knowledge base
Knowledge Management	PRB1561236	Users are unable to import a Word document to a knowledge base due to a 'Language is

Problem category	Number	Short description
		not configured in the selected knowledge base' error when a KB language isn't included in English
Knowledge Management	PRB1560314	The article star rating isn't removed as expected in Rome and San Diego
Knowledge Management	PRB1560139	A filter condition isn't localized when the sys_lang is set to Japanese
Knowledge Management	PRB1559337	Knowledge feedbacks don't display in the 'Knowledge' related list
Knowledge Management	PRB1559255	A screen reader doesn't announce the role and state (selected status) of a category when navigating through the list of categories
Knowledge Management	PRB1558703	Knowledge article anchor links do not work after a Rome upgrade
Knowledge Management	PRB1556946	The Human Resources articles created from templates don't display attachments for non-admin users
Knowledge Management	PRB1555626	Knowledge article images pop up if they are wrapped in an anchor tag
Knowledge Management	PRB1554609	Knowledge translations tasks aren't created when approving articles from email
Knowledge Management	PRB1553757	As an agent, users should be able to receive knowledge results in their preferred language for search_as user

Problem category	Number	Short description
Knowledge Management	PRB1553356	Cannot create more than one knowledge article template in Hebrew
Knowledge Management	PRB1553117	When a parent knowledge article/block is archived/outdated, clicking 'View Article' or 'View Block' on the child article/block takes a long time to load, displays all active languages, and displays an incorrect article when a language is selected
Knowledge Management	PRB1552566	Translated versions of knowledge articles are missing some versions
Knowledge Management	PRB1552504	Performance improvements needed for searching with knowledge blocks
Knowledge Management	PRB1548418	Slow load time on the knowledge homepage with translations
Knowledge Management	PRB1547987	Unnecessary logging in the 'Knowledge Result' widget
Knowledge Management	PRB1547895	GetAttachments that are used in the knowledge article comment sp_widget don't properly apply ACLs
Knowledge Management	PRB1547140	Creating a knowledge article in a knowledge base set with a default value for 'Valid to' generates an invalid date error, which prevents the form from saving
Knowledge Management	PRB1546182	The Rome knowledge content style doesn't display correctly
Knowledge Management	PRB1545580	'Sp-Knowledge-ratings' incorrectly uses aria-hidden

Problem category	Number	Short description
Knowledge Management	PRB1543081	Making a minor edit to a KB makes the article body editable
Knowledge Management	PRB1542701	Retire workflow doesn't execute on a list of knowledge articles created using custom templates, or tables extending kb_knowledge
Knowledge Management	PRB1580366	In knowledge search, the 'Applied filters' translation doesn't work the Hebrew language in Service Portal
Knowledge Management	PRB1580363	A non-admin user could use csm_table_map's mapping to transfer a knowledge task vale when creating a knowledge article
Language and Translations	PRB1577418	Installing a language plugin flushes the TD cache
Language and Translations	PRB1576750	Store App language install causes a high number of cache flushes when using the legacy language loader
Language and Translations	PRB1558609	Users with admin access are unable to set the language fall back entries
Lists	PRB1558918	The ESC key doesn't return the focus to the cell
Lists	PRB1536467	Conditions on write ACLs fail when editing list records in Workspace using an Edit list action
Lists	PRB1492502	On any related list, on a view other than the default view, list calculation doesn't persist for the first time until the related list

Problem category	Number	Short description
		layout is created in that view via personalization
Lists	PRB1550735	List breadcrumbs wrap unexpectedly when a list is grouped
Lists	PRB1578871	The 'Interaction' related list on sc_task doesn't display even if users click the 'list refresh' icon, and only works when refreshing the entire browser page
Lists	PRB1573947	Configuring the default view of 'Schedule Entries [cmn_schedule_span]' doesn't update the list
Lists	PRB1570173	The list search row can display the wrong choice label for the Dotwalked choice field
Lists	PRB1570164	When clicking Show Matching on an empty 'Status choice' field, cmdb_ci.LIST Condition Builder displays 'Status=Implementing'
Lists	PRB1568357	'Group by' list functionality doesn't work as expected on the 'dmn_demand.stage' column
Lists	PRB1568027	A non-default date format doesn't work on the Date field in CWF Agent Workspace
Lists	PRB1567241	A list search of the Number field on the tsp1_demand table returns results as 'greater than'
Lists	PRB1565407	There is a duplicate Add me button macro when loading 'Watch List' and 'Work Notes' list fields

Problem category	Number	Short description
Lists	PRB1564787	The contains operator doesn't work for the True/false field to filter data in Workspace
Lists	PRB1564110	Users with the personalize_list role can't save changes made in the list layout
Lists	PRB1563880	The related list 'Open new window' breadcrumb doesn't display the correct record set for the 'sys_relationship' related list
Lists	PRB1562777	Field styles with an image in the list view cause text to overlap
Lists	PRB1557887	The 'Lookup' toolbar in the user menu doesn't have an accessible name
Lists	PRB1556615	MRA performance is extremely slow due to a record count in the millions
Lists	PRB1556056	'Show matching' and 'filter out' actions on list queries don't trigger the query updated event
Lists	PRB1552654	A non-reference field that is added as the second column on a list loses its hyperlink after its value is edited
Lists	PRB1551625	The Percent complete field doesn't render properly when it's the first non-reference list column
Lists	PRB1551312	The document_id field in Agent Workspace is not clickable in the list
Lists	PRB1544014	A screen reader announces extra content along with the Skip to Row field at the bottom of the grid

Problem category	Number	Short description
Lists	PRB1540775	The 'List controls' context menu DIV container doesn't have an accessible name
Lists	PRB1535354	The Reference field with sys_dictionary 'Choice List Specification > Choice' set to a value of 'Dropdown with -- None --' causes a message to display on the reference pop-up modal: '1 row removed from this list by security constraints'
Lists	PRB1531544	'Group by' doesn't work correctly on some choice fields when there is a before query business rule present
Lists	PRB1525905	The list view on a base table lets a user choose fields from an extended table from the base table, but doesn't display them
Lists	PRB1516818	List calculation values are often incorrect after list editing, and the values should be corrected or removed until a refresh
Lists	PRB1476804	TinyURL isn't applied to the secondary field's link in the Composite field
Lists	PRB1407421	'Omit new condition' isn't working in list control
Lists	PRB1240225	The 'NULL_OVERRIDE' value doesn't display a custom value in a list
Live Feed	PRB1569268	Live feed notifications become active after upgrading to San Diego
Localization Framework	PRB1545116	The Lock/unlock button in the translation UI page (sn_lf_comparison_ui) throws

Problem category	Number	Short description
		an uncaught exception if the translation text contains '&'
MetricBase (Timeseries) Product	PRB1550286	There are persistent open files for clotho retry, which leads to 'Too many open files' and an outage on DCDev
MID Server	PRB1548649	A MID Server upgrade continues with a deletion though the wrapper is running, and if previous PIDs are not in the running PIDs, this results in a half-deleted installation and leaves the server in a down state
MID Server	PRB1551492	When replacing a synchronized JAR file in extlib, FileSyncDelete.ps1 does not wait long enough for shutdown, which potentially leaves the MID Server in a restarting loop for hours
MID Server	PRB1576909	GetMIDInfo(CloudServiceAccountInfoUtil) hangs in an infinite loop until it exhausts node memory
MID Server	PRB1561762	Secure shell (SSH) fails to strip off a sudo prefix for certain commands when disallowed in a target host's file
MID Server	PRB1560610	The Windows classify probe may return insufficient data for a classification
MID Server	PRB1559881	Using WinRM for Windows Discovery causes Japanese characters to garble in probes
MID Server	PRB1559835	system_defaults uses '*.servicenow.com' instead of '*.service-now.com', which is confusing

Problem category	Number	Short description
MID Server	PRB1559018	External credential storage (CyberArk) issue
MID Server	PRB1555755	Records are added to the ECC queue table when a group is deleted
MID Server	PRB1553224	If the Mutual Authentication (mTLS) certificate contains an extra Subject Alternate Name (SAN), the MID Server cannot connect to the AMB channel
MID Server	PRB1552837	Unable to validate a domain service account using MSI Windows MID installer
MID Server	PRB1552365	MID Server selector error with no constant ECC agent state
MID Server	PRB1548029	MID Server configuration parameters don't display in an instance if the host name from the user exceeds 120 characters, which causes the MID Server name to appear empty in configuration parameters
MID Server	PRB1541578	When users try to install MID Server on a linux host using installer.sh, the installer asks for a proxy user name and password and doesn't continue if they aren't entered
MID Server	PRB1538125	MID Server fails to check that the temporary upgrade process runs properly before shutting itself down, causing MID Server to go down
MID Server	PRB1537302	When there is an 'mid_cert_intranet' entry with an empty value for 'Classless Inter-Domain Routing', a MID Server all outbound calls fails with an NPE

Problem category	Number	Short description
MID Server	PRB1526718	Network Discovery is slow when there is external credential usage
MID Server	PRB1503603	Unhandled null pointer exception in ResourceManager.getTime()
MID Server	PRB1320985	MID Server doesn't reliably restart on a java.lang.OutOfMemoryError
MID Server	PRB1548872	The 'Put file' pattern operation doesn't use the mid.powershell.target_base_dir value
Mobile (Classic)	PRB1524703	An unnecessary user role is set in 'System Mobile' on the 'Application' menu
Mobile (Classic)	PRB1580981	A reference field doesn't display a selected value
Mobile Platform	PRB1571656	Invalid input's attribute names (empty string/null) can cause all inputs for a particular parameter screen not to be built instead of ignoring the bad input attribute
Mobile Platform	PRB1577879	The 'Choice/Reference' list for an input doesn't use the dependency if it doesn't use the same field name on both tables
Mobile Platform	PRB1574793	Parameter screen section labels aren't translated and always appear in English
Mobile Platform	PRB1563422	A 500 internal server error is caused by differing ParentIDs in RefreshContext for a footer button associated with the embedded details screen

Problem category	Number	Short description
Mobile Platform	PRB1544663	The news ticker widget doesn't display the information properly in the mobile view
Mobile Platform	PRB1577087	A mobile UI rule condition on the parameter screen causes the condition evaluation to fail
Mobile Platform	PRB1575373	In San Diego, if the glide.sys.date_format is set to dd-MMM-yyyy, the 'Request Time Off' action in Mobile Agent fails with a 'Start date cannot be same or after the End date' message, even though the submitted date range is valid
Mobile Platform	PRB1575348	In the agent mobile app, the bookmarks for mobile saved views (when clicking on a saved item) display properly in IOS, but only display 20 records in Android
Mobile Studio (non-classic)	PRB1571609	An error appears when attempting to add a role in the navigation configuration record via Studio
Mordor	PRB1538299	setTransactionTimeoutInSeconds doesn't work as expected for sn_vpe_client.ValidatedPayloadExecutionClient(
Next Experience Unified Navigation	PRB1575016	Wrapping text on the String field in a list doesn't honor an icon that is added on field styles
Next Experience Unified Navigation	PRB1569567	If begin_split is added next to contextual search results, fields after begin_split are partly hidden because of overlap in the form
Next Experience Unified Navigation	PRB1579809	glide.ui.presence.disabled doesn't impact the presence

Problem category	Number	Short description
		indicator (green dot) behavior on the user's avatar
Next Experience Unified Navigation	PRB1577563	The calendar overlaps the table header
Next Experience Unified Navigation	PRB1576484	Menu options are overridden or collide with a logo but load on refresh
Next Experience Unified Navigation	PRB1574370	Adding Agent Workspace and removing any other workspace results in unexpected behavior when opening the link
Next Experience Unified Navigation	PRB1573576	In Next Experience in San Diego, there is an issue with the 'Favorites' menu
Next Experience Unified Navigation	PRB1573446	On a URL field, extra 'unlock' icons appear when the URL field is set to 'mandatory' on a UI policy
Next Experience Unified Navigation	PRB1573346	If the maximum length increased, the User Roles field isn't operable in the Next Experience UI
Next Experience Unified Navigation	PRB1572978	Flags on fields cause the text to overlap on the corresponding field
Next Experience Unified Navigation	PRB1570481	A case-sensitive sys_properties value breaks Unified Navigation
Next Experience Unified Navigation	PRB1570020	Nested list columns are not rendering properly when using Next Experience
Next Experience Unified Navigation	PRB1569804	An unclickable three-dot leader appears next to the logo

Problem category	Number	Short description
Next Experience Unified Navigation	PRB1563363	Printer-friendly version isn't working for dashboards in Next Experience
Next Experience Unified Navigation	PRB1561385	Unable to elevate a role in a scoped app with Next Experience UI
Next Experience Unified Navigation	PRB1589911	When HR Workspace is the only workspace in the Unified Navigation Workspaces menu, nothing happens when it is clicked
Next Experience Unified Navigation	PRB1583907	Using <code>OpenFrameAPI.openInteraction()</code> with Next Experience UI replaces the current page
Next Experience Unified Navigation	PRB1582336	Changing the application scope doesn't bust the menu cache
Next Experience Unified Navigation	PRB1582005	The <code>[close_notes]</code> field is bigger than usual in a problem record in Next Experience when its form tab is active upon load
Next Experience Unified Navigation	PRB1580306	A link path to Notifications/ Categories doesn't work in Next Experience
Next Experience Unified Navigation	PRB1580273	UI Marco (<code>show_phone</code>) using OpenFrame API doesn't properly in Next Experience
Next Experience Unified Navigation	PRB1579129	The <code>openServiceNowForm</code> is doesn't open related records or create new records
Next Experience Unified Navigation	PRB1573806	The hyperlink in tagged documents doesn't redirect to the record
Next Experience Unified Navigation	PRB1549532	An unwanted confirmation popup displays when calling

Problem category	Number	Short description
		reloadWindow() after submitting a GlideModalForm
NLQ - Natural Language Query	PRB1561556	Screen readers announce irrelevant extra information when the focus is on the Ask button
NLU Workbench	PRB1559009	User is unable to access the 'Annotation' page from NLU Workbench
NLU Workbench	PRB1548411	After a Rome upgrade, NLU 'group my models' isn't working when the intent is deleted for a primary language on a topic in Virtual Agent, but not for secondary languages
NLU Workbench	PRB1547935	When sysparm_query = null is passed, the aggregate API returns a count of 0 records on the instance
Notification Preferences	PRB1573370	Default schedule records do not honor the user's time zone
NotifyNow	PRB1587629	Showing error when trying to migrate from legacy Twilio to new Twilio Direct
NotifyNow	PRB1579236	A race condition prevents the processing of callbacks from Twilio because of incomplete context data
NotifyNow	PRB1578746	A message displays in sys_log: 'There is already and an active url in this context with name: onCatchAllEvent'
On-call Scheduling	PRB1545839	Duplicate entries are created in the on-call calendar when a user in a different time zone adds a member to the roster

Problem category	Number	Short description
On-call Scheduling	PRB1569962	OCRotalCalendarSNC.getCalendarEvents() breaks for partial time offs
On-call Scheduling	PRB1562255	Unable to remove the slack option from an on-call communication
On-call Scheduling	PRB1561106	The on-call 'assign by acknowledgment' process ends escalation prematurely
On-call Scheduling	PRB1559507	sys_user with an active condition check causes breakdown sources automatically to turn off, as a user instance has more users than define property threshold
On-call Scheduling	PRB1558223	Error when trying to call 'On-Call: Assign workflow from flow designer'
On-call Scheduling	PRB1556625	Dates display in the wrong format when the language is set to French - Canada
On-call Scheduling	PRB1555828	The same assignment group, <code>#{message_number}</code> , is used for multiple incident SMS messages, including 'Assign by Acknowledgment' and 'On-Call: Check Assignment Response'
On-call Scheduling	PRB1555427	The 'Edit Escalation and Contact Preferences' link in 'Edit Shift' isn't working as expected on the 'On-call calendar' page
On-call Scheduling	PRB1553385	System logs throw an error: 'Invalid JOIN string: sys_user_grmmember.group=cmn_rota.group: no thrown'
On-call Scheduling	PRB1551974	The on-call scheduler adds the wrong user to a task

Problem category	Number	Short description
On-call Scheduling	PRB1551522	Removing a member from the roster causes the roster to stop rotating
On-call Scheduling	PRB1550038	rota_manager couldn't send on-call shift subscriptions
On-call Scheduling	PRB1547197	Duplicate records display in on-call scheduled reports
On-call Scheduling	PRB1540040	The on-call reminder email has the roster incorrectly published
On-call Scheduling	PRB1537663	On Major Incident Workbench, an on-call pop-up displays the mobile number, but when users call using the Start a call button, the call goes to the business number
On-call Scheduling	PRB1537077	There is a workflow error in the 'On-Call: Log Escalation Start' activity
On-call Scheduling	PRB1536843	The on-call gaps conflict report job has delays and performance issues
On-call Scheduling	PRB1533299	Personally identifiable information, like a phone number, displays on the on-call calendar
Orchestration	PRB1570422	If the system language isn't English, workflow activity inputs don't correctly store a required flag value
Orchestration	PRB1548026	Orchestration PowerShell probes that time out orphan the child PS process
Orchestration	PRB1522462	Orchestration AD object activities are not working with multi-value string values when

Problem category	Number	Short description
		the attribute contains multiple values and appends instead of replacing
Outbound Messaging	PRB1559207	SSL handshake issues after Rome upgrade
Outbound Messaging	PRB1488537	There is a false error on SOAPMessageV2 when running via MID Server
Password Reset Application	PRB1575652	Use of getMessageS causes the escaping of retrieved translated sys_ui_message records that contain an apostrophe
Password Reset Application	PRB1565289	The password reset process lets users reset the password even when the new password and retyped password doesn't match
Password Reset Application	PRB1555667	When there is a password reset request with the action 'Unlock Account', a warning syslog occurs from the 'Password Unlock' subflow
Password Reset Application	PRB1548874	Password reset application doesn't accept Japanese characters for the 'Question/ Answer' type when typing from the keyboard
Password Reset Application	PRB1393983	Password reset ignores the hostname from the credential store
Password Reset Application	PRB1583590	The change password sub-flow fails for external users at the step 'Send email after change password'
Patterns	PRB1552801	The 'Host_Name' attribute populates in uppercase for few of the servers during Discovery

Problem category	Number	Short description
Patterns	PRB1552508	Citrix creates connections to all the apps instead of just for the one specified in the ICON path
Patterns	PRB1551303	The network library (NLB) network card is given an incorrect IP address
Patterns	PRB1549348	Some SCSI disks aren't discovered in Linux Discovery
Patterns	PRB1547488	The Oracle database on UNIX needs a connection string configuration
Patterns	PRB1543535	Discovery fails for a network device with the type: 'Brocade DCX8510-8'
Patterns	PRB1541297	Solaris packages are created as relationships and not as a packages table
Patterns	PRB1541090	ServiceNow Discovery fails to populate the version for the DB2 instance class
Patterns	PRB1538999	A pattern option should be configured so users can elect to have the Linux Server pattern stop if the step 'Get DMI type 1' fails
Patterns	PRB1537459	The Alteon Load Balancer pattern doesn't set the install_status field for the cmdb_ci_lb_pool_member records
Patterns	PRB1457561	The 'Parse File' operation causes the MID Server host to crash when parsing large files
PDF Generation	PRB1557484	PDF export fails when a section has two rows with large content

Problem category	Number	Short description
PDF Generation	PRB1568000	Long footer text wraps and doesn't continue until the end of the page
PDF Generation	PRB1556804	The PDF export of the 'Scripted Relationship' related list causes an error in the system log
PDF Generation	PRB1554840	Before query business rules aren't honored by the instance when exporting a PDF directly from a URL
PDF Generation	PRB1552198	Other languages should be supported for paragraphs in scripting
PDF Generation	PRB1585452	Exporting PDF (Request Item) does not reflect the user's selected language
Performance Analytics	PRB1546989	The 'Time series' widget displays a time unit indicator, which has a threshold that displays the threshold as seconds instead of days/months
Performance Analytics	PRB1577345	The indicator scorecard on Agent Workspace/Analytics Center doesn't filter an unpublished indicator
Performance Analytics	PRB1573538	The Performance Analytics widget's color is ignored when an 'Elements' filter is applied, the filter returns more than one element, and the 'Follow element' isn't checked
Performance Analytics	PRB1573136	External elements can't be used in formula indicators
Performance Analytics	PRB1569536	Pagination buttons are missing for performance analytics widgets

Problem category	Number	Short description
Performance Analytics	PRB1566482	Selecting incorrectly defined color codes with a space at the end makes the visualization fail (when using the color or a palette that uses that color)
Performance Analytics	PRB1566404	The data collection job fails on rotation tables that have the 'sys_created on' condition
Performance Analytics	PRB1563407	Formula indicator widgets with a '%' display the previous month's values instead of current values
Performance Analytics	PRB1562444	On IE11, adding reports to the dashboard from Report Designer throws an error on the console, and the dashboard with the report doesn't load
Performance Analytics	PRB1553601	Analytics Hub doesn't display [N - 1] (N == current) breakdown scores in weekly/monthly SUM, even though the scores are available
Performance Analytics	PRB1552884	A tooltip doesn't update correctly on a dashboard widget
Performance Analytics	PRB1548095	In Analytics Hub, there are discrepancies between the last score date and the 'show scores' functionality for business calendars in the US/Central time zone
Performance Analytics	PRB1546068	'ServiceNow Performance Dashboards' error: An 'Invalid series data' error when a value of glide.rrd.writer is set to 'clotho'
Performance Analytics	PRB1545951	'Allow aggregation of multiple breakdown element scores' on the formula indicator has missing points in the chart

Problem category	Number	Short description
Performance Analytics	PRB1544269	'Show target' and 'Show trend' are visible on the form even when 'Previous period chart' is checked
Performance Analytics	PRB1541762	Updating is slow when executing the 'PA Data Collection' job during the closeHangingLogs function
Performance Analytics	PRB1527085	Analytics Hub displays no score with 'By month AVG' for the last full month even though the scores are available
Performance Analytics	PRB1499506	sn-nlq-query-input must update design system dependencies
Performance Analytics	PRB1457093	Collecting future scores (negative relative end) causes unexpected results on charts like YTD
Performance Analytics	PRB1549424	Breakdowns aren't followed when switching tabs or when a widget is far down on the page, loading after the rest of the dashboard
Performance Analytics	PRB1546643	A 'Breakdown is not available because it does not apply to one or more contributing indicators of the formula' message appears over the widgets/dashboards upon cache.do
Persistence	PRB1551600	Unknown system variable 'replicate_ignore_table' error displays in localhost logs for user instances that have a replica database that runs on MySQL 5.6
Persistence	PRB1547401	Gateway DB pool can't be instantiated at node startup, it succeeds after

Problem category	Number	Short description
		SecondaryDatabaseSweeperJob runs
Persistence	PRB1546784	An erroneous and malformed SQL statement is executed when loading a database view that references a function element
Persistence	PRB1521257	'sys_journal_field' entries aren't deleted when the corresponding record is deleted
Persistence	PRB1514936	Union replacement isn't adding the table alias in the 'ORDER BY' value, causing the platform not to apply the union replacement
Persistence	PRB1512024	When adding a field to the base table, to set the default value, the system unions all shards to the sys_ids, which unnecessarily causes a slowdown
Persistence	PRB1537587	Issue with large sys_id 'IN' queries
Platform	PRB1512041	All script fields in the 'sys_rte_eb_*' tables should define the max_length
Platform Level Encryption	PRB1550013	KMInstanceKeyAPI was renamed to EnsureAllInstanceKeysAPI and causes IDR activation errors
Platform Licensing	PRB1568507	ServiceNow apps in global scope display in the subscription overview dashboard
Platform Licensing	PRB1568241	Licensing API hasFeatureForTable() returns incorrect results for some tables that are part of the non-trackable, non-licensable plugins

Problem category	Number	Short description
Platform Licensing	PRB1565016	The 'Unrestricted User' related list on license_details displays incorrect users
Platform Licensing	PRB1551120	The App Engine v1 related business rule that calls RemoveCustomTableRole must be turned off
Platform Security	PRB1578304	Excessive flushing of the syscache_sys_certificate cache
Platform Security	PRB1573101	Nodes can run into OutOfMemory errors when iterating using LinkedHashMap.forEach()
Platform Security	PRB1570019	Invalid Glide Encryptor sys_id is returned by KMFGlideEncrypterModuleKeyProvider.getGlideEncrypterMasterKeySysId() after regenerating a Glide Encryptor main key
Platform Security	PRB1559178	Instances upgraded from early Rome releases may not be able to correctly unwrap keys
Platform Security	PRB1547059	Fixing Vault Cert renewal script and improving vault token handling
Platform Security	PRB1539129	Image attachments encrypted through KMF don't display preview images to users with the correct permissions
Platform Security	PRB1537341	Open redirect via Platform Security isURLWhiteListed
Platform Security	PRB1582214	When a 'KMFAutomationInterface.migrateToNewKeySecure' API call is made to migrateToNewKeySecure, it only

Problem category	Number	Short description
		checks the first instance key's validity
Platform Security	PRB1564158	Users observe 'OIDC token verification failed' error exceptions intermittently during MS Teams adapter load tests
Platform Security	PRB1510691	SSLConnectionFactory can't instantiate GlideSSLProtocolConnectionFactory
Predictive Intelligence	PRB1575179	Clustering training succeeds but updates fail when columns overlap in Input , Groupby , and Purity fields
Predictive Intelligence	PRB1555297	Record IDs are not populated for a cluster summary when the solution is trained using views
Predictive Intelligence	PRB1553506	Users with the 'ml_report_user' role should be able to view the clustering visualization chart
Predictive Intelligence	PRB1541952	The ML predictor results table isn't reflecting the correct value for the Predicted correctly field
Predictive Intelligence Workbench	PRB1551683	The related lists table is misaligned on the 'ML solution' page in Next Experience
Predictive Intelligence Workbench	PRB1528902	Improve piwb.instance_eligible_auto_train's performance
Problem Management	PRB1560425	The data lookup rule does not work properly in Agent Workspace if a field has dictionary override set
Process Automation Designer	PRB1563406	The Reference field doesn't correctly display names

Problem category	Number	Short description
Process Automation Designer	PRB1536519	The 'Wait for Condition' activity errors out when waiting on a record created by a previous activity
Process Automation Designer	PRB1576889	Dot-walker in the condition builder is broken on master
Process Optimization Application	PRB1547490	Mining might trigger an error message 'Project definition could not be downloaded'
Process Optimization Application	PRB1582414	The process optimization job fails for new users
Procurement	PRB1577455	If the user didn't provide an asset tag on the receive UI form, the asset_tag generated by number maintenance is overwritten by an empty value when receiving a purchase order
Procurement	PRB1558215	Users encounter issues when scanning assets using the Agent Mobile app in San Diego
Procurement	PRB1555100	When a purchase order is canceled, all assets associated to that order aren't deleted
Procurement	PRB1555039	The Active field is set to 'false' on the sc_request record when the request is created for an order guide
Procurement	PRB1554870	Hardware assets aren't created correctly if there are large number of items, slowness is observed with transaction errors
Project Management	PRB1574045	Percent complete doesn't update in the planning console correctly

Problem category	Number	Short description
Project Management	PRB1572989	If the time constraint is set to 'Start ASAP', users can't set a project phase with the 'Agile' type to 'Close Complete'
Project Management	PRB1570047	Edit view doesn't work for customer projects/tasks
Project Management	PRB1567789	Planning Console has display issues when announcements are present
Project Management	PRB1566213	If users click the Show More button on Idea Portal with a user that can't see all the ideas, the same records are repeated
Project Management	PRB1565942	Project Portfolio Management (PPM) planning console displays 'something wrong at client side. Contact System Administrator'
Project Management	PRB1563641	The sys_updated_on project task isn't updated correctly
Project Management	PRB1561486	The actual cost in project currency doesn't add the actual cost from a subproject when the expense line is added on the parent project's cost plan
Project Management	PRB1559485	Planning console doesn't create a project task under a teamspace
Project Management	PRB1557519	MS project import results in an error when a task has a predecessor with an external dependency
Project Management	PRB1556323	The availability isn't updating after the scheduled job run
Project Management	PRB1555935	Adding decision records to a project/demand makes the

Problem category	Number	Short description
		planned start and end dates become read-only
Project Management	PRB1554041	The planning console configurations for the project TeamSpace 1 aren't applied
Project Management	PRB1553663	The planning console's print functionality doesn't correctly display a column on the planning console
Project Management	PRB1553302	Cost plan breakdowns' exchange rate date is out of the fiscal period when the instance's time zone is not GMT
Project Management	PRB1551013	A 'True/false' custom column doesn't save when set through the planning console
Project Management	PRB1549614	Milestones are allowed to be created on program tasks even when they are in a 'work in progress' state
Project Management	PRB1548942	A notification message is garbled when the baseline name is in Japanese characters or the system language is set to Japanese
Project Management	PRB1548364	Read-only project fields become editable when the page is loading for existing records
Project Management	PRB1544573	Changing the project dates causes a shift in the cost plan breakdown actuals
Project Management	PRB1543326	A decimal separator isn't accounted for when creating a rate line

Problem category	Number	Short description
Project Management	PRB1537355	Clicking status report links under the 'Risk' section doesn't redirect the user to the record
Project Management	PRB1535472	Cost indicators have a wrong calculation after cost rollup
Project Management	PRB1584434	If an advanced planning console column is missing relative item advanced column setup, setAdvanceColumnMetadata throws a null pointer exception
Project Management	PRB1582522	Project and project tasks are set as a yellow status incorrectly
Project Portfolio Management	PRB1526332	The project budget doesn't match the budget sum
Project Portfolio Management	PRB1576175	'PPM - Portfolios' and 'Project' interactive filters contain invalid interactive filter references
Project Portfolio Management	PRB1574431	When completing an Agile phase, it also completes some stories that were removed from the phase
Project Portfolio Management	PRB1568996	There is an issue with the filter of the idea portal
Project Portfolio Management	PRB1568262	Program cost plan breakdowns are missing the portfolio
Project Portfolio Management	PRB1567569	Non-monetary benefit plan breakdown becomes zero when editing a benefit plan using a negative non-monetary entered benefit
Project Portfolio Management	PRB1566975	The way to create strategies from project/demand on the strategic objectives table is incorrect

Problem category	Number	Short description
Project Portfolio Management	PRB1561315	Program Workbench doesn't support encrypted fields
Project Portfolio Management	PRB1561089	Idea notifications come from an incorrect email address
Project Portfolio Management	PRB1560158	When editing cost plan cells on the 'Financial' tab in Project Workbench, the first number is omitted
Project Portfolio Management	PRB1559650	The amount in the Project field on a cost plan breakdown table is updated as a currency2 type in the script include PPMFundManager's function 'updateActualsForTask'
Project Portfolio Management	PRB1557150	Updating the lag of a dependency on the planning console does not work as expected when the system language is changed
Project Portfolio Management	PRB1555048	Duplicate project link tasks are created when a change request is created using a 'task' related link
Project Portfolio Management	PRB1553864	A time sheet's portal task, and group task filter, changes unexpectedly after the Add to time sheet button is clicked
Project Portfolio Management	PRB1553121	The browser freezes when writing in the idea Title field
Project Portfolio Management	PRB1552820	When an issue is converted into a decision, the Approval field on the dmn_decision form has duplicate 'Not yet requested' choices
Project Portfolio Management	PRB1547671	'Entered Currency' is empty on a project cost plan when the

