



# Yokohama Telecommunications Network Inventory

Last updated: 06/13/2026

Some examples and graphics depicted herein are provided for illustration only. No real association or connection to ServiceNow products or services is intended or should be inferred.

ServiceNow, the ServiceNow logo, Now, and other ServiceNow marks are trademarks and/or registered trademarks of ServiceNow, Inc., in the United States and/or other countries. Other company and product names may be trademarks of the respective companies with which they are associated.

Please read the ServiceNow Website Terms of Use at [www.servicenow.com/terms-of-use.html](http://www.servicenow.com/terms-of-use.html)

Company Headquarters  
2225 Lawson Lane  
Santa Clara, CA 95054  
United States  
(408) 501-8550

# Table of Contents

<b>Telecommunications Network Inventory.....</b>	<b>6</b>
Exploring Telecommunications Network Inventory.....	7
Data model for Telecommunications Network Inventory.....	10
Modeling your Telecommunications Network Inventory workflow.....	14
Network Inventory Workspace.....	24
Visualization of circuits.....	31
Attribute packs.....	33
Inventory number allocation.....	34
Modeling a 5G network function in Telecommunications Network Inventory.....	36
Revision, operationalization, and decommission of a Configuration Item.....	37
Capacity management.....	39
Telecommunication Network Inventory workflows in Flow Designer.....	40
Visualization of a rack or cabinet.....	43
Design and assign your network services.....	46
Service Operations Workspace for Telecommunications Network Inventory.....	50
Visualization of your network infrastructure.....	57
Configuring Telecommunications Network Inventory.....	65
Install Telecommunications Network Inventory .....	66
Assigning user roles for Telecommunications Network Inventory.....	67
Define a location hierarchy.....	68
Create manufacturer and vendor codes.....	69
Create the components of a telephone number.....	70
Configuring decision tables for Telecommunications Network Inventory.....	73
Configure Telecommunications Network Inventory attributes.....	75
Configuring an attribute pack table.....	76
Configuring capacity management.....	78
Configuring overlays on floor map.....	81
Configuring Design and Assign function for your network services.....	84
Integrating Telecommunications Network Inventory with other applications.....	101
Telecommunications Network Inventory integration with Hardware Asset Management.....	101
Telecommunications Network Inventory and Order Management for Telecommunications and Media.....	102
Using Telecommunications Network Inventory.....	105
Reviewing and updating your network inventory with the Network Inventory Workspace.....	106
Creating your inventory models.....	162
Creating inventory template for network asset instantiation.....	176
Creating inventory template relationship.....	179
Import Models and Templates.....	193

Export hierarchy of models and templates.....	197
Instantiating your network inventory by using design and assign.....	198
Viewing your network inventory configuration items with CMDB Workspace.....	217
Using the network diagram.....	220
Using an attribute pack for a CI record.....	223
Using Design and Assign function.....	224
Using Network visualization view.....	230
Telecommunications Network Inventory reference.....	243
Add or Remove member to Link Aggregation form.....	243
Cable form.....	244
Cable model form.....	247
Capacity Definition form.....	249
Capacity function additional fields.....	250
Capacity Function form.....	251
Card form.....	252
Change request and change task forms.....	252
Change request related tabs.....	265
Commonly used network asset instance identification fields.....	266
Commonly used network asset instance configuration fields.....	269
Company form.....	270
Connection Element form.....	271
Create equipment from rack view.....	272
Create Logical Connection form.....	273
Create Physical Connection form.....	274
Data center place types.....	275
Default Template forms.....	276
Designing and assigning a GPON broadband service.....	277
Domain separation in Telecommunications Network Inventory.....	280
Equipment form.....	280
Equipment Holder form.....	281
Equipment holder extension classes.....	285
Equipment extension classes.....	288
Equipment task attribute form.....	314
GPON Broadband Change model forms.....	314
Inventory Model forms.....	316
Inventory models additional tabs.....	326
Inventory number allocation fields.....	326
Inventory Numbers form.....	329
IP address inventory management data model.....	330
Location forms.....	332
Logical Connection form.....	333
Logical connection modification request form.....	335

Managed Network form.....	337
Naming convention for associated templates.....	341
Network inventory change request form.....	341
Network inventory facility classes.....	345
Network Interface Model form - Information tab.....	349
Network Model Relationship fields.....	350
Network site form.....	356
Network topology form.....	357
Pack tables.....	357
Path computation error messages.....	361
Physical Connection form.....	361
Physical connection modification request form.....	364
Power circuit form.....	366
Provision LAG form.....	367
Related tabs in the Network inventory forms.....	368
Related templates form.....	374
Router, Switch, Firewall, Virtual Machine, Load Balancer, and Server forms.....	375
Service Instance form.....	377
Strand form.....	378
Strand model form.....	381
Task attributes in Add Card form.....	384
Task attributes in Add Equipment to Rack or Cabinet form.....	384
Task attributes in Create logical connection form.....	385
Task attributes in Create physical connection form.....	386
Task attributes in Topology form.....	387
Telco Equipment form.....	387
Telecommunications Network Inventory function catalog.....	388
Telecommunications Network Inventory subflows.....	408
Telephone number inventory management data model.....	420
Time series metrics for datacenter.....	421
TNI CI Attributes form.....	422






# Telecommunications Network Inventory

With the ServiceNow® Telecommunications Network Inventory application, you can build a digital representation of your physical and logical networks, and the services that are provisioned to your customers. This network inventory contains the assets, services, and the relationships that define the infrastructure of your telecommunications networks.

Watch this short video for an introduction to the Telecommunications Network Inventory application.



[https://player.vimeo.com/video/1017254752?badge=0&autoplay=0&player\\_id=0&app\\_id=58479](https://player.vimeo.com/video/1017254752?badge=0&autoplay=0&player_id=0&app_id=58479)

## Get started

<p>Explore</p>  <p>Learn about how providers use Telecommunications Network Inventory.</p>	<p>Configure</p>  <p>Plan and configure your Telecommunications Network Inventory.</p>	<p>Integrate</p>  <p>Extend Telecommunications Network Inventory capabilities by integrating with other applications.</p>
<p>Use</p>  <p>Use Telecommunications Network Inventory to create and review a comprehensive network inventory model.</p>	<p>Reference</p>  <p>Get Telecommunications Network Inventory reference information.</p>	

## Additional resources

- Learn more about what's new and changed, see the [Telecommunications Network Inventory release notes](#).
- Log in to your ServiceNow® account and find additional information about implementing and deploying Telecommunications Network Inventory features at [Now Create](#).
- Access real-time courses, self-paced training, and career resources at [ServiceNow University](#).

- Find useful resources related to your role and explore best practices at the [Customer Success Center](#) .
- Connect with other Telecommunications Network Inventory users at [Now Community](#) .

## Exploring Telecommunications Network Inventory

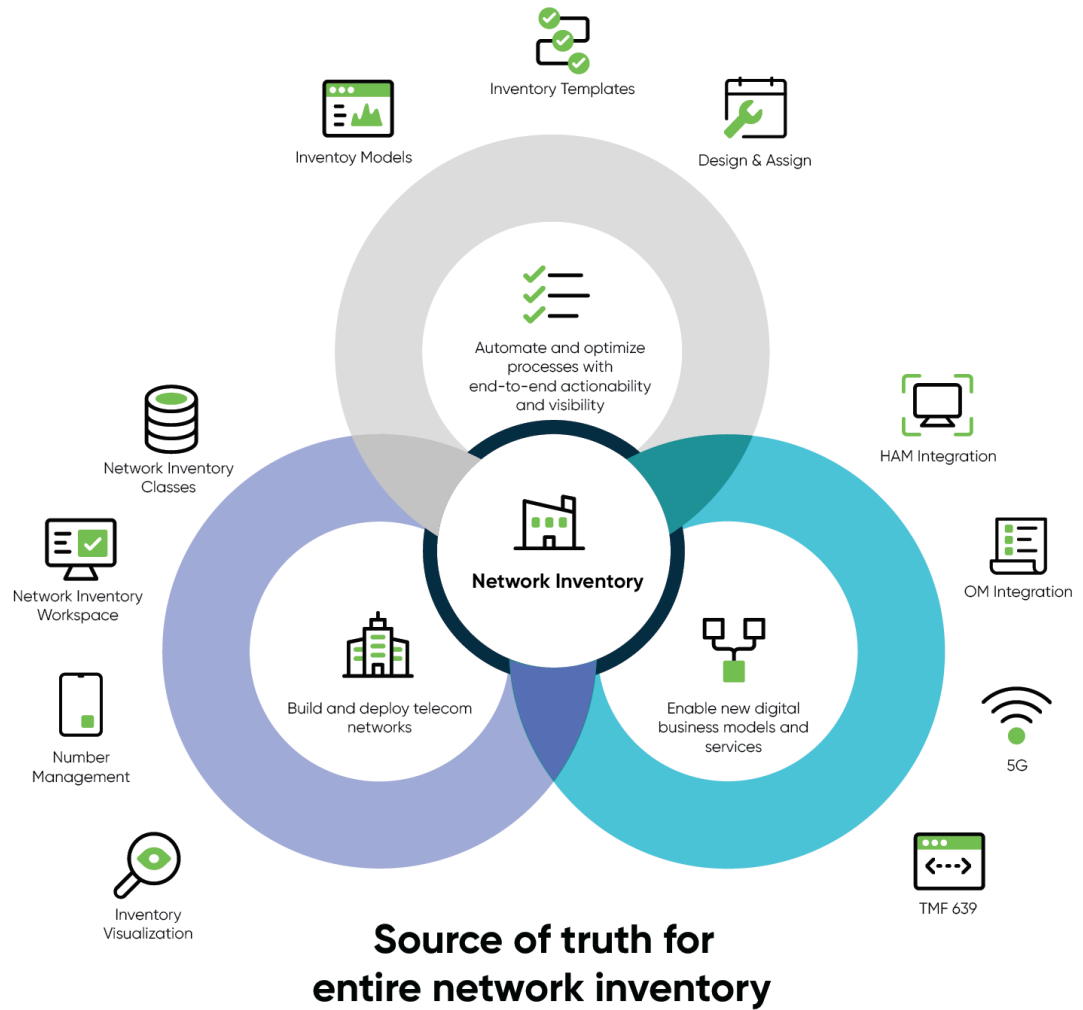
Learn how the Telecommunications Network Inventory application can help your organization to create a digital representation of your physical and logical networks in the ServiceNow AI Platform.

### Introduction to Telecommunications Network Inventory

With the Telecommunications Network Inventory application, you can redefine the telecommunications service experience with a consolidated, accurate network inventory to automate the resource and service life cycle in your organization. The Telecommunications Network Inventory application enables you to build a digital representation of your physical networks, logical networks, and the services that are provisioned to your customers. This network inventory contains the assets, services, and the relationships that define the infrastructure of your telecommunications networks.

The ServiceNow Configuration Management Database (CMDB) stores the network inventory details. With this information, you can monitor your network infrastructure so that you can help to ensure the integrity, stability, and continuous service operation of your network.

The following example shows the common uses of the Telecommunications Network Inventory



application.

Key uses of the Telecommunications Network Inventory application include:

**Network asset life-cycle management**

Help the service providers to understand their spare inventory equipment, currently deployed assets in the network, and free capacity (for example, the available slots or ports) for the new network. Capture, store, and maintain accurate resource life-cycle data as a single source of truth. Leverage your platform workflows to manage your resource and service life cycles across the organization.

**Telecommunications circuit design and resource assignment**

Automate how to create your network services. You can set the design criteria that initiate the change workflows to assign the necessary equipment.

**Telecommunications service assurance based on accurate network inventory**

Help service providers to understand which circuits, services, and customers are related to the physical equipment. Map your services to the physical network resources so that you can speed up the analysis of the service impacts. Get accurate visibility of your resource utilization through configurable dashboards.

**Benefits**

The Telecommunications Network Inventory provides the following benefits and features:

### Benefits of Telecommunications Network Inventory features

Benefit	Feature
Leverage Configuration Management Database (CMDB) classes, which are telecommunication industry standards aligned to support the needs of telecommunication service providers	Data model for Telecommunications Network Inventory
Quickly model equipment and design complex templates	Modeling your Telecommunications Network Inventory workflow
Automate network service creation by setting complex design criteria that initiate change workflows to assign the necessary equipment	Telecommunications design and assign
Deepen visibility into network inventory operations with personalized configurable workspaces and dashboards	Network Inventory Workspace
Allocate telephone numbers and IP addresses	Inventory number allocation
Model your 5G network	Modeling a 5G network function in Telecommunications Network Inventory
Associate customer orders with the required network resources to deliver a seamless service delivery experience	Telecommunications Network Inventory and Order Management for Telecommunications and Media
Instantiate Equipment template using an asset and to generate a service request to procure the assets	Telecommunications Network Inventory integration with Hardware Asset Management
Define a pack with user-defined attributes and update it against a CI record	Attribute packs
Provide a visualization of the circuit and its underlying connection elements	Visualization of circuits
Automate the network inventory's design and assign process using the function catalog and subflows	Telecommunication Network Inventory workflows in Flow Designer
Calculate the capacity of physical entities in your network to plan, monitor, and optimize the resources	Capacity management
Revise and operationalize a Configuration Item	Revision, operationalization, and decommission of a Configuration Item
Visualize and manage rack and cabinet	Visualization of a rack or cabinet
View the geographical location of your network sites, the floor plan in a datacenter, and the topology of your network.	Visualization of your network infrastructure

**Benefits of Telecommunications Network Inventory features (continued)**

Benefit	Feature
Get a converged experience for agents to view both incident/alert details and Network Inventory entities within a single Workspace	<a href="#">Service Operations Workspace for Telecommunications Network Inventory</a>

**Data model for Telecommunications Network Inventory**

The data model for Telecommunications Network Inventory displays the relationships between your network assets, infrastructure, and services. With this information, you can provision new services, modify existing services, maintain the network, and plan the forecast for the network growth in your organization.

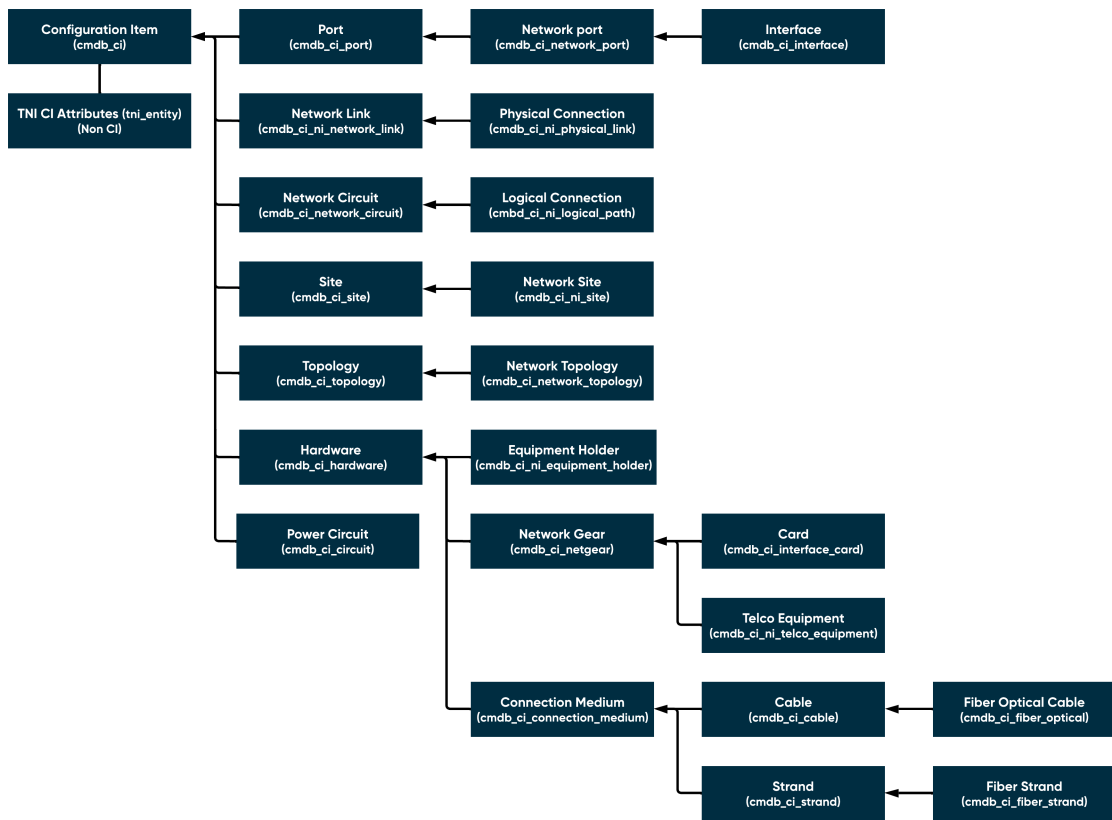
The data model contains the details about your network assets, such as the telco equipment configuration data, port availability of a framework, and bandwidth allocations between your sites and services. This data model enables you to build, manage, maintain, and allocate the network infrastructure and services. Further, this data model provides a for the automation of design and creation of your network equipment and connections that support the customer service orders and internal network orders.

The assets, services, and the relationships of your network inventory defines the infrastructure of your telecommunications networks. With this information, you can plan and forecast your network. You can store the data of the asset in a network inventory record.

The Telecommunications Network Inventory application uses the Network Inventory extension classes that extend the Configuration Management Database (CMDB) Configuration Item (CI) class hierarchy. These extensions enable the CMDB to store your network inventory information. Also, these extension classes provide the standardization and consistency that are aligned with the telecommunications industry standards bodies such as TeleManagement (TM) Forum and Metro Ethernet Forum (MEF). To learn more about the Network Inventory (NI) extension classes, see [Telecommunications Network Inventory extension classes](#).

The following diagram shows the extension classes in the data model for the network inventory.

## Network Inventory data model



## Network site and Network location

Network site records in the Telecommunications Network Inventory application provide information about the physical location of your network equipment and resources. You can use network site records to:

- monitor from where your network connections originate and terminate
- monitor the network centers, buildings, floors, and rooms where your network assets are located
- track the operational status of your network sites
- map your network sites in your service topology
- link your physical locations to your network sites for a better visualization
- Identify network faults and outages

A network site is a configuration item (CI) in the Telecommunications Network Inventory application that's derived from the equipment and connections within the network site, while a location is simply a physical address.

## Telecommunications Network Inventory extension classes

The Telecommunications Network Inventory application uses the generic configuration item (CI) classes that extend the CMDB class hierarchy as shown in the following table. The following table describes the classes that are used within the application.

**Network Inventory (NI) extension classes**

Telecommunications Network Inventory class	Extends generic CI class	Description
TNI CI Attributes [tni_entity]	Non-CI class	<p>Represents a collection of the common Telecommunications Network Inventory attributes. Use the TNI CI Attribute record to create the relevant common attributes relevant for Telecommunications Network Inventory and makes a relationship with the CI record. To learn more, see <a href="#">TNI CI Attributes form</a>.</p>
Network Site [cmdb_ci_ni_site]	Site [cmdb_ci_site]	<p>Captures and maintains the location-specific attributes for each network site, including the network centers, buildings, floors, and rooms where the equipment is located.</p> <p>The network site records enable you to view all the equipment at a location. You can filter the locations by the assigned type, role, or function categories. To learn more, see <a href="#">product/tmt-telecom-network-inventory/task/define-tni-sites.dita</a>.</p>
Equipment Holder [cmdb_ci_equipment_holder]	Hardware [cmdb_ci_hardware]	<p>Represents the physical units that contain the telecommunications equipment, including the cages, bays, cabinets, slots, and relay racks. An equipment holder can contain the other equipment holders. For example, the line-ups contain the individual relay racks and each relay rack contains the equipment shelves.</p> <p>Use the equipment holder records to track and manage your network assets. To learn more, see <a href="#">product/tmt-telecom-network-inventory/task/define-tni-equipment-holders.dita</a>.</p> <p>To learn more about the extension classes of the</p>

**Network Inventory (NI) extension classes (continued)**

Telecommunications Network Inventory class	Extends generic CI class	Description
		equipment holder, see <a href="#">Equipment holder extension classes</a> .
Telco Equipment [cmdb_ci_ni_telco_equipment]	Network gear [cmdb_ci_netgear]	<p>Represents a device that provides the technical functionality in a network. Examples include the routers, modems, mobile devices, optical cables, relays, and switches. The equipment can have slots, cards, or ports. The equipment can exist within an equipment holder or by itself because not all equipment is rack mounted.</p> <p>Use the equipment record to track and manage the details of your telco equipment. To learn more, see <a href="#">Create a telecommunications equipment instance</a>.</p> <p>To learn more about the equipment extension classes, see <a href="#">Equipment extension classes</a>.</p>
Network Interface [cmdb_ci_ni_interface]	Network Port [cmdb_ci_ni_network_port]	Captures and maintains the equipment-specific attributes for the network interfaces. To learn more, see <a href="#">Define the network interface details</a> .
Interface Card [cmdb_ci_interface_card]	Network gear [cmdb_ci_netgear]	<p>Represents the interface cards that are stored in a network. Cards can occupy more than one slot and can contain other cards. They can be the equipment ports that are physical or logical (virtual). Each port is assigned a bandwidth value. The bandwidths are consumed when you use the ports in the network design.</p> <p>To learn more, see <a href="#">Define the card details</a>.</p>

**Network Inventory (NI) extension classes (continued)**

Telecommunications Network Inventory class	Extends generic CI class	Description
Physical Connection [cmdb_ci_ni_physical_link]	Network Link [cmdb_ci_network_link]	Represents the physical port connections on the interface cards in your network. To learn more, see <a href="#">Define the physical connection details</a> .
Logical Connection [cmdb_ci_ni_logical_path]	Network Circuit [cmdb_ci_network_circuit]	Represents the logical or virtual port connections on the network interface cards. A logical connection typically represents the multiple physical connections on an interface card.  To learn more, see <a href="#">Define the logical connection details</a> .
Power Circuit (cmdb_ci_circuit)	Configuration Item [cmdb_ci]	Represents the electrical pathway that delivers power in a data center. To learn more, see <a href="#">Define the power circuit details</a> .
Topology [cmdb_ci_topology]	Network Topology [cmdb_ci_network_topology]	Represents the grouping of the network elements such as nodes (equipment), edges (connections), and termination points (interfaces), how they are organized and connected to each other.  To learn more, see <a href="#">Visualization of network topology</a> .
Facility Hardware		Represent power, HVAC, network, and their connectivity in a data center.  To learn more, see <a href="#">Network inventory facility classes</a> .

**Related topics**

[Network Inventory \(NI\) extension classes](#) 

**Modeling your Telecommunications Network Inventory workflow**

Learn how to create a network inventory record in the Telecommunications Network Inventory application to store the details about your network assets. As you create the records, you can also define the relationship between each inventory record so that you can design a digital model of your network.

## Network inventory workflow overview

By building an accurate digital representation of your network, you can view your physical and logical resources, improve how those resources are used, and reduce the operational costs of your network.

You use a series of forms such as telco equipment and network interface, to create and maintain your network inventory records. You can access these forms in the Inventory node in the Network Inventory Workspace List view.

## Methods for creating a network inventory record

You can create a network record by either of these two methods in the Telecommunications Network Inventory application:

1. Create network inventory records manually by using inventory forms. With these forms, you can create and review the network inventory records and then define the relationships between them. You can access the inventory form in the Inventory node in the Network Inventory Workspace List view. To learn more, see [Manually creating and reviewing your network asset instances](#).
2. Create network inventory records by using the design and assign function. Before you start the design and assign function, you set up the inventory model, template, and model relationships for your design criteria. By using the design and assign function, you perform inventory tasks to set a network design criteria that initiate change workflows. With these workflows, you can assign inventory resources and instantiate your network inventory record. To learn more about design and assign function, see [Telecommunications design and assign](#).
3. Create network inventory records by using the Resource Inventory Open API. The Resource Inventory Open API provides endpoints to create, retrieve, and delete resources in your network. If you're integrated with an external system, you can get the inventory records by using the Resource Inventory Open API. To learn more about the functions that enable you to query and manipulate [Network inventory templates](#) inventory records, see [Resource Inventory Open API](#) [↗](#).

## Inventory model and template

Inventory models and templates provide a framework for creating network inventory records in the Telecommunications Network Inventory application. A network inventory model contains the assets, services, and the relationships that define the infrastructure of your telecommunications networks. A template contains the business guidance rules on how the network asset must be configured in a network.

You can create the models, templates, and the relationships between them. You can have multiple configurations of the network inventory templates.

- To learn more about the inventory model, see [Network inventory models](#).
- To learn more about the inventory template, see [Network inventory templates](#).
- To learn more about the inventory model relationship, see [Modeling your network inventory relationships](#).

## Related topics

[Data model for Telecommunications Network Inventory](#)

## Network inventory models

You define an inventory model in the Telecommunications Network Inventory application so that you can track the technical information from the manufacturer about a network asset such as the telco equipment or a network interface.

### Inventory models overview

A network inventory model contains the assets, services, and the relationships that define the infrastructure of your telecommunications networks. An inventory model contains the metadata for the name, number, dimensions, compatible interface cards, and configurations from the manufacturer. When you instantiate an inventory record by using the design and assign function, your inventory record contains this standard manufacturer information. To learn more about how to create an inventory model record, see [Creating your inventory models](#).

After you create the inventory models, you can then define the relationships between the various network model entities. You can also define the compatibility between these entities. To learn more about model relationships, see [Network model relationships](#).

### Types of inventory models

You can create the following types of inventory models:

#### Facility Models

A network interface model captures the physical characteristics and data about the behavior of a facility hardware, as designated by the product manufacturer. Facility hardware represents the power, HVAC, network, and their connectivity in a data center.

#### Equipment Models

An equipment model represents the metadata that is provided by a vendor or manufacturer for the equipment. It defines the consistent characteristics across the various instances that are created for the equipment. An instance is an individual occurrence of a network asset at a site or datacenter. To learn more, see [Create an equipment model](#).

#### Equipment holder models

An equipment holder model represents the metadata for the representation of containers, including the bays, cabinets, cages, line ups, relay racks, and slots. A **Container Type** field refers to the type of container that the equipment model represents. To learn more, see [Create an equipment holder model](#).

The modeling guidelines for the slots vary according to the telecommunications service provider. The individual slot models are represented by the types of slots. Examples are a route processor slot, power slot, fan slot, or a generic slot model. To learn more, see [Create an equipment holder model](#).

#### Interface card models

A card model defines the card's metadata, which are the attributes that are consistent across the various instantiated cards of that model. To learn more, see [Create a card model](#).

#### Network interface models

A network interface model captures the physical characteristics and data about the behavior of a network interface, as designated by the product manufacturer. To learn more, see [Create a network interface model](#).

#### Physical connection model

A physical connection model captures the metadata for the physical connection. To learn more, see [Create a physical connection model](#).

### Logical connection model

A logical connection model captures the metadata for the logical connections. To learn more, see [Create a logical connection model](#).

### Cable model

A cable model captures the metadata for the cable. To learn more, see [Create a cable model](#).

### Strand model

A strand model captures the metadata for the strand. To learn more, see [Create a strand model](#).

### Network topology model

A network topology model captures the metadata for the topology. To learn more, see [Create a network topology model](#).

## Network model relationships

A model relationship captures the relationships between the inventory models. By defining the relationships between the various network model entities, you can also define the compatibility between these entities.

When setting up model relationships, you select one of the following options in the **Relationship Type** field:

#### --None--

No network model relationship exists.

#### Rack to Slot

Relationship between a rack model and a slot model. This relationship indicates that the rack and the slot models are compatible with the equipment model.

#### Equipment to Slot

Relationship between an equipment model and a slot model. This relationship indicates that the number of slots and the slot models are compatible with the equipment model.

#### Note:

- The **Parent product model** field shows a list of all the equipment models related to the Telecommunications Network Inventory application.
- The **Child product model** field shows only the slot models.

#### Equipment to Network interface

Relationship between an equipment model and a network interface model. This relationship indicates the interface model and the number of interfaces that are compatible and supported with the equipment model.

#### Note:

- The **Parent product model** field shows a list of all the equipment models related to the Telecommunications Network Inventory application.
- The **Child product model** field shows a list of all the network interface models related to the Telecommunications Network Inventory application.

### Slot to Interface Card

Relationship between a slot model and an interface card model. This relationship enforces the **Root product model** field where an equipment model or a card model should be selected.

#### **Note:**

- The **Root product model** field shows a list of all the equipment models related to the Telecommunications Network Inventory application.
- The **Parent product model** field shows the models of both the slots and subslots.
- The **Child product model** field shows a list of all the interface card models.

### Interface card to Slot

Relationship between an interface card model and a slot model. This relationship indicates that the slot model is compatible with the interface card model.

#### **Note:**

- The **Parent product model** field shows a list of all the interface card models.
- The **Child product model** field shows only the models of the subslots.

### Interface Card to Network interface

Relationship between an interface card model and a network interface model. This relationship indicates that the number of interfaces in the network interface model are compatible with the interface card model.

#### **Note:**

- The **Parent product model** field shows a list of all the interface card models.
- The **Child product model** field shows a list of all the network interface models.

### Physical Connection to Logical Connection

Relationship between the models of a physical connection to a logical connection.

#### **Note:**

- The **Parent product model** field shows a list of all the physical connection models.
- The **Child product model** field shows a list of all the logical connection models.

### Logical Connection to Logical Connection

Relationship between one logical connection model to another logical connection model.

#### **Note:**

- The **Parent product model** field shows a list of all the logical connection models.
- The **Child product model** field shows a list of all the logical connection models.

### Physical Connection to Network Interface

Relationship between a physical connection to a network interface.

**Note:**

- The **Parent product model** field shows a list of all the physical connection models.
- The **Child product model** field shows a list of all the network interface models.

### Logical Connection to Network Interface

Relationship between a logical connection to a network interface.

**Note:**

- The **Parent product model** field shows a list of all the logical connection models.
- The **Child product model** field shows a list of all the network interface models.

### Rack to Equipment

Relationship between a rack and the equipment.

**Note:**

- The **Parent product model** field shows all equipment holders that have **Container type** as **Rack**.
- The **Child product model** field shows all equipment models related to the Telecommunications Network Inventory application.

### Cabinet to Equipment

Relationship between a cabinet and the equipment.

**Note:**

- The **Parent product model** field shows all equipment holders that have **Container type** as **Cabinet**.
- The **Child product model** field shows all equipment models related to the Telecommunications Network Inventory application.

### Logical Connection to Channel

Relationship between a logical connection and the channel.

**Note:**

- The **Parent product model** field shows a list of all the logical connection models.
- The **Child product model** field shows a list of all the channel models that have **Behaviour** as **Channel**.

To learn more about how to model your network inventory relationships, see [Modeling your network inventory relationships](#).

## Accessing Inventory Model forms

You can access the inventory model forms in the Inventory Models node in the Network Inventory Workspace List view.

## Network inventory templates

You define the network inventory templates that contain the business guidance rules from a telecommunications provider in the Telecommunications Network Inventory application.

## Introduction to inventory template

A template includes the rules on how the equipment configurations should be generated and are based on the operating requirements from the manufacturer. It also includes the configuration and equipment compatibility information with the other types of hardware. To learn more about the network inventory templates and their relationships, see [Creating inventory template for network asset instantiation](#).

## Types of network inventory templates

### Inventory Template

A network inventory template contains a set of detailed business guidance rules from a telecommunications provider. These rules state how the equipment configurations should be generated and are based on certain operating requirements. For example, based on the equipment model that you develop, you can create a template for use in densely populated metropolitan areas and then you can create another equipment model template for use in sparsely populated rural areas. To learn more about how to create an inventory template, see [Create an inventory template](#).

Inventory templates also have an internal attribute that shows if an entry in an inventory template list is a singular template or a template relationship. A template relationship designates that there's a relationship between this template and another template. These associated templates appear in the Related Template tab in the Inventory template form. To learn more about the template relationship, see [Creating inventory template relationship](#).

### Default Template

Default templates capture the default attribute values for a configuration item (CI) class. A template defines the set of attribute values for any resource (equipment, card, and so on). When this default template is associated with an inventory template, it adds these attribute values to the resource that is instantiated using that template.

You can define multiple default templates for a single CI, such as equipment, when there are multiple business requirements for capturing different sets of attribute default values. When you create a default template and you select a CI, you can also select an associated attribute of that CI and set a value for it.

To learn more about how to create a default template, see [Create a default template](#).

## Accessing the Network Inventory Template node

You can access the inventory template in the Network Inventory Templates node in the Network Inventory Workspace List view.

## Modeling your network inventory relationships

You model your network inventory relationships in the Telecommunications Network Inventory application so that you can use them in the inventory template relationships to create your network inventory records.

### Network model relationship overview

A model relationship captures the relationships between the inventory models. By defining the relationships between the various network model entities, you can also define the compatibility between these entities. The inventory template uses the model relationships to create template relationships. The instantiation process uses the inventory template relationships that you create when it generates the network inventory records. For example, when you create an equipment or card template, the associated slots and interface templates are automatically created by using the data from the model relationship. If the model relationships aren't made, the system doesn't create the associated templates.

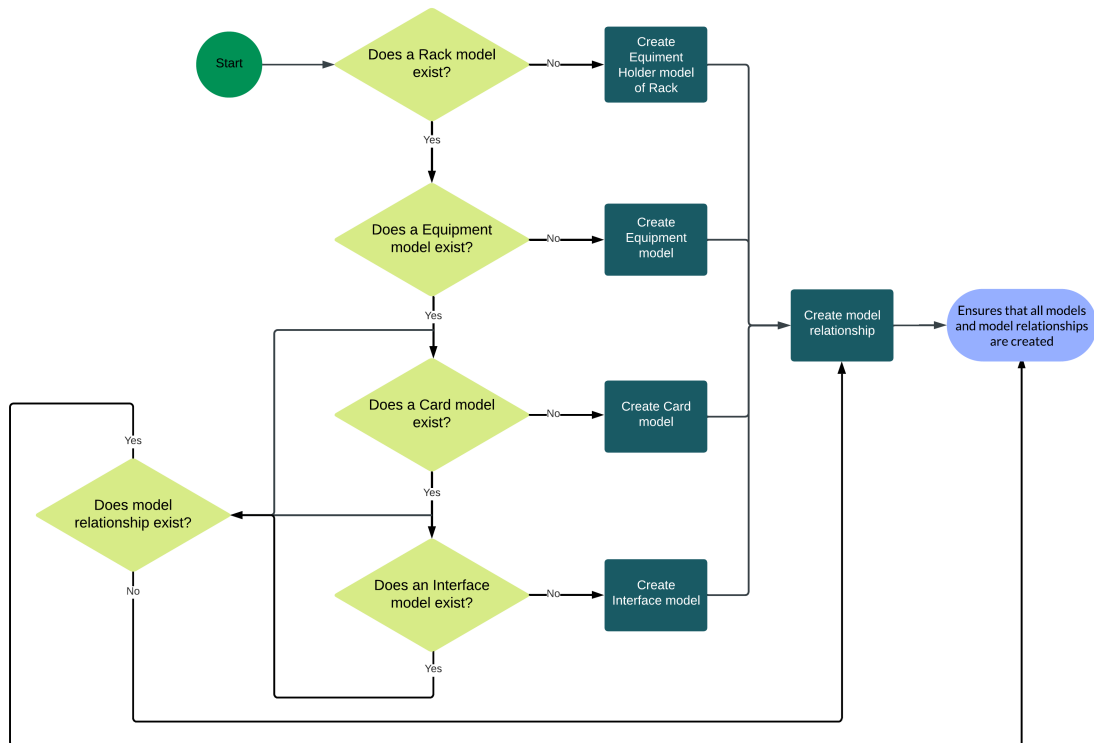
### Inventory modeling process

When you create inventory models for your equipment inventory in the Telecommunications Network Inventory application, you can use either a bottom-to-top or a top-to-bottom approach. Either sequence is acceptable, and both yield the same result when you finish:

- Bottom-to-top approach, where the modeling starts when you navigate to **Network interface model > Interface Card Model > Slot Model > Equipment Model > Equipment Holder Model (Rack)**.
- Top-to-bottom approach, where the modeling starts when you navigate to **Equipment Holder Model (Rack) > Equipment Model > Slot Model > Interface Card model > Network Interface model**.

The following diagram shows a top-to-bottom approach for the inventory modeling process.

## Top-to-bottom inventory modeling



The steps for top-to-bottom modeling of an inventory are as follows:

1. Check for any available rack models.
2. Check for any model relationships if a rack model is available. If not, create an equipment holder model of rack.
3. Check for any equipment models.
4. Check for any model relationships if an equipment model is available. If not, create an equipment model.
5. Check for the interface card model.
6. Check for any model relationships if an interface card model is available. If not, create an interface card model.
7. Check for the network interface model.
8. Check for any model relationships, if the network interface model is available. If not, create a network interface model.
9. Check for the model relationships after you create each inventory model. If not, create the model relationships.

This process ensures that all models and model relationships are created according to the manufacturer's recommendations.

### Related topics

[Creating your inventory models](#)

[Define a network model relationship](#)

## Telecommunications design and assign

With the design and assign function, you can build a digital representation of your network inventories and your network service in the Telecommunications Network Inventory application.

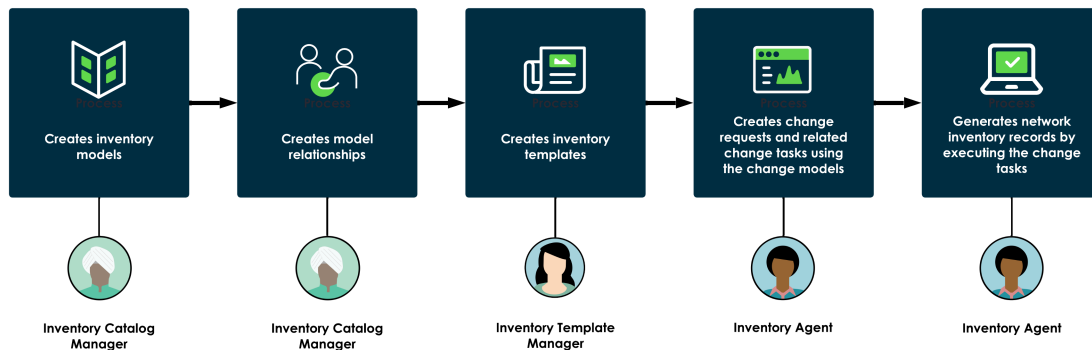
### Design and assign overview

By using the design and assign function, you perform inventory tasks sequentially or in parallel to set a network design criteria that initiates change workflows. With these workflows, you can assign inventory resources and instantiate your network inventory. You can also perform the design and assign function with the information that you collected from the customer orders.

When you perform the design and assign function in the Telecommunications Network Inventory application, you use the standard processes from the Change Management and Workflow Studio applications. Create a change request enables you to instantiate the network inventory resources to support your network service topologies. It helps you efficiently build new network capacity with accurate resource allocation. You can also automate workflows to create and expand your network service.