Problem category	Number	Short description
		currency is SAR (Saudi Arabia Riyad)
Project Portfolio Management	PRB1541702	The Title field is announced as a Search field
Project Portfolio Management	PRB1540232	The NPV value on Program Workbench displays the wrong currency symbol
Project Portfolio Management	PRB1559132	On the 'Financials' tab, there is a hard-coded 'Monetary Benefit Plans' string
Project Portfolio Management	PRB1556299	The 'New project workspace' link overlaps onto other tabs
Read Replica	PRB1502485	When a read replica process becomes unresponsive, all operations on the instance become unavailable
Record Watcher	PRB1565385	Using an 'IN' query with Filter.checkRecord() that has a duplicate value returns false
Record Watcher	PRB1532842	When 'Copy empty fields' on the transform map is checked, data import triggers an update set when it should not
Record Watcher	PRB1526988	Record watcher cleaner thread throws an exception, which results in the removal of the memory filter condition
Related Lists	PRB1573384	Editing a related list with an 'After the form loads' option breaks when a 'Tags' column is present
Related Lists	PRB1497625	Inconsistent behavior when personalizing the 'Workspace' view list layout in the 'Platform affects' related list layout in Workspace

Problem category	Number	Short description
Release Management	PRB1557884	Actual start/end dates aren't populating as expected on state changes to 'Testing/QA' and 'Deploy/Launch' in rm_release
Reporting	PRB1546971	A critical error message appears in the logs when using reports after creating a Function field
Reporting	PRB1578140	The global UI script can break PAREXPORT functionality for all instances in datacenter
Reporting	PRB1571871	A parent Reference field isn't fully saved and truncates after 80 characters
Reporting	PRB1571767	Real time updates functionality isn't removed after a table source changes to the database view
Reporting	PRB1571564	A user doesn't see the option to schedule a report in the sharing menu if the report_scheduler role is an elevated role, even when elevated to that role
Reporting	PRB1564120	The ACL assessment for the reports app check for domain separation activation isn't accurate on older instances
Reporting	PRB1561858	The report executions table doesn't store more than 10 transactions per a report when the property changes to 20
Reporting	PRB1559587	Speedometer report showing incorrect data formatting for Duration fields
Reporting	PRB1559154	report_view ACLs don't provide the documented functionality to survey roles

Problem category	Number	Short description
Reporting	PRB1558749	'From' and 'To' under the Y axis doesn't work in the 'Box' and 'Trendbox' reports
Reporting	PRB1557882	In San Diego, selection of the Dot-walking field is not extended in report designer
Reporting	PRB1557668	PDF export fails with a dashboard with many single score widgets
Reporting	PRB1553798	In Rome, using the 'Display geographical labels' option displays country labels with no relevant data
Reporting	PRB1553623	Changing the report 'Group By' from a variable to a non-variable field doesn't clear the sc_groupby_item_id field, which causes a wrong query to be triggered by the report
Reporting	PRB1551497	The dropdown for adding Performance Analytics and reporting widgets is broken on Service Portal
Reporting	PRB1550154	In classic real-time single score widgets, if the filter contains 'GROUPBY' and 'TRENDY', it can lead to the wrong AMB channel updating, which causes incorrect data to display
Reporting	PRB1546280	The PDF export of multi-pivots includes pages of extra white space
Reporting	PRB1542452	Headings and labels on the HR case dashboard are incorrect
Reporting	PRB1537446	The total value in donut charts isn't centered when the report is

Problem category	Number	Short description
		exported to a PDF, either in the UI or a scheduled report
Reporting	PRB1530172	String values in multi-level pivots don't display in alphabetical order when using all uppercase characters
Reporting	PRB1514560	Changing sys_ui_message.message isn't reflected on the 'Trend' report
Reporting	PRB1513946	If the date format in an instance is MMM dd, yyyy, a time series report with the Gregorian calendar doesn't work and results in an NPE in the logs
Reporting	PRB1512913	Generated PDFs don't return applicable rows when grouped by 'Incident_sla.Assignment Group.Manager'
Reporting	PRB1498891	Incorrect date format in the calendar report
Reporting	PRB1496391	The 'SUBSTRING' function doesn't work for a multi-level pivot table
Reporting	PRB1586395	During report creation, the 'configure function' field doesn't load
Resource Management	PRB1566189	Group resource allocation's weeklies are duplicated
Resource Management	PRB1576949	There is a mismatch in resource allocation due to the completion functionality in the system
Resource Management	PRB1566738	Unable to see the events on the day view of 'My Calendar'
Resource Management	PRB1559848	After the 'Resource Termination Handler' schedule job is

Problem category	Number	Short description
		executed, the confirmed/ allocated hours don't roll up correctly to the resource plan
Resource Management	PRB1557451	The Conf/Alloc roll-up hours display zero when FTE is selected
Resource Management	PRB1557237	The state of the resource plan remains as 'Planning' even after it is requested
Resource Management	PRB1553270	Resource finder queries inactive skills
Resource Management	PRB1546593	Users with the resource_user role are unable to create a resource plan for a demand due to user preference
Resource Management	PRB1546331	There is a reduce resource plan error
Resource Management	PRB1582635	The week is not selectable on the Confirm/Allocate for Specific Period on the Allocation Workbench's Resource Finder
Resource Management	PRB1582405	When users give an empty start date on an event created from their calendar, the system generates allocation dailies and aggregates from 1970
Resource Management	PRB1554681	Resource aggregates aren't updated correctly when reduce resource plan operation is performed
Restore	PRB1398252	The workflow hang checks for a replication lag, but the multi-threaded replication stops at all last but the last one bin log file, so the checking is never completed

Problem category	Number	Short description
Search UX	PRB1565353	If the user is unable to read a search source, the search source name becomes shuffled in the response
Search UX	PRB1545754	The global search results do not show the pagination numbers accurately with the ACLs applied
Search UX	PRB1515743	The Recent Search Suggestion field doesn't collapse when users select the shift tab
Security	PRB1583218	All instances present DOM XSS exploit
Security Applications	PRB1559373	sn_sec_core_integration_item's update set records don't contain the banner logo
Server Side Scripting	PRB1561833	There are long running queries from the business rule table
Server Side Scripting	PRB1579510	There are duplicate script includes with the same 'PPMDashboardUtil' name, one defined to be accessible from 'All Application Scope' and the other is 'This application Scope' (global) only
Service Catalog	PRB1570913	Facing g_form.showFieldMsg issue after upgrading to San Diego where a message displays on the same line and a new line is missing
Service Catalog	PRB1556126	The 'Item Diagnostic Job' job runs for long due to a slow query run from CatalogItemDiagnosticScore script included in the checkLookupVariableRowCount function

Problem category	Number	Short description
Service Catalog	PRB1549147	Adding, removing, and again adding a new attachment in an attachment variable results in a deleted attachment and still displays in the activity stream after submitting the record producer/catalog item
Service Catalog	PRB1526494	'New Bundle Name' doesn't translate into Swedish
Service Catalog	PRB1558705	A service catalog request doesn't have a closed skipped stage, but a business rule has the code to set the stage to closed_skipped
Service Catalog	PRB1567389	Variables in Service Portal display the translation of a translated value in San Diego instead of displaying an actual variable translation of English
Service Catalog	PRB1578925	Advanced reference qualifier doesn't work for variables with the 'Requested for' type in a domain separated instance
Service Catalog	PRB1578164	Variables within the variable editor on RITM and SC task forms display extra space between the catalog variables
Service Catalog	PRB1576945	When using the classic environment, ITIL users can't see variable set variables
Service Catalog	PRB1572630	Catalog item variable sets aren't expanding correctly on Variable Editor
Service Catalog	PRB1571946	Text present in the catalogs under the 'My recent Items' and 'Popular Items' tab controls isn't clearly visible after applying a text spacing tool

Problem category	Number	Short description
Service Catalog	PRB1571840	A running flow context associated with RITM doesn't cancel on a request deletion
Service Catalog	PRB1570848	Archived SCTASKs' restoration fails due to NullPointerException
Service Catalog	PRB1570469	Catalog client scripts that use <code>g_form.setValue</code> with an empty variable for the check box return a 'false' value in San Diego
Service Catalog	PRB1570064	A check box container is not visible to external users due to the title label variable
Service Catalog	PRB1569991	Images within an order guide's options are stretched/incorrectly sized
Service Catalog	PRB1569939	When users click the Restore Default button on the catalog builder, it isn't taking the value from the <code>glide.sc.builder.item_filter_mode</code> system property
Service Catalog	PRB1569348	Platform Approval Summarizer doesn't properly display multi-line fields
Service Catalog	PRB1565229	The Disclosure button isn't visible to voiceover users
Service Catalog	PRB1564301	In Workspace, the New UI action on the catalog item <code>sc_cat_item</code> isn't working
Service Catalog	PRB1564126	The 'GlideServiceCatalog.js' file isn't included in the 'js_includes_catalog.js' file, which causes client scripts not to work for MRVS on the 'catalog_table_variable_dialog' UI page

Problem category	Number	Short description
Service Catalog	PRB1562766	Tickets are created by a guest user using record producers that aren't public
Service Catalog	PRB1562337	g_form.showFieldMsg causes multiple choice variables not to display
Service Catalog	PRB1560805	The 'Update variable name references' business rule isn't working
Service Catalog	PRB1560309	A catalog item reference qualifier isn't correctly filtering the records in HR Agent Workspace
Service Catalog	PRB1559162	Masked variables can be unmasked by non-ITIL users in Agent Workspace
Service Catalog	PRB1558347	The Next Experience reference and search icons overlap after upgrading
Service Catalog	PRB1558273	Clicking the 'Enable Variable Action Logger' leads to system-wide performance issues
Service Catalog	PRB1558091	The modal dialog loses focus when g_form.addErrorMessage is used
Service Catalog	PRB1557960	It takes a long time to redirect after adding many MVS and clicking 'Order Now' or 'Add to Wish List'
Service Catalog	PRB1556582	Access counts for the Service Catalog Platform application are not tracked in the ua_app_usage table after upgrading to Rome

Problem category	Number	Short description
Service Catalog	PRB1556116	setValue behaves incorrectly for the 'Populate parent field in sc_task table' business rule
Service Catalog	PRB1555185	UI page client scripts have a reference error
Service Catalog	PRB1553650	Catalog items are not visible in the portal while an upgrade from Paris to Rome is in progress
Service Catalog	PRB1553139	The HTML catalog variable is editable when 'Read only' is selected
Service Catalog	PRB1553088	When users with catalog_builder_editors and catalog_manager/catalog_editor roles try to access the categories list in the Catalog Builder categories' slush bucket, the list of categories is empty
Service Catalog	PRB1552906	A few category icons are missing in the catalogs
Service Catalog	PRB1551495	Records are deleted from the sys_translated table when creating variables from the sc_ic_item_staging table
Service Catalog	PRB1551036	The Requested Item Updated and Updated By fields auto-update with the logged in user name when the user opens the respective catalog task record
Service Catalog	PRB1550647	Even though the copy catalog item's functionality fails, the variables and variables sets' copy is created
Service Catalog	PRB1548894	When the language on an instance is set to 'EN - English' (custom), users are

Problem category	Number	Short description
		unable to view MRVS variables on the portal when adding MRVS to the catalog form
Service Catalog	PRB1547180	Inconsistencies in the state flow of CSM when an attachment is added or removed
Service Catalog	PRB1546506	One/two-step checkout maps to 'requested_for' on sc_request, but the 'Requested For' variable maps to 'requested_for' on sc_req_item
Service Catalog	PRB1544980	Extra white space displays for the hidden multi-line text variable when displayed using the catalog UI policy in Variable Editor until the browser window is resized
Service Catalog	PRB1569424	Quantity on the wishlist is not taking any numbers other than 1
Service Catalog	PRB1543169	MRVS variables clear off when the associated/ parent record is saved at the same time as when the variable values are entered
Service Catalog	PRB1540215	An invalid role is assigned to users who are assigned to the catalog_admin role
Service Catalog	PRB1538867	Missing translation of a required field message in the 'Catalog Item' component for non-English languages
Service Catalog	PRB1538387	Multi Row Variable Sets (MRVS) are overriding values when more than one set is on an order guide or catalog item
Service Catalog	PRB1538077	A catalog UI policy containing the g_form.clearValue() script on a multi-row variable set breaks

Problem category	Number	Short description
		a form for a user with only read-only access to the record
Service Catalog	PRB1537131	Multiple draft items are created in Catalog Builder
Service Catalog	PRB1536946	A blue line appears when clicking 'Categories' on the 'sc_category' page
Service Catalog	PRB1521525	Non-admin users can see inactive users' sys_ids via the reference variable after upgrading to Quebec
Service Catalog	PRB1514982	The state on a request record is audited twice
Service Catalog	PRB1587918	Catalog Builder shows 'Please disable your pop-up blocker to use this feature' even though pop-up is enabled
Service Catalog	PRB1584097	The Variable Currency Widget doesn't show the currency symbol on the portal
Service Catalog	PRB1578202	A Reference Qualifier on a cascaded variable in an order guide doesn't work in Service Portal
Service Catalog	PRB1575260	A 400 dialog displays when there is a validation error when saving a record
Service Catalog	PRB1572661	When a catalog item is submitted from Service Portal, the delivery address remains populated within the request even when emptied
Service Catalog	PRB1553973	Chained CatalogDataLookups don't execute properly in the Service Portal

Problem category	Number	Short description
Service Catalog	PRB1462724	A translation happens twice on a UI page
Service Catalog: Builder	PRB1570458	When creating a portal via UI Builder and opening a catalog item with a container containing multiple required check boxes, when up to n-1 choices are selected out of n choices, an empty error message appears
Service Catalog: Builder	PRB1559684	Attachments/pictures delete after being added to the sys_attachment_cleaner_entry record in Catalog Workspace
Service Catalog: Seismic	PRB1568447	Variables aren't aligned properly in a workspace experience using the 'Catalog Item' component
Service Catalog: Seismic	PRB1552507	Files attached through the 'Catalog Item' component are attached to sc_cat_item instead of sc_req_item
Service Catalog: Service Portal Widgets	PRB1576021	If the variable text spans more than two lines within the sc_cat_item widget, the 'Help' icon '?' displays on the line below
Service Catalog: Service Portal Widgets	PRB1551313	Unnecessary pop-ups appear in Service Portal UI after posting content in the activity stream
Service Catalog: Service Portal Widgets	PRB1571413	When using Portal Designer, the 'Setting' page's background color also applies for some widgets
Service Catalog: Service Portal Widgets	PRB1569878	When 'Label' and 'Check Box' help text types are grouped, the help text displays an incoherent string

Problem category	Number	Short description
Service Catalog: Service Portal Widgets	PRB1564735	Clearing the 'Visible Elsewhere' setting in the availability tag for the 'Requested For' catalog item variable causes a JavaScript error in Service Portal
Service Catalog: Service Portal Widgets	PRB1559003	The values of cascade variables are collected from the order guide when submitting an order guide
Service Catalog: Service Portal Widgets	PRB1558463	The focus outline around an item name in a list view is not visible
Service Catalog: Service Portal Widgets	PRB1551305	A multi-line new line separator is not rendered when posted in the activity stream of an incident in Service Portal
Service Catalog: Service Portal Widgets	PRB1548939	When rejecting an RITM record in the HRM Todos Summary widget, two confirmation messages display when the user's language is Japanese but only one displays for English
Service Catalog: Service Portal Widgets	PRB1547380	A form won't accept input in the 'Activity' tab after switching from the 'Standard Ticket' tab
Service Catalog: Service Portal Widgets	PRB1547358	When there is server script as part of the UI policy condition, it is not evaluated to the result while sending it to the browser
Service Catalog: Service Portal Widgets	PRB1538960	The service catalog in Service Portal doesn't always automatically scroll up when selecting a category
Service Catalog: Service Portal Widgets	PRB1515676	There is an accessibility issue with the HTML editor on the Standard Ticket widget
Service Catalog: Service Portal Widgets	PRB1581663	The 'Related Catalog Item' widget can't be seen when

Problem category	Number	Short description
		a page is loaded with an outdated sys_id
Service Catalog: Service Portal Widgets	PRB1563481	When submitting a request in the 'Tuition Reimbursement Catalog Item Approvers' tab, attachments are displayed
Service Catalog: Workspace	PRB1566530	An attachment in the article isn't downloading when users navigate to the article from Service Portal through Agent Workspace
Service Creator	PRB1557347	Support localization for service creator questions/columns that are similar to name/description
Service Level Agreement (SLA)	PRB1565280	Incident Management package doesn't include report_view ACL on task_sla
Service Level Agreement (SLA)	PRB1556944	The table 'sla_async_queue' doesn't the 'No audit delete' value set to true
Service Level Agreement (SLA)	PRB1551602	SLA definitions with conditions that reference fields that are not audited (attribute 'no_audit=true' in the dictionary record) may prevent SLA repair, timeline, and async processing from working correctly
Service Level Agreement (SLA)	PRB1584160	There is no logic to cancel a flow with a deleted Task SLA as its trigger record
Service Level Agreement (SLA)	PRB1574098	HistoryWalker sets reference catalog variables incorrectly when multiple records of the same display value exist in the referenced table
Service Level Agreement (SLA)	PRB1570265	SLA async processing can be delayed/prevent further processing if one or more SLA

Problem category	Number	Short description
		sync jobs are terminated, leaving processing/queued records in the queue
Service Level Agreement (SLA)	PRB1580589	SLAs don't attach when one or more definitions override a definition in a higher domain
Service Management Virtual Agent Topic B	PRB1559259	The VATopicsHelper script include getOutages() and outagesInfo() return an outage 'begin' value in GMT due to a redundant use of getDisplayValue()
Service Mapping	PRB1550739	Readiness checklist doesn't calculate cloud load balancer
Service Mapping	PRB1541977	Manual service CI class exclusion list should be enhanced
Service Mapping	PRB1568370	An out of memory exception can be caused when a regex calculation concat cmdb_running_process.property field to a string without limiting the length
Service Mapping	PRB1567225	The calculation status displays as 'Waiting for Calculation'
Service Mapping	PRB1565850	The removeEntryPoint method in EntryPointHandler should delete a manual endpoint for the entry point CI
Service Mapping	PRB1561130	Null point error in recomputation
Service Mapping	PRB1556344	Users without a required role can still open the service via a direct link and can view the service map
Service Mapping	PRB1553828	The 'AFPPProviderJS' script includes log too much to the

Problem category	Number	Short description
		sys log, causing DB disk space growth
Service Mapping	PRB1548196	When set to any other language, clicking 'handle error' displays a message instead of the formatted suggestion
Service Mapping	PRB1545160	Commands run to collect tracked configuration files in the Oracle database on the UNIX pattern
Service Mapping	PRB1543044	The cleanup job for the sa_ml_connection_suggestion table deletes old records with decision equals to 'Add by Rule / Excluded by Rule'
Service Mapping	PRB1542157	The PeopleSoft to Tuxedo connection pattern fails in IRE due to a missing port in the cmdb_ci_endpoint_tcp payload
Service Mapping	PRB1541583	The 'ActiveMatrix Business Works' pattern identification section 'Tibco BW Identification' has misspelled a variable
Service Mapping	PRB1541342	The query-based service 'Dynamic CI Group' is not identified as an impacted service when 'refresh impacted services' is run in incident
Service Mapping	PRB1539213	Move the 'update business service' status to the com.snc.service-mapping plugin and optimize the query to change the status of service to done
Service Mapping	PRB1503459	If a visible connection is marked as 'boundary', CIs with hidden connections appear as floating CIs

Problem category	Number	Short description
Service Mapping	PRB1580805	Service Model's Blob Reaper update job causes replication lag
Service Mapping	PRB1578776	Top Down Discovery doesn't work when there are many records in NAT tables
Service Mapping	PRB1578753	The adding to an existing service action doesn't work on an instance with many applications services
Service Mapping	PRB1557676	ML connection suggestions don't display the expected connections for IIS w3wp
Service Portal	PRB1544431	When typing the wrong password inside the Confirm Password field, the screen reader doesn't announce the 'Password Not Match' alert message
Service Portal	PRB1544103	An attachment in a catalog item is removed after clicking the enter key in the other field in the portal's 'sc_cat_item' page
Service Portal	PRB1526096	Clicking Cancel in the date picker fulfills the required status
Service Portal	PRB1522680	The header menu in Service Portal on a mobile browser in landscape mode doesn't scroll when using devices with a viewport size greater than 767 px
Service Portal	PRB1553465	Catalog's 'Category' page doesn't have a title that is descriptive of the topic or purpose of the page
Service Portal	PRB1545171	In Service Portal, the required fields don't have a red border

Problem category	Number	Short description
		when submitted with empty values
Service Portal	PRB1543743	In Rome, 'knowledge base' is appended to a filter of the 'sp_search' Portal page, but it's not translated
Service Portal	PRB1504506	The footer is missing a footer landmark
Service Portal	PRB1577261	The notification settings option in the Service Portal user drop-down menu doesn't disappear
Service Portal	PRB1574471	An API returns '?id=null', redirecting to a 404 page
Service Portal	PRB1568593	The portal page with id=lf isn't responsive in the mobile size
Service Portal	PRB1568296	The 'HH:mm:ss z' time format generates an error in Service Portal when the dateUtils.formatDate API is called
Service Portal	PRB1561422	When closing an info message pop-up, a screen reader doesn't translate the 'Close notification' message
Service Portal	PRB1560057	Enabling debug text search breaks portal searching
Service Portal	PRB1559860	Buttons in the cart area become unclickable in the 'sc_cat_item' page when scrolling below the 'Related Items/Related Article' section
Service Portal	PRB1555689	Clicking the Order button in the Contextual search results on Service Portal redirects the user to an empty page

Problem category	Number	Short description
Service Portal	PRB1553923	After submitting a record in Service Portal with an image in the HTML field, an update in U16 causes an unnecessary field change in activity formatter
Service Portal	PRB1553197	The 'Previous Month' and 'Next Month' date tooltips is translated by parts
Service Portal	PRB1553092	Users can't sort sn-record-picker on a Date field
Service Portal	PRB1553068	The Service Portal form page crashes if user navigates to any tab while the record is being saved
Service Portal	PRB1550306	The announcement tooltip is unable to properly translate languages like English and Spanish
Service Portal	PRB1549981	Text positioning issue under the 'Team' section of the User Profile widget
Service Portal	PRB1549455	Field label tooltips are not displayed using the form widget in Service Portal when viewed from a mobile web browser
Service Portal	PRB1549102	The KB 'Category' page doesn't display the correctly updated date and time
Service Portal	PRB1548462	Japanese comments are garbled on the 'kb_article' page, but is correct on the 'kb_article_view' page
Service Portal	PRB1548165	NVDA screen reader doesn't announce Expand or Collapse buttons in Virtual Agent

Problem category	Number	Short description
Service Portal	PRB1547673	Ensure that elements with ARIA roles have all the required ARIA attributes on wakeup
Service Portal	PRB1547250	When users access date-picker and click the browser's Back button, a leave page modal displays when users access new links
Service Portal	PRB1546714	The 'Simple List' widget has an updated date set to 2022-12-05, which is a future date
Service Portal	PRB1542641	The Bio field on the Service Portal user profile widget isn't handling lengthy strings
Service Portal	PRB1540895	Clicking 'Next' or 'Previous page' in the AI search results page doesn't auto refresh to the top of the page when the 'Filters' section of 'Faceted Search' applet is beyond a certain size relative to the page
Service Portal	PRB1540150	The guided tours' menu item tooltip is grammatically incorrect when there is only one guided tour on the page
Service Portal	PRB1538068	The clear values in UI policy action aren't consistent with the HTML fields
Service Portal	PRB1536450	The Title field is translated HTML when creating the intro, or the title of the modal
Service Portal	PRB1536066	Variables with instruction annotation text don't center-align correctly on Service Portal

Problem category	Number	Short description
Service Portal	PRB1530096	In Service Portal, on the 'Pages' page, clicking the Try It button doesn't work
Service Portal	PRB1525163	The KBv3 widget doesn't consider the article's language when displaying the count
Service Portal	PRB1524626	The AI Search form section is hidden on the Service Portal form when a custom Service Portal is installed as part of a scoped application
Service Portal	PRB1522454	Announcement banners don't display all items and can't scroll down
Service Portal	PRB1521640	The Attachment button displays to a user who doesn't have write access on the sys_attachment table
Service Portal	PRB1516936	A screen reader doesn't narrate the current state for the selected links in the left navigation
Service Portal	PRB1516824	Translation failed in Service Portal due to an incorrect label text
Service Portal	PRB1512178	There is no indication of simultaneous updates
Service Portal	PRB1501211	The onChange client script on the HTML type field is not triggered consistently
Service Portal	PRB1489940	Text entered with a new line character for multi-line text fields doesn't work as expected in Service Portal
Service Portal	PRB1414215	The Virtual Agent 'chat' icon doesn't reposition in the browser

Problem category	Number	Short description
		in mobile when there is a fixed footer in the portal theme record
Service Portal	PRB1399633	Live changes to an activity stream aren't announced
Service Portal	PRB1071687	'Show matching' and 'filter out' don't populate the URL with an updated filter
Service Portal	PRB1586337	Column spacing in widget 'SC Order Status' has changed between Rome and San Diego
Service Portal	PRB1578927	The 'Related List' label displays when saving a record on the 'csm_ticket' page
Service Portal	PRB1557865	Agent Chat is not visible in the search result page on Service Portal after the 'Universal Request' plugin is enabled
Service Portal	PRB1540292	There is overlapping text on the 'esc_dashboard' page in Designer, as well as console errors
Service Portal	PRB1531037	The drop-down on Service Portal is misaligned
Service Portal	PRB1579714	Read-only variable with type Date/Time displays placeholder text
Service Portfolio Management	PRB1577493	In the Next Experience UI, the Filter button doesn't display for an outage related list 'Add affected CIs' and the user can't use Condition Builder
Service Portfolio Management	PRB1570280	The Double New button on the 'Vendor Management' related list is unable to remove both buttons

Problem category	Number	Short description
Service Portfolio Management	PRB1554046	Unable to navigate from 'Configure' to 'List Layout' on the service offerings table in the default view when Service Portfolio Management Premium is installed
Service Portfolio Management	PRB1553642	Offering modal displays 'Bad Request (400)' when submitted to create an offering
Service Portfolio Management	PRB1523932	CSAT scores aren't collected or updated in service offering for domain separated instances
Skills Management	PRB1578351	The awa.skills paired cache (334 MB) causes a high memory situation and performance issues
Skills Management	PRB1570901	A screen reader user isn't notified that a dialog has appeared on activating the New Skill button
Slushbucket	PRB1540001	When clicking 'Expand selected reference field' to display extended fields, there is slowness in the slushbucket when using Chromium browsers (Chrome, Edge)
Software Asset Management Professional	PRB1555098	Limitation on the number of devices counted, ignoring devices with an empty 'last discovered' date, the job/script should be protected, and incorrect classification of custom PC extended tables
Software Asset Management Professional	PRB1573869	Long reconciliation time due to SuiteEngine performance issues
Software Asset Management Professional	PRB1555535	There should be a column in cmdb_sam_sw_install table to log the reason of ignoring some installs

Problem category	Number	Short description
Software Asset Management Professional	PRB1548388	The NormalizationEngine creates a normalized date when a user uses a different date format than yyyy-MM-dd
Software Asset Management Professional	PRB1548272	The 'Processor Mapping [processor_mapping]' column on the 'Software Installation [cmdb_sam_sw_install]' table is a reference column, but has no table that it refers to
Software Asset Management Professional	PRB1506718	The 'Remove Installs For Retired/ Stolen CI' business rule should be moved from cmdb_ci_computer to cmdb_ci_hardware
Software Asset Management Professional	PRB1550379	samp.reset.install.deduplicated events trigger slow queries
Software Asset Management Professional	PRB1576897	Asset Workspace displays Activity Center with new requests for both software and non-software request items and the status field value isn't restricted to 'Pending approval'
Software Asset Management Professional	PRB1571644	In the 'Software Subscription' and 'Unrecognized Subscription Identifiers' tables, the Subscription identifier field is failing because it exceeds the 40 character restriction
Software Asset Management Professional	PRB1570870	Updating existing reclamation candidates fails when license_metric_result isn't set on installs and subscriptions
Software Asset Management Professional	PRB1570805	There are incorrect SAM calculations for the SQL server, due to entries of the standard edition of the SQL server not deleting from the software installation table, even though there is no installation present currently on the server

Problem category	Number	Short description
Software Asset Management Professional	PRB1568665	IBM License Metric Tool (ILMT) integration doesn't honor the MID Server configuration defined on the ILMT setup
Software Asset Management Professional	PRB1568138	Software spend detection's import transactions no longer display when a file has been added for import
Software Asset Management Professional	PRB1568078	SAP reconciliation takes a long time when stamping unlicensed users on SAP system users
Software Asset Management Professional	PRB1566832	SuiteEngine install pass isn't inferring to suites where apply_to_subscription is true
Software Asset Management Professional	PRB1566702	The 'Consumption summary' and 'Consumption units over time' widgets display a confusing output
Software Asset Management Professional	PRB1566697	User summary widget links are broken
Software Asset Management Professional	PRB1566128	Changing an entitlement's software model removes allocations
Software Asset Management Professional	PRB1564700	Suite Engine processes duplicate downgrades
Software Asset Management Professional	PRB1564291	Duplicate installs are created
Software Asset Management Professional	PRB1562857	Installs are created when 'installed on' is undefined
Software Asset Management Professional	PRB1559976	Suite components other than SQL and Windows servers shouldn't be considered in BYOL cloud licensing

Problem category	Number	Short description
Software Asset Management Professional	PRB1559487	Empty records are created because of spaces between XML tags in SAP response
Software Asset Management Professional	PRB1558889	ITAM machine-learning (ML) normalization job fails due to no model being available
Software Asset Management Professional	PRB1558325	The IBM calculator does not handle cases when the peak consumption values are not provided
Software Asset Management Professional	PRB1557144	Importing software entitlements produces errors
Software Asset Management Professional	PRB1556040	purchase_date entitlements are imported with an incorrect date if glide.sys.date_format isn't using the default 'yyyy-mm-dd'
Software Asset Management Professional	PRB1555763	The 'Software Asset Connections' job creates SW install records on retired CIs
Software Asset Management Professional	PRB1555511	Users encounter issues with fetching and updating single app data from Adobe Cloud
Software Asset Management Professional	PRB1553462	DMAP records have an 'is relevant' flag that cannot be updated from the content server
Software Asset Management Professional	PRB1553277	Discovery and IRE create orphaned relationships
Software Asset Management Professional	PRB1552371	Software installations are incorrectly matched to product lifecycles in the Software Lifecycle Report
Software Asset Management Professional	PRB1552331	PVU's subcapacity calculation isn't correct