You can design and configure both simple circuits and a complex network infrastructure. You can then perform path analysis and computations for your network assignments. You can also apply virtual local area network (VLAN) and link aggregation group (LAG) assignment rules for Passive Optical Networks (PONs). By using the design and assign function, you enforce technology and process restrictions as you design and allocate your network resources.

### Design and assign workflow



Before you start the design and assign function, you define the models, model relationships, templates, and template relationships for your design criteria. Then the ServiceNow AI Platform generates an automated workflow that performs all the tasks that are required to instantiate a network inventory.

As an inventory template or catalog manager, you can do the following tasks to instantiate your network inventory:

1. Create the inventory models. You create an inventory model to track the technical information from the manufacturer about a network asset. When you instantiate an inventory record, your inventory record contains this standard manufacturer information. To learn more, see [Creating your inventory models](#).
2. Create the model relationship. The model relationship captures the relationships between the inventory models. To learn more, see [Modeling your network inventory relationships](#).
3. Create the inventory template. You create the network inventory template that contains the business guidance rules from a telecommunications provider. To learn more, see [Creating inventory template for network asset instantiation](#).

You can then instantiate a new network inventory record by using the change management workflow to fulfill the network designs. As an inventory agent, you perform the following tasks:

1. Create the change request with the change model. To learn more, see [Create a change request from Network Inventory Workspace](#).
2. Create the change tasks from the change request. The network asset instantiation takes place using an Application programming interface (API) or change task that you create from the change request. To learn more, see [Create and execute a change task in Telecommunications Network Inventory](#).

When you complete the task, the following processing takes place:

- A network inventory record is generated. The record is based on the same structural relationships that you defined for the inventory templates and associated inventory models. The configured item consists of your inventory model and all the related inventory models.
- If you integrate with other operational and business support systems, the process triggers an internal workflow. This workflow completes the purchase, installation, shipment, and instantiation of your network asset at the designated site. This internal workflow is based on the individual tasks or lists of tasks that are associated with the inventory model in Workflow Studio.

## Instantiation example

You can create a set of network inventory records to fulfill an order request for Gigabyte Passive Optical Networks (GPON) broadband by using the design and assign function. To learn more, see [Designing and assigning a GPON broadband service](#).

### Related topics

[Flow Designer](#) 

[Change Management](#) 

[Network inventory models](#)

[Network inventory templates](#)

[Modeling your network inventory relationships](#)

## Network Inventory Workspace

The Network Inventory Workspace is the intuitive and streamlined user interface of the Telecommunications Network Inventory application to manage your network inventory. You can use Network Inventory Workspace to view your inventory details, respond to all task types, and perform the network functions such as designing the network.

### Introduction to Network Inventory Workspace

The Network Inventory Workspace is built on the Next Experience UI. It's a suite of tools that enables your personnel to view and update your network inventory.

With the Network Inventory Workspace, you can do the following tasks:

- Quickly determine the overall operational status of equipment entities that reside in the sites.
- Access, view, and update the detailed information about your network assets, and quickly create the network inventory when needed.
- Manage the open issues that require immediate responses.
- Perform the daily tasks from the List view.

Depending on your assigned roles and persona, the Network Inventory Workspace provides you with the information required for the access to the functions that you use daily.

## Dashboards

The views in the Network Inventory Workspace provide visibility into all the important aspects of your network inventory and your daily tasks. The Network Inventory Workspace contains the following views:

- [Network Inventory Workspace landing page](#): View active tasks and quick access links to them.
- [Network Inventory management view](#): View details of the network inventory.
- [Network Inventory Workspace Lists view](#): Access the filtered list of the inventory classes and functions to perform the network inventory tasks, for example, design and assign.

## Related topics

[Working in the Next Experience UI](#) 

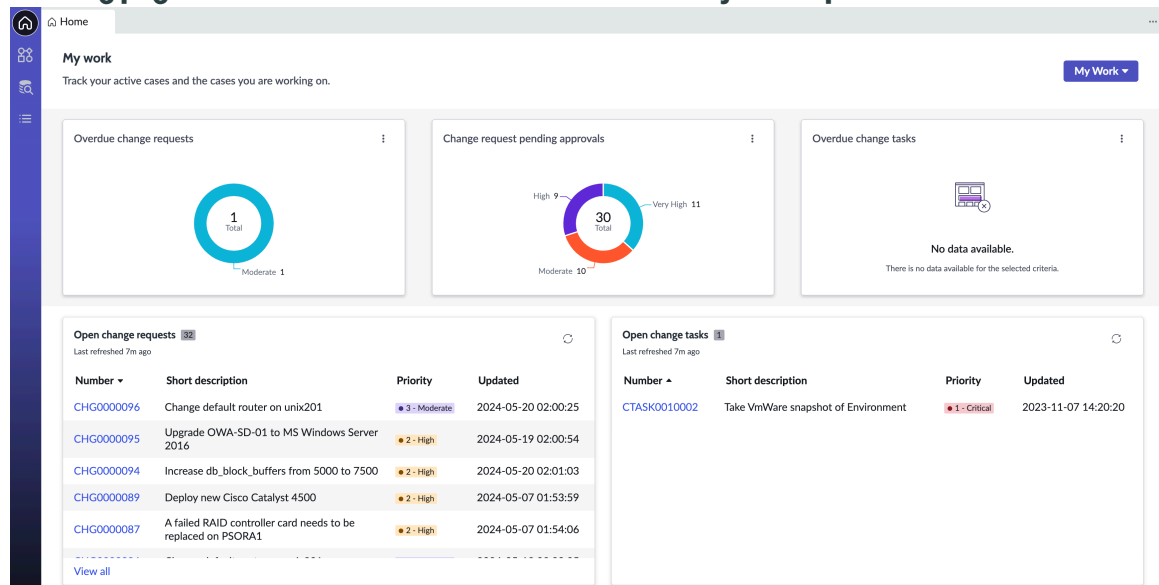
## Network Inventory Workspace landing page

Get real-time visibility into your network inventory and to perform the daily tasks through the Network Inventory Workspace landing page.

The landing page in the Network Inventory Workspace displays the list of your and your team's assignments. For example, you can look at the landing page to see the number of open change requests and change tasks that are assigned to you. You can use this page to get the real-time data of your work and of your team's work.

The following image shows an example of the Network Inventory Workspace landing page.

### Landing page of Telecommunications Network Inventory Workspace



## Landing page widgets

The widgets on the landing page help you and your team to monitor your workload, focus on high-priority items, and easily navigate across your responsibilities. Select any widget to view the list of issues that needs your action.

### Workspace landing page widgets

Widget or chart	Description
Overdue change requests	Donut chart grouping of change requests that are overdue. The widget contains a total count of change requests grouped by their risk.
Change request pending approvals	Donut chart grouping of change requests that are pending due to approval. The widget contains a total count of change requests grouped by their risk.
Overdue change tasks	Donut chart grouping of change tasks that are overdue. The widget contains a total count of change tasks grouped by their priority.
Open change requests	List of all open network change requests. You can only view the existing change requests in this widget.
Open change tasks	List of all open network change tasks. You can only view the existing change tasks in this widget.

### Viewing the assigned tasks

On the landing page, do the following to view the change requests and change tasks that are assigned to you and your team.

- Select **Your work** to view your assignments.
- Select **Your team's work** to view your team's assignments.

### Network Inventory management view

Use the Inventory management view in the Telecommunications Network Inventory Workspace to get a detailed view of your network inventory.

The Inventory management view displays the network inventory details such as equipment, equipment holders, network sites, and connections. Use the following tabs to view the inventory details and take appropriate actions:

#### Overview

View various inventory data, such as total number of equipment grouped by the model, manufacturer, and life-cycle state, and availability of racks, ports, and slots within a site that you're selected.

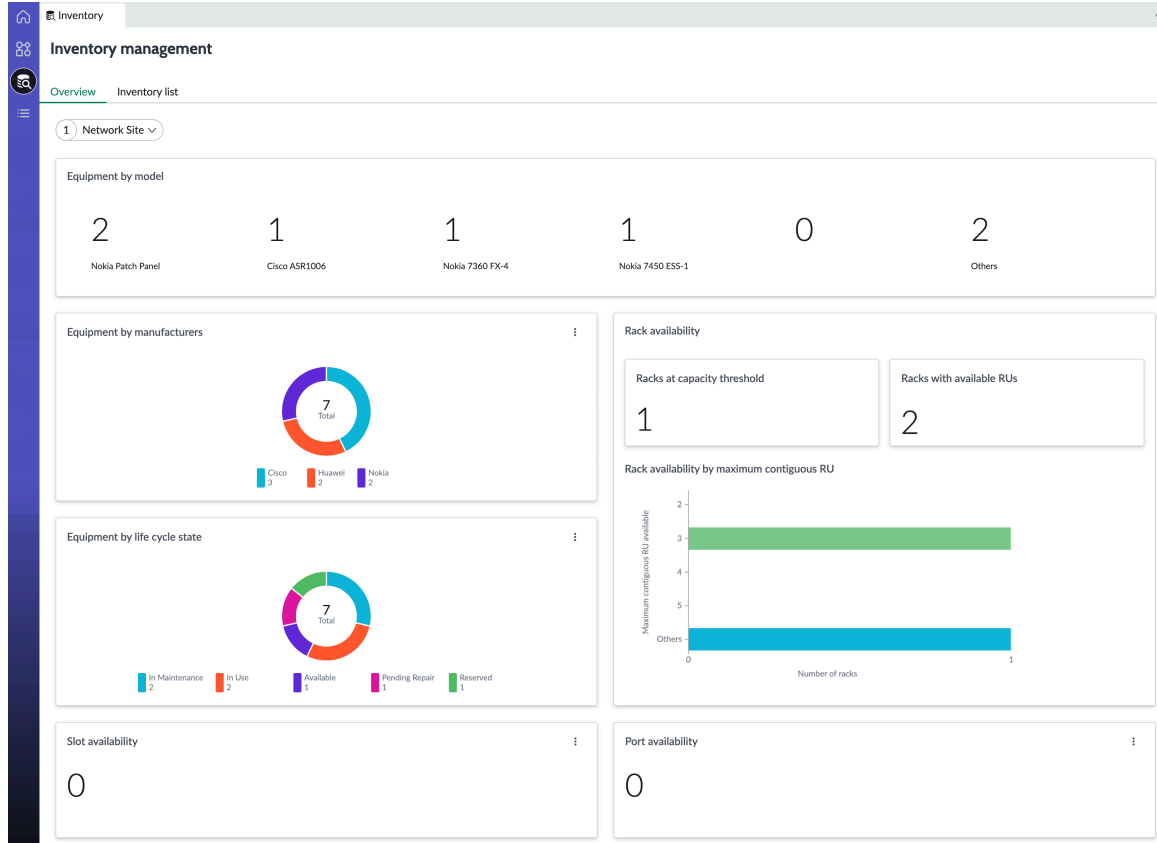
#### Inventory List

View a list of network sites or network assets such as equipment and connections based on the option that you're selected in the side panel.

### Overview tab

Use the **Overview** tab for a consolidated view of various network inventory data within a network site that you're selected.

## Inventory management view



Select any widget or chart to view the list of items that needs your action.

### Inventory management widgets

Widget or chart	Description
Equipment by model	Number of the individual pieces of equipment grouped by model. The widget contains a standard set of the five most used telecommunications equipment models. For each equipment model, you can view a total count of the equipment.
Equipment by manufacturers	Donut chart grouping of equipment by the manufacturers who supply them. The widget contains a standard set of the five most used telecommunications equipment manufacturers. For each manufacturer, you can view a total count of equipment.
Equipment by life-cycle state	Donut chart grouping of equipment by the current life-cycle state. The widget contains the number of equipment in the network sites that you're selected, grouped by the following life-cycle states. <ul style="list-style-type: none"> <li>• In Use</li> <li>• Empty</li> <li>• Reserved</li> </ul>

### Inventory management widgets (continued)

Widget or chart	Description
	<ul style="list-style-type: none"> <li>• Available</li> <li>• In Maintenance</li> <li>• Other</li> </ul>
Racks at capacity threshold	Number of racks that are occupied more than threshold capacity.
Racks with available RUs	Number of racks with available rack units.
Rack availability by maximum contiguous RU	Bar chart representation of available racks with maximum contiguous rack units.
Slot availability	Number of available slots across the equipment models.
Port availability	Number of available ports across the equipment models.

**Note:** To learn more about how the count data is collected and refreshed in the workspace landing page, see [Data collection and refresh for the Network Inventory Workspace widgets](#). To learn how to customize the content that appears in each widget, see [Customizing the content in your Network Inventory Workspace widgets](#).

### Inventory list tab

Use the **Inventory list** tab to view a list of network sites or network assets based on the item that you selected in the side panel and take appropriate actions. The side panel lists the following:

- All the locations that are available in the global location.
- All the network sites that are available in the global location.
- Network assets such as equipment and connections that are associated with each network site.

#### Inventory list tab


The screenshot shows the 'Inventory list tab' interface. On the left, a navigation sidebar lists 'Inventory management' with sub-items like 'Overview', 'Inventory list', and a tree view of locations including 'Americas', 'Apac', 'Australia', 'China', 'India', 'Japan', and 'ARIZONA-CO-001'. Under 'ARIZONA-CO-001', 'Logical connection' is selected. The main area shows a table titled 'Logical connection' with 5 items. The table has columns for Name, Site A, Site Z, and Life Cycle Stage. The data rows are as follows:

Name	Site A	Site Z	Life Cycle Stage	Life Cycle Stage
AR-OR-ENET-100G-001	ARIZONA-CO-001	OREGON-CO-001	Operational	In Use
AR-SF-ENET-100G-001	ARIZONA-CO-001	SANFRANCISCO-CO-001	Operational	In Use
AR-TE-ENET-100G-001	ARIZONA-CO-001	TEXAS-CO-001	Operational	In Use
SA-AR-ENET-100G-001	SEATTLE-CO-001	ARIZONA-CO-001	Operational	In Use
TE-AR-ENET-100G-001	TEXAS-CO-001	ARIZONA-CO-001	Operational	In Use

You can perform the following actions in the **Inventory list** tab.


- In the side panel, expand the location to view the associated network sites.
- Select a location to view the associated network site records in the list view.
- In the side panel, expand each network site to view any associated connections or equipment.
- Select **Equipment** to view the list of associated connections or equipment records.
- Select **Connection** to view the list of associated physical and logical connection records within the network site.
- Select a record in the list view to redirect to its form view.

## Accessing the Inventory management view

To open the Inventory management view, select the database search icon () on the side panel.

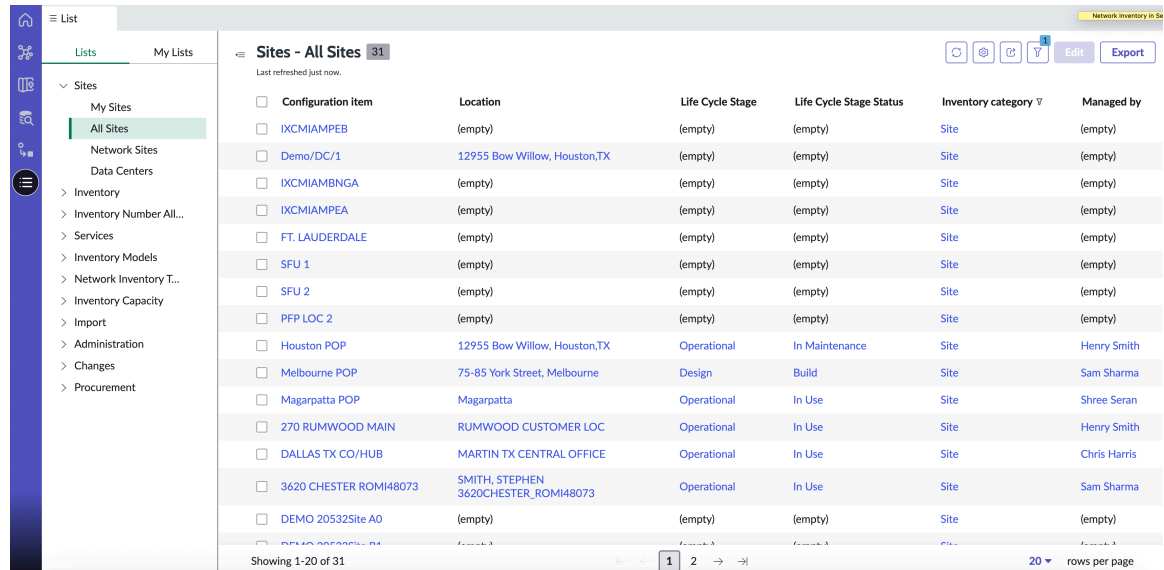
## Network Inventory Workspace Lists view

You use the Lists view to access the inventory classes and functions to perform the Network Inventory tasks.

From the Lists view, on the left side of the Network Inventory Workspace, you can access most of the Telecommunications Network Inventory classes and functions. To access the Lists view, select the list icon ()

From the **My Lists** tab, you can create a separate list or a different version of the existing list.

**List view**



Configuration item	Location	Life Cycle Stage	Life Cycle Stage Status	Inventory category	Managed by
<input type="checkbox"/> IXCMIAMPEB	(empty)	(empty)	(empty)	Site	(empty)
<input type="checkbox"/> Demo/DC/1	12955 Bow Willow, Houston,TX	(empty)	(empty)	Site	(empty)
<input type="checkbox"/> IXCMIAMBNGA	(empty)	(empty)	(empty)	Site	(empty)
<input type="checkbox"/> IXCMIAMPEA	(empty)	(empty)	(empty)	Site	(empty)
<input type="checkbox"/> FT. LAUDERDALE	(empty)	(empty)	(empty)	Site	(empty)
<input type="checkbox"/> SFU 1	(empty)	(empty)	(empty)	Site	(empty)
<input type="checkbox"/> SFU 2	(empty)	(empty)	(empty)	Site	(empty)
<input type="checkbox"/> PFP LOC 2	(empty)	(empty)	(empty)	Site	(empty)
<input type="checkbox"/> Houston POP	12955 Bow Willow, Houston,TX	Operational	In Maintenance	Site	Henry Smith
<input type="checkbox"/> Melbourne POP	75-85 York Street, Melbourne	Design	Build	Site	Sam Sharma
<input type="checkbox"/> Magarpatta POP	Magarpatta	Operational	In Use	Site	Shree Seran
<input type="checkbox"/> 270 RUMWOOD MAIN	RUMWOOD CUSTOMER LOC	Operational	In Use	Site	Henry Smith
<input type="checkbox"/> DALLAS TX CO/HUB	MARTIN TX CENTRAL OFFICE	Operational	In Use	Site	Chris Harris
<input type="checkbox"/> 3620 CHESTER ROMI48073	SMITH, STEPHEN 3620CHESTER_ROMI48073	Operational	In Use	Site	Sam Sharma
<input type="checkbox"/> DEMO 20532Site A0	(empty)	(empty)	(empty)	Site	(empty)

Showing 1-20 of 31 rows per page

In the lists pane, you can quickly access classes and tasks by using the filtered lists under different categories.