Problem category	Number	Short description
Software Asset Management Professional	PRB1550857	The number of cloud assets covered by Bring Your Own License (BYOL) is incorrect
Software Asset Management Professional	PRB1550006	De-duplication does not process true SaaS products
Software Asset Management Professional	PRB1549997	There is an issue with SAP's self-declaration software
Software Asset Management Professional	PRB1548109	A business rule has a typo
Software Asset Management Professional	PRB1547579	Reconciliation fails when only SAM foundation and SAM workspace are enabled
Software Asset Management Professional	PRB1547306	On a single currency instance, the 'total cost' column on the table 'alm_license' displays in another currency and not in the default single currency, as configured
Software Asset Management Professional	PRB1546133	Windows Server (OS) installs are created through Citrix Discovery source
Software Asset Management Professional	PRB1546021	The 'DataCollectorJob: SAM - Office 365 Daily' job fails with an error
Software Asset Management Professional	PRB1544048	Calculator doesn't gracefully handle the calculation of rights when the CPU core count and core count are missing on CI
Software Asset Management Professional	PRB1543445	The SAMP import entitlement feature can't populate 'Database option' on software entitlement
Software Asset Management Professional	PRB1543203	Business rules don't trigger after the 'SAM - Subscription Maintenance' scheduled

Problem category	Number	Short description
		job runs and changes the entitlement's state
Software Asset Management Professional	PRB1541027	SAMPentitlementUtil populates the wrong date if a user has a different date format
Software Asset Management Professional	PRB1538301	Client script throws a 'the end date must be greater than the start date' error when setting the 'glide.sys.date_format' property to dd.mm.yyyy
Software Asset Management Professional	PRB1537717	If the 'glide.ui.advanced' system property is set to true, there are two Save UI actions on the new and existing alm_license records
Software Asset Management Professional	PRB1453314	System fields like sys_created_on, sys_created_by, sys_updated_on, and sys_updated_by are missing on the 'samp_sw_usage' table
Software Asset Management Professional	PRB1583027	Attachments on Entitlements are missing in Software Asset Workspace
Software Asset Management Professional	PRB1574825	Inaccurate categorization of server and computer
Software Asset Management Professional	PRB1535573	File-based Discovery has intermittent duplicates or missed normalization for an unidentified file set
Source Control Integration	PRB1563440	When committing update_set history to Source Control, special characters in the update_set name or description can cause an exception
Source Control Integration	PRB1567751	Slowness when using the update set migration feature with large sys_update_xml tables

Problem category	Number	Short description
Source Control Integration	PRB1565739	AGitRepository causes an out of memory error on an instance
Source Control Integration	PRB1564961	The custom stash message feature is broken when using MID Server for Source Control operations
Source Control Integration	PRB1562140	Unable to link to Source Control due to a certificate error
Source Control Integration	PRB1549791	MID Server processing with duplicate golden bundle attachments cannot make a Source Control action
Source Control Integration	PRB1581459	The collision avoidance feature breaks the commit operation in studio for all applications if there is a custom update with an empty sys_update_name field
Survey Management	PRB1557305	Order of questions inside the template is not respected in a preview of Survey Designer
Survey Management	PRB1576814	URI parameters should be honored in the new survey widget
Survey Management	PRB1573871	Survey HTML editor buttons don't have discernible text for screen readers
Survey Management	PRB1565574	Assessment instances are created for incorrect users
Survey Management	PRB1564051	Incorrect survey responses are captured when the survey is taken from a non-desktop screen on the portal
Survey Management	PRB1563958	The category Delete button is hidden instead of displayed properly

Problem category	Number	Short description
Survey Management	PRB1558899	If a filter field is 'None' on asmt_metric_type, warnings display in the system logs when opening a scorecard for an assessable record
Survey Management	PRB1557542	Copying a survey does not work in the Japanese language
Survey Management	PRB1554617	When using the 'template question' type, clicking questions' text switches the answer to the first on the left
Survey Management	PRB1547083	Every 'ARIA' button, link, and menu item has an accessible name
Survey Management	PRB1546156	Survey Reference fields display 'No Matches found'
Survey Management	PRB1495219	Users aren't able to see an image from the sample metric in an email
Survey Management	PRB1589452	The self-closing tags cause issues in the Take Survey widget
Survey Management	PRB1588335	Issue with dependencies when using surveys in the new widget
Survey Management	PRB1581447	Re-used survey categories don't display properly
Survey Management	PRB1581163	A user can fill the survey and submit it successfully, but a survey isn't inserted in the asmt_metric_result or u_survey_response tables, making it invisible
Survey Management	PRB1563727	Dependency on multiple choice questions in surveys not working correctly

Problem category	Number	Short description
Survey Management	PRB1549393	There are discrepancies between surveys and assessments
Surveys: Service Portal Widgets	PRB1587414	Not Applicable label does not render in survey when the section contains Allow Not Applicable and Non-Allow Not Applicable questions
Systems Engineering	PRB1560774	Unable to perform force index on update statements
Table Rotation/Extension	PRB1541832	The many-to-many relationship isn't created normally in Japanese
Tables and Dictionary	PRB1506061	Users can't decrease the length of a string field, even though there isn't any data exceeding the new maximum length
Tables and Dictionary	PRB1557498	There is no type checking in function field definitions, which causes a flood of SQL warnings
Tables and Dictionary	PRB1553222	There is data loss when creating a unique type field with a default value via an update set
Tables and Dictionary	PRB1550560	The JoinQueryCondition 'where' clause silently ignores column references to the partition table during SQL building
Tables and Dictionary	PRB1537502	After Online Alter completes, a property should be added to delay dropping the old table
Tables and Dictionary	PRB1512266	A custom field on the CMDB base class has a different label on the child class

Problem category	Number	Short description
Tables and Dictionary	PRB1367806	The 'Hybridization' API doesn't check the data length, which could lead to data loss
Templates	PRB1573219	A deactivated column displays on the template in Agent Workspace
Templates	PRB1548869	When \$ is not the default currency for the current locale, the currency conversion doesn't work correctly when applying a template
Test Management	PRB1562564	Test Management 2.0 test step validation result choices are hard-coded and can't be modified
Text Search	PRB1573233	'JournalFieldPeekAhead::hasJournalFields' should be cached
Text Search	PRB1515500	Changing a prefix breaks search functionality on Global Search for records with an old prefix
Text Search	PRB1580330	Inactive search sources return results when using global search
Time Card Management	PRB1573110	Tuesday and Thursday hours are removed when merging time cards
Time Card Management	PRB1560437	Missing the 'Recalled' state in the time_sheet_exception table
Time Card Management	PRB1545050	An aborted state change operation results in server-side data refreshing, but that makes a ng-model watch invalidate and tc-grid not to update time card/time sheet

Problem category	Number	Short description
Time Card Management	PRB1579730	If multiple timecard categories are mapped to a single operational work type, recalling a timesheet doesn't work as expected
UI Action	PRB1578156	Related lists are misaligned after clicking the Request Extension UI action that displays a modal
UI Action	PRB1567549	getListControl().getLabel() returns 'null' and getListControl().getControlID() returns '-1' in the UI action condition on execution
UI Builder	PRB1575245	Declarative action doesn't work as expected in the UI Builder, where it displays '[Object object]' instead of the mapping, nor in Runtime, where it displays 'Object object' instead of the sys_id
UI Builder	PRB1589215	Admin users are not able to make any changes to record tab pages in UIB
UI Builder	PRB1568502	Tabs don't refresh on stage when a tab is added
UI Builder	PRB1563018	The '--now-color--primary-1' style can't be applied to the Primary button
UI Builder	PRB1559771	Tab names aren't marked as translatable
UI Builder	PRB1558811	Admin users are not able to change any record tab pages in UI Builder
UI Builder	PRB1547166	UI Builder displays no available columns on a table to add in list component

Problem category	Number	Short description
UI Builder	PRB1543125	Slow performance while saving changes to an experience when there are many records in sys_ux_screen and sys_ux_app_route
UI Policy/Client Script	PRB1540233	The UI policy on a read-only glide_duration field does not work as expected
UI Policy/Client Script	PRB1578048	The FX currency field clears when quickly saving a form twice
UI Policy/Client Script	PRB1572577	g_form.setValue doesn't work on a read-only field when a value changes
UI Policy/Client Script	PRB1563400	Date and Time fields display in the CEST format when the form is loaded and gives an error when the record is updated
UI Policy/Client Script	PRB1562733	Issue with reference qualifier script implementation in the new seismic modal form
UI Policy/Client Script	PRB1539214	The catalog item's variable value doesn't save when it is read-only and the value is set via script
Universal Request	PRB1556814	When transferring a universal request to an idea, the verbiage is wrong and transferred is spelled incorrectly as 'transferred'
Universal Request	PRB1556556	State mapping a universal request doesn't work when an incident is resolved directly
Universal Request	PRB1545298	Universal request fulfiller (sn_uni_req.routing_agent) can't see a record's related emails, even in the Activity Stream

Problem category	Number	Short description
Universal Request	PRB1542622	On universal request, creating an HR case doesn't work if the 'Description' field has multiple lines
Update Sets	PRB1554298	Deleting and recreating a field with the same name adds 'sys_metadata_delete' records to the update set when any app is linked to Source Control
Update Sets	PRB1549529	Dictionary updates that are done through update set fail for global apps deployed from the app repository
Upgrade Engine Issues	PRB1541126	The protection of the active and update_exempt fields during a replace on an upgrade is inadequately documented
Upgrade Engine Issues	PRB1539197	Out-of-band application zips that are copied to the temporary storage are not cleaned out after extracting to the Store packages
Upgrade Engine Issues	PRB1579525	An upgrade to San Diego displays as completed, but the application nodes display as offline/online randomly in the upgrade monitor
Usage Analytics	PRB1554784	The 'collect out-of-box script updates' business rule is incorrectly set as deprecated 'async'
Usage Analytics	PRB1551852	A sys_rate_limit_rules file exists in more than one plugin and causes skipped errors during upgrades
Usage Analytics	PRB1535133	On an instance, trying to connect to central throws a 503 exception in sys_log

Problem category	Number	Short description
User Criteria	PRB1574361	User criteria doesn't work for boolean fields after extension
User Experience Engineering	PRB1567607	Accessibility issues on an 'Impersonate User Modal' dialog's heading level
User Experience Engineering	PRB1576095	ATF system properties should be moved from the message stack service to the update directory, and out of the unloads for users who already have the plugin activated
UX Framework	PRB1565710	Users have to click related lists on an interaction table for it to open
UX Framework	PRB1557801	The UXF does not trim strings for 'now-color' in UxFrameworkColorGenerator.java prior to parsing as an integer, which causes Next Experience pages to crash
UX Framework	PRB1554825	The 'Display' label isn't translated on the data set component when 'Show grid/list toggle' is turned on
UX Framework	PRB1544383	CSM/FSM configurable workspace Intermittently loads empty
UX Framework	PRB1541489	Adding a 'Related Items' tab to a form on the classic workspace causes the 'Details' page to turn empty on a configurable workspace
UX Framework	PRB1538087	Performance during a partial upgrade is degraded
UX Runtime	PRB1543853	403 error when impersonating a user and the 'End Impersonation'

Problem category	Number	Short description
		option isn't available for some users
UX Runtime	PRB1573606	Trying to load UX Assets with numbers in the scope name space fails
UX Runtime	PRB1561037	Duplicate messages appear when pointing to menu items on UI Builder
UX Runtime	PRB1548119	The UI Builder page tab name was renamed with the viewport modal name
UX Runtime	PRB1585556	The chrome_header nested menu is not working after upgrade to San Diego
VA - Adapter Framework	PRB1542895	URLs in a certain format can't be extracted from the HTML content in MS Teams
VA - Adapter Framework	PRB1534247	The 'Restart' keyword doesn't work properly when 'Anything else' or 'Survey' topics are enabled
VA - Adapter Framework	PRB1534028	Custom adapter messages occasionally stick in a pending state
VA - Adapter Framework	PRB1532725	Messages aren't sent due to a serialization error
VA-Analytics	PRB1503827	The Virtual Agent indicator source 'VA.New.ConversationTask.CreatedToday.Daily' has incorrect filter criteria for the 'Design' category after the Quebec upgrade
VA-Conversation Server	PRB1573608	TopicTypeDaoImpl logs a warning when translating a topics' title, which results into

Problem category	Number	Short description
		a translation failure in the requester's language
VA-Conversation Server	PRB1575156	Topic picker is presented to the requester on launching the chat client with Virtual Agent Lite installed
VA-Conversation Server	PRB1555419	After using mid-topic Discovery, calls to vaSystem.switchTopic throws a NullPointerException
VA-Conversation Server	PRB1553734	Support should be added for HTML tags
VA-Conversation Server	PRB1551560	In async mode, VA-NLU prediction should time out with a traceable error when not all results are received
VA-Conversation Server	PRB1511860	If the values for any live agent context variables are updated before calling the API or if none of the AWA queue routing conditions are met, agent availability checks using 'vaSystem.isLiveAgentAvailable' API doesn't always work as expected
VA-Conversation Server	PRB1568236	When DT for Virtual Agent is enabled for a conversation, DTAC doesn't work properly because queueEntryAccepted doesn't submit work to the hybrid queue
VA-Designer	PRB1579944	FDIH debug log displays even when the user isn't previewing the topic
VA-Designer	PRB1556033	A reference choice topic node that has the same variable name as an NLU entity doesn't display the 'Show more' option

Problem category	Number	Short description
VA-Designer	PRB1547057	Virtual Agent designer clears node conditions when the name of a node in another branch has a similar name with numeric value
VA-Designer	PRB1572167	The ad-hoc translation record is blank if the message doesn't have a record in sys_ui_message
VA-Web Client	PRB1561377	Updating/Adding a guest user to a record causes unexpected issues
VA-Web Client	PRB1557845	Carousel output is not showing the last results
Vendor Manager Workspace	PRB1557136	The filter pane doesn't consistently contain the advanced view
Virtual Agent Platform	PRB1547985	A Virtual Agent web client user can request 'Contact Live Agent' before any conversation messages have been received
Virtual Agent Platform	PRB1579867	Dynamic Translation not working correctly due to the glide language set under cookies
Virtual Agent Platform	PRB1545935	The introduction and end note of a post-chat survey display as broken images on Microsoft Teams
Virtual Agent Platform	PRB1575354	There is a reference error with added static choices in a Virtual Agent topic and Okta spoke
Virtual Agent Platform	PRB1575345	Idle chats aren't abandoned when they are initiated through the NowMobile app
Virtual Agent Platform	PRB1575019	Connecting to Live Agent through the menu item (three

Problem category	Number	Short description
		dots) in Virtual Agent hangs the conversation
Virtual Agent Platform	PRB1572582	IAR notification doesn't go to the end-user due to an error in the event 'task.assigned_to.virtual_agent' caused by a timing issue
Virtual Agent Platform	PRB1572379	Messages aren't rendered on the agent side with DT when picker rich control is used in greeting topics
Virtual Agent Platform	PRB1571772	In Virtual Agent, user input isn't working on Safari version 15.4
Virtual Agent Platform	PRB1568881	Static choice values with a space character at the end can't be saved on the branch conditions of a decision
Virtual Agent Platform	PRB1568498	An assignment group shouldn't be cleared when unassigning a task from a bot user
Virtual Agent Platform	PRB1566519	Topics with an applicability script are removed on a browser refresh
Virtual Agent Platform	PRB1565458	Agents are unable to view an uploaded file from a third-party embedded site
Virtual Agent Platform	PRB1560389	Setting 'LiveAgent_short_description' from the live agent setup topic prevents transcript generation
Virtual Agent Platform	PRB1556190	Race condition leads to duplicate tasks during the end of a conversation during UniversalMessageSender.sendMessage()
Virtual Agent Platform	PRB1554065	When adding debug logging statements into a Virtual Agent

Problem category	Number	Short description
		topic, the scripts don't display the test active topics' 'logs' view
Virtual Agent Platform	PRB1553728	Action utility doesn't display all the relevant flow actions
Virtual Agent Platform	PRB1553341	Quick messages show incorrect characters
Virtual Agent Platform	PRB1553178	Conversations started with sysparm_default_topic are marked with interaction.virtual_agent = false
Virtual Agent Platform	PRB1553089	The virtual assistant's response doesn't display properly
Virtual Agent Platform	PRB1551630	max_wait_time_message translation doesn't work in Virtual Agent
Virtual Agent Platform	PRB1547705	Entities don't trigger in the Virtual Agent (VA) for MSOutlookAssistant intent
Virtual Agent Platform	PRB1546983	Virtual Agent displays the default text/label of the Show me everything button after a page refresh
Virtual Agent Platform	PRB1545535	Custom menu items' icons don't display for guest users
Virtual Agent Platform	PRB1542251	User is unable to send files to a live agent
Virtual Agent Platform	PRB1541981	Screen reader issues on the 'Chat Topics' screen
Virtual Agent Platform	PRB1538831	The session language isn't localized as per user specification in MS Teams

Problem category	Number	Short description
Virtual Agent Platform	PRB1536822	The carousel in Virtual Agent doesn't translate '1 of 3'
Virtual Agent Platform	PRB1536562	With the introduction of emoji options in Rome in the chat window, when the end-user types in the text field, the attachment clip icon overlaps the text
Virtual Agent Platform	PRB1456014	If an agent is typing a message and the conversation times out for the end-user, the conversation ends but still displays ellipses for the agent typing a message endlessly
Virtual Agent Platform	PRB1439783	The dynamic translation banner 'This chat is dynamically translated into your language' is visible on Virtual Agent even when the user is not connected to a live agent
Virtual Agent Platform	PRB1587052	Appending 'full stop' at the end of the Custom Input message by the Virtual agent
Virtual Agent Platform	PRB1576092	There is a 'Topic type DTO' translation logging error in the system logs
Virtual Agent Platform	PRB1575037	Issue Auto Resolution (IAR) doesn't check if the task (incident) is still assigned to a Virtual Agent user before clearing the 'assigned_to' field when un-assigning the task
Virtual Agent Platform	PRB1570464	The 'Notification' checkbox on the contact support menu on Web Client doesn't display
Virtual Agent Platform	PRB1552789	The chat window in Agent Workspace is empty

Problem category	Number	Short description
Visual Task Boards	PRB1536023	The card window closes and the text being written in the comments is lost when users point and release the cursor outside the card window
Visual Task Boards	PRB1573735	The Open Record button on the Reference field on the Scaled Agile Framework (SAFe) boards doesn't work when opened in Unified Experience
Visual Task Boards	PRB1571391	A visual task board (VTB) card is created in a wrong lane
Visual Task Boards	PRB1556075	Special characters don't display correctly when the Description field is HTML
Visual Task Boards	PRB1554045	A visual task board with swim lanes cuts off when scrolling
Visual Task Boards	PRB1553291	When pointing to 'updated information' in Visual Task Board, the date displayed doesn't follow the system or the user's preferred date format
Visual Task Boards	PRB1539022	The order of fields on a card changes when it is dragged to different lane
Visual Task Boards	PRB1532531	Clicking 'Add item' on the checklist on a VTB card deletes all entered text
Visual Task Boards	PRB1478926	When dragging a VTB card to a lane that is currently out of view, horizontal scrolling isn't smooth
Walk-Up Experience	PRB1558981	The contextual search doesn't consider a limit provided at location, which causes a performance issue

Problem category	Number	Short description
Walk-Up Experience	PRB1547648	Queue time display in Walk-up Portal has different behavior than Walkup Online Check-in
Walk-Up Experience	PRB1546928	The Now mobile app displays duplicate time slots in Walkup Experience
Walk-Up Experience	PRB1544053	The walk-up related business rule 'On Reschedule' triggers a poor query, which results in semaphore exhaustion
Walk-Up Experience	PRB1543424	The 'Walk-up check-in' page scrolls up after entering text in the input box
Walk-Up Experience	PRB1581128	The appointment widget refreshes continuously after scheduling a second appointment using the link from appointment confirmation mail
Web Services	PRB1558283	sys_ws_operation cache objects cache references to RhinoScope
Web Services	PRB1489154	Users are unable to set the model and model category on the asset using the REST API explorer
Workflow	PRB1574661	The activity node's display value exceeds the size of the activity box in workflows
Workflow	PRB1552550	A stage is incorrectly marked 'In-Progress' in multiple rollback workflows
Workflow	PRB1542855	The subflow to the parent flow signaling fails
Workforce Optimization for ITSM	PRB1555445	The 20 schedule cards limit on the sidebar prevents new

Problem category	Number	Short description
		schedule creation/publication/duplication on classic Manager Workspace
Workforce Scheduling	PRB1566504	The shift planning API fails for old instances if the on-call plugin isn't installed

Browser support

Browser support varies for each version of the user interface (UI). Most major browsers are supported.

Some features have additional browser requirements, which are noted in the appropriate documentation.

***i* Note:**

Vancouver is the last release that will support Internet Explorer and [Internet Explorer mode in Edge](#).

Browser support for each UI version

Browser	Next Experience	Workspace	Core UI
Chrome	Latest public release of the browser, and the two previous releases	Latest public release of the browser, and the two previous releases	Latest public release of the browser, and the two previous releases
Firefox and Firefox ESR	Latest public release of Firefox and Firefox ESR, and the two previous releases	Latest public release of Firefox and Firefox ESR, and the two previous releases	Latest public release of Firefox and Firefox ESR, and the two previous releases
Internet Explorer	Not supported	Not supported	IE version 11 and up. IE mode in Edge is also supported. Vancouver is the last release that will support Internet Explorer and Internet Explorer mode in Edge .
Microsoft Edge Chromium	Latest public release of the browser, and the two	Latest public release of the browser, and the two previous releases	Latest public release of the browser, and the two previous releases

Browser support for each UI version (continued)

Browser	Next Experience	Workspace	Core UI
	previous releases		
Safari	Safari 12.0 and up	Safari 12.0 and up	Safari 12.0 and up
Tablet Mobile	Not supported	Not supported	Supported
Phone Mobile*	Not supported	Not supported	Not supported

*Mobile phone browsers do not support the desktop version of the UI. Instead, mobile browsers use the [mobile UI](#).

Internet Explorer

i Important: Due to significant performance issues, ServiceNow recommends that customers migrate away from Internet Explorer 11. For more information, refer to [KB0683275](#).

- Virtual Agent will not support Internet Explorer in releases after Tokyo.
- Internet Explorer 11 is susceptible to memory leaks, which may impact performance, especially in Windows 7.
- In Jakarta and subsequent releases, Internet Explorer versions prior to IE11 are no longer supported.
- Compatibility mode is not supported.
- Setting the Security Mode to **High** (in the **Internet Options** > **Security** tab) is not supported.

Firefox

The iOS version of Firefox does not support ServiceNow Community or other Service Portal pages.

Accessibility and conformance

A voluntary product accessibility template (VPAT) is a globally recognized reporting format used to evaluate accessibility of a product or service. ServiceNow uses the international version of the VPAT to create Accessibility Conformance Reports (ACRs). ACRs are available for the currently supported ServiceNow releases.

For a full list of available accessibility conformance reports, see [Accessibility conformance reports](#).

Related topics






[Section508.gov](#)

Prepare your upgrade

Before each upgrade, refresh your memory on general upgrade information, learn which important pre- and post- upgrade tasks apply to your upgrade, and learn how to use ServiceNow® products and tools to make your experience easier.

To help you get ready for a safe and effective upgrade, all the most important upgrade resources are compiled in one place.

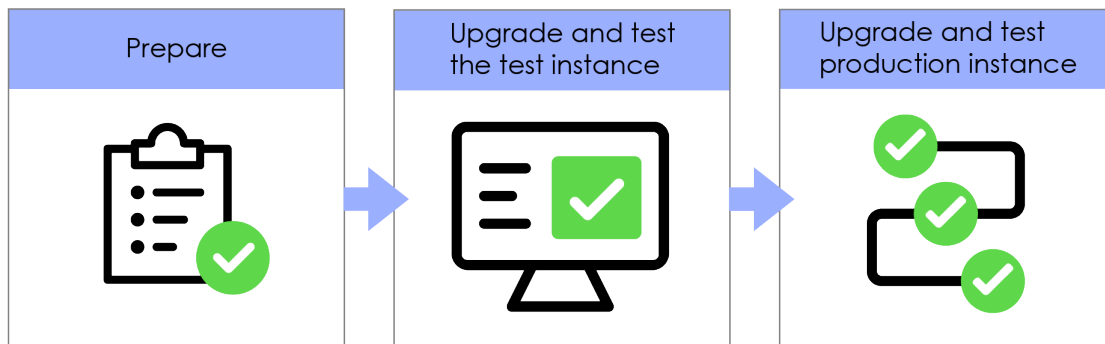
Upgrading to a new ServiceNow release

<p>ServiceNow upgrades</p>  <p>Learn high-level information about upgrades, such as duration, rollback options, and testing.</p>	<p>Pre- and post-upgrade tasks</p>  <p>Identify any tasks to complete before and after the upgrade for your applications and features.</p>	<p>Upgrade planning checklist</p>  <p>Use the end to end checklist to plan and track the activities for your upgrade.</p>
<p>Upgrade tools and resources</p>  <p>Learn about ServiceNow products, tools, and resources that can improve your upgrade experience.</p>	<p>Upgrades and the ServiceNow® Store</p>  <p>Learn about how upgrades are applied to ServiceNow® Store applications.</p>	

ServiceNow upgrades

The upgrade process moves your instance to a new ServiceNow release version. Understand the difference between upgrading and patching, release definitions, rollback and backup options, and how to test your non-production and production instance upgrades.

Before you begin the upgrade process, read the [Tokyo release notes](#) and review the [upgrade and migration tasks for your applications and features](#).



System upgrades can be significant projects. Each ServiceNow feature release includes major additions, and you should always consider the impact of new functionality on an instance. Upgrading implements enhancements to all features that are part of the base system or are already active, unless the feature is customized on your instance. For a list of all available plugins and whether they are active by default on the base system, see [List of Tokyo plugins](#).

Careful preparation and knowledge of the available software, tools, and resources can contribute to a successful upgrade. In addition to the materials provided by ServiceNow, it is important to understand how your ServiceNow instance is currently operating and the performance level of key business functionality. Set the expectation with IT and business users that time must be dedicated to preparing for, implementing, and testing ServiceNow upgrades.

If you have any issues during the upgrade process, [contact Customer Service and Support](#). Customer Service and Support is available 24 hours a day, 7 days a week to assist you with any questions or issues.

For additional help with upgrades, ServiceNow also offers various [Production Readiness Services](#). These services specifically address challenges with instance upgradability, manageability, scalability, and performance. The reviews are performed by a ServiceNow-certified professional consultant, who provide recommendations to align customer configurations with ServiceNow best practices. Contact your ServiceNow sales representative for more details.

Upgrade and update durations in Tokyo

The upgrade process takes a significantly shorter time for both updates and upgrades. (An update occurs when an instance moves from one patch or hotfix to another within the same release family. An upgrade occurs when an instance moves from one release family to another). As always, test your upgrades, but don't assume from the much faster completion time that the update or upgrade wasn't successful.

Supported upgrades

You can upgrade directly to the latest release family. If multiple software versions are involved in your upgrade, be sure to consult the release notes for each version between your current version and the target version. For more information about release terminology and availability phases, see the [ServiceNow Release Cycle \[KB0547244\]](#) article in the Now Support Knowledge Base.

Upgrades vs. updates

ServiceNow organizes its releases into families. A family is a set of releases that are named after a major city, such as Tokyo. Families also contain patches and hotfixes. For example, the following releases are both part of the Orlando family:

- Orlando Patch 4
- Orlando Patch 3 Hotfix 2

Upgrading is the act of moving to a release that is in a different family than your current release. For example, a move from London Patch 7 to Orlando Patch 3 is an upgrade because London and Orlando are different families.

Updating is the act of moving from one patch or hotfix to another within the same release family. For example, a move from Orlando Patch 1 to Orlando Patch 3 is a update because both versions are part of the Orlando family.

In both cases, the target release is Orlando Patch 3. It is the difference between your current and target release family that determines whether you are upgrading or updating.

Features, patches, and hotfixes

Each release family contains features, patches, and hotfixes.

A feature provides a complete solution that customers can implement to add value to their organization. New features are generally only available as part of a feature release. Features are supported with patches and hotfixes.

Type	Scope
Feature	<ul style="list-style-type: none"> • Introduces new features • Includes all available fixes to existing functionality • Is production-oriented; quality and stability are of the highest priority throughout the lifecycle
Patch	<ul style="list-style-type: none"> • Supports existing functionality with a collection of problem fixes • Generally does not include new features
Hotfix	<ul style="list-style-type: none"> • Supports existing functionality with a specific problem fix for a feature release • May or may not include any previous fixes for a given release • Does not include new features

For more information about release terminology and availability phases, see the [ServiceNow Release Cycle \[KB0547244\]](#)  article in the Now Support Knowledge Base.

Rollbacks and backups

When you plan an upgrade, remember that ServiceNow does not provide a universal rollback option. Rollbacks are available for updates (for example, Tokyo patch-to-patch

and Tokyo patch-to-hotfix). The rollback window is 10 days by default. You can customize this window by modifying the `glide.rollback.expiration_days` property. To request a rollback, [contact Customer Service and Support](#).

Avoid restoring a production instance from backup, when possible, due to downtime and data loss. When a problem cannot be solved using other methods, restoring a production instance from backup is a final option. ServiceNow can restore an instance to any point in time, regardless of when a backup is completed. Customer Service and Support provides support 24 hours a day, 7 days a week for assistance with critical post-upgrade issues.

Note: ServiceNow does not perform on-demand backups. Instances are automatically backed up daily during non-peak business hours on schedules defined by ServiceNow. The timing of existing backup schedules is not adjusted.

Testing throughout upgrades

Testing is an integral portion that occurs after each instance is upgraded. After you upgrade an instance, test and validate it.

This instance naming convention assumes that you have three ServiceNow instances. If you have three instances, upgrade your instances in this order:

1. Development
2. Test
3. Production

If you have more or less than three instances, or if you are using [Team Development](#), these instance labels will be different. In general, upgrade your instances furthest from production towards your production instance.