You can access the following classes:

### Network Inventory classes

Class	Details
Sites	View listings of network sites and data centers. Update or create site details. To learn more

**Network Inventory classes (continued)**

Class	Details
	about network site, see <a href="#">product/tmt-telecom-network-inventory/task/define-tni-sites.dita</a> . To learn more about data centers, see <a href="#">Define the datacenter details</a> .
Inventory	Manually create the individual instances of your network assets and define their relationships to each other. To learn more, see <a href="#">Manually creating and reviewing your network asset instances</a> .
Inventory Number Allocation	Manage your virtual local area networks (VLANs) or link aggregation groups (LAG) by using the inventory number allocation feature in the Telecommunications Network Inventory application. To learn more, see <a href="#">Inventory number allocation</a> .
Services	Manage and model your networks using services in the Telecommunications Network Inventory application. To learn more, see
Inventory Models	Create the metadata for the inventory models and then define their relationships to each other for network asset instantiation. To learn more, see: <ul style="list-style-type: none"> <li>• <a href="#">Network inventory models</a></li> <li>• <a href="#">Creating your inventory models</a></li> </ul>
Network Inventory Templates	Create the inventory and default templates and then define their relationships to each other for network asset instantiation. To learn more, see: <ul style="list-style-type: none"> <li>• <a href="#">Network inventory templates</a></li> <li>• <a href="#">Creating inventory template for network asset instantiation</a></li> </ul>
Inventory Capacity	Calculate the capacity of physical entities in your network. To learn more, see <a href="#">Capacity management</a> .
Import	Import your models and templates using Import in the Telecommunications Network Inventory application. To learn more, see <a href="#">Import Models and Templates</a> .
Administration	Configure the Telecommunications Network Inventory application. To learn more, see <a href="#">Configuring Telecommunications Network Inventory</a> .

### Network Inventory classes (continued)

Class	Details
	<p><b>Note:</b> All selections in the Lists view are accessible to all user roles, including the following selections under the Administration node. However, only those users with an assigned admin role have write or delete access privileges in the administration functions.</p>
Changes	<p>Instantiate your network inventory using design and assign. To learn more, see <a href="#">Telecommunications design and assign</a>.</p>
Procurement	<p>Create the bill of materials to procure the network assets. To learn more, see <a href="#">Telecommunications Network Inventory integration with Hardware Asset Management</a>.</p>

## Visualization of circuits

The network diagram in the Telecommunications Network Inventory application graphically displays a hierarchical map of the logical connection and its underlying connection elements. You can use the network diagram to get a detailed overview of the logical connection.

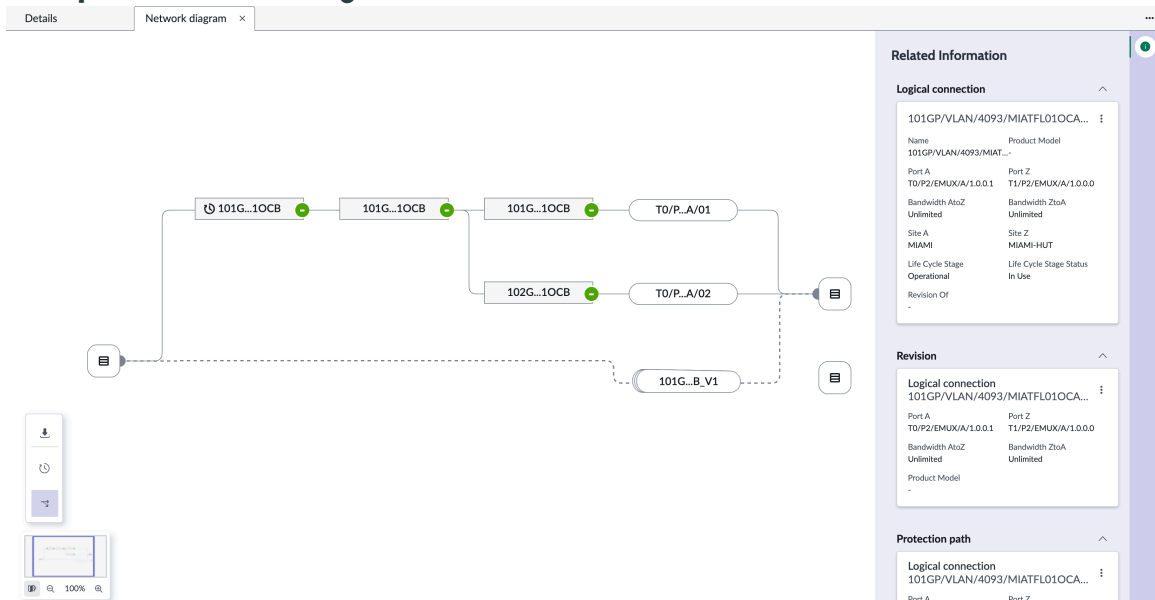
The network diagram graphically displays a circuit of the logical connection elements, and the details of each element. It provides a detailed overview of a logical connection and how the various elements are connected to each other. You can view the following by using the network diagram:

- Logical connection and all the underlying connection elements.
- Revision of the logical connection and all underlying connection elements.
- Protection paths of the logical connection.

A protection path of a logical connection refers to an alternative route in case the primary path (logical connection) fails or experiences significant issues.

The following example shows a network diagram in the Telecommunications Network Inventory application.

## Example for a network diagram



A network diagram contains two panels:

- The map pane shows the map for a selected logical connection, revision of the logical connection, and protection path.
- The details pane shows related information of the logical connection according to the current selections.

To learn more about how to use the network diagram, see [Using the network diagram](#).

### Map pane

The map shows all logical connection elements in the hierarchy starting with the home node CI, up to the specified level. You can expand the hierarchy levels up to three levels and view all the underlying connections. You can only expand connections that have connection elements underneath them.

You can perform the following actions in the map pane:



- Expand and collapse the nodes and view all the underlying connections.
- View the revision of the logical connection.
- View the protection paths of the logical connection.
- Use the zoom controls to zoom in and out of the map.

To learn more, see [View the details of a network diagram](#).

### Details pane

The details pane shows the related information about the logical connection elements in a network diagram. If a node is selected in the map pane, the details pane shows the related information for that node. For example, if you select a logical connection node on the network diagram, then the details pane shows all the details related to that logical connection.

You can perform the following actions in the details pane:

- Select the info icon (  ) to open the details pane.
- Select more options icon (  ) in the details pane and then select **View Details** to redirect to the corresponding CI form.

## Access

You can access the network diagram in the Telecommunications Network Inventory Workspace as follows:

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Open the desired logical connection record.
3. Select **View connection** to open the network diagram for the respective logical connection.

## Attribute packs

Use an attribute pack to capture the attributes that you define against a set of records in a configuration item (CI) in the Telecommunications Network Inventory application. You can capture the additional information about the network asset in the inventory form that belongs to the CI.

### Introduction to attribute packs

An attribute pack is a collection of attributes that you can associate with a subset of a CI. A pack is an extra set of attributes. These attributes are defined as standard ServiceNow AI Platform tables and columns.

You create an attribute pack table and configure the mapping between a pack table and CI. When you create or update the CI record, you can add the pack table and provide the additional information about the inventory object.

By using an attribute pack, you can manage a CI and its attributes more granularly. For example, if you consider a server as a CI, an attribute pack for a server could include such attributes as a hostname or IP address. These attributes provide additional information about the server that helps you to manage and track it throughout its life cycle. To learn more about how to use an attribute pack in the inventory form, see [Using an attribute pack in an inventory form](#) section.

Use an attribute pack to customize the attributes according to the requirements of your organization or a subset of CIs. This customization enables your organizations to scale your present and future inventory management needs.

### Using an attribute pack in an inventory form

To use an attribute pack in an inventory form, you, as the administrator, must perform the following tasks:

- Create a pack table with the attributes that you define. To learn more, see [Create an attribute pack table](#).
- Configure the mapping between the pack table and the inventory object that you want to use it with. To learn more, see [Configure an attribute pack table against a configuration item](#).

After you create and configure a pack table, you can use it in a CI record. To learn more, see [Using an attribute pack for a CI record](#).

## Inventory number allocation

You can manage IP addresses, telephone number allocations, virtual local area networks (VLANs), or link aggregation groups (LAGs) by using the inventory number allocation of the Telecommunications Network Inventory application. By using this feature, you can organize, track, and manage the physical and logical numbers.

### Benefits

The number management tool provides your organization with the following benefits:

1. Data that is accurate and consistent.
2. Ability to follow the trends and patterns that lead to more efficient and effective operations.
3. Reduced costs so that you can optimize or streamline your resources and processes.
4. Tracking and analyzing how you use your resources.
5. Tracking your key performance indicators (KPIs), so that your organization can monitor and improve its performance.
6. Presenting data clearly to your stakeholders so that they can understand how your business is performing.

### Number management tools

By using the Telecommunications Network Inventory application, you can manage:

1. IP addresses. For more information, see [IP addresses allocation](#).
2. Telephone numbers. For more information, see [Telephone allocation](#).
3. VLANs and LAGs. For more information, see [Define your inventory numbering](#).

### IP addresses allocation

By using the IP address allocation of the Telecommunications Network Inventory application, you can create, review, and update IP pools, IP network subnets, allocated IP addresses, and Classless Inter-Domain Routing (CIDR).

### IP address tables

- **IP pool:** An IP pool is a sequential range of IP addresses that are allocated to a large network, such as the subnet mask of /16 or /24 IP addresses.
- **IP network subnet:** An IP network subnet represents the IP address that is allocated to the customer, such as the subnet mask of /28 or /29 addresses.
- **Allocated IP address:** An allocated IP address is a list of all individual IP addresses that are part of an IP network subnet and can be assigned to configuration Items (CIs). By using an allocated IP address, you can assign an IP address to a host.
- **Managed Network:** A managed network is a list of all existing networks or new networks. By using a managed network, you can assign a network to an IP pool or to an allocated IP address. To learn more, see [Create Managed Network](#).

To learn more about how to manage IP addresses, see [IP address inventory management data model](#).

## Use case

Let's say a company that is in need of an internet access submits an order request to their service provider. The order request generates the order line items for allocating a WAN IP address with a subnet of /30 and order tasks. To assign IP addresses, a change request is initiated. This change request initiates the following change tasks:

- Create an IP pool record for the subnet mask of /30 IP addresses according to the design guidelines. For more information, see [Create an IP pool record](#).
- Create an IP network subnet for the subnet mask of /30 IP addresses and four individual IP addresses. For more information, see [Create an IP network subnet record](#) and [IP addresses](#).
- Create an application service.
- Relate an IP network subnet with the change request.

## Related topics

[Create IP address allocation](#)

## Telephone allocation

Learn about telephone blocks, telephone numbers, and allocating telephone numbers. You can also learn what the benefits and relationships are between them and how you can manage them more effectively.

## Telephone number infrastructure

- **Telephone block:** A telephone block is a pool of telephone numbers that are allocated to a telco operator by an administrator.
- **Telephone number:** A telephone number is a unique numerical identifier that is assigned to a telephone line or device for making and receiving telephone calls. You can add, review, and update the list of telephone numbers.
- **Telephone number allocation:** A telephone number allocation consists of all the telephone numbers that are either allocated or available to allocate to the customer.

To learn more, see [Telephone number inventory management data model](#).

### **Note:**

- To perform any activity on telephone numbers, ensure that you're assigned to the inventory number manager (sn\_inv\_num\_mgmt.inventory\_number\_manager) role.
- To create any telephone block, number, or number allocation, ensure that you create the components of the telephone number. To learn more, see [Components of a telephone number](#).

## Use case of a telephone system

Let's say that a network operator has a large series of numbers that include ported in, third party, owned numbers, and other types of numbers. To manage these numbers, an inventory number manager can create a telephone block. To learn more, see [Create a telephone block](#).

Now, a customer that has Voice over Internet Protocol (VoIP) or Unified Communication as a Service (UCaaS)-based services submits a request to the operator for a series of numbers. The requested series of numbers belong to three different areas, countries, or a series of numbers.

To fulfill the earlier scenario, an inventory agent can create a telephone number allocation or create a telephone number for an area or region in a particular block. To learn more, see [Create a](#)

telephone number allocation and [Create a telephone number to an area or region](#). This process helps an operator to identify the following issues:

- Availability of a number by using telephone number allocation
- Ported-in and ported-out numbers
- Numbers assigned to a country or to an area

### Components of a telephone number

A telephone number is a unique numerical identifier assigned to a telephone line or device for making and receiving telephone calls. Components of a number are central office code, country code, area code, and rate center.

### Central office code, country code, area code, and rate center

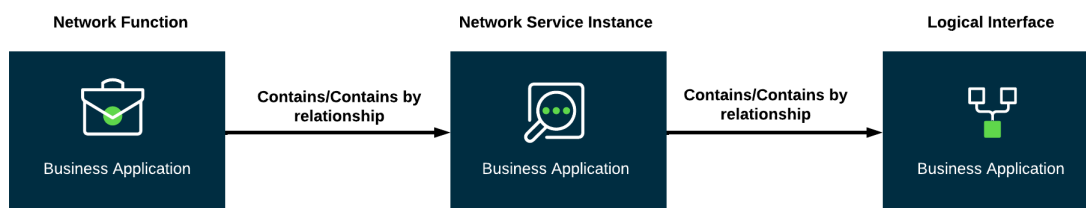
- **Central office code** - The central office code, also known as an exchange code. It identifies a telephone exchange within a particular area code and helps to route calls within the local telephone network. See [Create a central office code](#) to learn more.
- **Country code** - A country code is also referred to as an international dialing code. It's generally a one to three-digit code that is dialed before the area code and telephone number when contacting to another country. See [Create a country code](#) to learn more.
- **Area code** - An area code is a number used to identify a geographic region within a country. See [Create an area code](#) to learn more.
- To learn more about telephone numbers, how to manage and assign them, see [Create a telephone infrastructure](#)


## Modeling a 5G network function in Telecommunications Network Inventory

You can model your 5G network and manage your any type of network functions by using the Telecommunications Network Inventory application. By using the model, you can create, review, update, and delete your networks.

### 5G network model

You must create a business application, an application service, and network interfaces to model your 5G network as shown in the following diagram.



- **Business Application:** The business application table stores all network functions. The business application records the labels of all classes proposed by 3GPP™\* as a type of managed network function. To learn more, see [Define the network function details](#).
- **Application Service:** The application service stores the instance of the corresponding network function, which is associated with the business applications to indicate its type, such as DU or CU-CP and so on. Each instance of a function has a record in the application service. You can create a relationship with a business application and network interface. To learn more, see [Define the network service instance details](#).
- **Network Interface:** The network interface stores all the logical IP interfaces that are assigned to the managed network. The logical interfaces represent a peer-to-peer relationship. If there's a connection between a distributed unit (DU) and centralized unit (CU) control plane or user plane (UP) functions, a logical connection is created between the logical interfaces. By using the relationship editor, you can create a relationship with an application service. To learn more, see [Define the network interface details](#) and [CI relationship editor](#)  to create or edit a relationship.

\*The 3GPP™ TS28.541 V18.2.2 inspired attributes are provided as the pack tables. To learn more, see [Pack tables](#). To learn more about attribute packs, see [Attribute packs](#).

\*3GPP is a trademark of ETSI.

## Related topics

[Managing your network functions](#)

## Revision, operationalization, and decommission of a Configuration Item

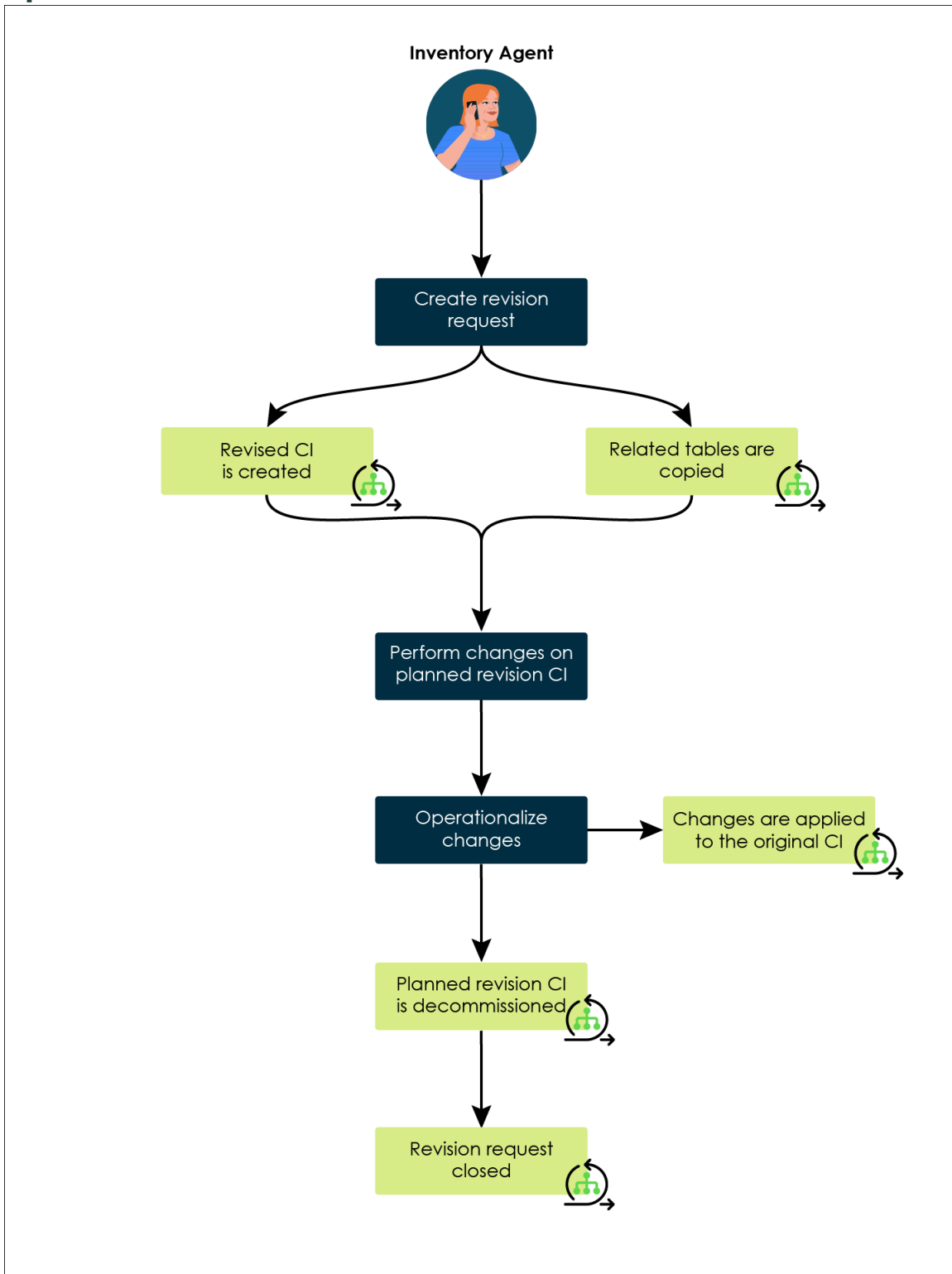
Revision of Configuration Item (CI) enables you to update the network attributes of a Configuration Item, such as attributes, connection elements, and relations using the Telecommunications Network Inventory application. You can make a safe and efficient update to your network infrastructure by using the CI revision.

### CI revision overview

CI revisions enable you to modify network-configured attributes and connection elements of an operational Configuration Item. The CI revision is applicable only to logical connection and physical connection CIs. So, you can update all configuration items of a connection, as required with the help of revise CI and its subflows.

CI revisions enable you to modify network-configured attributes and connection elements of an operational Configuration Item. The CI revision is applicable only to logical connection and physical connection CIs. So, after a logical connection or a physical connection Configuration Item is created, you can update it as required with the help of revise CI and its subflows.

## Operationalization and decommission flow



The following process guides you through the flow for a Configuration Item (CI) record after a request is created.

- 1. Initiate Revision Request:** Once you create a revision request, the selected CI is automatically cloned. This cloned CI includes all its related tables such as, attributes, connection elements, and relations.
- 2. Customize Cloning Process:** You can customize the cloning process and specify which related tables are included. To learn more, see [#unique\\_92](#).