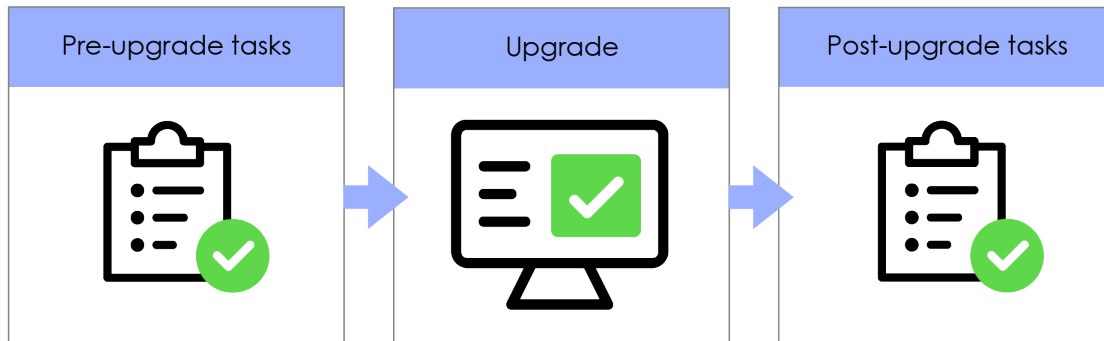
Instance	Type of testing required
Development	Conduct smoke tests.
Test	<ul style="list-style-type: none"> • Use the ServiceNow Automated Test Framework to assist you in testing your non-production instances. • You can use Automated Test Framework quick start tests and product testing suites to help you jump start your testing before and after upgrades. For a list of available tests and activation information, see Quick start tests. • For extra testing coverage, you can also conduct user acceptance testing (UAT) on your non-production instances.
Production	Conduct UAT. <p>Note: The Automated Test Framework is intended for use on non-production instances. On your production instance, conduct UAT only.</p>

If you encounter any post-upgrade issues, document the issue's conditions, steps to reproduce the issue, and your customizations. [Contact Customer Service and Support](#) to open an incident for each issue, and provide this information accordingly. Customer Service and Support is available 24 hours a day, 7 days a week to assist you with any questions or issues.

Pre- and post-upgrade tasks for various products

In preparation for your upgrade, review the upgrade and migration tasks for various applications and features. Plan to complete these tasks, when applicable, before or after the upgrade is complete.

Prepare your instance for a smoother upgrade



Before you upgrade to Tokyo, review these pre- and post-upgrade tasks and complete the tasks as needed.

Upgrade and migration tasks

Important: For any changes in the upgrade procedure for self-hosted customers, see [KB0563844](#) for details.

Product	Release notes	Family
AI Search	<p>When you upgrade to <i>San Diego</i> from <i>Quebec</i> or <i>Rome</i>, <i>AI Search</i> automatically reindexes all your indexed Japanese content. This one-time reindexing process is required to enable the Japanese search experience improvements in this release.</p> <p>If you enabled Q&A Genius Results in <i>Quebec</i> or <i>Rome</i>, you must reindex your <i>Knowledge</i> content after upgrading to <i>San Diego</i>. This one-time reindexing process is necessary to enable the Q&A improvements in this release.</p>	San Diego
Application Usage Overview dashboard	After upgrading to the <i>San Diego</i> release, you cannot edit the Application Usage Overview homepage.	San Diego
Assessments and Surveys	After you upgrade <i>Assessments and Surveys</i> to <i>San Diego</i> , deactivate the Survey User Invite email notification, which is deprecated. Then, activate Survey Invitation, which is a new email notification.	San Diego

(continued)

Product	Release notes	Family
Automated Test Framework	<p>Copy and customize quick start tests provided by the <i>Now Platform</i>® to validate that your instance works after you make any configuration changes. For example, if you apply an upgrade or develop an application.</p> <p>The tests can produce a pass result only when you run them on a base system without any customizations and with the default demo data that is provided with the application or feature plugin. To apply a quick start test to your instance-specific data, copy the quick start test and add your custom data. For more information, see Available quick start tests by application or feature .</p> <p>ATF doesn't support certain elements of Next Experience. For more information, see Automated Test Framework .</p>	San Diego
Business Continuity Management	<ul style="list-style-type: none"> • Business Impact Analysis (BIA): The fields Impact analysis, Configuration item, and Element definition were added to Dependency [sn_bia_dependency] table. A fix script, Populate dependency references, migrates existing data. • Business Continuity Planning (BCP): Description field is added to Plan document [sn_bcp_document] table. A fix script, Update description on plan documents, migrates the existing data. The description is populated from the corresponding document section description. 	San Diego
Cloud Insights	<p>For instructions, see Upgrade to <i>Cloud Insights</i> version 2.2 .</p>	San Diego
Configuration Compliance	<ul style="list-style-type: none"> • Due to a data model change in the <i>Configuration Compliance</i> application, upgrading might take noticeably longer than previous upgrades. For more information, see KB0856498 . • If you have previously downloaded the application from the <i>ServiceNow Store</i> and a new version is available, you can update it in your <i>Now Platform</i> instance. • For more information about released versions of the <i>Configuration Compliance</i> application, as well as third-party and <i>ServiceNow</i> applications that are compatible with <i>San Diego</i>, see the Vulnerability Response Compatibility Matrix and Release Schema Changes [KB0856498] article in the HI Knowledge Base. 	San Diego

(continued)

Product	Release notes	Family												
	<p>Upgrade information for Versions 14.3 through 12.0 of Configuration Compliance to San Diego</p> <table border="1" data-bbox="405 331 1189 1900"> <thead> <tr> <th data-bbox="410 338 560 394">Version</th> <th data-bbox="560 338 1184 394">Upgrade description</th> </tr> </thead> <tbody> <tr> <td data-bbox="410 405 560 495">14.3</td> <td data-bbox="560 405 1184 495">Certified for <i>San Diego</i> in the <i>ServiceNow Store</i>.</td> </tr> <tr> <td data-bbox="410 506 560 596">13.1</td> <td data-bbox="560 506 1184 596">Certified for <i>San Diego</i> in the <i>ServiceNow Store</i>.</td> </tr> <tr> <td data-bbox="410 606 560 995">12.2</td> <td data-bbox="560 606 1184 995"> <p>Certified for <i>San Diego</i> in the <i>ServiceNow Store</i>.</p> <p>The <i>Tenable.io</i> product of the <i>Tenable Vulnerability Integration</i> imports policies, controls (test results), and configuration tests for processing in the <i>Configuration Compliance</i> application.</p> <p>See the "New in the <i>San Diego</i> release" section below for more information.</p> </td> </tr> <tr> <td data-bbox="410 1005 560 1096">12.1</td> <td data-bbox="560 1005 1184 1096">Certified for <i>San Diego</i> in the <i>ServiceNow Store</i>.</td> </tr> <tr> <td data-bbox="410 1106 560 1900">12.0</td> <td data-bbox="560 1106 1184 1900"> <p>Certified for <i>San Diego</i> in the <i>ServiceNow Store</i>.</p> <p>Case sensitivity in the condition builder on group rules records and forms</p> <p>By default (with the Case sensitive check box deselected), the search text you enter is not case-sensitive in the condition builder. You can enable or disable case sensitivity for the rule-matching text you enter for test result group rules forms and records.</p> <p>For assignment rules, remediation target rules, CI lookup rules, and calculator records and forms, the search text you enter in the condition builder is not case-sensitive. Case sensitivity is no longer supported for searches on these records.</p> </td> </tr> </tbody> </table>	Version	Upgrade description	14.3	Certified for <i>San Diego</i> in the <i>ServiceNow Store</i> .	13.1	Certified for <i>San Diego</i> in the <i>ServiceNow Store</i> .	12.2	<p>Certified for <i>San Diego</i> in the <i>ServiceNow Store</i>.</p> <p>The <i>Tenable.io</i> product of the <i>Tenable Vulnerability Integration</i> imports policies, controls (test results), and configuration tests for processing in the <i>Configuration Compliance</i> application.</p> <p>See the "New in the <i>San Diego</i> release" section below for more information.</p>	12.1	Certified for <i>San Diego</i> in the <i>ServiceNow Store</i> .	12.0	<p>Certified for <i>San Diego</i> in the <i>ServiceNow Store</i>.</p> <p>Case sensitivity in the condition builder on group rules records and forms</p> <p>By default (with the Case sensitive check box deselected), the search text you enter is not case-sensitive in the condition builder. You can enable or disable case sensitivity for the rule-matching text you enter for test result group rules forms and records.</p> <p>For assignment rules, remediation target rules, CI lookup rules, and calculator records and forms, the search text you enter in the condition builder is not case-sensitive. Case sensitivity is no longer supported for searches on these records.</p>	
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Product	Release notes		Family
	Version	Upgrade description	
Core Now Platform		<p>Prior to version 12.0, a warning message indicated you might experience performance issues if the case sensitivity option was inactive. Starting with version 12.0, searches that are not case-sensitive are fully supported.</p> <p>After upgrading, you can request <i>ServiceNow</i> personnel to configure your instance to support languages other than the 22 for which <i>ServiceNow</i> offers language plugins. The two-character language code supports the BCP 47 standard.</p> <p>The JavaScript engine's default expression evaluation mode has been changed from Compiled mode to Interpreted mode. Refer to KB0960944 for details.</p> <p>If the <code>sys_archive_log</code> has more than 10 million records, add (archive, restored) and (archive, sys_created_on, restored, from_table) indexes to the <code>sys_archive_log</code>.</p> <p>Note: The order of the columns must exactly match: (archive, restored) and (archive, sys_created_on, restored, from_table). Prior to <i>San Diego</i> upgrade, if the appropriate columns already exist in the <code>sys_archive_log</code> table, it can be done using the UI.</p> <ol style="list-style-type: none"> 1. Navigate to the table page. 2. Scroll down and select Database Indexes and click New. 3. Select the appropriate columns in the pop-up modal and click Create Index. Ensure that the columns are in the correct order. <p>If the <code>sys_archive_log</code> has less than 10 million records, upgrade should have no issues.</p>	San Diego
DevOps		<p>Note: To upgrade to version 1.31, search for and install the <i>DevOps</i> Change Velocity app from the <i>ServiceNow Store</i>.</p> <p>For all new installations of the <i>DevOps</i> application for <i>San Diego</i>, you must set the <code>com.snc.change_management.change_model.type_compatibility</code> property to True.</p> <ul style="list-style-type: none"> • Starting with <i>DevOps</i> version 1.32, base system archive rules are configured to auto-archive <i>DevOps</i> tables that are older than a specified period. An archive table is 	San Diego

(continued)

Product	Release notes	Family
	<p>created for any table that has an archive rule that is associated with it. You can also choose to restore data from the archive tables. For more information, see Data archiving DevOps table data.</p> <ul style="list-style-type: none"> Starting with version 1.26, scheduled jobs are automatically activated to enable data archiving to the new processed inbound events [sn_devops_processed_inbound_event_list.do] table through table rotation. Table cleaners are also initiated to purge data from the inbound events [sn_devops_inbound_list.do] table. Starting with release version 1.27, you must include the sn_devops.integration user role for read and write (create/update) operations on any custom access control list (ACL) that you create, due to changes in the security models. 	
Encryption and Key Management	Encryption contexts will automatically convert to Column Level Encryption field encryption modules and corresponding module access policies on the upgrade to <i>San Diego</i> . A guided tour explaining this enhancement is available from the dashboard.	San Diego
Governance, Risk, and Compliance	Starting with version <i>Governance, Risk, and Compliance</i> 14.0, only your users who have the <i>GRC</i> roles can access the <i>GRC</i> records. Records that used to be accessible to the users with the snc_internal role are now only accessible to the users who have the <i>GRC</i> roles. For details, see Security tightening for GRC apps [KB1096145] in the <i>Now Support</i> knowledge base.	San Diego
Health Log Analytics	When upgrading to <i>San Diego</i> , request an upgrade for the <i>Health Log Analytics</i> application core components through <i>Now Support</i> or contact your <i>ServiceNow</i> sales representative.	San Diego
MID Server	<p>For the latest MID Server system requirements, see MID Server system requirements. The following Java Runtime Environment (JRE) versions are supported:</p> <ul style="list-style-type: none"> JRE11: the minimum version is 11.0.12. JRE8: the minimum version is 1.8.0_275. <p>If you have installed your own JRE, the upgrade process takes the following actions to ensure that the <i>MID Server</i> uses a supported JRE:</p>	San Diego

(continued)

Product	Release notes	Family
	<ul style="list-style-type: none"> • If a <i>MID Server</i> is using an unsupported version of the JRE when it upgrades, the upgrade process replaces that JRE with the OpenJDK bundled with the <i>MID Server</i> installer. • If a supported JRE is running on the <i>MID Server</i> host, the upgraded <i>MID Server</i> uses that version. <p>All <i>MID Server</i> host machines require access to the download site at install.service-now.com to enable auto-upgrades. For additional details, read how the system manages <i>MID Server</i> upgrades.</p> <p>Only one <i>Windows MID Server</i> service is permitted per executable path. Upgraded <i>Windows MID Servers</i> that have multiple services pointing to the same installation folder cannot start. See MID Server fails to start for more information.</p> <p>For more information about <i>MID Server</i> upgrades, see the following topics:</p> <ul style="list-style-type: none"> • MID Server pre-upgrade check: Describes how the AutoUpgrade monitor tests the <i>MID Server</i>'s ability to upgrade on your system before the actual upgrade. • Upgrade the <i>MID Server</i> manually: Describes how to upgrade your <i>MID Servers</i> manually. 	
Mobile	<p>Migrate from <i>ServiceNow Classic</i> mobile platform to the <i>ServiceNow Mobile Platform</i> to take advantage of features such as rapid development, offline capability, and integration with native mobile device features. For details on migrating to the <i>ServiceNow Mobile Platform</i>, see Migrate from the ServiceNow Classic mobile app to the ServiceNow Mobile Platform.</p>	San Diego
Next Experience UI	<p>Considerations for migration to <i>Next Experience</i></p> <p>Your path to activating <i>Next Experience</i> might depend on your instance's level of customization. Guidance and support from those who helped you customize your instance, or another certified partner, will ensure that your move to <i>Next Experience</i> goes smoothly.</p>	San Diego
Order Management for Telecommunications, Media, and Technology	<p>The table architecture that supports the <i>Order Management for Telecommunications, Media, and Technology</i> application has been restructured. After you upgrade to the <i>San Diego</i> release, and before you use <i>Order Management for Telecommunications, Media, and Technology</i>, you must first run a script that moves your existing order data to the newly restructured tables. For more details, see the Order Management for Telecommunications, Media, and</p>	San Diego

(continued)

Product	Release notes	Family
	<p>Technology (2.0.0) version: Post upgrade reparenting script for the San Diego release [KB1000941] 🔗 article in the <i>Now Support</i> Knowledge Base.</p>	
Performance Analytics	<p>Conditional scripts for data collection jobs now run in a sandbox with restricted rights. This change can introduce script execution errors to existing conditional scripts. If you have scripted data collection jobs, consider testing the upgrade on a non-production build. Rewrite the scripts if necessary. For more information, see Script sandbox property 🔗.</p>	San Diego
Privacy Management	<p>To be able to use <i>Privacy Management</i> in the <i>San Diego</i> release, you must activate the <i>Advanced Risk</i> plugin.</p>	San Diego
Reporting	<p>Conditional scripts for scheduled report jobs now run in a sandbox with restricted rights. This change can introduce script execution errors to existing conditional scripts. If you have scripted scheduled report jobs, consider testing the upgrade on a non-production build. Rewrite the scripts if necessary. For more information, see Script sandbox property 🔗.</p>	San Diego
Security Incident Response	<p>If you're upgrading <i>Security Incident Response</i> directly from the previous releases, navigate to System Definition > Fix Scripts, and run the Update integrations to multi domain fix script. Run this script to enable certain integrations to define multiple configurations.</p> <p>For example, if you have multiple <i>Splunk</i> instances, you can create connections and queries that run across a sightings search for multiple <i>Splunk</i> instances. After you run the fix script, navigate to System Definition > Fix Scripts and deactivate the fix script. Don't run the script more than one time.</p>	San Diego
Service Catalog	<p>If you are upgrading to <i>San Diego</i> and setting up a data store to store information needed for running a service fulfillment step, ensure that the Service Fulfillment Step [sc_service_fulfillment_step] table that you are extending has canCreate, canUpdate, and canRead application access enabled.</p> <p>If you are upgrading to <i>San Diego</i> and you want to use the new email notification templates for requests, you need to activate them. For more information, see Email notifications for requests 🔗.</p>	San Diego

(continued)

Product	Release notes	Family								
	<p>If you are upgrading to <i>San Diego</i> and you want to add comments to a request item as a business stakeholder, run the script available in the <code>Activate BS comments write for req mgmt</code> script action in the <code>Scripts – Background module</code>. For information on running scripts, see the Script actions and Scripts - Background module topics.</p>									
<p>Service Operations Workspace for ITSM</p>	<p>Ensure that the following applications have compatible upgraded versions:</p> <ul style="list-style-type: none"> <i>Service Operations Workspace ITSM</i> Applications application (sn_sow_itsm_cont) <i>Service Operations Workspace ITOM</i> Applications application (sn_sow_itom_cont) <p>Compatible SOW versions</p> <table border="1" data-bbox="405 821 1187 1094"> <thead> <tr> <th data-bbox="405 821 788 888">SOW-ITSM (sn_sow_itsm_cont)</th> <th data-bbox="788 821 1187 888">SOW-ITOM (sn_sow_itom_cont)</th> </tr> </thead> <tbody> <tr> <td data-bbox="405 888 788 955">1.1.x</td> <td data-bbox="788 888 1187 955">21.0.y</td> </tr> <tr> <td data-bbox="405 955 788 1022">1.2.x</td> <td data-bbox="788 955 1187 1022">21.1.y</td> </tr> <tr> <td data-bbox="405 1022 788 1094">1.3.x</td> <td data-bbox="788 1022 1187 1094">21.2.y, 21.5.y, and 21.6.y</td> </tr> </tbody> </table> <p>Here, x is the sub-version of <i>Service Operations Workspace ITSM</i> Applications application (sn_sow_itsm_cont) and y is the sub-version of <i>Service Operations Workspace ITOM</i> Applications application (sn_sow_itom_cont).</p>	SOW-ITSM (sn_sow_itsm_cont)	SOW-ITOM (sn_sow_itom_cont)	1.1.x	21.0.y	1.2.x	21.1.y	1.3.x	21.2.y, 21.5.y, and 21.6.y	<p>San Diego</p>
SOW-ITSM (sn_sow_itsm_cont)	SOW-ITOM (sn_sow_itom_cont)									
1.1.x	21.0.y									
1.2.x	21.1.y									
1.3.x	21.2.y, 21.5.y, and 21.6.y									
<p>ServiceNow Performance dashboard</p>	<p>After upgrading to San Diego, you cannot edit the Performance homepage.</p>	<p>San Diego</p>								
<p>ServiceNow Voice</p>	<p>After you upgrade, you will see the label name changes listed in the table.</p> <table border="1" data-bbox="405 1629 1187 1957"> <thead> <tr> <th data-bbox="405 1629 788 1696">This interface label</th> <th data-bbox="788 1629 1187 1696">Is replaced with this label</th> </tr> </thead> <tbody> <tr> <td data-bbox="405 1696 788 1764"><i>Cloud Call Center</i></td> <td data-bbox="788 1696 1187 1764"><i>ServiceNow Voice</i></td> </tr> <tr> <td data-bbox="405 1764 788 1871"><i>Cloud Call Center for ITSM</i></td> <td data-bbox="788 1764 1187 1871"><i>ServiceNow Voice for ITSM</i></td> </tr> <tr> <td data-bbox="405 1871 788 1957"><i>Cloud Call Center for CSM</i></td> <td data-bbox="788 1871 1187 1957"><i>ServiceNow Voice for CSM</i></td> </tr> </tbody> </table>	This interface label	Is replaced with this label	<i>Cloud Call Center</i>	<i>ServiceNow Voice</i>	<i>Cloud Call Center for ITSM</i>	<i>ServiceNow Voice for ITSM</i>	<i>Cloud Call Center for CSM</i>	<i>ServiceNow Voice for CSM</i>	<p>San Diego</p>
This interface label	Is replaced with this label									
<i>Cloud Call Center</i>	<i>ServiceNow Voice</i>									
<i>Cloud Call Center for ITSM</i>	<i>ServiceNow Voice for ITSM</i>									
<i>Cloud Call Center for CSM</i>	<i>ServiceNow Voice for CSM</i>									




(continued)

Product	Release notes	Family														
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Applications																
Cloud Call Center Core (sn_cti_core)	<i>ServiceNow Voice (sn_cti_core)</i>															
Amazon Connect Integration with Cloud Call Center (sn_cti_amzn_cct)	<i>ServiceNow Voice with Amazon Connect (sn_cti_amzn_cct)</i>															
Cloud Call Center UX Components (sn_cti_ux)	<i>ServiceNow Voice UX Components (sn_cti_ux)</i>															
Software Asset Management	<p>For information about upgrading from the <i>Software Asset Management Foundation plugin</i> (com.snc.sams), see Revert Software Asset Management customizations.</p> <p>For additional upgrade information, see Software Asset Management upgrade information.</p>	San Diego														
Store Usage Overview dashboard	After upgrading to San Diego, you cannot edit the <i>ServiceNow</i> Store Usage Overview homepage.	San Diego														
System Administration dashboard	After upgrading to the <i>San Diego</i> release, you cannot edit the System Administration homepage.	San Diego														
System Diagnostics homepage	After upgrading to San Diego, you cannot edit the System Diagnostics homepage.	San Diego														
Virtual Agent	<ul style="list-style-type: none"> After the upgrade, <i>Virtual Agent</i> does not support access control lists for notification cards. To manage access to notification card content and to allow parameter substitutions in message headings and contents, use the <code>com.glide.cs.notification_record_access_check</code> system property to enable these features. Many of the <i>Conversational Interfaces</i> configuration forms and settings, such as the Chat Setup and the 	San Diego														

(continued)

Product	Release notes	Family
	<p>Branding and Chat Menu forms, have moved to Chat Settings. They can be accessed through the <i>Conversational Interfaces Home</i> page in the <i>Conversational Interfaces</i> module. For details, see #unique_18_Connect_42_section_ijj_s3c_5rb in these release notes.</p> <ul style="list-style-type: none"> • If you used secure inputs for Action components in <i>Virtual Agent Designer</i>, all secure fields must now use the password2 data type. Fields with a string data type can no longer be marked as secure. • Although an issue with packaging is known to cause an error, <i>Virtual Agent Topic Recommendations 2.1.1</i> is being shipped with the <i>San Diego</i> early access release. For detailed information, please refer to, KB1005131. 	
Vulnerability Response integrations	<ul style="list-style-type: none"> • For upgrade information about third-party applications that are supported by <i>Vulnerability Response</i>, see Vulnerability Response integrations upgrade information. Updates to these applications supported by <i>Vulnerability Response</i> are available in the <i>ServiceNow® Store</i>. • For more information about the released versions of the <i>Vulnerability Response</i> application, as well as third-party and <i>ServiceNow</i> applications that are compatible with <i>San Diego</i>, see the Vulnerability Response Compatibility Matrix and Release Schema Changes [KB0856498] article in the HI Knowledge Base. • For information about the new features for <i>Vulnerability Response</i>, see Vulnerability Response release notes. 	San Diego
Vulnerability Response	<ul style="list-style-type: none"> • Due to a data model change in the <i>Vulnerability Response</i> application, upgrading might take noticeably longer than previous upgrades. For more information, see KB0856498. • When you upgrade to a new version of the <i>Vulnerability Response</i> application, your new version is available on your instance and ready for installation. Updates to <i>Vulnerability Response</i> are available in the <i>ServiceNow® Store</i>. • For more information about released versions of the <i>Vulnerability Response</i> application, compatibility with <i>San Diego</i>, and schema changes, see the Vulnerability Response compatibility Matrix and Release Schema Changes [KB0856498] article in the HI Knowledge Base. <p>When you upgrade the <i>Vulnerability Response</i> application from older versions to version 15.x, the default</p>	San Diego

(continued)

Product	Release notes	Family
	remediation task rule in the base system is deactivated. For more information, see Vulnerability Response Workspaces and updates to remediation task and remediation task rules 	
Walk-up Experience	If you are a user on previous releases, you must configure your current instance before initiating an upgrade to <i>San Diego</i> . If you want to enhance the remote walk-up appointments with <i>Microsoft Teams</i> chat, see Microsoft Teams integration  . The integration activates the Skills Management plugin (com.snc.skills_management) and the Skills Determination plugin (com.snc.skill_determination).	San Diego
Workforce Optimization for ITSM	<p>When you upgrade to <i>Workforce Optimization for ITSM</i> version 1.1.1, you must Enable text indexing  for the following tables:</p> <ul style="list-style-type: none"> • Schedule [sn_shift_planning_schedule_plan] • Shift plan [sn_shift_planning_shift_plan] • Shift [cmn_rota] <p>If you do not perform the text indexing after your upgrade, you can search the schedule plans and shift plans by name and not by keywords.</p>	San Diego
AI Search	<p>When you upgrade to <i>Tokyo</i> from a previous release, <i>AI Search</i> automatically reindexes content and metadata from the indexed sources for the Catalog Item [sc_cat_item] and Knowledge [kb_knowledge] tables. This one-time reindexing process is required to enable search experience improvements in this release.</p> <p>When you view or edit search application configurations after upgrading to <i>Tokyo</i> from a previous release, the system may display a warning message telling you to reindex one or more indexed sources. This reindexing process (a one-time process for each indexed source listed) is required to populate search-based auto-complete suggestions correctly.</p> <p>After you upgrade to <i>Tokyo</i> from a previous release, the default relevancy scores for your search results may change. Relevancy models trained in the previous release should continue to produce the same result ordering. Models trained more than one release ago may revert to the default relevancy model.</p> <p><i>AI Search</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere</p>	Tokyo





(continued)

Product	Release notes	Family
	are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .	
Admin Center	The latest version of the <i>Admin Center</i> application is available in the <i>ServiceNow Store</i> .	Tokyo
Application Portfolio Management	<i>Application Portfolio Management</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .	Tokyo
Assessments and Surveys	When you upgrade to <i>Tokyo</i> from a previous release, <i>Assessments and Surveys</i> is activated by default on <i>Service Portal</i> and the <i>Now Mobile</i> app.	Tokyo
Authentication	<i>Authentication</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .	Tokyo
Automated Test Framework	Copy and customize quick start tests provided by the <i>Now Platform</i> ® to validate that your instance works after you make any configuration changes. For example, if you apply an upgrade or develop an application. The tests can produce a pass result only when you run them on a base system without any customizations and with the default demo data that is provided with the application or feature plugin. To apply a quick start test to your instance-specific data, copy the quick start test and add your custom data. For more information, see Available quick start tests by application or feature .	Tokyo
Cloud Provisioning and Governance	<i>Cloud Provisioning and Governance</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .	Tokyo
Configuration Compliance	<ul style="list-style-type: none"> Due to a data model change in the <i>Configuration Compliance</i> application, upgrading might take noticeably longer than previous upgrades. For more information, see KB0856498. 	Tokyo

(continued)

Product	Release notes	Family				
	<ul style="list-style-type: none"> If you have previously downloaded the application from the <i>ServiceNow Store</i> and a new version is available, you can update it in your <i>Now Platform</i> instance. For more information about released versions of the <i>Configuration Compliance</i> application, as well as third-party and <i>ServiceNow</i> applications that are compatible with <i>Tokyo</i>, see the Vulnerability Response Compatibility Matrix and Release Schema Changes [KB0856498] article in the HI Knowledge Base. For information about updates to third-party applications that are supported by <i>Vulnerability Response</i> and <i>Configuration Compliance</i>, see Vulnerability Response integrations release notes. <p>Upgrade information for Configuration Compliance to Tokyo</p> <table border="1" data-bbox="411 852 1182 1073"> <thead> <tr> <th data-bbox="411 852 560 905">Version</th> <th data-bbox="560 852 1182 905">Upgrade description</th> </tr> </thead> <tbody> <tr> <td data-bbox="411 905 560 1073">14.3</td> <td data-bbox="560 905 1182 1073"> Certified for <i>Tokyo</i> in the <i>ServiceNow Store</i>. See the following section called "New in the <i>Tokyo</i> release" for more information. </td> </tr> </tbody> </table>	Version	Upgrade description	14.3	Certified for <i>Tokyo</i> in the <i>ServiceNow Store</i> . See the following section called "New in the <i>Tokyo</i> release" for more information.	
Version	Upgrade description					
14.3	Certified for <i>Tokyo</i> in the <i>ServiceNow Store</i> . See the following section called "New in the <i>Tokyo</i> release" for more information.					
Conversational Interfaces Home	<p><i>Conversational Interfaces Home</i> is included with the <i>Tokyo</i> release, so existing customers don't need to install it. However, it is also available as an app from the <i>ServiceNow Store</i>, and subsequent updates should be installed from there.</p>	Tokyo				
Core Now Platform	<p>To opt in to log protection, install the Protected Tables plugin (com.glide.protected_tables) that enables the platform to restrict update and delete operations on certain system log tables. Admins can customize the log table protection rules for each table in the Log Protection Admin panel.</p> <p><i>Core Now Platform</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control.</p>	Tokyo				
Customer Service Management (CSM)	<p><i>Customer Service Management</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control.</p>	Tokyo				

(continued)

Product	Release notes	Family
Employee Journey Management	<p><i>HR Service Delivery</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .</p>	Tokyo
Encryption Key Management	<p>Encryption contexts will automatically convert to <i>Column Level Encryption</i> field encryption modules and corresponding module access policies on the upgrade beginning with the <i>San Diego</i> release. A guided tour explaining this enhancement is available from the dashboard.</p> <p><i>Encryption Key Management</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .</p>	Tokyo
Flow Designer	<p><i>Flow Designer</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .</p> <p>You can allow instances upgraded from <i>San Diego</i> and earlier releases to generate restricted caller access privilege requests for flows and actions. For more information about enabling access privileges for flows and actions, see Upgrade restricted caller access privileges for flows and actions .</p> <div style="background-color: #ffffcc; padding: 10px; border: 1px solid #ccc;"> <p>⚠ Warning: Upgrading restricted caller access privileges to track flows and actions can cause service disruptions on instances that previously tracked cross-scope access from script includes or business rules. After upgrade, all flows and actions that attempt to access restricted resources will be blocked from running and instead generate their own restricted caller access privilege requests for approval. Someone must approve the access privilege requests before cross-scope flows and actions can run. Customers who already allowed indirect tracking of flows and actions using script calls may want to skip this task and continue calling flows and actions from scripts. Customers who want to replace their existing access privileges with the new Flow and Flow Action source types may want to schedule an outage to generate and approve the new access privilege requests.</p> </div>	Tokyo
Governance, Risk, and Compliance	<p>Starting with <i>Governance, Risk, and Compliance</i> version 14.0, the business user (sn_grc.business_user) role is removed from the GRC Reader (sn_grc.reader) role and added</p>	Tokyo

(continued)

Product	Release notes	Family
	to GRC user (sn_grc.user) role. For more information, see KB1123608 .	
HR Service Delivery Case and Knowledge Management	<i>HR Service Delivery</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .	Tokyo
Health Log Analytics	If your <i>Health Log Analytics</i> version is earlier than February 2022, contact <i>Now Support</i> or your <i>ServiceNow</i> sales representative to request an upgrade for the <i>Health Log Analytics</i> application core components.	Tokyo
ITOM Visibility	<p><i>ITOM Visibility</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control.</p> <p>After upgrading to Tokyo, the install status is automatically set to "Installed" ("1") for all discovered infrastructure CIs. If your organization uses the install status, test Tokyo on your test instance before upgrading the production instance.</p> <p>Use the CSDM lifecycle status for tracking life cycle stages and stage statuses for CIs. For more info, see: [Placeholder link text to key bundle-rn.bundle-platcap.csdm-life-cycle-standard-values].</p> <p>To resolve issues related to the install status after upgrading to Tokyo, see KB1213467.</p>	Tokyo
Import and Export	Import and Export report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .	Tokyo
Incident Management	<i>Incident Management</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .	Tokyo
Instance Data Replication	<i>Instance Data Replication</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .	Tokyo