3. **Modify cloned CI:** After successful cloning, you can perform changes on the cloned Configuration Item record, as required.
4. **Finalize and apply changes:** Using operationalization process merge and finalize the changes. This process integrates the revisions into the original CI record. To learn more, see [Revise a configuration item using design and assign](#).
5. **Decommission:** After operationalization, the cloned CI record is automatically decommissioned, ensuring an efficient workflow. To learn more, see [Decommission an inventory record](#).

## Use case

Let's say, for a logical connection having two ENETs, you want to add another ENET to increase the LAG capacity. So, in this scenario, for a safe LAG update, use the CI revision.

With the help of revise CI, the LAG and all of its connections are cloned. Then, in the cloned LAG Configuration Item, add the desired ENET member and merge it back into the original CI with the help of operationalize CI. After successful operationalization, all three ENETs are added to the original CI without disrupting the network. To learn more, see [Revise a configuration item using design and assign](#), [Operationalize a configuration item](#). Here, the cloned CI is decommissioned automatically. To learn more, see [Decommission an inventory record](#).

Let's say, you must update the IP address of a router in your network. This router is part of a complex network, and you aren't sure how changing the IP address affects the rest of the network. So, in this scenario, for a safe update of the router's IP address, use the CI revision.

With the help of revise CI, you firstly, duplicate the router CI and all of its related data. Then, you change the IP address of the duplicated router and merge it back into the original CI with the help of operationalize CI. As a result, the changes are applied to the original router without disrupting the network. To learn more, see [Revise a configuration item using design and assign](#) and [Operationalize a configuration item](#).

## Capacity management

Capacity management in Telecommunications Network Inventory enables you to calculate the capacity of physical entities in your network. By effectively managing the capacity, you can plan, monitor, and optimize the resources to make sure that the network can meet your current and future demands efficiently.

### Introduction to capacity management

The capacity management in Telecommunications Network Inventory uses functions and definitions to calculate and report the capacity of your network assets. The capacity metric estimates the maximum, occupied, and available network resources such as ports, slots, or racks in a telecommunication network. You can use this metric result to report the capacity of a network asset that can be used for future expansion of the network design.

### Capacity calculation use cases

When you create a configuration item (CI) using the design and assign function, the system automatically calculates the available capacity of the associated CIs. The Telecommunications Network Inventory application uses predefined definitions and functions to calculate the capacity. So, whenever there's a modification in the current design, the system automatically triggers the capacity calculation, and updates the metrics. The metric shows estimated maximum, occupied, available, and usage values for an entity. This approach makes sure that

resource consumption is effectively managed. Also, this calculation improves the accuracy of the design and assign function.

For example, when you add a new piece of equipment to a rack, it's important to determine the available racks within the equipment holder. When you create an equipment record, the predefined capacity definition runs, and the metric automatically updates the rack availability data. The capacity definition includes functions that determine the maximum and occupied racks. Subsequently, it calculates the difference between the maximum and occupied racks. For instance, if the maximum number of racks is 10 and the occupied racks are 7, there are 3 available racks. If the maximum number of racks are 10 and the occupied racks are 10, the available rack count is 0, which indicates no racks are available. Then the system consolidates the result in the capacity metric. This process provides you with the accurate capacity and availability information of the racks.

You can customize the capacity calculation for each type of Configuration Item (CI). This feature enables you to create and configure the function, definition, and metric to calculate the capacity. To learn more about configuring the capacity function and creating the metric, see [Configuring capacity management](#).

## Capacity management workflow

Capacity management uses function, definition, and metric tables to calculate and report the capacity. In the Telecommunications Network Inventory application, the system runs the capacity function and aggregates the results into the capacity metric table. It creates an available metric for capacity and a usage metric where the percentage value of available capacity is stored. Whenever a design change is happened, the system triggers an API to calculate the capacity using predefined functions and definitions. You can also manually calculate the capacity by selecting the **Calculate capacity** button in the inventory record.

To learn more about capacity function, definition, and metric, see [Configuring capacity management](#).

## Operational data collection of a datacenter

A datacenter generates a high volume of operational data for thermal, power, and usage readings. The ServiceNow instance can store and process the internal or external data for further analysis and reporting. Equinix (an external system) provides this data feed in the form of REST APIs. You then store the data in clothoDB through the `/api/sn_ni_adv/dcim/feed/{vendorname}` endpoint. The system runs TNI Aggregate Metric Data scheduled job once a day to update any capacity metric records on ClothoDB that haven't been updated in the last 24 hours. Also when the trigger condition is met, then the system creates an alert or incident. Use the time series metrics to query the operational data and get an overlay on your datacenters floor map with this data. So you can view the health of the floor and take the necessary actions. To learn more about the time series metrics, see [Time series metrics for datacenter](#).

You can also manually feed the operational data from your instance to clothoDB. To learn more, see [Collect operational values for datacenter](#).

## Telecommunication Network Inventory workflows in Flow Designer

By using the Telecommunications Network Inventory function catalog and subflows, you can access the functions that help you to automate the network inventory's design and assign process.

## Telecommunications Network Inventory function catalog

You can use the Telecommunications Network Inventory functions to create, update, and retrieve a configuration item (CI) while you're performing the Design and Assign process. For example, you can do the following actions:

- Create telco equipment
- Add an interface card

The following table lists the Telecommunications Network Inventory functions that are categorized by their functionality.

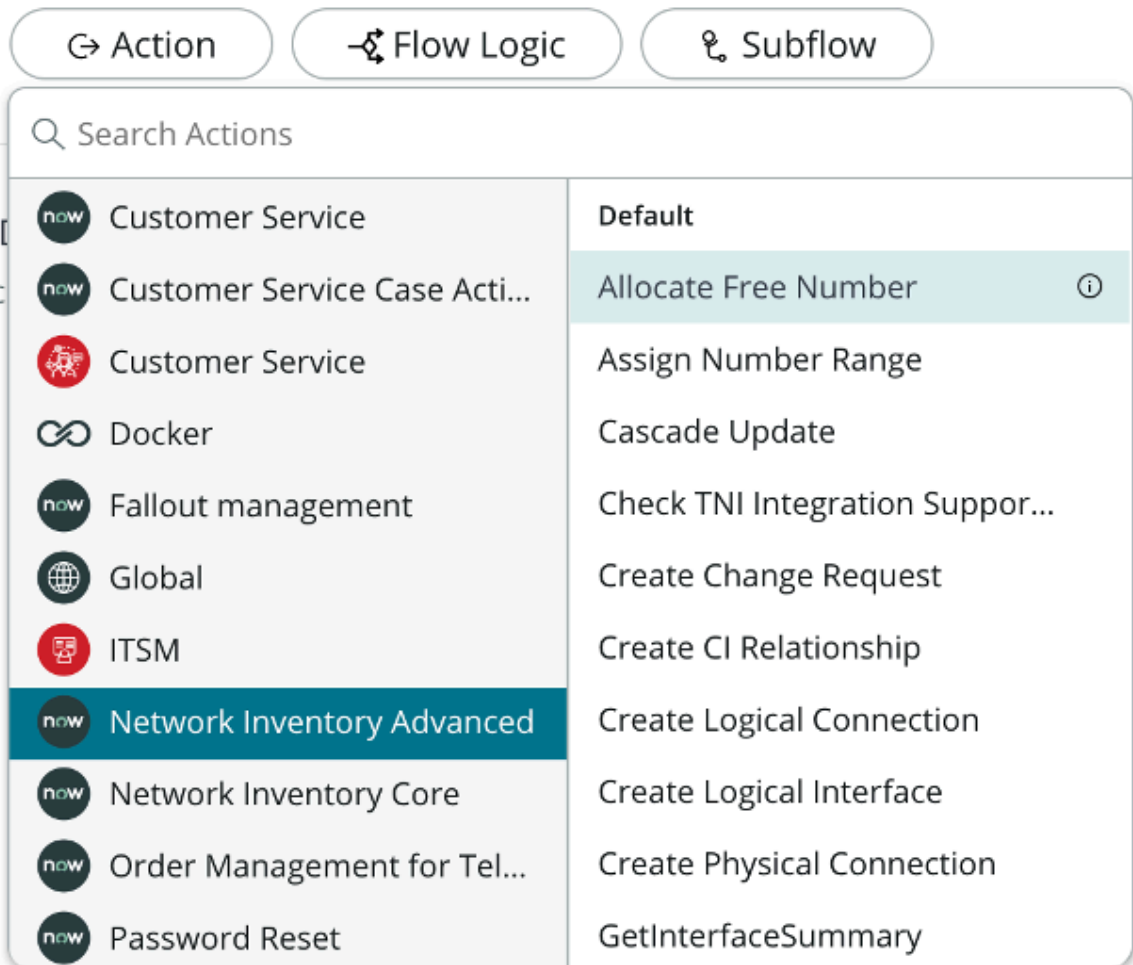
### Telecommunications Network Inventory functions

Function Type	Function Name
Create	<ul style="list-style-type: none"> <li>• TNI Create CI From Template</li> <li>• Create Logical Connection</li> <li>• Create Logical Interface</li> <li>• Create Physical Connection</li> <li>• Path Search</li> </ul>
Read	<ul style="list-style-type: none"> <li>• Allocate Free Number</li> <li>• Get Interface Summary</li> <li>• Lookup Next Hub</li> </ul>
Update	Cascade Update
Helper function	<ul style="list-style-type: none"> <li>• Split String</li> <li>• Get Index From Array</li> </ul>

To learn more about the network inventory functions, see [Telecommunications Network Inventory function catalog](#).

The following example shows the functions that are available in the Workflow Studio action library under the **Network Inventory Advanced** option. You can use these functions to perform the inventory-related data operations.

**Network Inventory Function Catalog Location**



You can also use these functions as Workflow Studio actions in the Telecommunications Network Inventory workflow because the Design and Assign is a series of actions. The reusable Workflow Studio actions can automate repetitive work, such as creating a logical connection in the workflow. To learn more about Workflow Studio actions, see [Flow Designer](#).

**Telecommunications Network Inventory subflows**

In Workflow Studio, you can give the inputs and outputs to pass the data to and from the subflow while you're performing the Design and Assign process. If necessary, you can add more fields in the subflows. To learn more about working with the subflows, see [Building subflows](#). To learn more about the Workflow Studio, see [Flow Designer](#).

The Telecommunications Network Inventory application has the following subflows:

**Logical Connection Creation**

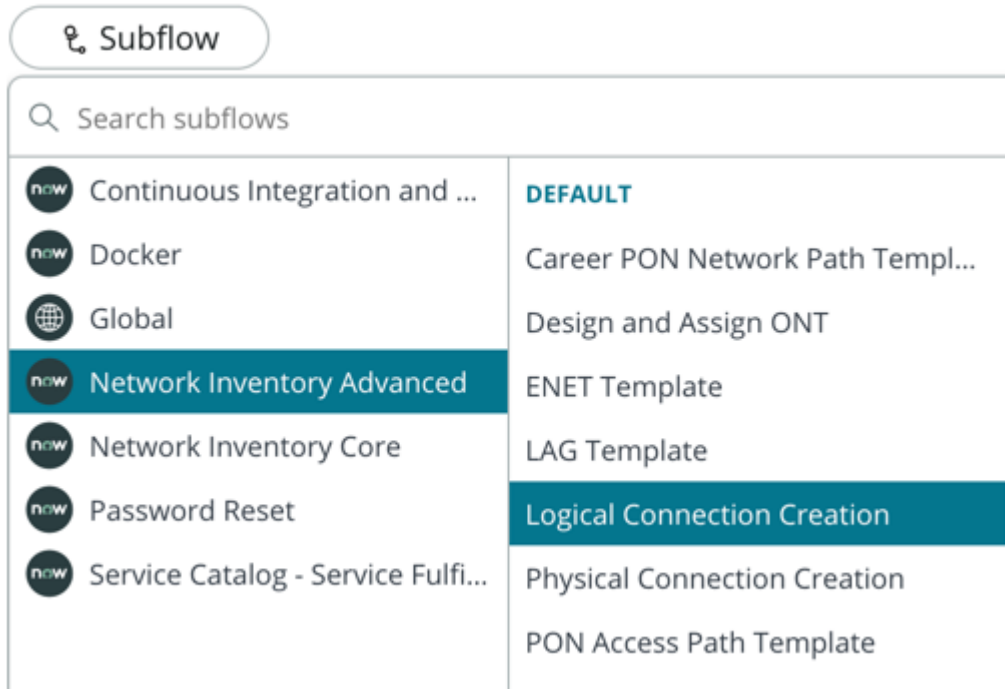
Creates a logical connection record in the Telecommunications Network Inventory application based on the input that you receive when you instantiate an inventory. To learn more, see [Logical Connection Creation subflow](#).

**Physical Connection Creation**

Creates a physical connection record in the Telecommunications Network Inventory application based on the input that you receive when you instantiate an inventory. To learn more, see [Physical Connection Creation subflow](#).

The following example shows the subflows that are available in the Workflow Studio action library under the **Network Inventory Advanced** option. You can use these functions to perform the inventory-related data operations.

**Network Inventory Subflow Location**



**Related topics**

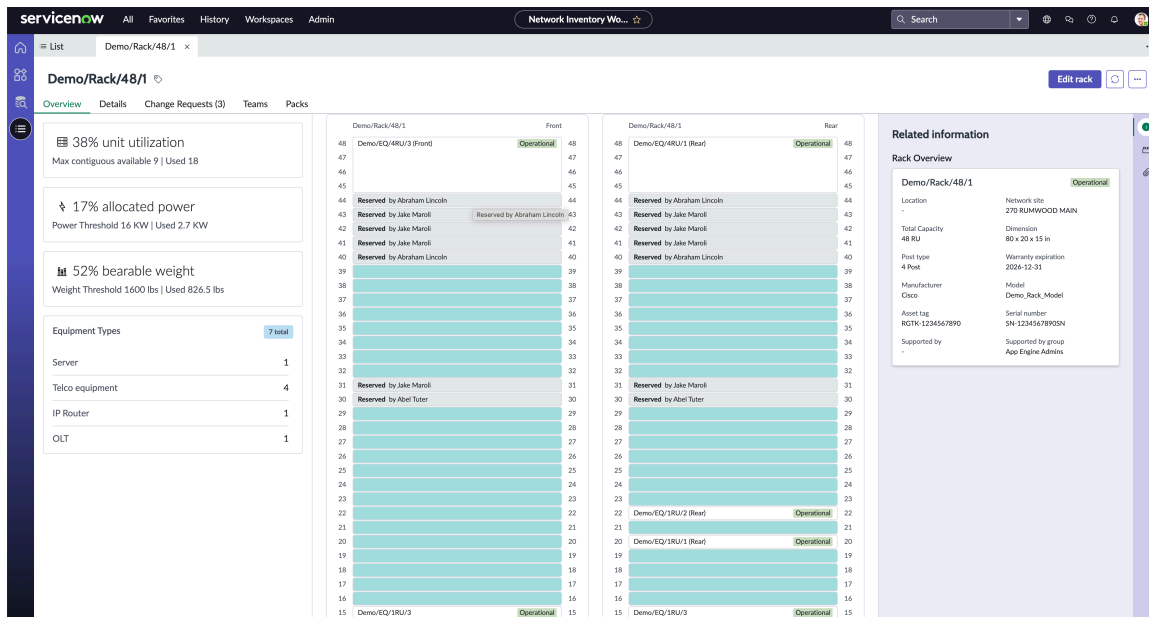
- [Telecommunications Network Inventory function catalog](#)
- [Telecommunications Network Inventory subflows](#)

**Visualization of a rack or cabinet**

Using rack or cabinet visualization in the Telecommunications Network Inventory application, you can visualize a rack or cabinet in the canvas. Here you can observe the loading of equipment and shelves into the front and rear accessible racks or cabinets, with each item placed in its designated Rack Units.

**Rack visualization overview**

Rack or cabinet visualization is a graphical representation of a datacenter rack or cabinet used to store and organize all equipment.



The previous screenshot is an example of a rack. From the **Overview** tab of a rack or cabinet, you can:

- See the KPI (Key Performance Indicator) of a rack using rack utilization.

**Note:** This KPI is only for racks.

- See the percentage of allocated power currently utilized by all equipment within the rack. This value is derived from the equipment model details. However, the actual power consumption might vary.


**Note:** This KPI is only for racks.

- See the percentage of allocated weight currently utilized by all equipment within the rack. This value is derived from the equipment model details. However, the actual weight consumption might vary.

**Note:**

- All rack capacities are calculated based on the capacity definition - rack capacity. To change the evaluation of the capacity, you can create a capacity definition and function. To learn more, see [Configuring capacity management](#).
- This KPI is only for racks.

- Explore different equipment types to optimize the placement of routers, shelves, or other network infrastructure.
- See both the front and rear views of the rack or cabinet.
- See all the reserved units and reserved by which user.
- See the rack or cabinet and rack or cabinet models.
- Create equipment from a rack or cabinet view. To learn more, see [Create a rack](#).
- Edit a rack. To learn more, see [Edit rack](#).
- Edit a cabinet. To learn more, see [Edit a cabinet](#).
- Add packs

- Decommission a rack or cabinet. To learn more, see [Decommission an inventory record](#).
- Delete a rack or cabinet. To learn more, see [Delete a record](#).
- Navigate to the rack/cabinets/slots form either from the canvas or the menu item.
- See life-cycle stage of equipment.
- See all the equipment and shelf details by selecting the info icon (  ).
- See the number of total and occupied slots available.
- Switch between the default and dark view using the preferences settings.

## Pre-requisites

To instantiate the creation of a rack or cabinet, you must:

1. Create or select a model in the equipment holder model with the Equipment Rack or Cabinet **Model categories** to associate it with a rack or cabinet respectively.

To learn more, see [Create an equipment holder model](#).

2. Create or select a relationship in the network model relationships with the Rack/Cabinet to Rack/Cabinet Slot **Relationship type** to define the number of rack slots.

To learn more, see [Define a network model relationship](#).

3. Create or select a template having the rack or cabinet model in the **inventory model** field.

To learn more, see [Create an inventory template](#).

## Visualize and manage a rack or cabinet

1. Initiate the rack or cabinet creation based on the rack or cabinet model, and rack or cabinet slots based on the template. To learn more, see [Create a change request from Network Inventory Workspace](#).

### Note:

- You can create a rack using [Create a rack](#).
- You can create a cabinet using [Create a cabinet](#).

2. Add an equipment or shelf to a rack or cabinet. To learn more, see [Create a change request from Network Inventory Workspace](#).

### Note: You can also edit, add, move, and remove an equipment using [Edit rack](#) and [Edit a cabinet](#).

3. Remove an equipment or shelf from a rack or cabinet.

To learn more, see [Create a change request from Network Inventory Workspace](#).

## Related topics

[Create a rack](#)

[Create a cabinet](#)

## Design and assign your network services

The Design and Assign function provides step-by-step guidance for designing a network service in the Telecommunications Network Inventory application. You can use the Design and Assign function to complete guided activities to design the network services and assign the network inventories.

### Introduction to design and assign function

The Design and Assign function is an end-to-end workflow that includes the necessary steps to design a network service against a design request. You can visualize a workflow in a task-oriented view and guides users through sequences of tasks to complete the design process. The Design and Assign function offers a structured approach for agents to deliver a network service. It provides agents with clear visibility into the steps to be executed, the network resources to be allocated at each step, and how everything is integrated together.

The Design and Assign framework breaks the design workflow into multiple activities. Each activity includes the steps necessary for an agent to complete that activity. Activities also include automated workflows, such as creation of change tasks for the next step when an activity is complete.

The Design and Assign function include:

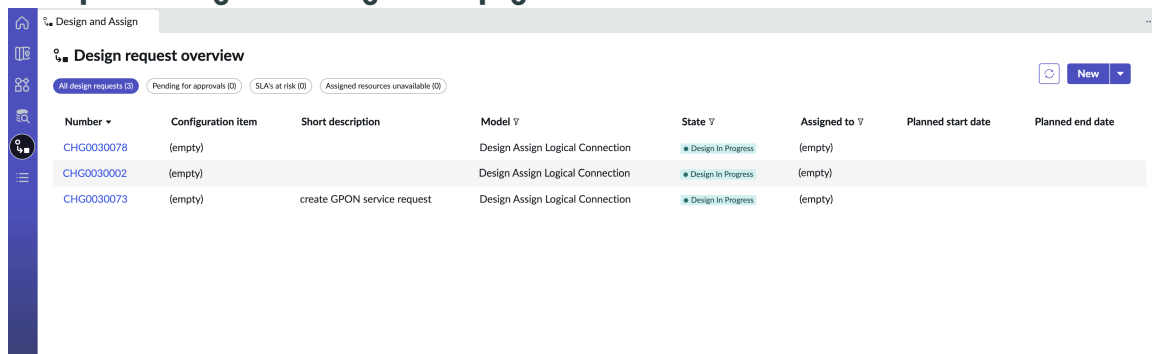
- An activity picker displays the activities.
- A series of steps that you have to complete to achieve a particular goal for each activity.

### Design and Assign home page

The Design and Assign home page displays all change requests (design requests) that are in the Design in Progress state. Selecting a change request redirects to the corresponding Design and Assign function where you can visualize the workflow in a task-oriented view. You can also select the UI action to launch a Design and Assign function from the home page. For example, select **Create Logical Connection** to launch the Design and Assign function for a new logical connection.

The following is an example for the Design and Assign home page.

#### Example of Design and Assign home page





The screenshot shows the 'Design request overview' page. It features a navigation sidebar on the left and a main content area with a table of design requests. The table has columns for Number, Configuration item, Short description, Model, State, Assigned to, Planned start date, and Planned end date. Three rows are visible, all with a 'Design In Progress' state.

Number	Configuration item	Short description	Model	State	Assigned to	Planned start date	Planned end date
CHG0030078	(empty)		Design Assign Logical Connection	Design In Progress	(empty)		
CHG0030002	(empty)		Design Assign Logical Connection	Design In Progress	(empty)		
CHG0030073	(empty)	create GPON service request	Design Assign Logical Connection	Design In Progress	(empty)		

Access the Design and Assign home page in the Telecommunications Network Inventory workspace as follows.

1. Navigate to **Workspaces > Network Inventory Workspace**.

2. Select the design and assign icon (.

To refresh the home page, select refresh icon (.

## Design and Assign function user roles

### Design and Assign function user roles and responsibilities

User role	Description
Network Planning Agent [sn_ni_core.network_planning_agent]	<ul style="list-style-type: none"> <li>• View the Design and Assign home page for assigned requests.</li> <li>• Create a logical connection design request.</li> <li>• Complete the activities according to sequence.</li> <li>• View the diagram and validate the design as activity progresses.</li> <li>• Review and complete the Design and Assign request.</li> </ul>
Network Planning Manager [sn_ni_core.network_planning_manager]	<ul style="list-style-type: none"> <li>• View the Design and Assign home page for your and your team's assigned requests.</li> <li>• Create a logical connection design request.</li> <li>• Complete the activities according to sequence.</li> <li>• View the diagram and validate the design as activity progresses.</li> <li>• Review and complete the Design and Assign request.</li> </ul>
Playbook admin [playbook.admin]	Uses the <a href="#">Workflow Studio</a> application to author, configure, and monitor the Design and Assign function.

### Creating and configuring Design and Assign function for your network services

You can create the Design and Assign function for various types of network services such as designing a Gigabyte Passive Optical Network (GPON) Broadband service. You can use ServiceNow AI Platform capabilities and Workflow Studio application to create and configure the Design and Assign function. To learn more, see [Configuring Design and Assign function for your network services](#).

### Using Design and Assign function

The inventory agents can use the guidance available with the Design and Assign function to complete the tasks and activities. These activities are needed to design your network service and assign the network resources.

A Design and Assign function includes multiple activities for an agent to complete. When using a Design and Assign function, agents can:

- View the activities.
- Select an activity and perform the work necessary to complete that activity.

- Mark an activity as complete and move to the next activity.
- Complete the activities necessary to design and assign an inventory record.

To learn more, see [Using Design and Assign function](#).

You can create a logical connection by using the Design and Assign function available in the Telecommunications Network Inventory application. To learn more, see [Design and Assign function for logical connections](#).

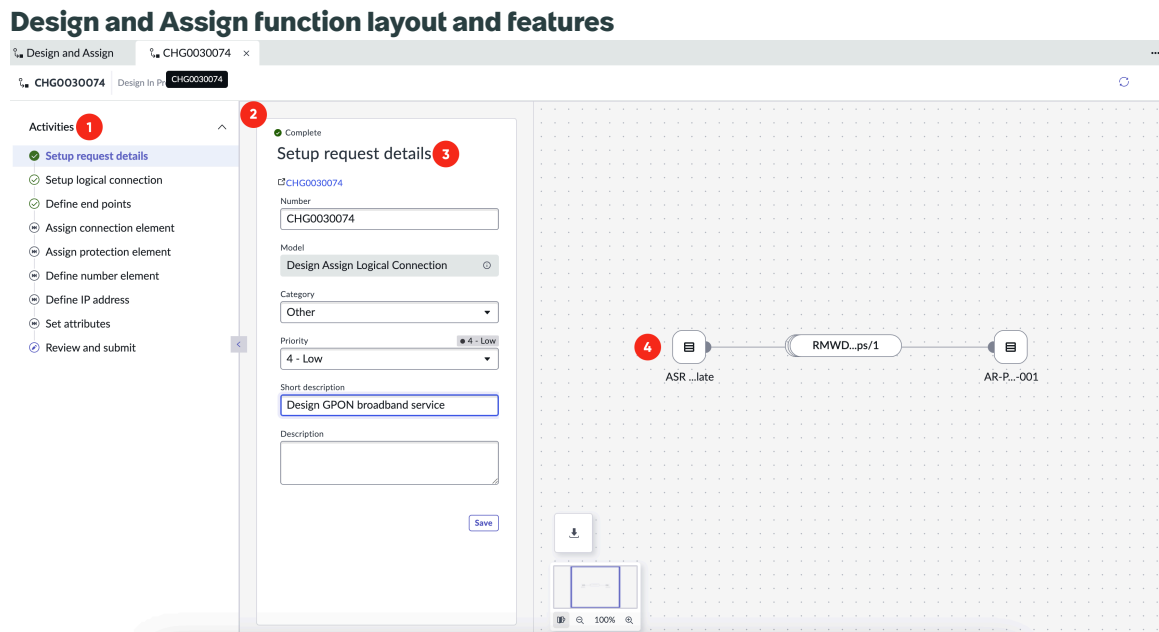
## Design and Assign function for logical connections

Design and assign a logical connection in the Telecommunications Network Inventory application. By using the Design and Assign function, you can fulfill the logical connection design request of a customer.

The Design and Assign function provides the activities and tasks that an agent can perform to create a logical connection. Depending on the design request, the agent can design a logical connection and assign the related network inventories to that connection.

## Design and Assign function layout and features

The following example shows the Design and Assign function layout for a logical connection.



### Design and Assign function layout

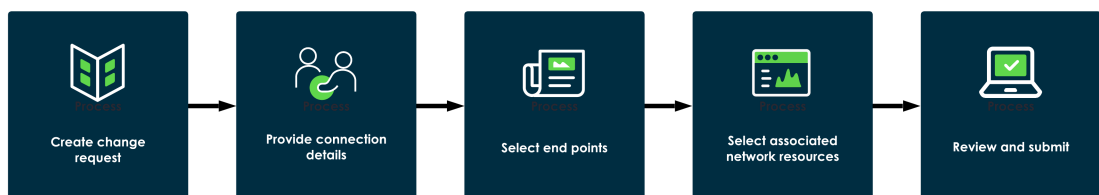
Callout	Feature	
1	Activity picker	<p>The activity picker displays the list of activities to design and assign a logical connection. Each activity has an indicator that shows the activity state:</p> <ul style="list-style-type: none"> <li>•  - Activity is work in progress.</li> <li>•  - Activity is completed.</li> </ul>

### Design and Assign function layout (continued)

Callout	Feature	
		<ul style="list-style-type: none"> <li>🔒 - Pending activities.</li> <li>⏸️ - Activity is skipped.</li> </ul> <p>Select an activity to view the details in the activity viewer.</p>
2	Activity viewer	<p>The activity viewer displays the selected activity. Activity viewer is the main work area where an agent performs the work necessary to complete the current activity.</p> <p>You can collapse the activity viewer panel.</p>
3	Activity cards	<p>Activity cards display the details about the current activity in the activity viewer. Depending on the type of activity, the activity cards can display information such as field information to set up an end point.</p> <p>Agents use the cards to complete the work for each activity, such as adding end points or setting attributes.</p>
4	Network diagram	<p>Network diagram graphically displays a circuit of the logical connection elements. After you complete each activity, the network diagram updates and displays the data. You get a clear visualization of your design.</p> <p>You can expand the network diagram by collapsing the activity picker and activity details panels.</p> <p>You can expand the pills in the diagram to see all underlying connection elements. Hover over each pill show the full name of that connection element.</p>

## Design and Assign workflow for logical connection

### Design and Assign playbook workflow for logical connection



The Design and Assign function for a logical connection has the following workflow.


1. Create a change request and add necessary details about your design.
2. Provide connection details which influence the design such as logical connection model, bandwidth, and domain.
3. Select end points such as network sites and interfaces where the connection starts and terminates.
4. Select connection elements between the endpoints.
5. Select a protection path to define the redundancy path for your logical connection.
6. Select a number element such as VLAN or LAG.
7. Select an IP address.
8. Review the design and submit for approval.

By completing these steps, a logical connection record is generated with the associated Configuration Items (CI).

To learn more about the steps to design and assign a logical connection, see [Create a logical connection record using the Design and Assign function](#).

## Access

You can access the Design and Assign function for a logical connection in the Telecommunications Network Inventory Workspace as follows:

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the design and assign icon () to open the Design request overview window.
3. Select **New > Create Logical Connection** or select any change request from the list.

## Related topics

[Design and assign your network services](#)

[Telecommunications Network Inventory subflows](#)

# Service Operations Workspace for Telecommunications Network Inventory

ServiceNow® Service Operations Workspace is a configurable workspace that provides a converged experience for Telecommunications Network Inventory (TNI) workflows. Configure your agent experience using the easy-to-navigate interface of Service Operations Workspace.

## Service Operations Workspace for TNI overview

The Service Operations Workspace for TNI a converged experience for agents to view both incident/alert details and Network Inventory entities within a single Workspace. You can monitor the alert and incident for your network site or datacenter and analyze and resolve them, all from a single interface. It helps the agent to identify issues, manage network inventory assets, and promote service continuity across telecom networks.

## Benefits

### Enhance operational efficiency

Empower operations agents with real-time visibility into datacenter incidents and alerts, enabling faster response and efficient resolution.

### Unify experience for TNI workflows

Consolidate various TNI workflows into a single, intuitive interface, enabling seamless inventory management across different areas of network infrastructure.

### Customize configurability

Enable organizations to tailor the workspace to specific requirements and preferences, optimizing productivity by displaying relevant data and tools for each workflow.

## User roles

### Service Operations Workspace for TNI user roles and responsibilities

Role title [Name]	Descriptions
DC Ops Agent [sn_ni_core.dc_ops_agent]	Oversees datacenter floor operations, using the floor map to manage incidents and alerts, resolve problems, and handle change requests.
DC Ops Viewer [sn_ni_core.dc_ops_viewer]	Read-only access to the Network Inventory workspace and its components.

### Related topics

[Assigning user roles for Telecommunications Network Inventory](#)

[Exploring Telecommunications Network Inventory](#)

## Service Operations Workspace for Telecommunications Network Inventory user interface

Explore the Service Operations Workspace for Telecommunications Network Inventory interface to understand how an operator can prioritize network inventory tasks and offer solutions.

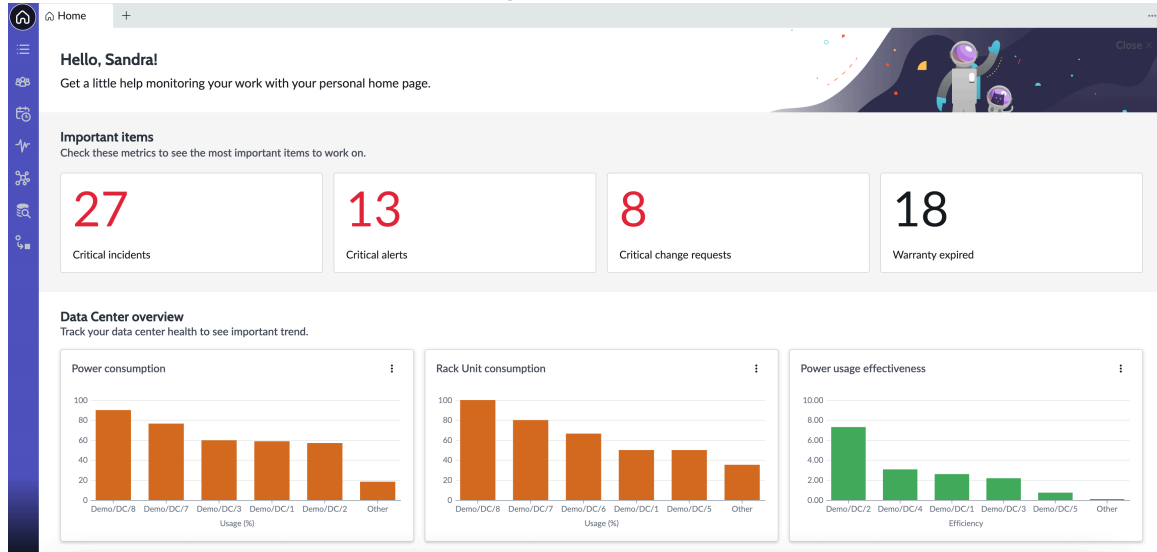
### Accessing Service Operations Workspace

From the **Workspaces** menu, select **Service Operations Workspace**.

### Landing page

The landing page in the Service Operations Workspace for Telecommunications Network Inventory provides an overview of the current operational landscape of your datacenter. The landing page includes the important items such as datacenter overview, list of your and your team's assignments including change requests, alerts, and incidents.

## Example of the landing page of Service Operations Workspace for Telecommunications Network Inventory



Widgets in the landing page might look different based on the Telecommunications Service Management (TSOM) and Telecommunications Service Operations Management (TSOM) applications you have installed.

### Landing page widgets

Widget type	Widget and Description
Important Items	<p><b>Critical incidents</b></p> <p>Total count of incidents that are critical.</p> <p><b>Critical alerts</b></p> <p>Total count of alerts that are critical.</p> <p><b>My open change requests</b></p> <p>Total count of open change requests.</p> <p><b>Critical change requests</b></p> <p>Total count of change requests that are critical.</p> <p><b>Critical tasks</b></p> <p>Total count of change tasks that are critical.</p> <p><b>Warranty expired</b></p> <p>Total count of network assets with expired warranties.</p>

Landing page widgets (continued)

Widget type	Widget and Description
	<p><b>Note:</b></p> <p>With TSOM is installed, the following widgets appear.</p> <ul style="list-style-type: none"> <li>• Critical incidents</li> <li>• Critical alerts</li> <li>• Critical change requests</li> <li>• Warranty expired</li> </ul> <p>With TSM is installed, the following widgets appear.</p> <ul style="list-style-type: none"> <li>• Critical incidents</li> <li>• Critical change requests</li> <li>• Critical tasks</li> <li>• Warranty expired</li> </ul> <p>Without TSOM and TSM are installed, the following widgets appear.</p> <ul style="list-style-type: none"> <li>• My open change requests</li> <li>• Critical change requests</li> <li>• Critical tasks</li> <li>• Warranty expired</li> </ul>
Data Center overview	<p><b>Power consumption</b></p> <p>Bar chart representation of total power supplied to datacenter.</p> <p><b>Rack Unit consumption</b></p> <p>Bar chart representation of rack usage of datacenter.</p> <p><b>Power usage effectiveness</b></p> <p>Bar chart representation of power usage of datacenter. Power Usage Effectiveness (PUE) is a measure of how efficiently a datacenter uses energy. It compares the total power used by the datacenter to the power used only by the equipment (like servers).</p>
Your work/Your team's work	<p>Select <b>Your work</b> to view your assignments, or select <b>Your team's work</b> to view your team's assignments.</p> <p><b>Incidents</b></p>

**Landing page widgets (continued)**

Widget type	Widget and Description
	<p>List of all incidents.</p> <p><b>Alerts</b></p> <p>List of all alerts.</p> <p><b>Open change requests</b></p> <p>List of all open network change requests.</p> <p><b>Open change tasks</b></p> <p>List of all open network change tasks.</p> <p><b>Note:</b></p> <p>With TSOM is installed, the following widgets appear.</p> <ul style="list-style-type: none"> <li>• Incidents</li> <li>• Alerts</li> </ul> <p>With TSM is installed, the following widgets appear.</p> <ul style="list-style-type: none"> <li>• Incidents</li> <li>• Open change requests</li> </ul> <p>Without TSOM and TSM are installed, the following widgets appear.</p> <ul style="list-style-type: none"> <li>• Open change requests</li> <li>• Open change tasks</li> </ul>

**Lists**

From the Lists view, you can access most of the Telecommunications Network Inventory classes and functions. An agent can analyze the individual lists of incidents, alerts, change tasks, and so on, and take appropriate action. To learn more, see [Network Inventory Workspace Lists view](#).

To access the Lists view, select the list icon ()

### List view tab

Number	Initial event generation time	Description	Priority group	Severity	Source
Alert0010015	2025-07-05 09:38:06	There is delay in the impact jobs. The longest delay is 497 seconds. Additional Info The job: Event Management - Impact Calculator Trigger is idle for 5 secon...	High	Major	EMSelfMonitoring
Alert0010007	2025-06-16 05:23:19	There are 15 alerts which were not updated for over 2 days. To remediate the issue follow these steps:...	Low	Minor	EMSelfMonitoring
Alert0015861	2022-02-14 03:00:00	Feb 1 13:55:08 INCO048090-01 stress-ng: info: [22602sdsad] (secs) (secs) (secs) (real time) (usr+sys time)	High	Critical	Log Analytics
Alert0010342	2022-01-20 08:11:01	RAVIV - 77777777	Low	Minor	Log Analytics
Alert0010343	2022-01-20 08:11:01	RAVIV - 77777777	Low	Minor	Log Analytics
Alert0010346	2022-01-20 08:11:01	RAVIV - 77777777	Low	Minor	Log Analytics
Alert0010340	2022-01-20 08:11:00	/** Access log for a tri-state system property.	Low	Minor	Log Analytics

The menus you see depend on the applications you have installed. If you install the TSOM and TSM, the Incidents and Alerts menu appears on the Lists view.

**Note:** You must install Service Operations Workspace Alert Management (sn\_sow\_em) plugin to view the Alerts in the List menu.

To learn more about Telecommunications Network Inventory features, see [Exploring Telecommunications Network Inventory](#).

### Network visualization

The Network visualization view provides various options to explore the network infrastructure-related functions. You can use the Network visualization to view the geographical location of your network sites, the floor plan of a datacenter, and the topology of your network. To learn more, see [Visualization of your network infrastructure](#).

To access the Network visualization page, select the blue hub icon ( ).