(continued)

Product	Release notes	Family
Instance Scan	<i>Instance Scan</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .	Tokyo
Integration Hub	<i>Integration Hub</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .	Tokyo
Intelligent Service Delivery	<i>HR Service Delivery</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .	Tokyo
Knowledge Management	<ul style="list-style-type: none"> <i>Knowledge Management</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control. Starting from the <i>Tokyo</i> release, the upgraded version Angular JS 1.5.11 is available with the base system. 	Tokyo
Legal Service Delivery	<p>Before upgrading <i>Legal Service Delivery</i> to <i>Tokyo</i>, you must set the value of the <code>glide.rollback.blacklist.TableParentChange.change</code> system property to false. If this property doesn't exist in the System Property [sys_properties] table, add the property and set its value to false.</p> <p>After the upgrade, some tables installed with <i>Legal Request Management</i>, <i>Legal Digital Forensics</i>, and <i>Legal Simple Contracts</i> applications extend the Application File [sys_metadata] table to enable seamless migration of Practice Areas, Intake Forms, Contract configurations, and Forensic configurations into update sets.</p> <p>If you upgrade to the <i>Tokyo</i> version without updating the system property value, the tables will not extend the Application File table. To manually update the table changes, see the Manual upgrade steps for reparenting table changes in Tokyo [KB1163388] article in the <i>Now Support</i> Knowledge Base.</p>	Tokyo
MID Server	For the latest MID Server system requirements, see MID Server system requirements . The following Java Runtime Environment (JRE) versions are supported:	Tokyo

(continued)

Product	Release notes	Family
	<ul style="list-style-type: none"> • JRE11: Beginning with version 11.0.15 • JRE8: Beginning with version 1.8.0_275 <p>If you have installed your own JRE, the upgrade process takes the following actions to ensure that the <i>MID Server</i> uses a supported JRE:</p> <ul style="list-style-type: none"> • If a <i>MID Server</i> is using an unsupported version of the JRE when it upgrades, the upgrade process replaces that JRE with the OpenJDK bundled with the <i>MID Server</i> installer. • If a supported JRE is running on the <i>MID Server</i> host, the upgraded <i>MID Server</i> uses that version. <p>All <i>MID Server</i> host machines require access to the download site at install.service-now.com to enable auto-upgrades. For additional details, read how the system manages MID Server upgrades.</p> <p>Only one <i>Windows MID Server</i> service is permitted per executable path. Upgraded <i>Windows MID Servers</i> that have multiple services pointing to the same installation folder cannot start. See MID Server fails to start for more information.</p> <p>For more information about <i>MID Server</i> upgrades, see the following topics:</p> <ul style="list-style-type: none"> • MID Server pre-upgrade check: Describes how the AutoUpgrade monitor tests the <i>MID Server</i>'s ability to upgrade on your system before the actual upgrade. • Upgrade the MID Server manually: Describes how to upgrade your <i>MID Servers</i> manually. 	
Mobile	<p>Migrate from the <i>ServiceNow Classic</i> mobile app to the <i>ServiceNow Mobile Platform</i> to take advantage of features such as rapid development, offline capability, and integration with native mobile device features. For details on migrating to the <i>ServiceNow Mobile Platform</i>, see Migrate from the ServiceNow Classic mobile app to the ServiceNow Mobile Platform.</p> <p><i>ServiceNow Mobile Platform</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report view access control.</p>	Tokyo
Operational Technology Incident Management v2	<p>If you're an <i>Operational Technology Incident Management</i> user on previous releases, you must assign new <i>Operational Technology Incident Management</i> v2 roles to users originally assigned the OT Incident User</p>	Tokyo

(continued)

Product	Release notes	Family						
	(ot_incident_user) role. For more information, see Assign new Operational Technology Incident Management roles .							
Password Reset	<i>Password Reset</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .	Tokyo						
Project Portfolio Management	<p><i>Project Portfolio Management</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control.</p> <p>When you upgrade <i>Scenario Planning for PPM</i> to version 2.3.0 or later, you must upgrade the legacy <i>Investment Funding</i> application to the <i>ServiceNow Store</i> for the integration to work. For detailed instructions on upgrading from the legacy <i>Investment Funding</i> application to the <i>ServiceNow Store</i> application, see upgrade instructions.</p>	Tokyo						
Service Bridge (Technology)	To upgrade to the <i>Tokyo</i> version of the <i>Service Bridge</i> applications, see the Service Bridge- Upgrade steps for San Diego store release to Tokyo store release [KB1120583] article in the <i>Now Support</i> Knowledge Base.	Tokyo						
Service Bridge (Telecommunications)	To upgrade to the <i>Tokyo</i> version of the <i>Service Bridge</i> applications, see the Service Bridge- Upgrade steps for San Diego store release to Tokyo store release [KB1120583] article in the <i>Now Support</i> Knowledge Base.	Tokyo						
Service Operations Workspace for ITSM	<p>Ensure that the following applications have compatible upgraded versions:</p> <ul style="list-style-type: none"> <i>Service Operations Workspace ITSM</i> Applications application (sn_sow_itsm_cont) <i>Service Operations Workspace ITOM</i> Applications application (sn_sow_itom_cont) <p>Compatible SOW versions</p> <table border="1"> <thead> <tr> <th>SOW-ITSM (sn_sow_itsm_cont)</th> <th>SOW-ITOM (sn_sow_itom_cont)</th> </tr> </thead> <tbody> <tr> <td>1.1.x</td> <td>21.0.y</td> </tr> <tr> <td>1.2.x</td> <td>21.1.y</td> </tr> </tbody> </table>	SOW-ITSM (sn_sow_itsm_cont)	SOW-ITOM (sn_sow_itom_cont)	1.1.x	21.0.y	1.2.x	21.1.y	Tokyo
SOW-ITSM (sn_sow_itsm_cont)	SOW-ITOM (sn_sow_itom_cont)							
1.1.x	21.0.y							
1.2.x	21.1.y							








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Product	Release notes	Family								
	<table border="1" data-bbox="405 239 1189 506"> <thead> <tr> <th data-bbox="405 239 790 289">SOW-ITSM (sn_sow_itsm_cont)</th> <th data-bbox="790 239 1189 289">SOW-ITOM (sn_sow_itom_cont)</th> </tr> </thead> <tbody> <tr> <td data-bbox="405 289 790 359">1.3.x</td> <td data-bbox="790 289 1189 359">21.2.y, 21.5.y, and 21.6.y</td> </tr> <tr> <td data-bbox="405 359 790 428">2.0.x</td> <td data-bbox="790 359 1189 428">22.0.y</td> </tr> <tr> <td data-bbox="405 428 790 497">2.1.x</td> <td data-bbox="790 428 1189 497">22.1.y and 22.y.y</td> </tr> </tbody> </table> <p data-bbox="405 533 1125 699">Here, x is the sub-version of <i>Service Operations Workspace ITSM</i> Applications application (sn_sow_itsm_cont) and y is the sub-version of <i>Service Operations Workspace ITOM</i> Applications application (sn_sow_itom_cont).</p>	SOW-ITSM (sn_sow_itsm_cont)	SOW-ITOM (sn_sow_itom_cont)	1.3.x	21.2.y, 21.5.y, and 21.6.y	2.0.x	22.0.y	2.1.x	22.1.y and 22.y.y	
SOW-ITSM (sn_sow_itsm_cont)	SOW-ITOM (sn_sow_itom_cont)									
1.3.x	21.2.y, 21.5.y, and 21.6.y									
2.0.x	22.0.y									
2.1.x	22.1.y and 22.y.y									
Service Portal	<p data-bbox="427 758 997 789">Report_view ACLs enabled with upgrade</p> <p data-bbox="483 821 1107 982"><i>Service Portal</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control.</p> <p data-bbox="483 1014 1086 1077">Report_view ACLs were previously enabled for new (zBoot) instances.</p> <p data-bbox="491 1108 624 1140">Note:</p> <p data-bbox="536 1171 1066 1434">For a list of <i>Service Portal</i> report_view access control lists (ACLs), navigate to All > System Security > Access Control (ACL) and use the condition builder to add the following filter: [Operation] [is] [report_view] AND [Package] [contains] [service portal] AND [Package] [is not] [Service Portal - Standard Ticket].</p> <p data-bbox="427 1465 1107 1528">User Experience Analytics tracking enabled by default</p> <p data-bbox="483 1560 1102 1686">The <i>Service Portal Analytics</i> plugin (com.glide.service-portal.analytics) is activated by default, and <i>User Experience Analytics</i> tracking for portals is on by default.</p> <p data-bbox="483 1717 1102 1843">For upgrade customers who previously enabled <i>User Experience Analytics</i> tracking for some portals but not others, tracking settings for portals will not change after upgrading.</p> <p data-bbox="427 1875 719 1906">TinyMCE 5 upgrade</p> <p data-bbox="483 1917 1074 1969">The TinyMCE HTML editor has been upgraded to version 5.10.2. If you have a customized</p>	Tokyo								

(continued)

Product	Release notes	Family
	<p>TinyMCE implementation using Angular Providers in <i>Service Portal</i>, see Changes in TinyMCE 5 for information about upgrading your customized version.</p>	
Software Asset Management	<p>For information about upgrading from the <i>Software Asset Management Foundation plugin</i> (com.snc.sams), see Revert Software Asset Management customizations.</p>	Tokyo
Subscription Management	<p><i>Subscription Management</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control.</p>	Tokyo
Upgrade Center	<p><i>Upgrade Center</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control.</p>	Tokyo
Vendor Management Workspace	<p><i>Vendor Management Workspace</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control.</p>	Tokyo
Virtual Agent	<ul style="list-style-type: none"> • New Portable Virtual Agent Web Client, a Seismic component, simplifies adding <i>Virtual Agent</i> to a third-party website. The legacy method of embedding <i>Virtual Agent</i> in a third-party web page will continue to work. • In previous releases, <i>Virtual Agent Designer</i> topic blocks and custom controls were published in the Global scope. In this release, topic blocks and custom controls are now included in the scope of the calling topic. 	Tokyo
Visual Task Boards	<p><i>Visual Task Boards</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control.</p>	Tokyo
Vulnerability Response integrations	<ul style="list-style-type: none"> • For more information about the released versions of the <i>Vulnerability Response</i> application, as well as third-party and <i>ServiceNow</i> applications that are compatible with <i>Tokyo</i>, see the Vulnerability Response Compatibility 	Tokyo

(continued)

Product	Release notes	Family
	<p>Matrix and Release Schema Changes [KB0856498]  article in the HI Knowledge Base.</p> <ul style="list-style-type: none"> For information about the new features for <i>Vulnerability Response</i>, see Vulnerability Response release notes . 	
<p>Vulnerability Response</p>	<p>Due to a data model change in the <i>Vulnerability Response</i> application, upgrading might take noticeably longer than previous upgrades. For more information, see KB0856498 .</p> <p>While upgrading to a newer version, the upgrade time might increase based on the data and version that you are upgrading from. This is due to additional schema changes added during the upgrade. For more information, see KB0856498 .</p> <p>When you upgrade the <i>Vulnerability Response</i> application from older versions to version 15.x, the default remediation task rule in the base system is deactivated. For more information, see Vulnerability Response Workspaces and updates to remediation task and remediation task rules .</p> <p><i>Vulnerability Response</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control .</p> <ul style="list-style-type: none"> When you upgrade to a new version of the <i>Vulnerability Response</i> application, your new version is available on your instance and ready for installation. Updates to <i>Vulnerability Response</i> are available in the <i>ServiceNow</i>[®] Store. For more information about released versions of the <i>Vulnerability Response</i> application, compatibility with <i>Tokyo</i>, and schema changes, see the Vulnerability Response compatibility Matrix and Release Schema Changes [KB0856498]  article in the HI Knowledge Base. <p>When you upgrade to version 18.0 of the <i>Vulnerability Response</i> on <i>Rome</i>, Vulnerability Manager Workspace is not supported.</p>	<p>Tokyo</p>
<p>Workforce Optimization for ITSM</p>	<p>Improved forecasting methods: <i>Demand Forecast</i> uses improved forecasting methods to forecast data. The naive methods for forecasting indicator scores have been upgraded to linear regression methods. Where the older naive methods used only the first and last scores of the most recent season, the upgraded methods use all the available scores over the evaluation period. In addition, the older Linear and Drift methods have been replaced</p>	<p>Tokyo</p>

(continued)

Product	Release notes	Family
	<p>with a single Linear method, and the calculation of the 95% prediction interval has been improved. When you upgrade, the following updates are made to the forecast algorithm that is used in Demand Forecast:</p> <ul style="list-style-type: none"> • The Naive Seasonal algorithm is renamed to Seasonal. • The Naive Seasonal Drift algorithm is renamed to Seasonal Trend. • The Drift algorithm is removed. <p>Enabling text indexing for schedule plans and shift plans: When you upgrade to <i>Workforce Optimization for ITSM</i> version 1.1.1, you must enable text indexing for the following tables:</p> <ul style="list-style-type: none"> • Schedule [sn_shift_planning_schedule_plan] • Shift plan [sn_shift_planning_shift_plan] • Shift [cmn_rota] <p>If you don't perform the text indexing after your upgrade, you can't search the schedule plans and shift plans by keywords. You can only search by the name of the schedule and shift plans.</p> <p>Workforce Optimization for ITSM Report View ACLs: report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Tokyo</i> release. For more information, see Report_view access control.</p> <p>Coaching with Learning: When you upgrade to the <i>Workforce Optimization for ITSM Tokyo</i> release, the following updates are automatically made:</p> <ul style="list-style-type: none"> • The Learning Catalog is renamed to the Learning Library. All courses within the learning catalog are moved to the learning libraries. • As a manager, when you create a course item or a learning path, you must associate that course or path with a course catalog. Depending on the security constraints that are enforced for each catalog, users can access the courses or paths within the catalog. <p>Note: All existing courses are migrated to the Default Course Catalog.</p> <p>After you upgrade to the ITSM Shift Planning Host v 5.3.0 application from the <i>ServiceNow Store</i>:</p>	

(continued)

Product	Release notes	Family
	<ul style="list-style-type: none"> To enable the agents to sign up for shifts, you must set the <code>sn_shift_planning.enable_agent_signup</code> property to true. The following label changes to the filters for schedules are automatically made: <ul style="list-style-type: none"> State is renamed to Schedule plan state. Dates is renamed to Schedule plan dates. 	
AI Search	<p><i>AI Search</i> automatically applies the new automatic language detection feature when you index records from the Task [task] table and its child tables after upgrading to <i>Utah</i> from a previous release. To apply automatic language detection to Task records that you indexed before you upgraded to <i>Utah</i>, you must manually reindex those records.</p> <p>Similarly, <i>AI Search</i> automatically applies the new text region detection feature for Chinese and Japanese when you index records or documents with regions of Chinese or Japanese text after upgrading to <i>Utah</i> from a previous release. To apply text region detection to records and documents that you indexed before you upgraded to <i>Utah</i>, you must manually reindex those records and documents.</p> <p>The <i>AI Search for Next Experience</i> application is automatically enabled in new <i>Utah</i> instances. If you upgrade to <i>Utah</i> from a previous release, you can manually configure and enable <i>AI Search for Next Experience</i>. For details on the application, see AI Search for Next Experience.</p>	Utah
Agent Chat and Sidebar	<p>The <i>Conversational Interfaces</i> console is included with the <i>Utah</i> release so existing customers don't need to install it. If it was installed as an app from the <i>ServiceNow Store</i>, subsequent updates should be installed from there.</p>	Utah
Assessments and Surveys	<p>In the <i>Utah</i> release, all the buttons on the assessments or surveys cards have been removed. To run <i>Automated Test Framework (ATF)</i> tests successfully, the Click the Take Survey button step must be replaced with Click the Survey card for all tests that have this step.</p>	Utah
Authentication	<p><i>Authentication</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Utah</i> release. For more information, see Report_view access control.</p>	Utah

(continued)

Product	Release notes	Family				
<p>Cloud Provisioning and Governance</p>	<p>After upgrading <i>Cloud Provisioning and Governance</i> to the <i>Utah</i> release, create a database index from the specified columns of the Cloud Events [sn_cmp_cloud_event] table. The database index helps to improve the <i>Amazon Web Services (AWS)</i> event processing performance of the instance. If you've started using <i>Cloud Provisioning and Governance</i> with the <i>Utah</i> release, the database index is automatically created on application installation. For more information, see Improve AWS cloud event processing performance.</p>	<p>Utah</p>				
<p>Configuration Compliance</p>	<ul style="list-style-type: none"> • Due to a data model change in the <i>Configuration Compliance</i> application, upgrading might take noticeably longer than the previous upgrades. For more information, see KB0856498. • If you've previously downloaded the application from the <i>ServiceNow Store</i> and a new version is available, you can update it in your <i>Now Platform</i> instance. • For more information about the released versions of the <i>Configuration Compliance</i> application, as well the as third-party and <i>ServiceNow</i> applications that are compatible with <i>Utah</i>, see the Vulnerability Response Compatibility Matrix and Release Schema Changes [KB0856498] article in the HI Knowledge Base. • For information about updates to the third-party applications that are supported by <i>Vulnerability Response</i> and <i>Configuration Compliance</i>, see Vulnerability Response integrations release notes. <p>Upgrade information for Configuration Compliance to Utah</p> <table border="1" data-bbox="411 1434 1182 1654"> <thead> <tr> <th data-bbox="411 1434 564 1480">Version</th> <th data-bbox="564 1434 1182 1480">Upgrade description</th> </tr> </thead> <tbody> <tr> <td data-bbox="411 1480 564 1654"> <p>14.7</p> </td> <td data-bbox="564 1480 1182 1654"> <p>Certified for <i>Utah</i> in the <i>ServiceNow Store</i>.</p> <p>See the following section called "New in the <i>Utah</i> release" for more information.</p> </td> </tr> </tbody> </table>	Version	Upgrade description	<p>14.7</p>	<p>Certified for <i>Utah</i> in the <i>ServiceNow Store</i>.</p> <p>See the following section called "New in the <i>Utah</i> release" for more information.</p>	<p>Utah</p>
Version	Upgrade description					
<p>14.7</p>	<p>Certified for <i>Utah</i> in the <i>ServiceNow Store</i>.</p> <p>See the following section called "New in the <i>Utah</i> release" for more information.</p>					
<p>Customer Service Management (CSM)</p>	<p>Case task enhancements add several fields to the case task record. After you upgrade to the <i>Utah</i> release, your customers can run a script that populates these fields for the active case tasks. For more information, see Cases and case tasks.</p>	<p>Utah</p>				

(continued)

Product	Release notes	Family
Encryption Key Management	<p>Encryption contexts automatically convert to <i>Column Level Encryption</i> field encryption modules and corresponding module access policies on the upgrade beginning with the <i>San Diego</i> release. A guided tour explaining this enhancement is available from the dashboard.</p> <p>The <i>Encryption Key Management</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Utah</i> release. For more information, see Report_view access control.</p>	Utah
Hardware Asset Management 7.0.0	<p>You must change the configurations of the existing customizations to be compatible with the standard record page template. For more information about the standard record page template and the configuration changes, see the Work Instruction How to Migrate existing Record Pages to Standard Record Pages [KB1224040] article in the Now Support Knowledge Base.</p>	Utah
Health Log Analytics	<p>If your <i>Health Log Analytics</i> version is earlier than February 2022, contact <i>Now Support</i> or your <i>ServiceNow</i> sales representative to request an upgrade for the <i>Health Log Analytics</i> application core components.</p>	Utah
Industrial Process Manager	<p>If you use the ISA Service Graph Connector that's packaged with the Manufacturing Process Manager and are upgrading to the <i>Industrial Process Manager</i>, ensure that any new ISA equipment model entities have a unique name field.</p>	Utah
Instance Data Replication	<p>You can improve the performance and processing efficiency of <i>Instance Data Replication (IDR)</i> by upgrading your replication sets to V2, which uses the <i>Hermes Messaging Service</i>. For details, see Upgrading legacy replication set to V2 in Instance Data Replication.</p>	Utah
MID Server	<p>For the latest MID Server system requirements, see MID Server system requirements. The minimum Java Runtime Environment (JRE) version supported is 11.0.9 and the recommended version is 11.0.16.</p> <p>If you have installed your own JRE, the upgrade process takes the following actions to ensure that the <i>MID Server</i> uses a supported JRE:</p>	Utah

(continued)

Product	Release notes	Family
	<ul style="list-style-type: none"> • If a <i>MID Server</i> is using an unsupported version of the JRE when it upgrades, the upgrade process displays a warning message with the minimum and recommended JRE version. • If a supported JRE is running on the <i>MID Server</i> host, the upgraded <i>MID Server</i> uses that version. <p>All <i>MID Server</i> host machines require access to the download site at install.service-now.com to enable auto-upgrades. For additional details, read how the system manages MID Server upgrades.</p> <p>Only one <i>Windows MID Server</i> service is permitted per executable path. Upgraded <i>Windows MID Servers</i> that have multiple services pointing to the same installation folder cannot start. See MID Server fails to start for more information.</p> <p>For more information about <i>MID Server</i> upgrades, see the following topics:</p> <ul style="list-style-type: none"> • MID Server pre-upgrade check: Describes how the AutoUpgrade monitor tests the <i>MID Server's</i> ability to upgrade on your system before the actual upgrade. • Upgrade the MID Server manually: Describes how to upgrade your <i>MID Servers</i> manually. 	
Manager Hub	<p>If you are upgrading to the Tokyo release, additional conditions that were created for to-do mappings in the To-dos Configuration form in Employee Center must be created again in the Manager To-dos mapping module in Manager Hub.</p>	Utah
Operational Technology Incident Management v2	<p>If you're an <i>Operational Technology Incident Management</i> user on previous releases, you must assign new <i>Operational Technology Incident Management</i> v2 roles to users originally assigned the OT Incident User (ot_incident_user) role. For more information, see Assign new Operational Technology Incident Management roles.</p>	Utah
Platform Security	<p>Obtain the Vault entitlement to use the data privacy feature. For more detail on this feature, see Servicenow Vault.</p>	Utah
Portfolio Planning	<ul style="list-style-type: none"> • Starting with v6.0.1, Alignment Planner Workspace is renamed to <i>Portfolio Planning</i> for <i>SPM</i> Standard license. In your <i>ServiceNow</i> instance, the application name is shown as <i>Portfolio Planning</i>, and the 	Utah

(continued)

Product	Release notes	Family
	<p>workspace module name is shown as <i>Portfolio Planning</i> Workspace.</p> <ul style="list-style-type: none"> If you're upgrading from an older version to <i>Portfolio Planning</i> v6.1.1 or higher, a fix script is run to remove the <code>milestone_editor</code> role from the <code>roadmap_editor</code> role because the <code>roadmap_editor</code> role is no longer used. In this case, you may experience a longer time for the upgrade to complete if your <i>ServiceNow</i> instance has a large number of users with the <code>roadmap_editor</code> role. For more information, see KB1443618. 	
Public Sector Digital Services	<p>After the upgrade, certain public sector menus and menu items in the <i>CSM Configurable Workspace</i> revert to their original CSM label names. You can relabel these items for public sector use by updating the UX List Categories for Customer and Service Organizations. For details, see Relabel items for public sector use after upgrade.</p>	Utah
Robotic Process Automation (RPA) Hub	<p>Ensure that you upgrade the current installed Microsoft Software Installers (MSIs) (<i>RPA Desktop Design Studio</i>, <i>Attended Robot</i>, and <i>Unattended Robot</i>), by downloading the RPA applications. For more information, see Download the RPA applications from RPA Hub.</p> <p>Based on the number of records in the application file table, you could experience a potential delay while upgrading the <i>RPA Hub</i> applications from <i>Tokyo</i> to <i>Utah</i>.</p> <p>Before upgrading <i>RPA Hub</i> to <i>Utah</i>, you must set the value of the <code>glide.rollback.blacklist.TableParentChange.change</code> system property to false. If this property doesn't exist in the System Property [sys_properties] table, add the property and set its value to false.</p> <p>After you upgrade to the <i>Utah</i>, the bot process definitions change to the new structure, that is, the bot process configuration. Although the bot process configuration doesn't replace bot process completely. Most fields are moved from bot process to bot process configuration.</p> <p>If you upgrade to the <i>Utah</i> version without updating the system property value, the tables will not extend the Application File table. To manually update the table changes, see the Restructuring RPA Hub tables to sys_metadata in Utah article in the <i>Now Support Knowledge Base</i>.</p>	Utah
Service Operations	<p>Ensure that the following applications have compatible upgraded versions:</p>	Utah

(continued)

Product	Release notes	Family												
Workspace for ITSM	<ul style="list-style-type: none"> • <i>Service Operations Workspace ITSM</i> Applications application (sn_sow_itsm_cont) • <i>Service Operations Workspace ITOM</i> Applications application (sn_sow_itom_cont) <p>Compatible SOW versions</p> <table border="1" data-bbox="405 495 1189 905"> <thead> <tr> <th data-bbox="405 495 790 552">SOW-ITSM (sn_sow_itsm_cont)</th> <th data-bbox="790 495 1189 552">SOW-ITOM (sn_sow_itom_cont)</th> </tr> </thead> <tbody> <tr> <td data-bbox="405 552 790 632">1.1.x</td> <td data-bbox="790 552 1189 632">21.0.y</td> </tr> <tr> <td data-bbox="405 632 790 711">1.2.x</td> <td data-bbox="790 632 1189 711">21.1.y</td> </tr> <tr> <td data-bbox="405 711 790 791">1.3.x</td> <td data-bbox="790 711 1189 791">21.2.y, 21.5.y, and 21.6.y</td> </tr> <tr> <td data-bbox="405 791 790 871">2.0.x</td> <td data-bbox="790 791 1189 871">22.0.y</td> </tr> <tr> <td data-bbox="405 871 790 905">2.1.x</td> <td data-bbox="790 871 1189 905">22.1.y and 22.y.y</td> </tr> </tbody> </table> <p>Here, x is the sub-version of <i>Service Operations Workspace ITSM</i> Applications application (sn_sow_itsm_cont) and y is the sub-version of <i>Service Operations Workspace ITOM</i> Applications application (sn_sow_itom_cont).</p>	SOW-ITSM (sn_sow_itsm_cont)	SOW-ITOM (sn_sow_itom_cont)	1.1.x	21.0.y	1.2.x	21.1.y	1.3.x	21.2.y, 21.5.y, and 21.6.y	2.0.x	22.0.y	2.1.x	22.1.y and 22.y.y	
SOW-ITSM (sn_sow_itsm_cont)	SOW-ITOM (sn_sow_itom_cont)													
1.1.x	21.0.y													
1.2.x	21.1.y													
1.3.x	21.2.y, 21.5.y, and 21.6.y													
2.0.x	22.0.y													
2.1.x	22.1.y and 22.y.y													
Service Portal	After upgrading, you must specify the tables from which guest users can access data for any public widgets that accept the table input parameter. By default in the <i>Utah</i> Patch 10 release and later, public widgets that accept the table input parameter can't access and return data from any tables for guest users. If you added the <code>glide.service_portal.widget.table_allow_list</code> or <code>glide.service_portal.widget.allow_list</code> system properties before upgrading, the values of these properties will be migrated to the Public Table Allow List for widgets after upgrading to the <i>Utah</i> Patch 10 release or later. For more information, see Configure widget security .	Utah												
Service Portfolio Management	Viewing availability results was introduced in the Tokyo release but also applies to subsequent releases. On upgrade, for customers identified as having a heavy data load, the system initiates a long-running background job, which could take a long duration. For more information, see KB1123644 .	Utah												
Software Asset Management	For information about upgrading from the <i>Software Asset Management Foundation plugin</i> (com.snc.sams), see Revert Software Asset Management customizations .	Utah												

(continued)

Product	Release notes	Family
	<p>On upgrading to <i>Utah</i>, your existing perpetual license entitlements covered by Software Assurance and associated with generic version software models get modified. <i>Software Asset Management</i> automatically converts these entitlements to version-specific software models. These changes are made to comply with <i>Microsoft's</i> license terms and to mitigate the potential risk of applying software assurance benefits to all versions of your <i>Microsoft</i> products. For more information, see Software license maintenance.</p>	
Strategic Planning	<ul style="list-style-type: none"> Starting with v2.0.1, Lenses for <i>Alignment Planner Workspace</i> is renamed to <i>Strategic Planning</i> for <i>SPM Pro</i> license. In your <i>ServiceNow</i> instance, the application name is shown as Strategic Planning, and the workspace module name is shown as Strategic Planning Workspace. After installing the <i>Strategic Planning</i> application, the existing fields on the Goal form, Company, Business Unit, Department, and Portfolio, are consolidated into two fields, Assigned entity type and Assigned entity, and are populated automatically based on the values in the existing fields. If you've created m2m relationships with lens entities other than Business Unit, Department, Company, or Portfolio, run the Migrate goal relationships for assigned entities scheduled job to populate the Assigned entity type and Assigned entity fields on the Goal form based on the data from the Goal Relationship [sn_gf_goal_m2m_relationship] table. If you're upgrading from an older version to <i>Strategic Planning</i> v2.1.0 or higher, a fix script is run to remove the milestone_editor role from the roadmap_editor role because the roadmap_editor role is no longer used. In this case, you may experience a longer time for the upgrade to complete if your <i>ServiceNow</i> instance has a large number of users with the roadmap_editor role. For more information, see KB1443618. 	Utah
Supplier Lifecycle Operations	<p>In the <i>Utah</i> release, all the existing tables have been renamed. As part of the renaming, all the occurrences of the word "supplier" have been changed to "slm" in the new names of the existing tables. For example, Supplier Case [sn_supplier_case] has been renamed to Supplier Case (sn_slm_case), Supplier Task [sn_supplier_task] has been renamed to Supplier Task (sn_slm_task), and so on. If you are upgrading from the <i>Tokyo</i> release to the <i>Utah</i> release, ensure that you run the fix script to migrate the existing tables to <i>Supplier Common Architecture</i>. For</p>	Utah

(continued)

Product	Release notes	Family
	<p>more information, see Run fix script to migrate existing tables to Supplier Common Architecture.</p>	
Upgrade Center	<p><i>Upgrade Center</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Utah</i> release. For more information, see Report_view access control.</p>	Utah
Vulnerability Response integrations	<ul style="list-style-type: none"> For more information about the released versions of the <i>Vulnerability Response</i> application, as well as third-party and <i>ServiceNow</i> applications that are compatible with <i>Utah</i>, see the Vulnerability Response Compatibility Matrix and Release Schema Changes [KB0856498] article in the HI Knowledge Base. For information about the new features for <i>Vulnerability Response</i>, see Vulnerability Response release notes. 	Utah
Vulnerability Response	<p>Due to a data model change in the <i>Vulnerability Response</i> application, upgrading might take noticeably longer than previous upgrades. For more information, see KB0856498.</p> <p>While upgrading to a newer version, the upgrade time might increase based on the data and version that you are upgrading from. This issue is due to additional schema changes added during the upgrade. For more information, see KB0856498.</p> <p>When you upgrade to version 18.0 of the <i>Vulnerability Response on Rome</i>, Vulnerability Manager Workspace is not supported.</p>	Utah
AI Search	<ul style="list-style-type: none"> When you upgrade to <i>Vancouver</i> from an earlier release, <i>AI Search</i> automatically reindexes non-Task tables to allow for display of attachment search results with their parent record, but doesn't automatically reindex the Task [task] table and its child tables. Before you can display Task record attachment search results with their parent records, you must manually reindex the Task [task] table. For details on reindexing a table, see Perform a full table index or reindex for a single indexed source. <p>Note: Reindexing the Task table can take some time.</p> <ul style="list-style-type: none"> After you upgrade to <i>Vancouver</i> from an earlier release, you can optionally republish your search profiles that contain result improvement rules with block and promote 	Vancouver