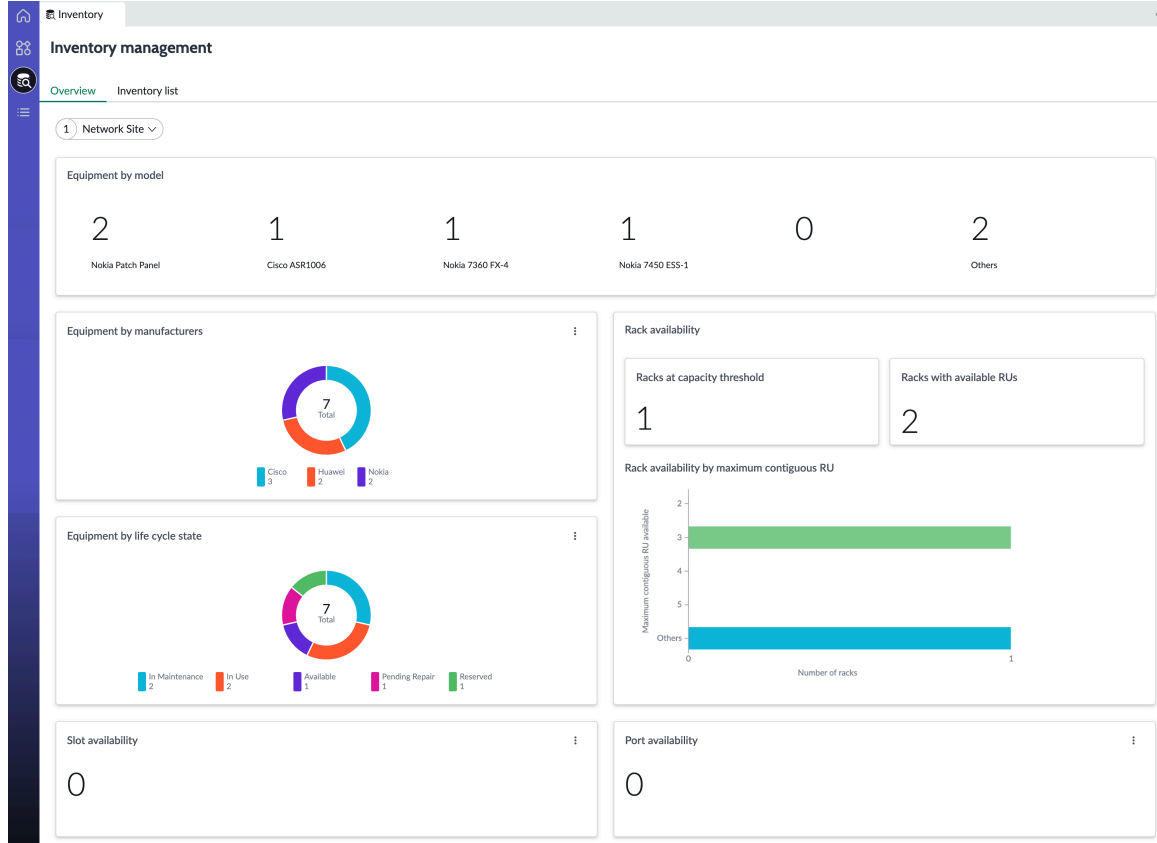
### Example of Network visualization page

## Inventory management

Use the Inventory management view in the Service Operations Workspace to get a detailed view of your network inventory. To learn more, [Network Inventory management view](#).

To open the Inventory management view, select the database search icon (🔍) on the side panel.

### Example of Inventory management view



## Design and Assign your network service

The Design and Assign function provides step-by-step guidance for designing a network service. You can use the Design and Assign function to complete guided activities to design the network services and assign the network inventories. To learn more, see [Design and assign your network services](#).

To access the Network visualization page, select the network visualization icon (🌐).

### Example of Design and Assign home page

Number	Configuration item	Short description	Model	State	Assigned to	Planned start date	Planned end date
CHG0030078	(empty)		Design Assign Logical Connection	Design In Progress	(empty)		
CHG0030002	(empty)		Design Assign Logical Connection	Design In Progress	(empty)		
CHG0030073	(empty)	create GPON service request	Design Assign Logical Connection	Design In Progress	(empty)		

## Related topics

[Visualization of your network infrastructure](#)

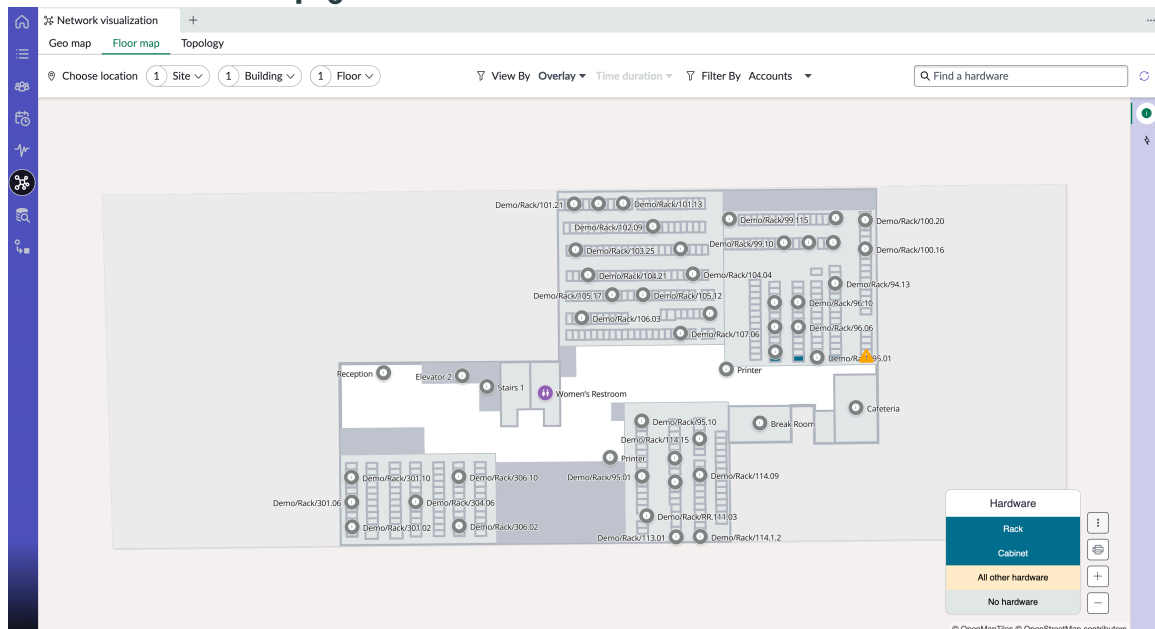
# Visualization of your network infrastructure

Use the Network visualization view in the Telecommunications Network Inventory to explore your network infrastructure. You can explore the details about your network site, datacenter, and topology of your network.

## Network visualization overview

The Network visualization provides various options to visualize the network infrastructure-related functions in the Telecommunications Network Inventory application. You can use the Network visualization to view the geographical location of your network sites, the floor plan in a datacenter, and the topology of your network.

### Network visualization page view



The following features are available in the Network visualization view:

### Geo map

Use the geo map to see the geographical location of your network sites and datacenters. You can also get details such as site specific, connectivity, and capacity. To learn more, see [Visualization of geo map](#).

### Floor map

Use the floor map to view the location of network assets on a datacenter floor. You can also view the operational details of the datacenter on the map, so you can keep an eye on power, thermal, and usage data. To learn more, see [Visualization of floor map](#).

### Topology

With the topology map, you can see how elements connect to each other in a network, such as equipment and interfaces. Get a high-level view of your whole network. To learn more, see [Visualization of network topology](#).

## User roles

### user roles and responsibilities

User role	Description
DC Floor Designer [sn_ni_core.dc_floor_designer]	Design the floor layout in Indoor Mapping Map Studio, focusing on creating and defining the visual representation of the floor.
DC Ops Agent [sn_ni_core.dc_ops_agent]	Oversees datacenter floor operations, using the floor map to manage incidents, resolve problems, and handle change requests.
DC Ops Viewer [sn_ni_core.dc_ops_viewer]	Read-only access to the Network Inventory workspace and its components.

## Access

You can access the Network visualization page as follows:

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the blue hub icon ()

## Visualization of geo map

Use the geo map in Telecommunications Network Inventory to view the geographical location of your network sites and datacenters. You can use the geo map to get the details of the network site and datacenters such as site details, connectivity, and capacity information.

### Geo map overview

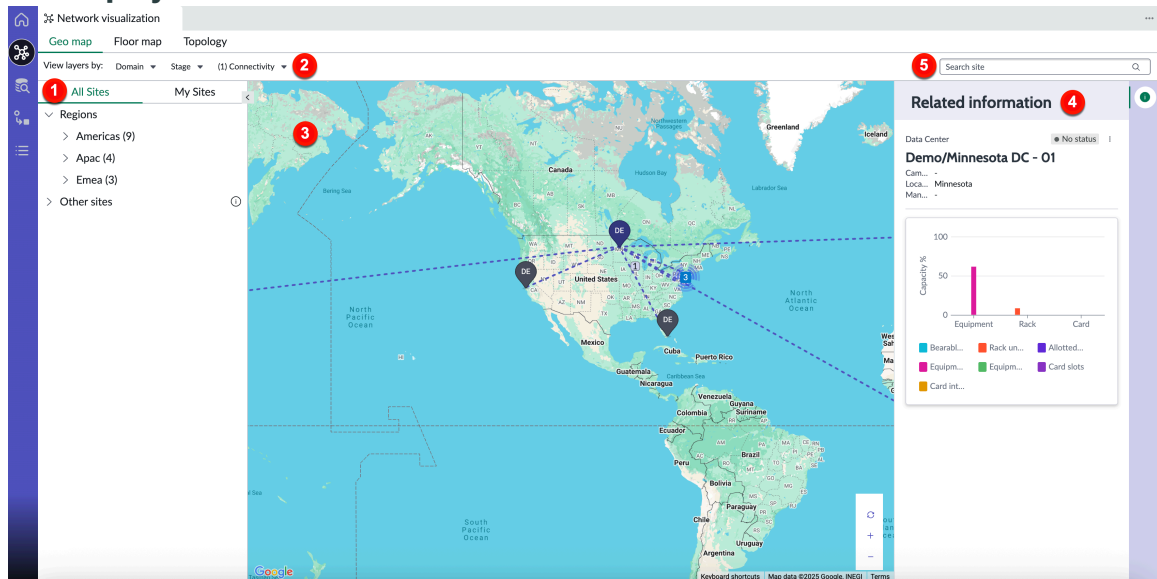
The geo map (outdoor map) geographically displays the network sites and datacenters on a map pane including the details of the connections. It provides an overview of the site and details about the various connections that are connected between the sites. You can view the following information using the geo map.

- Geographical location of network sites and datacenters.
- Connection elements associated with the site such as physical and logical connection, topology, and cable route.
- Associated sites of a network site that you're selected.
- Related information of a site including the capacity information.

### Map layout and features

The following example shows the geo map layout in the Telecommunications Network Inventory application.







## Geo map layout



## Geo map layout and features


Callout	Feature	
1	Navigation panel	<p>Use the navigation panel to view a list of locations and sites they're associated with each location. The navigation panel has the following tabs:</p> <p><b>All Sites</b></p> <p>Lists all network sites and datacenters.</p> <p><b>My Sites</b></p> <p>Lists the network sites and datacenters that you're managing.</p> <p><b>Note:</b> Sites without any location details are listed under <b>Other sites</b> and are displayed as inactive.</p> <p>Select location or site in the navigation panel to zoom to its corresponding area in the map pane.</p>
2	Filter options	<p>Map pane displays the network sites and datacenters based on the filter condition that you set. Use the following options to filter the network sites:</p> <p><b>Domain</b></p> <p>Filters the sites based on the domain name.</p> <p><b>Stage</b></p> <p>Filters the sites based on the life-cycle stage.</p> <p><b>Connectivity</b></p> <p>Displays the type of connections such as physical and logical connection, topology, and cable for a network site that you're selected on the map pane.</p>

### Geo map layout and features (continued)

Callout	Feature	
		<p> <b>Note:</b> The datacenter doesn't show cable filter option.</p>
3	Map pane	<p>The map pane displays the network site and datacenter with a location icon (). You can zoom in or out of the map using the plus (+) or minus (-) buttons. When you zoom out, the sites that are closely situated near each other geographically, appear as cluster icon () on the map pane. The number that is next to a cluster indicates the number of sites in that cluster. If a same location has multiple sites, it shows as a location cluster icon (). The location icon with red color () indicates that the site exceeds the capacity threshold. By default the map pane shows all the sites that are exceeded the capacity threshold. The <code>sn_ni_adv.threshold_capacity_site_usage</code> system property maintains the value of the threshold of site capacity usage in percentage.</p> <p>You can view the following information with the map pane:</p> <ul style="list-style-type: none"> <li>• View the associated sites by selecting a network site or datacenter.</li> <li>• Hover over a site shows the site-specific information.</li> <li>• View the physical and logical connections between the sites.</li> <li>• View the cable route between the sites.</li> <li>• View the topology that is associated with a site.</li> </ul>
4	Details pane	<p>The details pane shows the related information about a network site or datacenter that you're selected in the map pane. You can select the info icon () to view the details pane. If a location has multiple sites, the details pane shows the related information about all the sites. You can also view the available capacity of the site in the details pane.</p>
5	Search box	<p>Use the search box to select a site to view its location and details. You can select one site at a time.</p>

### Access

You can access the geo map in the Telecommunications Network Inventory workspace as follows:

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the blue hub icon () to open the Network visualization window.
3. Select **Geo map** tab.

To learn more about how to use the geo map, see [View details of the geo map](#).

**Related topics**

[Using the geo map](#)

**Visualization of floor map**

Use the floor map in the Telecommunications Network Inventory application to view a layout of your datacenter infrastructure. You can view the network assets placement and monitor the operational data on the map.

**Floor map overview**

The floor map provides a visual representation of your datacenter floor. Use the floor map to view the layout of your datacenter infrastructure including network asset placement and operational details to monitor power, thermal, and usage data. You can view alerts, incidents, changes requests, and capacity information of the datacenter.

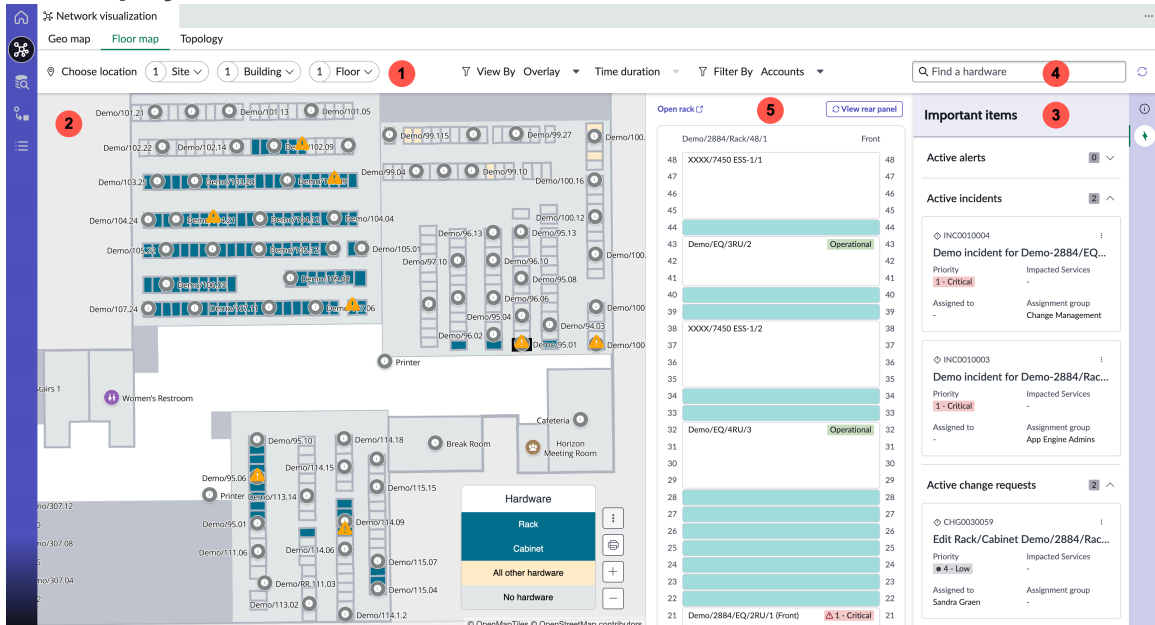
You can view the following information using the floor map.

- Details of the objects on the floor
- View operational data
- View alert information
- Visualize a rack
- View floor and rack health information


**Floor map layout and features**

The following example shows a floor map layout in the Telecommunications Network Inventory application.




**Floor map layout**



Floor map layout and features

Callout	Feature	Description
1	Filter options	<p>The map pane shows the floor map based on the filters that you set. Use the following options to filter the floor:</p> <p><b>Site</b></p> <p>Select the campus. A campus must be associated with any network site or datacenter. The associated configuration item (CI) must also have TNI entity attributes.</p> <p><b>Building</b></p> <p>Select the building within a campus.</p> <p><b>Floor</b></p> <p>Select the floor in the building. The map pane displays the floor map for the selected floor.</p> <p><b>Filter By Account</b></p> <p>Select the company account to group the network assets. You can filter accounts to show that service-related infrastructure.</p> <p><b>View By</b></p> <p>Select the type of overlay to view the operational data such as Power, Temperature, and RU Utilization.</p> <p><b>Time duration</b></p> <p>Select the time duration for the operational metric data.</p>
2	Map pane	<p>The map pane displays the objects of a datacenter floor, including the following details.</p> <ul style="list-style-type: none"> <li>• Places with boundary line.</li> <li>• Markers on the datacenter floor.</li> <li>• Places that are associated with a rack or cabinet CI in bluish green color.</li> <li>• Places that are associated with other facility hardware in yellow color.</li> <li>• Selected place borders are highlighted in black color.</li> <li>• Places that haven't been mapped with a CI appears in gray color.</li> <li>• Alert information with an alert icon () on a place that is associated with a rack CI.</li> </ul>

### Floor map layout and features (continued)

Callout	Feature	Description
		<ul style="list-style-type: none"> <li>• Temperature, Power, and RU Utilization data with color-coded rack overlays according to map legend.</li> <li>• View map legends of metric overlay and network assets color codes.</li> </ul> <p>You can zoom in or out of the map using the plus (+) or minus (-) buttons.</p>
3	Details pane	<p>The details pane shows the related information about a place that you're selected in the map pane. Select the info icon (  ) to view the details pane. When you first open the details pane, it shows the details of the floor. Select a place to learn more about it. If a configuration item (CI) is associated with that place, you see the details about that CI.</p> <p>Select the alert icon (  ) on the map pane to view the details of the alerts, incidents, and change requests that are associated with the corresponding CI. You can also select the green lightning bolt icon (  ) on the details pane to view the same details.</p> <p><b>Note:</b> Alerts are displayed when the Telecommunications Alarm Management Open API (sn_ind_tmf642) plugin is installed. Incidents are displayed when the Customer Service Problem Management (sn_sprb_mgmt) plugin is installed.</p>
4	Search box	<p>Use the search box to find hardware on the map pane. The searched hardware is highlighted on the map. If the hardware is located directly on the floor (not inside a rack), the system highlights the exact location of the hardware on the floor map. Search option also highlights the hardware within the Rack view if the searched hardware is placed within a rack or cabinet.</p>
5	Rack view	<p>Rack view shows the visual representation of a rack. The Rack view also shows the warning labels for alerts, incidents, and change requests. Select a rack CI in the map pane to open the Rack view.</p>


### Managing your floor map

You can upload and manage the datacenter map objects using the Indoor Mapping Map Studio. You can view the respective floor plans for a selected building in a datacenter campus using the floor map. To learn more, see [Upload and manage floor map for your datacenter](#).