(continued)

Product	Release notes	Family
	<p>actions. Republishing these search profiles resolves an issue where result improvement rules could fail to block or promote translated search results correctly. For instructions on republishing a search profile, see Publish a search profile. To learn more about how <i>AI Search</i> handles translated content, see Internationalization support for AI Search.</p>	
Assessments and Surveys	<p>Update the <i>Automated Test Framework</i> (ATF) tests, if you're upgrading to <i>Vancouver</i> from any version prior to <i>Utah</i>. In the <i>Utah</i> release, all the buttons on the assessments or surveys cards have been removed. To run ATF tests successfully, the Click the Take Survey button step must be replaced with the Click the Survey card step for all tests that have this step.</p>	Vancouver
Authentication	<p><i>Authentication</i> report_view access control lists (ACLs) that govern who can see reports in dashboards and elsewhere are enabled by default in the <i>Vancouver</i> release. For more information, see Report_view access control.</p>	Vancouver
Automated Test Framework	<p>Copy and customize quick start tests provided by the <i>Now Platform</i>® to validate that your instance works after you make any configuration changes. For example, if you apply an upgrade or develop an application.</p> <p>The tests can produce a pass result only when you run them on a base system without any customizations and with the default demo data that is provided with the application or feature plugin. To apply a quick start test to your instance-specific data, copy the quick start test and add your custom data. For more information, see Available quick start tests by application or feature.</p>	Vancouver
Cloud Cost Management	<p>For instructions on upgrading <i>Cloud Cost Management</i> to <i>Vancouver</i>, see Upgrade Cloud Insights.</p>	Vancouver
Configuration Management Database (CMDB)	<p>During upgrade, a fix script that re-parents the Reconciliation Definition Mapping [cmdb_reconciliation_definition_mapping] table, runs. The length of time that it takes this fix script to complete depends on the number of reconciliation rules in the upgraded instance and will typically add several minutes to the upgrade.</p> <p>Re-parenting the Reconciliation Definition Mapping [cmdb_reconciliation_definition_mapping] table is necessary to ensure that data in that table is captured by update sets when exporting reconciliation rules between instances. After upgrading, any changes to reconciliation</p>	Vancouver

(continued)

Product	Release notes	Family
	rules are fully captured by update sets and are properly ported to destination instances.	
Document Intelligence	<i>Document Intelligence</i> 3.0 and later includes an updated schema to support its transition from a scoped application to a <i>Now Platform</i> plugin. For upgrade details, see Upgrade to Document Intelligence 3.0 or later from version 2.4 or earlier .	Vancouver
Goal Framework	Starting with v4.2.0, the existing targets with the Type field set to Milestone are considered as qualitative targets. After upgrading <i>Goal Framework</i> , for such existing targets, the unit of measure is set to Yes/No , the Base value is set to No , and the Target value is set to Yes automatically. Also, the Actual value is set to Yes if the progress value is 100%, otherwise the value is set to No .	Vancouver
ITOM Visibility	Microsoft Azure Alert configuration After upgrading, configure the <i>Microsoft Azure</i> alert service to forward alert notifications to the <i>Now Platform</i> in a secure way. For more information, see Use a secure webhook to forward the Microsoft Azure alerts to the Now Platform .	Vancouver
Industrial Process Manager	If you use the ISA Service Graph Connector that's packaged with the Manufacturing Process Manager and are upgrading to the <i>Industrial Process Manager</i> , ensure that any new ISA equipment model entities have a unique name field.	Vancouver
Instance Data Replication	Improve the performance and processing efficiency of <i>Instance Data Replication (IDR)</i> by upgrading your replication sets to V2, which uses the <i>Hermes Messaging Service</i> . For details, see Upgrading legacy replication sets to V2 in Instance Data Replication . If the Replication Payload Error [idr_replication_payload_error] table on your instance has more than 10 million records, set up table rotation according to KB1364728 . Using table rotation to delete records from the Replication Payload Error [idr_replication_payload_error] table is safe because that table only contains replication errors logged by <i>IDR</i> and not any replicated data.	Vancouver
MID Server	For the latest <i>MID Server</i> system requirements, see MID Server system requirements . The minimum JRE version	Vancouver

(continued)

Product	Release notes	Family
	<p>supported is 11.0.9 and the recommended version is 11.0.16.1.</p> <p>If you have installed your own JRE, the upgrade process takes the following actions to ensure that the <i>MID Server</i> uses a supported JRE:</p> <ul style="list-style-type: none"> • If a <i>MID Server</i> is using an unsupported version of the JRE when it upgrades, the upgrade process displays a warning message with the minimum and recommended JRE version. • If a supported JRE is running on the <i>MID Server</i> host, the upgraded <i>MID Server</i> uses that version. <p>All <i>MID Server</i> host machines require access to the download site at install.service-now.com to enable auto-upgrades. For additional details, read how the system manages MID Server upgrades.</p> <p>Only one <i>Windows MID Server</i> service is permitted per executable path. Upgraded <i>Windows MID Servers</i> that have multiple services pointing to the same installation folder cannot start. See MID Server fails to start for more information.</p> <p>For more information about <i>MID Server</i> upgrades, see the following topics:</p> <ul style="list-style-type: none"> • MID Server pre-upgrade check: Describes how the AutoUpgrade monitor tests the ability of the <i>MID Server</i> ability to upgrade on your system before the actual upgrade. • Upgrade the MID Server manually: Describes how to upgrade your <i>MID Servers</i> manually. 	
Order Management	<p>Starting with the November 2023 release, the <i>Order Management</i> application supports the complete life cycle of product and service orders, including the order fulfillment features provided with the <i>Order Management for Telecommunications, Media, and Technology</i> application. If you have a Telecommunications Service Management subscription, you install the Order Management for Telecom, Media and Tech application from the <i>ServiceNow Store</i>. This application installs the <i>Order Management</i> application, telecommunications demo data, and the following <i>ServiceNow</i> Open API implementations of TM Forum API REST specifications:</p> <ul style="list-style-type: none"> • Product Catalog Open API • Service Catalog Open API • Product Order Open API • Service Order Open API 	Vancouver

(continued)

Product	Release notes	Family
	<ul style="list-style-type: none"> • Product Inventory Open API • Technical Service Qualification Open API <p>If you're familiar with the <i>Order Management for Customer Service Management</i> application, you can optionally use that interface after installing the <i>Order Management</i> application. For more information, see Enable the user interface for Order Management for Customer Service Management KB1554296. For information on changes to the interface, see Changes to the Order Management for Customer Service Management application KB1560237.</p> <p>During upgrade, the Order Task [sn_ind_tmt_orm_order_task] table is extended from the Planned Tasks [planned_tasks] table that is used in the <i>Customer Service Management</i> application. The Order Task table has also been modified. For details on changes to the Order Task table, see OMT Reparenting data model changes KB1496935.</p> <p>If you upgraded to the <i>Vancouver</i> release and are using a version of the <i>Order Management for Telecommunications, Media, and Technology</i> application that is not version 5.2.0, the fixes for populating product inventory and product model characteristics aren't available to you. To get those changes, upgrade to the current <i>Vancouver</i> patch.</p>	
Platform Analytics Workspace	The <i>Vancouver</i> version of Platform Analytics Workspace (3.0) includes the updates in versions 2.1.x, previously available only in the <i>ServiceNow® Store</i> .	Vancouver
Portfolio Planning	<ul style="list-style-type: none"> • If you're upgrading from an older version to <i>Portfolio Planning</i> v6.1.1 or higher, a fix script is run to remove the milestone_editor role from the roadmap_editor role because the roadmap_editor role is no longer used. In this case, you may experience a longer time for the upgrade to complete if your <i>ServiceNow</i> instance has a large number of users with the roadmap_editor role. For more information, see KB1443618. • If you're upgrading from an older version to <i>Portfolio Planning</i> 7.0.0 or 7.1.0, the entities list may not load in the select entities step while you create or edit a portfolio plan. In this case, you must add the script in the List component for the Select entities page. For more information, see KB1566418. 	Vancouver

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Product	Release notes	Family
Process Automation Designer	<p>After you upgrade to <i>Vancouver</i>, update the <i>Process Automation Designer</i> application in the <i>ServiceNow Store</i>.</p>	Vancouver
Public Sector Digital Services	<p>Before you upgrade to <i>Public Sector Digital Services</i> v8.0, you must create custom service definitions for data in the Services Offered table, data in the Services Received table, and all other data affected by the conversion of the Services Offered table to the Service Definition table (Performance Analytics dashboard data, constituent or business report data, and so on). Any custom Services Offered and Services Received data created in previous releases will not be automatically migrated to the new release, and, after upgrade, will not be accessible within the application until the data is migrated from the legacy entities to the Service Definition table. For details, see Services Offered and Services Received Migration Guidance and Configure a service definition for Playbooks in Public Sector Digital Services.</p> <p>After the upgrade, certain public sector menus and menu items in the <i>CSM Configurable Workspace</i> revert to their original <i>CSM</i> label names. You can relabel these items for public sector use by updating the UX List Categories for Customer and Service Organizations. For details, see Relabel items for public sector use after upgrade.</p>	Vancouver
Robotic Process Automation (RPA) Hub	<p>Ensure that you upgrade the current installed Microsoft Software Installers (MSIs) (<i>RPA Desktop Design Studio</i>, <i>Attended Robot</i>, <i>Unattended Robot</i>, and <i>Unattended Robot Login Agent</i>), by downloading the RPA applications. For more information, see Download the RPA applications from RPA Hub.</p> <p>The following upgrade steps are applicable only when you're upgrading from <i>San Diego</i> or <i>Tokyo</i> to <i>Vancouver</i>.</p> <p>Based on the number of records in the application file table, you could experience a potential delay while upgrading the <i>RPA Hub</i> applications from <i>Tokyo</i> or before to <i>Vancouver</i>.</p> <p>Before upgrading <i>RPA Hub</i> to <i>Vancouver</i>, you must set the value of the <code>glide.rollback.blacklist.TableParentChange.change</code> system property to false. If this property doesn't exist in the System Property [sys_properties] table, add the property and set its value to false.</p> <p>After you upgrade to the <i>Vancouver</i>, the bot process definitions change to the new structure, that is, the</p>	Vancouver




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Product	Release notes	Family														
	<p>bot process configuration. Although the bot process configuration doesn't replace the bot process completely. Most fields are moved from bot process to bot process configuration.</p> <p>If you upgrade to the <i>Utah</i> version without updating the system property value, the tables don't extend the Application File table. Manually to update the table changes, see the Restructuring RPA Hub tables to sys_metadata in Utah article in the <i>Now Support</i> Knowledge Base.</p>															
Security Incident Response		Vancouver														
Service Bridge	<p>For information on upgrading and using the new <i>Service Bridge</i> applications, see Migrate from Service Bridge (legacy).</p>	Vancouver														
Service Operations Workspace for ITSM	<p>Ensure that the following applications have compatible upgraded versions:</p> <ul style="list-style-type: none"> <i>Service Operations Workspace ITSM</i> Applications application (sn_sow_itsm_cont) <i>Service Operations Workspace ITOM</i> Applications application (sn_sow_itom_cont) <p>Compatible SOW versions</p> <table border="1" data-bbox="403 1297 1187 1780"> <thead> <tr> <th data-bbox="403 1297 790 1360">SOW-ITSM (sn_sow_itsm_cont)</th> <th data-bbox="790 1297 1187 1360">SOW-ITOM (sn_sow_itom_cont)</th> </tr> </thead> <tbody> <tr> <td data-bbox="403 1360 790 1438">1.1.x</td> <td data-bbox="790 1360 1187 1438">21.0.y</td> </tr> <tr> <td data-bbox="403 1438 790 1501">1.2.x</td> <td data-bbox="790 1438 1187 1501">21.1.y</td> </tr> <tr> <td data-bbox="403 1501 790 1575">1.3.x</td> <td data-bbox="790 1501 1187 1575">21.2.y, 21.5.y, and 21.6.y</td> </tr> <tr> <td data-bbox="403 1575 790 1648">2.0.x</td> <td data-bbox="790 1575 1187 1648">22.0.y</td> </tr> <tr> <td data-bbox="403 1648 790 1711">2.1.x</td> <td data-bbox="790 1648 1187 1711">22.1.y and 22.y.y</td> </tr> <tr> <td data-bbox="403 1711 790 1780">4.0.x</td> <td data-bbox="790 1711 1187 1780">24.y.y</td> </tr> </tbody> </table> <p>Here, x is the sub-version of <i>Service Operations Workspace ITSM</i> Applications application (sn_sow_itsm_cont) and y is the sub-version of <i>Service Operations Workspace ITOM</i> Applications application (sn_sow_itom_cont).</p>	SOW-ITSM (sn_sow_itsm_cont)	SOW-ITOM (sn_sow_itom_cont)	1.1.x	21.0.y	1.2.x	21.1.y	1.3.x	21.2.y, 21.5.y, and 21.6.y	2.0.x	22.0.y	2.1.x	22.1.y and 22.y.y	4.0.x	24.y.y	Vancouver
SOW-ITSM (sn_sow_itsm_cont)	SOW-ITOM (sn_sow_itom_cont)															
1.1.x	21.0.y															
1.2.x	21.1.y															
1.3.x	21.2.y, 21.5.y, and 21.6.y															
2.0.x	22.0.y															
2.1.x	22.1.y and 22.y.y															
4.0.x	24.y.y															







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Product	Release notes	Family
	<p>If the upgraded instance has any of the following customizations, you need to migrate standard record page changes. For more information, see Configure a Standard Record Page in Service Operations Workspace.</p> <ul style="list-style-type: none"> • Any custom declarative action of the client type • Any custom modal • Any custom horizontal tab or contextual side panel tab's screen or screen condition <p>After the 3.0 upgrade, the <i>Recommendation Framework</i> feature is no longer available, and instead, only the standard version of the <i>Recommended Actions for ITSM</i> feature is available.</p>	
Service Portal	<p>After upgrading, you must specify the tables from which guest users can access data for any public widgets that accept the table input parameter. By default in the <i>Vancouver</i> Patch 7 release and later, public widgets that accept the table input parameter can't access and return data from any tables for guest users. If you added the <code>glide.service_portal.widget.table_allow_list</code> or <code>glide.service_portal.widget.allow_list</code> system properties before upgrading, the values of these properties will be migrated to the Public Table Allow List for widgets after upgrading to the <i>Vancouver</i> Patch 7 release or later. For more information, see Configure widget security.</p>	Vancouver
Service Portfolio Management	<p>Viewing availability results was introduced in the <i>Tokyo</i> release but also applies to subsequent releases. On upgrade, for customers identified as having a heavy data load, the system initiates a long-running background job, which could take a long duration. For more information, see KB1123644.</p>	Vancouver
Skills Management	<p>If you've customized the URL for the Manage skills page, you must manually update the URL to point to the new page. Here's the relative path to the new Manage skills page: <code>https://<instance name>.service-now.com/now/nav/ui/manage-skills/params/parent-skill/2eb1c2029f100200a3bc1471367fcfe4/parent-department/221f79b7c6112284005d646b76ab978c/recursive-departments/true/recursive-skills/true/group-by/department</code>. You can replace the existing path with this one.</p> <p>Note: Make sure that the parent-skill and the parent-department sys_ids are the same IDs that are in your existing URL.</p>	Vancouver

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Product	Release notes	Family
Software Asset Management	<p>For information about upgrading from the <i>Software Asset Management Foundation plugin</i> (com.snc.sams), see Revert Software Asset Management customizations .</p> <p>On upgrading to <i>Vancouver</i>, the Version and Edition fields in discovery map (DMAP) definitions support the new is_empty value. If the Edition field for an existing <i>Microsoft SQL Server</i> component DMAP definition was previously set to is_anything, it is automatically updated with the new is_empty value following content update.</p>	Vancouver
Strategic Planning	<ul style="list-style-type: none"> Starting with v2.1.0, accessing the Goals module in <i>Strategic Planning</i> requires the <code>sn_apw_advanced.spw_goal_user_read</code> and <code>sn_apw_advanced.spw_goal_user</code> roles for read and edit access, respectively. After upgrading <i>Strategic Planning</i>, assign these roles to the existing goal users to manage goals in <i>Strategic Planning</i>. Starting with v2.1.0, the existing targets with the Type field set to Milestone are considered qualitative targets. After upgrading <i>Strategic Planning</i>, for such existing targets, the Unit of measure is set to Yes/No, the Base value is set to No, and the Target value is set to Yes automatically. Also, the Actual value is set to Yes if the progress value is 100%, otherwise the value is set to No. If you're upgrading from an older version to <i>Strategic Planning</i> v2.1.0 or higher, a fix script is run to remove the <code>milestone_editor</code> role from the <code>roadmap_editor</code> role because the <code>roadmap_editor</code> role is no longer used. In this case, you may experience a longer time for the upgrade to complete if your <i>ServiceNow</i> instance has a large number of users with the <code>roadmap_editor</code> role. For more information, see KB1443618 . If you're upgrading from an older version to <i>Strategic Planning</i> v3.0.0 or v3.4.0, the entities list may not load in the select entities step while you create or edit a portfolio plan. In this case, you must add the script in the List component for the Select entities page. For more information, see KB1566418 . 	Vancouver
Telecommunications Service Operations Management	<p>The Integration Hub starter package, along with the external trigger, is included as components of the starter package in <i>Vancouver</i> Patch 1. The customer must use the family release <i>Vancouver</i> Patch 1 to get the Telecommunications API notification functionality.</p>	Vancouver


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Product	Release notes	Family
Third-party Risk Management		Vancouver
Virtual Agent	<p>Some features that were delivered in <i>Vancouver</i> Patch 7 are not available in the initial <i>Washington DC</i> early access release. These features will be available in future Patch releases of <i>Washington DC</i>.</p> <p>Input Collector control changes </p> <ul style="list-style-type: none"> • Drag and drop to reorder inputs within the node. • Specify the type of input that the node will accept: Text, Email, IP Address, Phone Number, URL, or custom. • Maximum number of inputs per node is 5. <p>Enforced user prompt option in the Text user input control </p> <p>Toggle switch in the Advanced properties area that allows topic authors to specify the message shown to the user instead of the response generated by the LLM.</p>	Vancouver
Vulnerability Response integrations	<ul style="list-style-type: none"> • For more information about the released versions of the <i>Vulnerability Response</i> application, as well as the third-party and <i>ServiceNow</i> applications that are compatible with <i>Vancouver</i>, see the Vulnerability Response Compatibility Matrix and Release Schema Changes [KB0856498]  article in the knowledge base. • For information about the new features for <i>Vulnerability Response</i>, see Vulnerability Response release notes . 	Vancouver
Vulnerability Response	<p>Due to a data model change in the <i>Vulnerability Response</i> application, upgrading might take noticeably longer than previous upgrades. For more information, see KB0856498 .</p> <p>While upgrading to a newer version, the upgrade time might increase based on the data and version that you're upgrading from. This issue is due to additional schema changes that were added during the upgrade. For more information, see KB0856498 .</p> <p>Starting with version 20.0 of the <i>Vulnerability Response</i> application and version 2.03 of the Vulnerability Emergency Response application, the Vulnerability Analyst Workspace</p>	Vancouver

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Product	Release notes	Family
	<p>is renamed to Vulnerability Assessment Workspace. All references to Vulnerability Analyst workspace now are Vulnerability Assessment workspace.</p>	
<p>AI Search</p>	<p>When you upgrade to <i>Washington DC</i>, <i>AI Search</i> automatically updates your existing Genius Result configurations to use the new AI Search Genius Result Configuration form fields. This update procedure makes the following changes:</p> <ul style="list-style-type: none"> • Removes existing Genius result answer type field values. • Migrates Genius result logic field values to the new <i>AI Search request processor</i> and <i>AI Search response processor</i> fields as appropriate. <p>After you upgrade your instance to <i>Washington DC</i>, <i>AI Search</i> retains the value that you previously set for the Boolean search operator to use when a search query includes multiple terms (<i>glide.ais.query.search_operator</i>) system property. To gain the benefits of the new enhanced query mode for multi-term searches, set this system property's value to <i>AND then OR 2+ key terms</i>. For details on <i>AI Search</i> system properties, see AI Search system properties.</p> <p>Starting in <i>Washington DC</i>, the User [sys_user] table defaults to sorting indexed records by their sys_created_on dates instead of sorting them by their sys_updated_on dates. This change requires reindexing of the User table indexed source for <i>AI Search</i>, which can be time-consuming. When you upgrade to <i>Washington DC</i> from a previous family release, <i>AI Search</i> does not automatically reindex the User table indexed source. If you need to be able to search the latest configuration for user records, you can manually reindex the User table indexed source, which may take some time. Otherwise, <i>AI Search</i> will reindex individual User table records as they're updated until all records have been reindexed.</p>	<p>Washington DC</p>
<p>Automated Test Framework</p>	<p>Copy and customize quick start tests provided by the <i>Now Platform</i> to validate that your instance works after you make any configuration changes. For example, if you apply an upgrade or develop an application.</p> <p>The tests can produce a pass result only when you run them on a base system without any customizations and with the default demo data that is provided with the application or feature plugin. To apply a quick start test to your instance-specific data, copy the quick start test and add your custom data. For more information, see Available quick start tests by application or feature.</p>	<p>Washington DC</p>

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Product	Release notes	Family
<p>Business Continuity Management</p>	<p>Post an upgrade to the <i>Washington DC</i> release, you must note the following important information for the existing business impact analyses, business continuity plans, and events:</p> <ul style="list-style-type: none"> • For business impact analyses, the Source column in the Dependency assessment is renamed to Primary source and the BCM source is renamed to Manual for manually added dependencies post an upgrade. When you select the Update dependencies action button, the system adds the <i>CMDB</i> dependencies. • For business continuity plans, the Source column is renamed to Primary source post an upgrade. When you select the Update dependencies action button, the system adds the <i>CMDB</i> and BIA dependencies. To maintain compatibility with the previous releases, the <i>BCM</i> administrator can configure the sources and keep only the BIA upstream dependency and BIA downstream dependencies as the sources in the update configuration. • For events and exercises, when you select the Update dependencies action button, the system adds the <i>CMDB</i>, BIA, and Business Continuity Planning (BCP) dependencies after an upgrade. To maintain compatibility with the previous releases, the <i>BCM</i> administrator can configure the sources and keep only BIA upstream dependency and BIA downstream dependencies as the sources in the update configuration. 	<p>Washington DC</p>
<p>Configuration Management Database (CMDB)</p>	<ul style="list-style-type: none"> • The column <i>product_instance_id</i> has been added to the base Configuration Item [cmdb_ci] table to support the new product instance identifier (PID), which enables the lookup and linking of any pre-existing related assets, CIs, and Install Base Items (IBI). For more information about the impact of that change during upgrade and how to minimize that impact, see the Upgrade impact of CMDB_CI schema changes for Washington release [KB1534035]  knowledge base article. • If you enable CMDB 360 for the first time after upgrading to the <i>Washington DC</i> release, to enable the capture of CMDB 360 data for CIs from non-CMDB classes (classes not derived from the Configuration Item [cmdb_ci] class) you must set the <i>glide.identification_engine.multisource_non_cmdb_ci_enabled</i> system property to true. • If you have been using the legacy Data Certification application on Core UI, then any associated definitions won't be available in the new implementation of Data Certification in CMDB Workspace. After upgrading to the <i>Washington DC</i> release and to CMDB Workspace version 6.0, you can convert definitions created in the 	<p>Washington DC</p>

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Product	Release notes	Family
	<p>legacy Data Certification application into draft Data Manager Certification policies in CMDB Workspace. For more information, see . ↗</p>	
<p>Core Now Platform</p>	<p>Previously, if a transaction was canceled, certain auditable operations were not being recorded. This behavior of missing audit records is because the platform executes some operations between the record change and is canceled before audit creation. But now, audits are created immediately after the record is changed, reducing the chance of a canceled transaction aborting the operation before the audit is recorded. To facilitate this update, audits are now recorded in the same thread as the transaction. Earlier audits were created in a background thread.</p> <p>This change redefines the default value of the <code>glide.db.audit.lazy</code> property from true to false. Ideally, this property is not defined in the Properties table, which means that the majority of instances start using the new default value and behavior with the <i>Washington DC</i> release. On some instances, this property may have been inserted with the value set to true, which means that these instances won't be able to use this change to audit behavior. Delete this property to leverage this update.</p>	<p>Washington DC</p>
<p>Encryption Key Management</p>	<p>If you upgrade your instance to <i>Washington DC</i> but don't upgrade your <i>MID Server</i>, Secrets Management authentication fails. Avoid authentication failures by upgrading your <i>MID Server</i> to <i>Washington DC</i>. If you can't upgrade, you must turn off authentication until <i>MID Server</i> is upgraded to <i>Washington DC</i> to avoid authentication failures.</p> <p>For details on MID Server upgrades, see MID Server upgrades ↗.</p>	<p>Washington DC</p>
<p>Enterprise Asset Management</p>	<p>After you upgrade to <i>Washington DC</i>, the <code>model_component</code> field isn't available in the Enterprise asset <code>[sn_ent_asset]</code> table. Instead, a new <code>model_component_id</code> field is available in the Asset <code>[alm_asset]</code> table. The ENT - Migrate to new model component script moves the existing <code>model_component</code> field data to the <code>model_component_id</code> field.</p> <p>Note the following upgrade scenarios for the Total Cost of Ownership (TCO) of assets:</p> <ul style="list-style-type: none"> • Upgrade works for all <i>Enterprise Asset Management</i> flow tasks • You must have task rate cards for each workflow task. 	<p>Washington DC</p>

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Product	Release notes	Family
	<ul style="list-style-type: none"> • The TCO upgrade populates the Asset and Expense category fields on expense lines corresponding to each task. • Expense category is populated based on the expense lines and the source of the expense line. • You need to populate the TCO benchmark cost and the TCO benchmark threshold field on all existing models manually or using the bulk import functionality. • TCO upgrade populates following fields on asset forms: <ul style="list-style-type: none"> ◦ Asset end of useful life: The created date plus the useful life in months. ◦ Asset first used date: The created date. ◦ Asset TCO: The aggregated sum of all the expense lines related to the asset. For simple assets, Asset TCO is the aggregated sum of expense lines under it. For complex assets, Asset TCO is the aggregated sum of expense lines of the parent as well as its child assets. 	
Financial Services Operations Core	<p>During the upgrade to <i>Washington DC</i>, the <i>Financial Services Operations Core</i> plugin reparents the following tables:</p> <p>Note: You may experience a longer time for the upgrade to complete if your upgraded instance has a large number of records.</p> <ul style="list-style-type: none"> • The Service Definition [sn_bom_service_definition] table extends from the Service Definition [sn_case_type_selection] table instead of the Request Definition [sn_ind_request_definition]. • The Financial task [sn_bom_task] table extends from the Customer Service Task [sn_customerservice_task] table instead of the Global Task [task] table. • The Policy Participant [sn_bom_policy_participant] table extends from the Sold Product Related Party [sn_install_base_sold_product_related_party] table. <p>Reparenting enables leveraging of the benefits and advancements introduced by <i>ServiceNow® Customer Service Management (CSM)</i> while preserving the functionality of existing applications.</p>	Washington DC
Hardware Asset Management 10.0.0	<p>After your upgrade to <i>Washington DC</i>, keep in mind the following upgrade scenarios for the Total Cost of Ownership (TCO) of assets:</p>	Washington DC

(continued)

Product	Release notes	Family
	<ul style="list-style-type: none"> • Upgrade works for all <i>Hardware Asset Management</i> flow tasks. • You must have task rate cards for each workflow task. • TCO upgrade populates an asset and expense category field on the expense line corresponding to each task. • Expense category is populated based on the expense lines and the source of the expense line. • You must populate the TCO benchmark cost and the TCO benchmark threshold field on all existing models manually or using the bulk import functionality. • TCO upgrade populates the following fields on assets: <ul style="list-style-type: none"> ◦ Asset end of useful life: Created date along with useful life in months. ◦ Asset first used date: Same as the created date. ◦ Asset TCO: Aggregated sum of all the expense lines related to the asset. For simple assets, Asset TCO is the aggregated sum of expense lines under it. For complex assets, Asset TCO is the aggregated sum of expense lines of the parent as well as its child assets. 	
<p>Healthcare and Life Sciences Service Management Core</p>	<p>During the upgrade to <i>Washington DC</i>, the Healthcare sold product [sn_hcls_sold_product] parent table changes to Install base item [sn_install_base_item] for the following tables:</p> <ul style="list-style-type: none"> • Member Plan [sn_hcls_member_plan] • Medication [sn_hcls_medication] • Immunization [sn_hcls_immunization] • Enrolled Program [sn_hcls_enrolled_program] • Enrolled Program Service [sn_hcls_enrolled_program_service] <p>In addition, the following tables have had their parent tables removed and are standalone tables:</p> <ul style="list-style-type: none"> • Healthcare Organization[sn_hcls_organization] • Healthcare Location[sn_hcls_location] • Practitioner Location[sn_hcls_practitioner_facility] <p>This reparenting enables customers to use the organizations and location tables for a broader set of use cases.</p> <p>Existing data is migrated in the following manner so that existing functionality isn't impacted:</p>	<p>Washington DC</p>

(continued)

Product	Release notes	Family
	<ol style="list-style-type: none"> 1. Reference of location field in <code>sn_hcls_immunization</code> updated to use <code>cmn_location</code>. 2. All data is moved from Healthcare Sold Product to Install Base Item tables. 3. Rows in the affected Install Base Item are populated based on the <code>source_task</code> value from the Healthcare Sold Product. 4. The state of <code>sn_hcls_enrolled_program</code> and <code>sn_hcls_enrolled_program_service</code> are copied from <code>hcls_state</code>. 5. All data moves to the standalone tables of Healthcare Organization, Healthcare Location, and Practitioner Location. <ol style="list-style-type: none"> a. The script creates records in the Business Location table for existing records in the Healthcare Organization table to form a 1:1 reference. b. Records that refer to a service organization are updated with a reference to the appropriate business location. c. Any practitioner who has a record in the practitioner location will have a record created in the Service Organization Member table with the appropriate business location. d. Records that contain healthcare location data will contain the parent service organization of that healthcare location. <p>Note: You may experience a longer time for the upgrade to complete if your upgraded instance has a large number of records.</p>	
Instance Data Replication	<p>Improve the performance and processing efficiency of <i>Instance Data Replication (IDR)</i> by upgrading your replication sets to V2, which uses the <i>Hermes Messaging Service</i>. For details, see Upgrading legacy replication sets to V2 in Instance Data Replication.</p> <p>Log rotation is automatically enabled for the Replication Payload Error [<code>idr_replication_payload_error</code>] table after the upgrade. By default, the log rotation schedule is comprised of seven shards, with five days for each shard. All log entries in this table created before the upgrade are automatically truncated.</p>	Washington DC
MID Server	For the latest <i>MID Server</i> system requirements, see MID Server system requirements . The minimum JRE version	Washington DC

(continued)

Product	Release notes	Family
	<p>supported is 11.0.9 and the recommended version is 11.0.16.1.</p> <p>If you have installed your own JRE, the upgrade process takes the following actions to ensure that the <i>MID Server</i> uses a supported JRE:</p> <ul style="list-style-type: none"> • If a <i>MID Server</i> is using an unsupported version of the JRE when it upgrades, the upgrade process displays a warning message with the minimum and recommended JRE version. • If a supported JRE is running on the <i>MID Server</i> host, the upgraded <i>MID Server</i> uses that version. <p>All <i>MID Server</i> host machines require access to the download site at install.service-now.com to enable auto-upgrades. For additional details, read how the system manages MID Server upgrades.</p> <p>Only one <i>Windows MID Server</i> service is permitted per executable path. Upgraded <i>Windows MID Servers</i> that have multiple services pointing to the same installation folder can't start. See MID Server fails to start for more information.</p> <p>For more information about <i>MID Server</i> upgrades, see the following topics:</p> <ul style="list-style-type: none"> • MID Server pre-upgrade check: Describes how the AutoUpgrade monitor tests the ability of the <i>MID Server</i> to upgrade on your system before the actual upgrade. • Upgrade the MID Server manually: Describes how to upgrade your <i>MID Servers</i> manually. 	
Now Assist for Creator		Washington DC
Now Assist	<p>For more information about troubleshooting your <i>Now Assist</i> application and plugin upgrades, see the KB article for issues and mitigation for Now Assist upgrades.</p>	Washington DC
Order Management for Telecommunications, Media, and Technology	<p>New features introduced in this <i>Washington DC</i> release aren't supported in earlier releases of <i>Order Management for Telecommunications, Media, and Technology</i>.</p> <p>Starting with the <i>Washington DC</i> release, the Monthly Recurring Charges (MRC) and the Non Recurring Charges (NRC) set for product offerings and product attribute characteristics are stored in the Pricing data model in price lists and price list lines, rather than the Product Offering data model. If you want to upgrade your pricing information to use price lists after upgrading to <i>Washington DC</i>, see the</p>	Washington DC

(continued)

Product	Release notes	Family
	<p>Price Management Plugin (com.sn_csm_pricing) uptake for Telecommunications, Media, and Technology customers upgrading to Washington [KB1585863] 🔗 article in the Now Support Knowledge Base.</p> <p>After upgrading to the <i>Washington DC</i> release, a fix script runs automatically to deactivate certain telecommunications list records that are no longer needed to resume the capture of an unfinished order. For more information on these records and using the former order capture process if needed, see the Deprecating Telco List for Order Capture [KB1586538] 🔗 article in the Now Support Knowledge Base.</p> <p>After upgrading to the <i>Washington DC</i>, review the reconfiguration workarounds for working on new change orders or orders with disconnect, suspend, or resume actions while using the product configurator. For details, see the Order line reconfiguration issues in Washington when using Order Capture UI [KB1585976] 🔗 article in the Now Support Knowledge Base.</p>	
Order Management	New features introduced in this <i>Washington DC</i> release aren't supported in earlier releases of <i>Order Management</i> .	Washington DC
Performance Analytics	The legacy PA Scores [pa_scores] table is being deprecated. If you still have indicator scores captured in the PA Scores table and the number of such scores is fewer than 43 million, these scores will be migrated automatically to the pa_scores_l1 and pa_scores_l2 tables upon upgrade. The expected amount of time added to upgrade is approximately two hours. For more information, see KB1294371 🔗 or Migrating Performance Analytics scores 🔗 .	Washington DC
Platform Analytics Experience	<i>Platform Analytics</i> Experience functionality was previously located in the <i>Platform Analytics</i> Workspace. The functionality is now part of the core <i>Now Platform</i> , accessible through the <i>Next Experience Unified Navigation</i> . You can migrate any dashboards, reports, and <i>Performance Analytics</i> widgets that were created in <i>Core UI</i> to this functionality.	Washington DC
Playbooks in Workflow Studio	After you upgrade to <i>Washington DC</i> , update the <i>Playbooks</i> and <i>Workflow Studio</i> applications in the ServiceNow Store.	Washington DC
Portfolio Planning	Starting with v8.0.0, you can access the <i>Strategic Portfolio Management (SPM)</i> Pro-licensed features	Washington DC

(continued)

Product	Release notes	Family
	<p>only in <i>Strategic Planning</i> Workspace. If you own an <i>SPM</i>Pro license but you're still using the <i>SPM</i>Pro-licensed features (such as Goals, Product Feedback, Hybrid portfolio planning, and additional lenses) in <i>Portfolio Planning</i> Workspace, you must install <i>Strategic Planning</i> to access such features. For more information on features that can be accessed only in <i>Strategic Planning</i> Workspace, see Comparing Portfolio Planning with Strategic Planning.</p>	
<p>Predictive Intelligence</p>	<p>If you're upgrading to <i>Washington DC</i>, you won't be able to create new regression solutions. If you have existing solutions, they will still be supported and you will be able to train and modify them, but you won't be able to create new ones.</p> <p>The changes to the similarity and clustering solutions apply to all instances that are on <i>Washington DC</i>.</p>	<p>Washington DC</p>
<p>Proactive Service Experience Workflows</p>	<p>Customers who prefer not to receive trouble ticket notifications can disable the business rules related to the incident and case tables. To learn more about how to disable the business rules for trouble ticket notification, see Deactivate trouble ticket notification.</p>	<p>Washington DC</p>
<p>Public Sector Digital Services</p>	<p>After the upgrade, certain public sector menus and menu items in the <i>CSM Configurable Workspace</i> revert to their original <i>CSM</i> label names. You can relabel these items for public sector use by updating the UX List Categories for Customer and Service Organizations. For more details on relabeling, navigate to All > Constituent Service > Administration > Guided Setup, and select Configurable Workspace for Public Sector Digital Services > Customize Workspace Labels Manually..</p>	<p>Washington DC</p>
<p>Robotic Process Automation (RPA) Hub</p>	<p>Ensure that you upgrade any of the following currently installed Microsoft Software Installers (MSIs) by downloading the RPA applications:</p> <ul style="list-style-type: none"> • <i>RPA Desktop Design Studio</i> • <i>Attended Robot</i> • <i>Unattended Robot</i> • <i>Unattended Robot</i> Login Agent <p>For more information, see Download the RPA applications from RPA Hub.</p> <p>The following upgrade steps are applicable only when you're upgrading from <i>San Diego</i> or <i>Tokyo</i> to <i>Washington DC</i>.</p>	<p>Washington DC</p>

(continued)

Product	Release notes	Family																
	<p>Based on the number of records in the application file table, you could experience a potential delay while upgrading the <i>RPA Hub</i> applications from <i>Tokyo</i> or before to <i>Washington DC</i>.</p> <p>Before upgrading <i>RPA Hub</i> to <i>Washington DC</i>, you must set the value of the <code>glide.rollback.blacklist.TableParentChange.change</code> system property to false. If this property doesn't exist in the System Property [sys_properties] table, add the property and set its value to false. For more information on how to add a property, see Add a system property.</p> <p>After you upgrade to the <i>Washington DC</i>, the bot process definitions change to the new structure, which is the bot process configuration.</p> <p>Although the bot process configuration doesn't replace the bot process completely, most fields are moved from bot process to bot process configuration. If you upgrade to the <i>Utah</i> version without updating the system property value, the tables don't extend the Application File table. To update the table changes manually, see the Restructuring RPA Hub tables to sys_metadata in Utah article in the <i>Now Support Knowledge Base</i>.</p>																	
<p>Service Operations Workspace for IT Service Management</p>	<p>Ensure that the following applications have compatible upgraded versions:</p> <ul style="list-style-type: none"> <i>Service Operations Workspace ITSM</i> Applications application (sn_sow_itsm_cont) <i>Service Operations Workspace ITOM</i> Applications application (sn_sow_itom_cont) <p>Compatible SOW versions</p> <table border="1" data-bbox="403 1430 1187 1976"> <thead> <tr> <th>SOW-ITSM (sn_sow_itsm_cont)</th> <th>SOW-ITOM (sn_sow_itom_cont)</th> </tr> </thead> <tbody> <tr> <td>1.1.x</td> <td>21.0.y</td> </tr> <tr> <td>1.2.x</td> <td>21.1.y</td> </tr> <tr> <td>1.3.x</td> <td>21.2.y, 21.5.y, and 21.6.y</td> </tr> <tr> <td>2.0.x</td> <td>22.0.y</td> </tr> <tr> <td>2.1.x</td> <td>22.1.y and 22.y.y</td> </tr> <tr> <td>3.1.x</td> <td>23.y.y</td> </tr> <tr> <td>4.0.x</td> <td>24.y.y</td> </tr> </tbody> </table>	SOW-ITSM (sn_sow_itsm_cont)	SOW-ITOM (sn_sow_itom_cont)	1.1.x	21.0.y	1.2.x	21.1.y	1.3.x	21.2.y, 21.5.y, and 21.6.y	2.0.x	22.0.y	2.1.x	22.1.y and 22.y.y	3.1.x	23.y.y	4.0.x	24.y.y	<p>Washington DC</p>
SOW-ITSM (sn_sow_itsm_cont)	SOW-ITOM (sn_sow_itom_cont)																	
1.1.x	21.0.y																	
1.2.x	21.1.y																	
1.3.x	21.2.y, 21.5.y, and 21.6.y																	
2.0.x	22.0.y																	
2.1.x	22.1.y and 22.y.y																	
3.1.x	23.y.y																	
4.0.x	24.y.y																	

(continued)

Product	Release notes	Family
	<p>In the table, x is the sub-version of the <i>Service Operations Workspace ITSM</i> Applications application (sn_sow_itsm_cont) and y is the sub-version of the <i>Service Operations Workspace ITOM</i> Applications application (sn_sow_itom_cont).</p> <p>After the 3.0 upgrade, the <i>Recommendation Framework</i> feature is no longer available. Instead, only the standard version of the <i>Recommended Actions for ITSM</i> feature is available.</p>	
Service Portal	<p>After upgrading, you must specify the tables from which guest users can access data for any public widgets that accept the table input parameter. By default in the <i>Washington DC</i> release, public widgets that accept the table input parameter can't access and return data from any tables for guest users. If you added the <code>glide.service_portal.widget.table_allow_list</code> or <code>glide.service_portal.widget.allow_list</code> system properties before upgrading, the values of these properties will be migrated to the Public Table Allow List for widgets after upgrading. For more information, see Configure widget security.</p> <p>If a user previously selected a user consent preference for user experience analytics for portals different from the rest of the platform, the preference selected for the platform is also used for portals in the <i>Washington DC</i> release. For example, if users opted out of tracking for portals but opted in to tracking for the rest of the platform in the <i>Vancouver</i> release, user experience analytics for portals are tracked for them in the <i>Washington DC</i> release. Users can update their selection from the user profile page in portals at any time.</p>	Washington DC
Software Asset Management	<p>After upgrading to <i>Washington DC</i>, you must redo all your customizations related to <i>Adobe</i> and <i>Microsoft 365</i> integrations with your <i>ServiceNow</i> instance because the functionalities of these integrations are moved to the <i>Software Asset Management - SaaS License Management</i> store application.</p> <ul style="list-style-type: none"> • If you've customized an impacted file, the upgrade process skips the file and indicates a conflict. You must manually resolve the conflict and ensure that the old existing file is deleted. • If you haven't customized an impacted file, the file gets deleted as part of the upgrade, and a file with a new sys_id is created. 	Washington DC
Strategic Planning	Starting with v4.0.2, you can access the <i>Strategic Portfolio Management (SPM)</i> Pro-licensed features	Washington DC

(continued)

Product	Release notes	Family
	<p>only in <i>Strategic Planning</i> Workspace. If you own an <i>SPMPro</i> license but you're still using the <i>SPMPro</i>-licensed features (such as Goals, Product Feedback, Hybrid portfolio planning, and additional lenses) in <i>Portfolio Planning</i> Workspace, you must install <i>Strategic Planning</i> to access such features. For more information on features that can be accessed only in <i>Strategic Planning</i> Workspace, see Comparing Portfolio Planning with Strategic Planning.</p>	
<p>Supplier Lifecycle Operations</p>	<p>After upgrading from the <i>Vancouver</i> release to the <i>Washington DC</i> release, you will see only the <i>Source-to-Pay Workspace</i> on the All navigation tab. You don't have to do anything if you choose to continue to use the <i>Source-to-Pay Workspace</i>.</p> <p>However, you will see both the <i>Source-to-Pay Workspace</i> and <i>Supplier Manager Workspace</i> on the Workspaces tab. If you want to use the <i>Supplier Manager Workspace</i> instead of the default <i>Source-to-Pay Workspace</i>, ensure that you run the <code>fixscript_migrate_workspace_to_smw.xml</code> fix script after upgrading to the <i>Washington DC</i> release. You can download the <code>fixscript_migrate_workspace_to_smw.xml</code> file from the <i>ServiceNow Store</i>. For more information about how to run a fix script, see Run fix scripts.</p> <p>If you want to revert to using the <i>Source-to-Pay Workspace</i>, run the <code>fixscript_migrate_workspace_to_s2p.xml</code> fix script. You can download the <code>fixscript_migrate_workspace_to_smw.xml</code> file from the <i>ServiceNow Store</i>. For more information about how to run a fix script, see Run fix scripts.</p>	<p>Washington DC</p>
<p>UI Builder</p>	<p>After your upgrade to <i>Washington DC</i>, update the <i>UI Builder</i> application from the <i>ServiceNow Store</i>.</p>	<p>Washington DC</p>
<p>Virtual Agent</p>	<p>Some features that were delivered in <i>Vancouver</i> Patch 7 are not available in the initial <i>Washington DC</i> early access release. These features will be available in future Patch releases of <i>Washington DC</i>.</p> <p>Input Collector control changes</p> <ul style="list-style-type: none"> • Drag and drop to reorder inputs within the node. • Specify the type of input that the node will accept: Text, Email, IP Address, Phone Number, URL, or custom. • Maximum number of inputs per node is 5. 	<p>Washington DC</p>

(continued)

Product	Release notes	Family
	<p>Enforced user prompt option in the Text user input control</p> <p>Toggle switch in the Advanced properties area that allows topic authors to specify the message shown to the user instead of the response generated by the LLM.</p>	
Vulnerability Response integrations	<ul style="list-style-type: none"> For more information about the released versions of the <i>Vulnerability Response</i> application as well as the third-party and <i>ServiceNow</i> applications that are compatible with the <i>Washington DC</i> release, see the Vulnerability Response Compatibility Matrix and Release Schema Changes [KB0856498] article in the <i>Now Support</i> Knowledge Base. For information about the new features of <i>Vulnerability Response</i>, see Vulnerability Response release notes. 	Washington DC

Upgrade planning checklist

Plan and track the activities related to your ServiceNow instance upgrade. To help ensure that you complete all the tasks for a successful upgrade, follow the step-by-step instructions in the upgrade planning checklist to track and plan the upgrade.

Some optional steps may not be appropriate depending on the number of instances, customizations, and so forth. Mark the ones you do not need in the **N/A** column.


Tip: To download a PDF version of this checklist, click [here](#).

The process for completing steps for self-hosted customers may vary (for example, requesting an instance clone or upgrades). These differences must be considered during planning.


Customer name:	
Product instance name:	https://[instancename].service-now.com
Other instance names	https://[instancename].service-now.com https://[instancename].service-now.com

	Description	Yes	No	N/A
Phase 1 - Read the release notes and plan your upgrade				
1	Review the Tokyo release notes for the target ServiceNow feature release and patch, in addition to product and release documentation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Description	Yes	No	N/A
	For Tokyo -specific upgrade considerations, see Pre- and post-upgrade tasks for various products .			
Phase 2 - Complete these planning tasks.				
2	Confirm which ServiceNow instances are in-scope for upgrade.			
3	Confirm the instance hosting model. For example, ServiceNow cloud, on-premise, or off-premise.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4	Based on the Tokyo release notes and other release materials, determine new functionality or notable changes that need to be validated after the upgrade.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5	Confirm plans to enable or disable features introduced in the new product release.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6	Review the Browser support to determine browser prerequisites. For example, versions and types supported, and additional requirements for new UI versions. Compare these supported browsers to your corporate standard and identify any gaps.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7	Create a project plan for cloning, upgrading, and testing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8	Identify the core team of testers, power users, and key stakeholders required to validate functionality in the ServiceNow instances before and after the upgrade.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9	Confirm whether there are any change freeze windows impacting the timing for environment clones or upgrades. For example, end quarter.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10	Confirm which of the following situations applies to your ServiceNow non-production instances: <ol style="list-style-type: none"> 1. Development and testing can be frozen until the production upgrade is completed. 2. Continued development (and testing) activities need to continue in a non-production instance while upgrade, remediation, and testing activities are performed in parallel on another instance. 			

	Description	Yes	No	N/A
	<p>3. Once the final upgrade to your production instance is complete, the cloning of your final production instance to your non-production instance will wait until after the production upgrade is complete.</p>			
11	Confirm the availability of other systems required for integration testing (key resources and environments).	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12	Confirm whether there are any restrictions in which ServiceNow instances can be used for integration testing. For example, an interfacing system is only set up to access a specific ServiceNow test instance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13	Confirm the testing scope and approach.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
14	Create a comprehensive test plan including test cases for all core instance functionality and integrations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
15	Confirm the method for tracking any defects identified during testing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
16	<p>Create a high-level implementation plan that covers:</p> <ul style="list-style-type: none"> • the sequence and timing to upgrade non-production and production instances • the instances to be cloned • the instance to be used for integration testing. 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
17	<p>Confirm whether there are any change freeze windows impacting the timing for environment clones or upgrades. For example, end quarter.</p> <p>Responsible: ServiceNow or Customer</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
18	Determine whether existing internal training materials, Knowledge Base articles in the customer instance, or other supporting documentation must be updated to align with the upgraded version. For example, changes in functionality or user interface.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
19	<p>Optional: Schedule the ServiceNow Configuration Review , which provides</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Description	Yes	No	N/A
	<p>recommendations to align the customer configurations with ServiceNow best practices.</p> <p>i Note:</p> <p>There may be a service charge and require professional services engagement.</p>			
20	<p>On your production instance, create a system clone and select your development instance as the Target instance. Notify impacted users and internal stakeholders of the scheduled date/ time for cloning (from production) and upgrade of the non-production instance.</p> <p>i Note:</p> <p>It is important to test on a system that reflects the production instance as closely as possible. If your non-production and production instances are the same size, include the production audit log and the attachment data, and ensure that you have deselected the exclude options.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Phase 3 - Verify your upgrade configurations and schedule the development instance upgrade in Now Support				
21	<p>Check the configuration of the <i>Check distribution for possible upgrade</i> scheduled job to view how often and when it runs.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
22	<p>Verify that the Check distribution for possible upgrade sys_trigger is set properly for upgrading.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
23	<p>Verify that the Check database for possible upgrade sys_trigger is set properly for upgrading.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
24	<p>Schedule the upgrade in Now Support.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25	<p>If applicable, request a version entitlement.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Phase 4 - Upgrade and validate the development instance				
26	<p>Using the Upgrade Monitor, monitor the upgrade to your instance and validate that</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Description	Yes	No	N/A
	the upgrade to your development instance is complete.			
27	After the upgrade for your development instance is complete, process the skipped records list  in the Upgrade Monitor.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28	Identify your update sets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
29	Before and after upgrading, conduct smoke tests on your development instance. Use your comprehensive test plan to perform functional testing.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Phase 5 - If applicable: Upgrade and validate your other non-production instances, such as your test instance				
30	On your production instance, create a system clone and select your development instance as the Target instance .	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31	Schedule the non-production upgrade in Now Support and verify your upgrade configurations.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32	Validate that the upgrade to your non-production instance is complete.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33	Install any optional plugins that were installed on your development instance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34	Install any custom applications and post-upgrade fix scripts that you need.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
35	Install update sets.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36	Perform functional testing and monitor the performance of your instance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Phase 6 - Prepare to upgrade the production instance				
37	Confirm sign-off from IT and Business stakeholders that all non-production instance defects have been fixed and validated in update sets. Responsible: Customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Description	Yes	No	N/A
38	Confirm the core team of key stakeholders required to validate functionality in the ServiceNow instance after the production upgrade. Responsible: Customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
39	Confirm coverage for Day 1 support post-upgrade. Responsible: Customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
40	Create a Production Upgrade Implementation Plan that includes all upgrade steps, roles and responsibilities, communication plans, key contacts, support coverage for Day 1, and so forth. Responsible: Customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
41	Schedule a walkthrough and sign-off of the Implementation Plan with key stakeholders and the core team. Responsible: Customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
42	Submit and obtain approvals for change records as required by the organization change process. Responsible: Customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
43	Send a communication to key stakeholders and end users with details for the production upgrade outage, new features, and so forth. Responsible: Customer	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
44	Profile the performance of your instance before upgrading.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
45	Use the ServiceNow Performance homepage to document the performance of your instance before the upgrade.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
46	On your clone, perform functional testing and monitor the performance of your instance.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Phase 7 - Upgrade the production instance				
47	Schedule the upgrade in Now Support.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

	Description	Yes	No	N/A
48	If applicable, request a version entitlement.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
49	Monitor the upgrade to your instance and validate that the upgrade to your production instance is complete.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
50	Apply any update sets and post-upgrade fix scripts that you have.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
51	Validate and test your instance by conducting user acceptance testing (UAT). Verify with all key stakeholders that the system is performing properly after production upgrade, and key functionality is available.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Upgrade tools and resources

Learn about ServiceNow products and tools that can improve your upgrade experience.

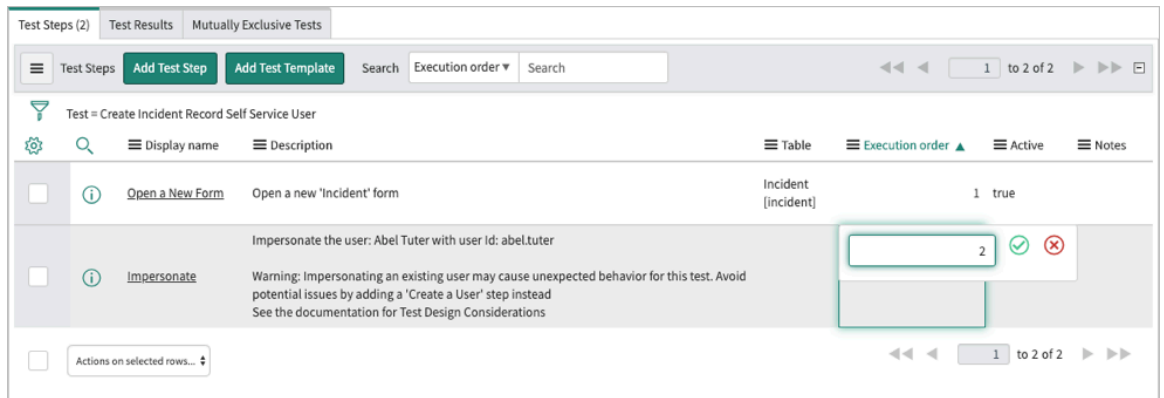
Products

Use these ServiceNow products to automate parts of your upgrade testing and manage your upgrades from one central place.

[Automated Test Framework](#)

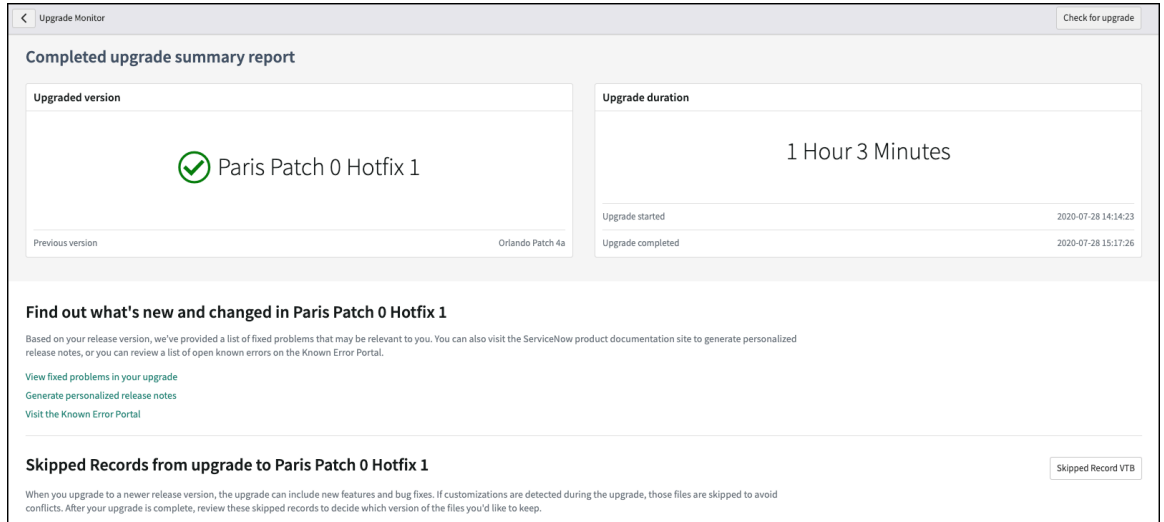
The Automated Test Framework (ATF) enables you to create and run automated tests to confirm that your instance works after making a change. For example, after an upgrade, during application development, or when deploying instance configurations with update sets. Review failed test results to identify the changes that caused the failure and the changes that you should review.

Note: By default, the system property to run automated tests is disabled to prevent you from accidentally running them on a production system. Run tests only on development, test, and other non-production instances to avoid data corruption and outage.



[Upgrade Center](#)

Use ServiceNow® Upgrade Center to plan and manage your upgrades. Use the Upgrade Preview module to explore different release versions available to you and gain insights about the experience of an upgrade without actually upgrading your instance. You can also monitor the status of any ongoing upgrade and view the summary of your latest upgrade with the new Upgrade Monitor module. The Upgrade Center also features an Upgrade visual task board (VTB) to manage post-upgrade skips. A separate Upgrade History module can be used to view all your past upgrades.



Upgrade tools

In addition to upgrade-related products, you can also use ServiceNow's upgrade tools.

[Now Support upgrade assist](#)

Stay current by automating your ServiceNow upgrades. Use an automated service to offload upgrade scheduling tasks.

[Known Error portal](#)

Review a list of known issues in selected patch release versions.

Sample upgrade project plans

The [Upgrade planning checklist](#) provides a quick look at the steps in an upgrade. If you'd like to track your upgrade progress in Excel, PDF, or Microsoft Project, you can download these sample project plans to get started.

- [PDF](#)
- [Excel](#)
- [MPP](#)

Best practices

Visit the ServiceNow Customer Success Center website for information on upgrade value and best practices.

[Upgrade value calculator](#)

Determine the potential business value of staying current with ServiceNow upgrades.

[Playbook: Upgrade quickly and maintain platform health](#)

Use upgrade processes and tools to conduct your upgrades, and learn how to make changes to your baseline system when required.

[Balance value and risk with platform customizations](#)

Learn when and how to customize your instance to maximize value and minimize upgrade impact.

Balance value and risk with platform customizations.

Resources

[ServiceNow Customer Success Center](#)

Browse prescriptive content and tools such as playbooks, checklists, and quick answers to gain more value from your ServiceNow implementation.

[Expert services](#)

Connect with a ServiceNow expert who will help you apply best practices and tools to upgrade to the most recent ServiceNow innovations.

Upgrades and the ServiceNow Store

The [ServiceNow Store](#) includes official applications that are developed and released by ServiceNow. Users can download, access, and configure Tokyo apps on their instances. Store application versions can be upgraded when you upgrade your instance to a new release version.

New versions for a ServiceNow® Store app can be defined in patch and family releases. This includes the ability to define a minimum version and/or a hotfix for a version you already have installed. If your instance has an installed app version below the defined minimum version, the app will be upgraded to the minimum required version. Similarly, if your instance has an installed app below the defined hotfix version, your app will be upgraded to the hotfix version.

For example, consider an application that defines these versions in a release: 1.7.0, 2.4.1, and 3.0.1. In this example, version 1.7.0 is the minimum version. Versions 2.4.1 and 3.0.1 are hotfix versions.

When an instance upgrades to the release version, the following behavior occurs:

Minimum version upgrades

Version installed before the upgrade	Expected version after the upgrade
1.0.0	1.7.0 - The version upgrades to the minimum version
1.3.2	1.7.0 - The version upgrades to the minimum version
1.7.0	1.7.0 - The version stays the same, because the instance was already on the minimum version
1.7.2	1.7.2 - The version stays the same, because the instance was already ahead of the minimum version

Hotfix version upgrades

Version installed before the upgrade	Expected version after the upgrade
1.8.0	1.8.0 - The version stays the same, because the instance was already ahead of the defined hotfix version
2.0.0	2.4.1 - The version upgrades to the defined hotfix version
2.6.0	2.6.0 - The version stays the same, because the instance was already ahead of the defined hotfix version
3.0.0	3.0.1 - The version upgrades to the defined hotfix version
3.0.5	3.0.5 - The version stays the same, because the instance was already ahead of the defined hotfix version
4.0.0	4.0.0 - The version stays the same, because there are no hotfix versions defined for 4.0.0+.

Upgrade to the Tokyo release

Upgrading and patching your instance requires planning, testing, and validation. To ensure a safe and effective upgrade, read the release notes, create upgrade plans, and test your upgrade on non-production instances before upgrading your production instance.

i Important: These topics contain in-depth explanations about upgrades. For a step-by-step reference of upgrade steps, refer to the [Upgrade planning checklist](#).

Phase 1 - Read the release notes and plan your upgrade



Before you begin the upgrade process, it is essential to read the release notes for your target version so you understand the required upgrade and migration tasks. This information helps you plan a safe and effective upgrade.

Phase 2 - Prepare for the development instance upgrade



For a better understanding of your production upgrade duration, request a full clone of your production instance (including large tables and attachments) onto a non-production instance. Confirm your current and target release versions, because you will later use this information when scheduling your upgrade in Now Support.

Phase 3 - Verify your upgrade configurations and schedule the development instance upgrade in Now Support



Check the configuration of the *Check distribution for possible upgrade* scheduled job to view how often and when it runs. Review information about timing your upgrade in coordination with the *Check distribution for possible*

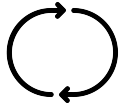
upgrade scheduled job. Then, schedule your upgrade in Now Support.

Phase 4 - Upgrade and validate the development instance



Track the progress of your upgrades with the Upgrade Monitor. For your first non-production instance upgrade (your development instance), use the Upgrade Monitor to process the skipped list of records that were not addressed in the upgrade. Then identify your update sets and perform functional testing.

Phase 5 - If applicable: Upgrade and validate your other non-production instances, such as your test instance



After you've configured and refined your development instance, request to upgrade any other non-production instances you have, such as a test instance. Immediately after the upgrade is complete, apply the post-upgrade changes made to your development instance, including activating optional plugins, installing and upgrading applications, and applying update sets.

Phase 6 - Prepare to upgrade the production instance



After you have configured and refined your test environment to be a good representation of your production environment, prepare to upgrade your production instance.

Phase 7 - Upgrade the production instance



After you have upgraded your development, non-production, and test instances, upgrade your production instance last. Then validate that the upgrade was complete, apply update sets and fix scripts, and perform post-upgrade user acceptance testing (UAT).

Phase 1 - Read the release notes and plan your upgrade

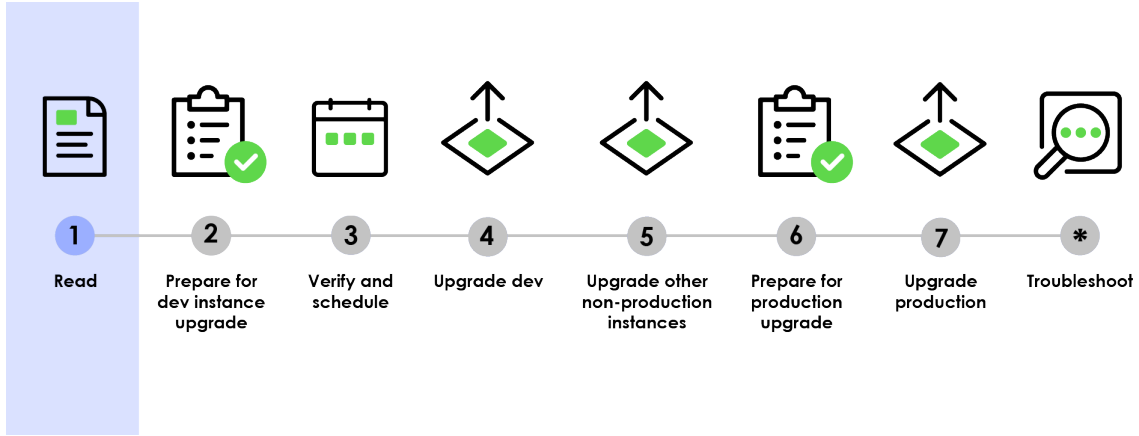
Before you begin the upgrade process, it is essential to read the release notes for your target version so you understand the required upgrade and migration tasks. This information helps you plan a safe and effective upgrade.

Before you begin

i Important: If multiple software versions are involved in your upgrade, be sure to consult the release notes for each version between your current version and the target version.

Role required: admin.

About this task



Procedure

1. Read the release notes for your target version. Review upgrade and migration tasks that you will need to complete before or after your upgrade.

- ServiceNow provides release notes for every release. The release notes offer valuable information about new functionality, notable changes, and fixes available in a particular version. Read the [Tokyo release notes](#) to determine whether the upgrade contains functionality you need and fixes that resolve any issues affecting your instance. The release notes can also help you determine whether items you previously customized are being upgraded.
- For Tokyo -specific upgrade considerations, see [Pre- and post-upgrade tasks for various products](#).
- If you are thinking about upgrading to the Tokyo family, problem (PRB) fixes can be an important factor in your upgrade plans. You can generate a list of [Personalized PRB release notes for upgrades to Tokyo](#). Compare the lists of fixed problems across various Tokyo upgrade scenarios to help you decide which release version to upgrade to.

2. Complete the preparation and planning tasks in Phase 2 of the [Upgrade planning checklist](#).

The checklist contains a list of planning tasks that guide you through various aspects of upgrade preparation. You are guided through tasks such as scoping, gathering stakeholders, identifying features to disable and enable, and creating test plans to use throughout the upgrade. Follow these steps to ensure that all aspects of your organization are ready for the upgrade.

3. To better prepare for the upgrade, evaluate the level of customizations on your instances.

For information on customization best practice guidelines, visit the [Customer Success Center website](#) [↗](#).

Complexity score	Customization examples
Low	<ul style="list-style-type: none"> ◦ Modification to form layout/design ◦ Add fields and/or UI policies to forms ◦ Build simple custom integration ◦ Extend an existing table (such as incident) in scope with new fields only

Complexity score	Customization examples
Low-medium	<ul style="list-style-type: none"> ◦ Extend an existing table (such as incident) in scope with some scripting ◦ Extend an existing table (such as incident) as the basis for a different application, such as HR
Medium	Build a new scoped application
Medium-high	Build a new global application
High	<ul style="list-style-type: none"> ◦ Change baseline business rules (such as modifying the SLA process) ◦ Build a complex custom integration

4. Create a comprehensive test plan that includes test cases for all core instance functionality and integrations, including any customizations you may have.

To efficiently test and evaluate system functionality, create a set of detailed test scripts for your testing team to use. You will use this test plan throughout each instance upgrade.

Instance	Type of testing required
Development	Conduct smoke tests.
Test	<ul style="list-style-type: none"> ◦ Use the ServiceNow Automated Test Framework to assist you in testing your non-production instances. ◦ You can use Automated Test Framework quick start tests and product testing suites to help you jump start your testing before and after upgrades. For a list of available tests and activation information, see Quick start tests. ◦ For extra testing coverage, you can also conduct user acceptance testing (UAT) on your non-production instances.
Production	<p>Conduct UAT.</p> <p>Note: The Automated Test Framework is intended for use on non-production instances. On your production instance, conduct UAT only.</p>

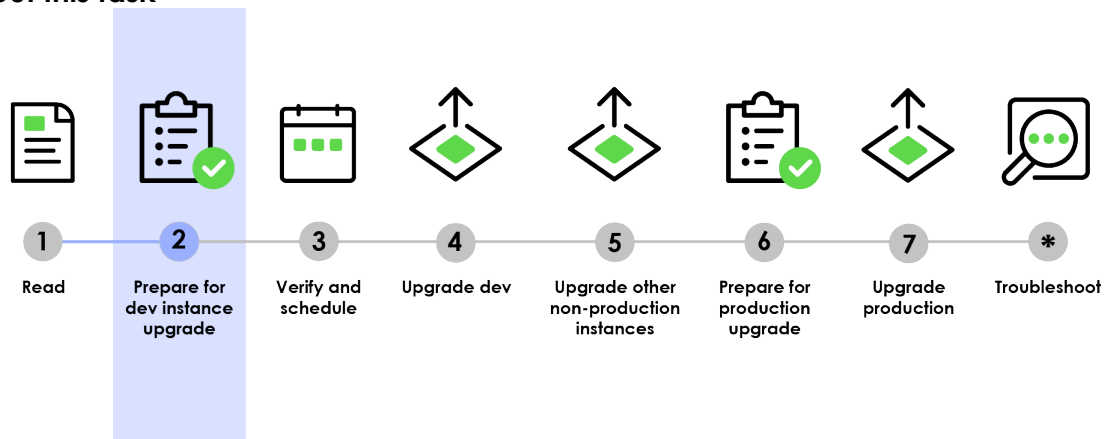
Phase 2 - Prepare for the development instance upgrade

For a better understanding of your production upgrade duration, request a full clone of your production instance (including large tables and attachments) onto a non-production instance. Confirm your current and target release versions, because you will later use this information when scheduling your upgrade in Now Support.

Before you begin

Role required: admin.

About this task



Procedure

1. On your production instance, create a system clone and select your development instance as the **Target instance**.

The clone provides you with an exact copy of production. Performing an upgrade on your clone allows you to simulate an upgrade on your production configuration in a non-production environment. Refer to [System clone](#) for details.

Important:

For effective upgrade testing, use this clone to test on a system that reflects the production instance as closely as possible. If your non-production and production instances are the same size, include the production audit log and the attachment data on your production clone. To ensure that all production data is included with the clone, make sure that you clear all the **Exclude** check boxes on the Request Clone form. On your non-production instance, replicate typical user behaviors that occur on your production instance to enhance an estimate of your upgrade duration.

2. Set expectations for performance during upgrades.

During an upgrade, your performance may be impacted because your nodes initiate the distribution upgrade. All nodes are restarted during an upgrade, but your multi-node instances are available during an upgrade because ServiceNow instances operate on a multi-node system. This multi-node system staggers node distribution upgrades, ensuring that there is at least one active pair of nodes for multi-node instances during an upgrade.

To help you set accurate expectations for performance during upgrades, be aware of the differences between the nodes on your non-production and production instances. Instances with one node experience a short period of downtime during the upgrade, but multi-node instances do not have UI downtime. For details on your nodes and their status, see the [Upgrade Progress screen](#) .

Phase 3 - Verify your upgrade configurations and schedule the development instance upgrade in Now Support

Check the configuration of the *Check distribution for possible upgrade* scheduled job to view how often and when it runs. Review information about timing your upgrade in coordination with the *Check distribution for possible upgrade* scheduled job. Then, schedule your upgrade in Now Support.

Before you begin

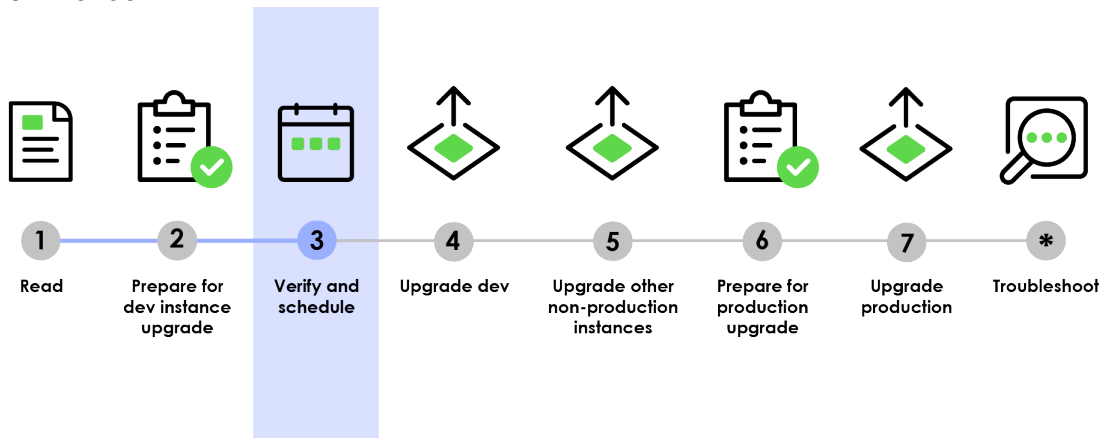
Role required: admin.

You must check the configuration of the **Check distribution for possible upgrade** and **Check database for possible upgrade** `sys_triggers`, which are essential to making sure your instance upgrades to the correct target version.

i Note: Starting in the Paris release, 'Upgrade' job has been renamed to 'Check distribution for possible upgrade'. In addition, the 'Check Upgrade Script' job has been renamed to 'Check database for possible upgrade'.

sys_trigger	Function
Check distribution for possible upgrade	<ul style="list-style-type: none"> Queries Now Support to ask whether an upgrade is going to happen in a given time interval, which is determined by the configuration for the <i>Check distribution for possible upgrade</i> scheduled job. Asks whether the instance should be running a different version. If so, the distribution for that version is downloaded, and your instance upgrades to the target version.
Check database for possible upgrade	<ul style="list-style-type: none"> Runs after the distribution has been upgraded. Performs the database upgrade.

About this task



i Important: Your upgrades are orchestrated out of your instance, not Now Support.

Now Support keeps records of what version you should be running, and your instance periodically queries Now Support to check its assigned version. When you designate a time for your upgrade, your instance begins the upgrade at that time. For example:

Action	Result
You schedule an upgrade to Tokyo Patch 8 to take place on June 10 at 3:00pm.	Now Support changes its records to reflect that you should be on Tokyo Patch 8 on June 10 at 3:00pm.

Action	Result
Now Support waits to get pinged by your instance after the scheduled time on June 10.	Your instance continues to operate on its current release version, and it periodically pings Now Support.
After the scheduled time on June 10, Now Support receives a ping from your instance.	Now Support tells your instance that it should be on Tokyo Patch 8.
Your instance receives a Now Support notification that it should be running a different version.	Your instance starts the upgrade.

How to schedule and manage instance upgrades on Now Support

You can browse the Now Support service catalog to request and self-service tasks such as scheduling an upgrade.

Request plugins and self-service tasks using service catalog on Now Support

Procedure

1. Check the configuration of the *Check distribution for possible upgrade* scheduled job to view how often and when it runs.
 - a. Navigate to **System Scheduler > Scheduled Jobs > Scheduled Jobs**.
 - b. In the list, find the *Check distribution for possible upgrade* scheduled job.
 - c. View the **Next action** column to determine when the job next runs.
2. Verify that the **Check distribution for possible upgrade** sys_trigger is set properly for upgrading.
 - a. Navigate to **System Scheduler > Scheduled Jobs > Scheduled Jobs**.
 - b. Find and click the *Check distribution for possible upgrade* scheduled job.
 - c. Make sure that the **Trigger type** is set to **Interval**.
 - d. Make sure that the **System ID** is set to **None**.
3. Verify that the **Check database for possible upgrade** sys_trigger is set properly for upgrading.
 - a. Navigate to **System Scheduler > Scheduled Jobs > Scheduled Jobs**.
 - b. Find and click the *Check database for possible upgrade* scheduled job.
 - c. Make sure that the **Trigger type** is set to **Run at System Startup**.
4. Schedule the upgrade in Now Support.
 - a. Log in to Now Support.
 - b. Click **Instances** in the left navigation menu.
 - c. Select **Manage Instances**.
 - d. Partners only: From the user menu, use the **Switch Company** feature to select a company.
 - e. Select the instance that you want to upgrade or patch.

f. In the **Actions** menu, click **Upgrade Instance**.

The **Upgrade an Instance** Service Catalog item opens up. It is prepopulated with the instance name and available versions to which you can upgrade or patch the

instance.

g. To specify a date and time for the upgrade or patch, click the calendar icon next to the **Start Date and Time** field.

h. Click the clock icon to select the time for the upgrade or patch.

Note: Setting the time for an upgrade or patch is important. Set the upgrade or patch to start 10–15 minutes before the *Check distribution for possible upgrade* scheduled job runs. This setting allows enough time for the upgrade or patch request to update Now Support 's records about which release version your instance should be on before the *Check distribution for possible upgrade* scheduled job runs.

i. Click **Submit**.

A confirmation message appears. If you do not need an entitlement, a change request is created.

5. If applicable, request a version entitlement.

a. In the **Actions** column, click **Schedule**.


If the version does require an entitlement, this screen appears:

* Available Versions

Kingston Patch 3
Kingston Patch 2
Kingston Patch 1
Jakarta Patch 8

i Entitlement: This version requires entitlement approval. A request will be submitted for review & approval before the upgrade can begin.

* Start Date and Time



*Due to the additional review that is required, you must select a date at least 3 days from today

b. Click the calendar icon and specify a date and time at least three days in the future.

ServiceNow entitlement managers respond to your entitlement request within three days.

i Note: Setting the time for an upgrade or patch is important. Set the upgrade or patch to start 10–15 minutes before the *Check distribution for possible upgrade* scheduled job runs. This setting allows enough time for the upgrade or patch request to update Now Support 's records about which release version your instance should be on before the *Check distribution for possible upgrade* scheduled job runs.

c. Click **Schedule**.

A confirmation message appears. If you need an entitlement, the entitlement request number is included. Click the entitlement request number to view the request.

d. If you have any questions about your entitlement, comment on your entitlement request after you have submitted it.

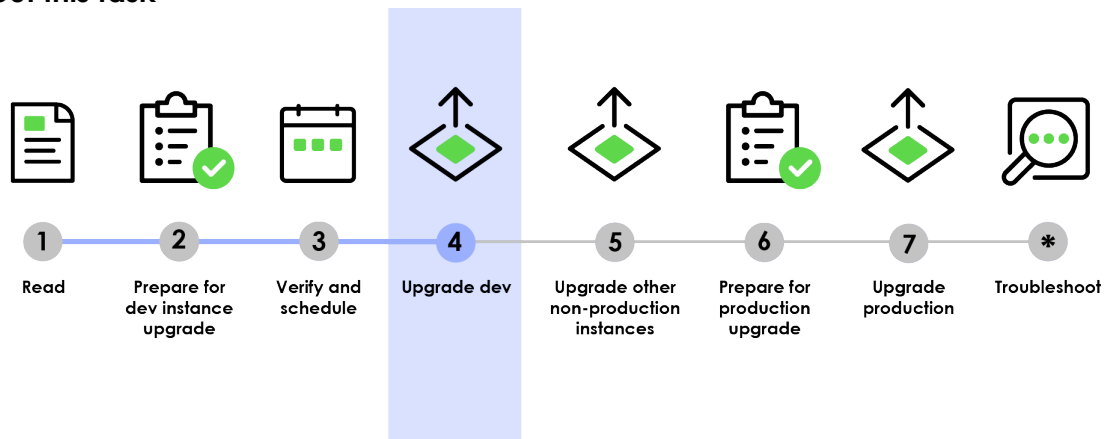
Phase 4 - Upgrade and validate the development instance

Track the progress of your upgrades with the Upgrade Monitor. For your first non-production instance upgrade (your development instance), use the Upgrade Monitor to process the skipped list of records that were not addressed in the upgrade. Then identify your update sets and perform functional testing.

Before you begin

Role required: admin.

About this task



The [Upgrade Monitor](#) helps you upgrade an individual instance. You can monitor the progress of an upgrade and resolve conflicts between the upgrade and customizations.

Procedure

1. Using the Upgrade Monitor, monitor the upgrade to your instance and validate that the upgrade to your development instance is complete.
2. After the upgrade for your development instance is complete, [process the skipped records list](#) in the Upgrade Monitor.

As you are processing the skipped list, you may merge and revert records, [resolve conflicts for an individual record](#), and make additional customizations. These changes go into the latest version, which goes into your current update set.

3. Identify your update sets.

You need these update sets for your subsequent non-production instances. If there are issues that must be addressed after the upgrade, make the appropriate changes and they will go into your current update set. Collect the update sets that:

- Were created while reviewing the skipped updates list.
- Were created while changing customizations to work with the latest release.
- Must go live immediately after your next upgrade.

Gathering these update sets before your upgrade expedites the process of exporting, importing, and committing them onto your other instances. After the correct update sets are identified, follow the standard process for moving and applying those update sets. Refer to [System update sets](#) for details.

4. Before and after upgrading, conduct smoke tests on your development instance. Use your comprehensive test plan to perform functional testing.

After upgrading, track any defects or deviations from the pre-upgrade testing results. Defect tracking can help identify root causes and create fixes. When a fix is identified, capture the fix in a single update set. The resulting update sets hold the cumulative fixes that should be applied to the production instance.

To help automate your testing and validation on non-production instances, use the [Automated Test Framework](#). You can use Automated Test Framework quick start tests and product testing suites to help you jump start your testing before and after upgrades. For a list of available tests and activation information, see [Quick start tests](#).

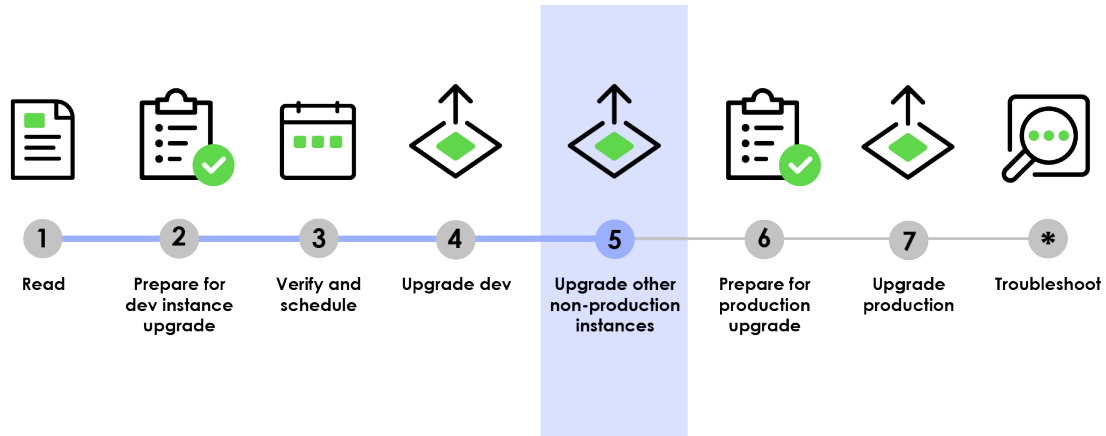
Phase 5 - If applicable: Upgrade and validate your other non-production instances, such as your test instance

After you've configured and refined your development instance, request to upgrade any other non-production instances you have, such as a test instance. Immediately after the upgrade is complete, apply the post-upgrade changes made to your development instance, including activating optional plugins, installing and upgrading applications, and applying update sets.

Before you begin

Role required: admin.

About this task



This instance naming convention assumes that you have three ServiceNow instances. If you have three instances, upgrade your instances in this order:

1. Development
2. Test
3. Production

If you have more or less than three instances, or if you are using [Team Development](#), these instance labels will be different. In general, upgrade your instances furthest from production towards your production instance.

After you have applied your development update sets to your test instance, perform the following tasks on your test instance (and other non-production instances, if applicable).

Procedure

1. Create a system clone down from your production instance.
2. Schedule the non-production upgrade in Now Support and verify your upgrade configurations.
3. Validate that the upgrade to your non-production instance is complete.
4. Install any optional plugins that were installed on your development instance.
5. Install any custom applications and post-upgrade fix scripts that you need.
6. Install update sets.
Use these update sets to move your initial changes into your subsequent non-production instances.
7. Perform functional testing and monitor the performance of your instance.

Reproduce the typical user activities that occur on your production instance. The [Automated Test Framework](#) can greatly assist you in testing your non-production instances. You can use Automated Test Framework quick start tests and product testing suites to help you jump start your testing before and after upgrades. For a list of available tests and activation information, see [Quick start tests](#). For extra testing coverage, you can also conduct user acceptance testing (UAT).

Phase 6 - Prepare to upgrade the production instance

After you have configured and refined your test environment to be a good representation of your production environment, prepare to upgrade your production instance.

Before you begin

Role required: admin.

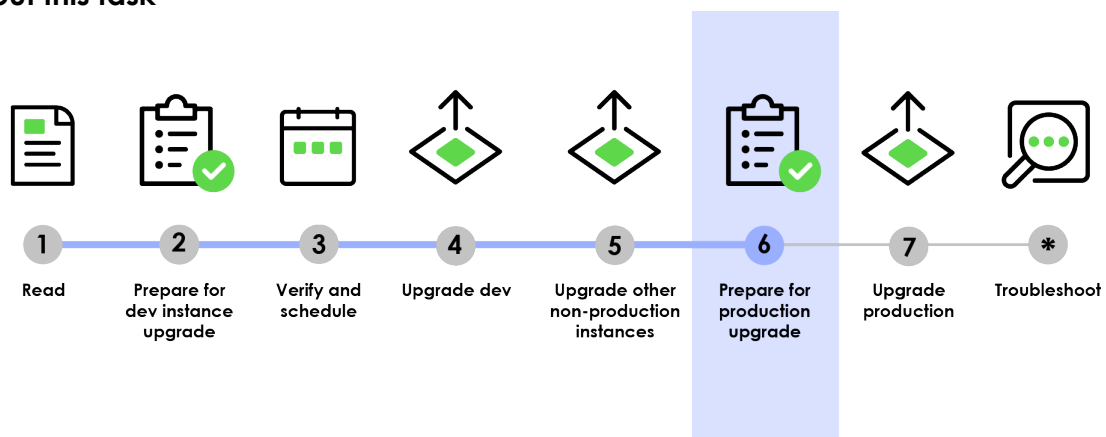
To ensure that all stakeholders in your company are prepared for the final production upgrade, complete the administrative planning tasks in Phase 6 of the [Upgrade planning checklist](#). When upgrading a production instance:

- Obtain confirmation from IT and management that all non-production instance defects have been fixed, validated, and included in an update set.
- Use the change management process established by your organization to track the upgrade.
- Communicate effectively with your user community regarding changes, new features, and process updates resulting from the upgrade.
- Negotiate a suitable upgrade time for all users of the ServiceNow system.

For example, schedule the upgrade after hours, to minimize impact to your users. Remember to schedule the upgrade to occur 15–20 minutes before the [Upgrade scheduled job](#) interval.

- Allow time in your change window to run all test cases and validate that all integrations, key business functionality, and system performance are acceptable. Add a time buffer for responding to errors without breaching the change window.

About this task



Procedure

1. Profile the performance of your instance before upgrading.

Pre-upgrade instance validation can provide a reliable benchmark of the current operating environment and alert you to any issues that may appear after the upgrade. For

example, it sometimes appears that specific functionality is broken by an upgrade. Analysis might show that the functionality did not work properly in the production instance, even before the upgrade.

Before performing the upgrade, analyze the current operating environment. Specifically, review:

- Key functionality
- Integrations
- Instance performance

2. Use the ServiceNow Performance homepage to document the performance of your instance before the upgrade.

You will later compare and contrast this information during your post-upgrade validation and testing. Benchmarks will be different for each of your instances.

To access the ServiceNow Performance homepage:

- a. Log in to your instance.
- b. From the list in the top left of the instance homepage, select **ServiceNow Performance**.



3. On your clone, perform functional testing and monitor the performance of your instance. Replicate typical user behaviors that occur on your production instance. Assign a consistent core team of power users and key stakeholders to validate important functionality in the ServiceNow instance before and after upgrades.

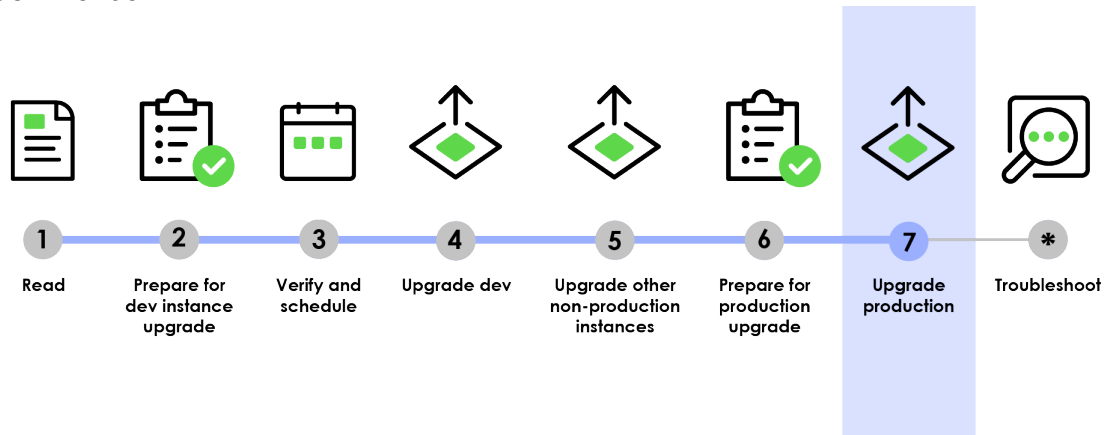
Phase 7 - Upgrade the production instance

After you have upgraded your development, non-production, and test instances, upgrade your production instance last. Then validate that the upgrade was complete, apply update sets and fix scripts, and perform post-upgrade user acceptance testing (UAT).

Before you begin

Role required: admin.

About this task



Procedure

1. Schedule the upgrade in Now Support.

- Log in to Now Support.
- Click **Instances** in the left navigation menu.
- Select **Manage Instances**.
- Partners only: From the user menu, use the **Switch Company** feature to select a company.
- Select the instance that you want to upgrade or patch.
- In the **Actions** menu, click **Upgrade Instance**.

The **Upgrade an Instance** Service Catalog item opens up. It is prepopulated with the instance name and available versions to which you can upgrade or patch the

Upgrade an Instance ☆

This catalog item enables you to schedule a patch/upgrade to a new ServiceNow release version. Upgrading and patching your instance requires planning, testing, and validation. Please plan to test your upgrade/patch on non-production instances before applying to your production instance.

Before initiating an upgrade process, review the upgrade and migration tasks for your applications and features. To help ensure that you complete all the tasks for a successful upgrade/patch, follow the step by step instructions in the upgrade planning checklist to track and plan the upgrade.

Upgrade assistance

The following resources are available to help you plan your upgrade/patch:

- [Upgrade Product Documentation](#)
- [Release Notes](#)
- [Known Error Information](#)
- [Upgrade and migration tasks for your applications and features](#)
- [Upgrade Planning Checklist](#)

* Instance

instance-name Non-Production Change Instance

Jakarta Patch 7

* Available Versions

Kingston Patch 4
Kingston Patch 3
Kingston Patch 2
Kingston Patch 1
Kingston
Jakarta Patch 8

instance.

g. To specify a date and time for the upgrade or patch, click the calendar icon next to the **Start Date and Time** field.

h. Click the clock icon to select the time for the upgrade or patch.

Note: Setting the time for an upgrade or patch is important. Set the upgrade or patch to start 10–15 minutes before the *Check distribution for possible upgrade* scheduled job runs. This setting allows enough time for the upgrade or patch request to update Now Support 's records about which release version your instance should be on before the *Check distribution for possible upgrade* scheduled job runs.

i. Click **Submit**.

A confirmation message appears. If you do not need an entitlement, a change request is created.

2. If applicable, request a version entitlement.

a. In the **Actions** column, click **Schedule**.


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i Note: Setting the time for an upgrade or patch is important. Set the upgrade or patch to start 10–15 minutes before the *Check distribution for possible upgrade* scheduled job runs. This setting allows enough time for the upgrade or patch request to update Now Support 's records about which release version your instance should be on before the *Check distribution for possible upgrade* scheduled job runs.

c. Click **Schedule**.

A confirmation message appears. If you need an entitlement, the entitlement request number is included. Click the entitlement request number to view the request.

d. If you have any questions about your entitlement, comment on your entitlement request after you have submitted it.

3. [Monitor the upgrade to your instance](#)  and validate that the upgrade to your production instance is complete.

There are several methods of verifying that your upgrade is complete:

- Navigate to the **System Diagnostics > Upgrade Monitor**.
- Navigate to **System Diagnostics > Upgrade Log** and locate the *Notifying HI that upgrade has been completed* message.
- Navigate to **System Definition > System Upgrades**. Information about all system upgrades is listed.
- Navigate to **System Diagnostics > Upgrade History** and search for the most recent upgrade.

4. Apply any update sets and post-upgrade fix scripts that you have.

5. Validate and test your instance by conducting user acceptance testing (UAT).

Performance and operating information is available in the system logs, which offer an excellent source of information for evaluating the inner workings of a ServiceNow instance.

Use this information to help resolve as many errors as possible. To access the log data, navigate to **System Logs > System Log > Errors**.

i Note: Not all errors in the error log are results of your upgrade. Error messages are often present in pre-upgrade instances, and many of these messages do not affect users or performance.