### Access

Access the floor map in the Telecommunications Network Inventory workspace as follows:

1. Navigate to **Workspaces > Network Inventory Workspace**.

2. Select the blue hub icon (  ).

3. Select the **Floor map** tab.

To learn more about how to use the floor map, see [Using the floor map](#).

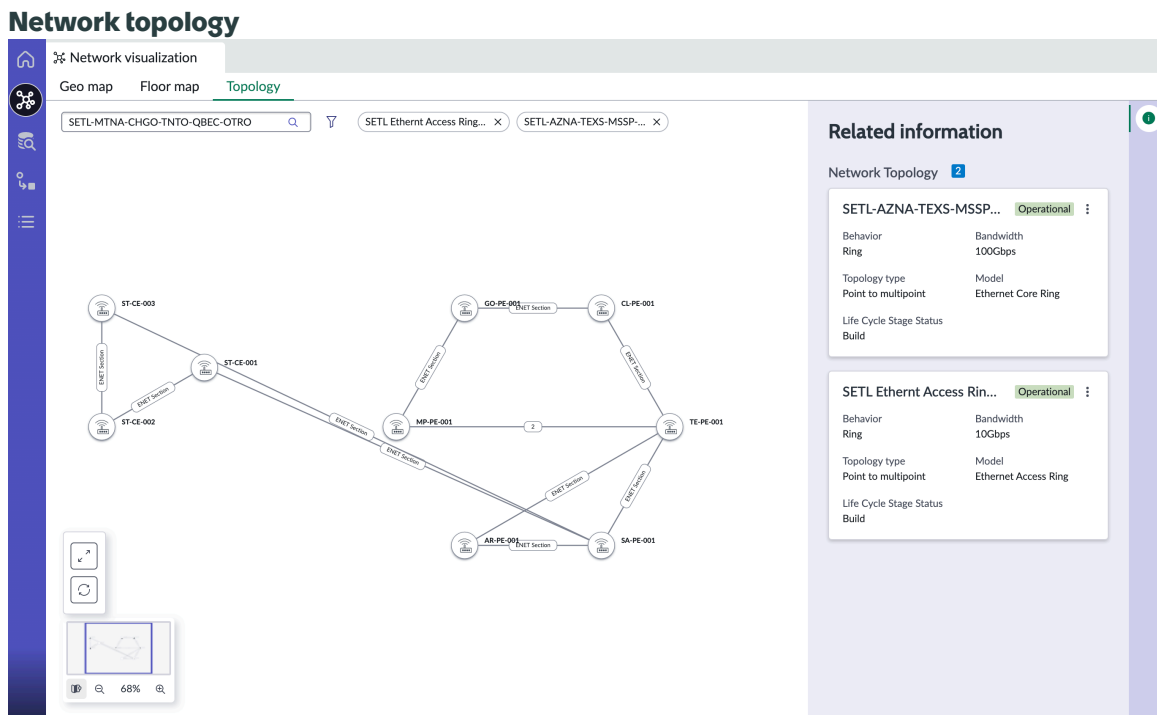
## Visualization of network topology

The topology in the Telecommunications Network Inventory application graphically displays how the different elements in a network such as equipment, connections, and interfaces are organized and connected to one another. By using a topology, you get a bird's eye view to the network.

### Topology visualization overview

The network topology is a visual representation of the network elements such as nodes (equipment), edges (connections), and termination points (interfaces), and how they're organized and connected to one another. A topology can be a ring, tree, mesh, star, or bus in structure. A topology enables you to plan the network expansions, monitor the network performance, and troubleshoot the faults occurring in the network.

The following example shows a topology in the Telecommunications Network Inventory application.



You can view the topology in the Network Viewer window in the Telecommunications Network Inventory workspace. The Network Viewer window contains the following:

- The search box and advanced filter enable you to select the topology.
- The map pane shows the network topology.
- Details pane on the shows related information of the topology according to the current selections.



## Search box

Use the search box to select the topology that you want to visualize. You can select multiple topologies at a time. The advanced filter option enables you to filter the topologies based on the conditions that you set.


## Map pane

The map pane shows the topology that you selected in the search box. You can view many topologies in the map pane at a time. The map pane also shows the name of each element in the topology.

You can perform the following actions in the map pane:

- Hover over a node to highlight the connections that are associated with the node.
- Select one among the topologies to highlight the elements associated with it.
- Select the refresh icon () to reload the map and return it to its initial view.
- Select the fit to screen icon () to adjust the topology to the size of the map pane.
- Use the zoom controls to zoom in and out of the map.


## Details pane

The details pane shows the related information about the topology, node, or connection that you're selected. You can select the info icon () to view the details pane. Initially the details pane shows the related information about the topology record. If you select a node, then the details pane shows the related information about that node. If you select an empty space on the map pane, the details pane shows related information about the topologies that are opened.

You can also select **View Details** in the details pane to redirect to the corresponding CI record.

## Access

You can access the network topology in the Telecommunications Network Inventory workspace as follows:

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the network visualization icon ()
3. Select the **Topology** tab.

To learn more about how to create and view a topology in the Telecommunications Network Inventory application, see [Using the network topology](#).

## Related topics

[Data model for Telecommunications Network Inventory](#)

[Using the network topology](#)


# Configuring Telecommunications Network Inventory

Learn how to configure the Telecommunications Network Inventory application so that you can define your telecommunications network and create a comprehensive network inventory model.

## Install Telecommunications Network Inventory

If you have the admin role, you can install the Telecommunications Network Inventory application. The application includes the demo data and installations that are related ServiceNow® Store applications and plugins, if they aren't already installed.


### Before you begin

- Ensure that the application and all of its associated ServiceNow Store applications have valid ServiceNow entitlements. For more information, see [Get entitlement for a ServiceNow product or application](#) .
- Ensure to install the demo data of Telecommunications Network Inventory. On installing the demo data, the flows and subflows are triggered. The demo data enables you to understand the flow of OMT-TNI integration. As part of the demo data along with the required attributes, the following are also created:
  1. Order- Includes an order request for installation of fiber broadband demo data
  2. Order task- An order task is created automatically when an order is created
  3. OMT task- order management tasks that are created under an order task
  4. Change request- this includes the change request details for the installation of fiber broadband
  5. Change task- multiple tasks are created to fulfill the order
- **Note:** On successful installation of demo data, the demo data for GPON broadband and design assign link aggregation group is automatically added.
- Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent, sn\_ni\_core.inventory\_template\_manager, sn\_ni\_core.telco\_inventory\_catalog\_manager

### About this task

The following items are installed with Telecommunications Network Inventory:

- Plugins
- Store applications
- Roles
- Tables

For more information on viewing components that are installed with an application, see [Find components installed with an application](#) .

### Procedure

1. Navigate to **All > System Applications > All Available Applications > All**.
2. Find the Telecommunications Network Inventory application (sn\_ni\_adv) using the filter criteria and search bar.

- **Note:** Installation of TNI Advanced leads to automatic installation of TNI Core without its demo data. You need to manually load or install the demo data for TNI Core demo data.

You can search for the application by its name (Network Inventory) or ID. If you can't find the application, you might have to request 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](#).

3. In the Application installation dialog box, review the application dependencies.

Dependent plugins and applications appear if they're yet to be installed, are currently installed, or must be installed. If any plugins or applications require installation, you must install them before you can install Telecommunications Network Inventory.

4. **Optional:** If demo data is available and you want to install it, select the **Load demo data** check box.

Demo data are sample records that describe application features for common use cases. Load the demo data when you first install the application on a development or test instance.

5. Select **Install**.

## Assigning user roles for Telecommunications Network Inventory

You can assign roles to control user access to specific features, capabilities, and data in the Telecommunications Network Inventory application. These assigned roles enable or prevent access to specific forms and processes by users with the specified roles only.

You assign roles to users and groups by using the ServiceNow AI Platform user administration feature.

- To assign a role to a user, see [Assign a role to a user](#).
- To assign a role to a group, see [Assign a role to a group](#).

The Telecommunications Network Inventory provides the following roles:

### Telecom Network Inventory roles

Role	Description
Inventory Admin [sn_ni_core.inventory_template_admin]	Role that enables a user with create, read, update, and delete access to all Telecommunications Network Inventory application-related functions.
Inventory Catalog Manager [sn_ni_core.telco_inventory_catalog_manager]	Role that enables a user with create, read, edit, and delete access to the metadata for all network inventory entities. This role also enables the user to associate the metadata of the different entities.
Inventory Template Manager [sn_ni_core.inventory_template_manager]	Role that enables a user with create, read, edit, and delete access to the network inventory templates for the new or existing entities. Also, this role enables the user to perform a Create, Read, Update, Delete (CRUD) operation on the default template.
Inventory Agent [sn_ni_core.inventory_agent]	Role that enables a user with the following permissions:

**Telecom Network Inventory roles (continued)**

Role	Description
	<ul style="list-style-type: none"> <li>• Read access to all inventory models, capacity metrics, and pack tables.</li> <li>• Write, update, and delete access to the inventory tables.</li> <li>• Read and write access to the template, change request and change task table.</li> </ul> <p><b>Note:</b> To modify the model and model relationships tables, a user assigned with the Inventory Agent role must also have either the Asset or Inventory User roles.</p>
Inventory Number Manager [sn_inv_num_mgmt.inventory_number_manager]	Role that enables a user with the following permissions: <ul style="list-style-type: none"> <li>• Read access to all telephone number tables.</li> <li>• Write, update, and delete access to the telephone number tables.</li> </ul>

**Define a location hierarchy**

Define a location hierarchy for your Telecommunications Network Inventory forms so that you can track and manage your network assets. By defining a location hierarchy, you can see where all your network equipment is located.

**Before you begin**

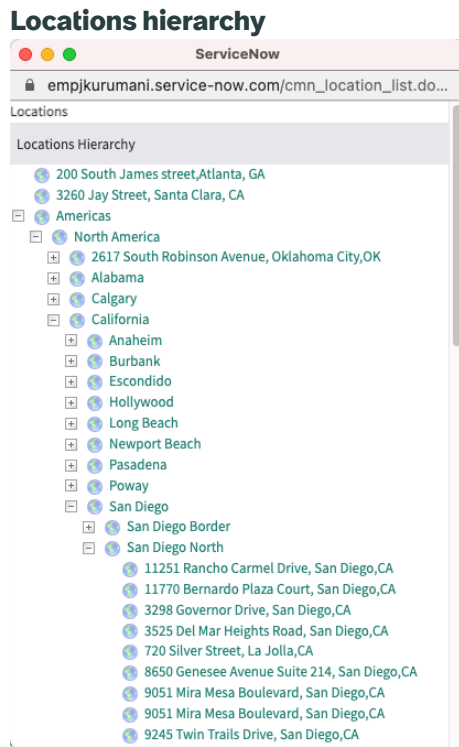
- Role required: admin, sn\_ni\_core.inventory\_admin
- To establish locations hierarchy, ensure to:
  - 1.** Create the top-level locations that contain the subordinate locations. For example, in the locations hierarchy, create **Americas** first. Leave the **Parent** field empty.
  - 2.** Create a regional location and in the **Parent** field, select the top-level location as its parent. For example, in the locations hierarchy, create **North America** and then select **Americas** as its parent.
  - 3.** In the Locations section at the bottom of the form, click **New** and create the location records for each lower-level child location that are subordinate to that regional location.

**About this task**

A location record must contain at least one of the following properties or sets of properties:

- Address
- Country
- Region
- Latitude and Longitude

By using this form, you can construct a location hierarchy. For example, the following example shows a typical location hierarchy that appears when you search for a location in the **Location** field in the Network Site form.



### Procedure

1. Navigate to **All > User Administration > Locations**.
2. Select **New**.
3. On the Location form, fill in the fields, with address and contact information for the location record.

**Note:** To learn more about the fields on the Locations form, see [Location form](#).

4. Click **Submit**.

### Create manufacturer and vendor codes

Create company codes by using the Telecommunications Network Inventory application. You can create codes for each manufacturer, vendor, or customer that you do business with. You can categorize these records to categorize the network assets.

#### Before you begin

Role required: user\_admin or admin

### Procedure

1. Navigate to **User Administration > Companies**.
2. Click **New**.
3. On the form, fill in the fields.

**Note:** To learn more about the fields on the Company form, see [Company form](#).

4. Click **Submit**.

## Create the components of a telephone number

Create a central office code, country code, area code, and rate center for a series of telephone numbers by using the Telecommunications Network Inventory application.

### Create a central office code

Create a central office code to allocate it to an area code of a country by using the Telecommunications Network Inventory application.


#### Before you begin

Role required: sn\_ni\_core.inventory\_admin

#### About this task



You can create, review, update, or delete a central office code. You can also view the details of an area code or allocate a central office code to an area code of a country by using the Telecommunications Network Inventory application.

#### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Administration > Central office code**.
3. Select **New**
4. On the **Details** tab, on the form, fill in the fields as follows.

#### Create New Central Office Code

<p>Area Code</p>	<p>Code that identifies a geographic region within a country or territory. It's usually the first three digits of a telephone number. The purpose of the area code is to route telephone calls to destinations that are based on the location of the recipient.</p> <p>For example, in the phone number (123) 456-7890, "123" represents the area code.</p>
<p>Central Office Code</p>	<p>Central office code that is also referred to as NXX. The NXX portion of a telephone number provides information about the central office or local exchange that belongs to a particular geographic area. Each central office code is related to a geographic location or service provider within the area code.</p> <p>For example, in the phone number (123) 456-7890, "456" represents the central office code.</p>

5. Add the attachments, such as the graphics or documents, by selecting the attachment icon () in the right panel.
6. Select **Save**.  
A central office code and an area code are added in the list view of the central office code.
7. **Optional:** If you want to delete a central office code, navigate to that code, select the options icon () , select **Delete**, and select **OK** when you see the confirmation window.

### What to do next

Create a country code. For information, see [Create a country code](#).

## Create a country code

Create, review, update, or delete a country code by using the Telecommunications Network Inventory application. A country can have multiple phone formats and phone validations.






### Before you begin

Role required: sn\_ni\_core.inventory\_admin

### About this task

Create a country code and add conditions to it so that you can manage, review, or update it.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Administration > Country code**.
3. **Note:** The list view of the country code includes almost all country codes.  
Select **New**
4. On the **Details** tab, on the form, fill in the fields.  
To learn more about the fields, see [configure a territory phone display rule](#) .
5. Add the attachments, such as the graphics or documents, by selecting the attachment icon () in the right panel.
6. Select **Save**  
Related tabs appear next to the **Details** tab. To learn more, see [configure a territory phone display rule](#) .
7. **Optional:** If you want to delete a country code, navigate to that country code, select the options icon () , select **Delete**, and select **OK** when you see the confirmation window.

### What to do next

Create an area code. For information, see [Create an area code](#).

## Create an area code

Create, review, update, or delete an area code by using the Telecommunications Network Inventory application.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin

### About this task



You can create an area code for a country code. You can assign the same area code to different country code.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Administration > Area code**.
3. Select **New**
4. On the **Details** tab, on the form, fill in the fields as follows.

#### Create New Central Office Code

Area Code	Code that identifies a geographic region within a country or territory. It's usually the first three digits of a telephone number. The purpose of the area code is to route telephone calls to destinations that are based on the location of the recipient.  For example, in the phone number (123) 456-7890, "123" represents the area code.
Central Office Code	Central office code that is also referred to as NXX. The NXX portion of a telephone number provides information about the central office or local exchange that belongs to a particular geographic area. Each central office code is related to a geographic location or service provider within the area code.  For example, in the phone number (123) 456-7890, "456" represents the central office code.

5. Add the attachments, such as the graphics or documents, by selecting the attachment icon () in the right panel.
6. Select **Save**.  
The area code is included in the list view of the area code.
7. **Optional:** If you want to delete an area code, navigate to that area code, select the options icon () , select **Delete**, and select **OK** when you see the confirmation window.

### What to do next

Create a telephone block, telephone number allocation, or telephone number. For information, see [Create a telephone infrastructure](#).

## Configuring decision tables for Telecommunications Network Inventory

You can configure decision tables to resolve complex tasks in the Telecommunications Network Inventory application. For example, you can create, review, or delete an entry for tasks in a decision table in Decision Builder.

By using a decision table, you can add the required conditions to automate your tasks. Decision tables in Decision Builder embed business logic into a series of if-then decision rules. Decision tables read data from the inputs and evaluate the data according to the specified conditions. When all the conditions for a decision rule are met, the decision table returns one or more results. To learn more, see [Decision Tables](#).

You can use the decision tables in the Telecommunications Network Inventory application to do the following tasks:

1. Integrate Telecommunications Network Inventory and Order Management for Telecommunications.
2. Assign a record producer form to a change request.
3. Assign a record producer to a change task of a change request.

### Related topics

[Exploring Decision Tables](#)

## Order Management for Telecommunications integration

Use a Telecommunications Network Inventory decision table to integrate the Telecommunications Network Inventory and Order Management for Telecommunications applications.

### Before you begin

- Configure the change model and order task variables to enable the Order Management for Telecommunications - Telecommunications Network Inventory integration.
- Role required: sn\_ni\_core.inventory\_admin

### About this task

You can create, review, update, and remove a decision entry.

### Procedure

1. Navigate to **All > System Definition > Decision Tables**
2. Select the **TNI Record Producer and Change model policy** decision table.
3. Create a decision entry in the decision table for an order task.  
For this entry, you must complete the following items:
  - Order task.
  - Condition for the order task. In the decision table, search and select an Order Task.Request Type condition for the order task. The **Answer** field is filled based on the condition that you select.
  - Record Producer.
  - Change model.

If all the conditions are met, a change request is created for the order task that needs the inventory actions. In this change request, the order task is assigned as its parent. The new

change request is in the related list of the order task. This task redirects you to the change request from the OMT task page.

4. Transfer the order characteristics to the Telecommunications Network Inventory application by creating an entry in the TNI Record Producer Variable Policy decision table. The change tasks are created for the configuration items.

### Example: TNI Design Assign of Fiber Broadband

Let's say that you add a service order with the category broadband service. After you make this addition, the TNI Design Assign of Fiber Broadband flow of the Service Order Fulfillment Policy triggers. As part of this flow, in the TNI Record Producer and Change model policy decision table, an allocate and assign Customer Premises Equipment (CPE) order task is created with a Gigabyte Passive Optical Network (GPON) broadband record producer for the GPON broadband change model.

To transfer the order characteristics in the TNI Record Producer Variable Policy decision table, the order characteristics map with the record producer.

### Assign a record producer form to a change model

Assign a record producer to a change request by using a decision table in the Telecommunications Network Inventory application.

#### Before you begin

Role required: sn\_ni\_core.inventory\_admin

#### Procedure

1. Navigate to **All > System Definition > Decision Tables**.
2. Select the **TNI Change Model To Record Producer Policy** decision table.
3. In the conditions section of the decision table, select the **Add new decision row** button.
4. Select a change model from the **value** field of the **Change model** column.
5. Select a record producer to assign to the selected change model from **Record Producer** column.

#### Result

When you select **Changes > All** and the **Next** button for the added change model, the assigned record form is displayed.

**Note:** All record producer form inputs can be seen in the Variables section of the **Details** tab. You can view and update the details as required.

#### What to do next

You can also assign a record producer to a change task of a change request. To learn more, see [Assign a record producer form for a request type of a change task](#).

### Assign a record producer form for a request type of a change task

Assign a record producer to a change task of a change request with the help of a decision table in Telecommunications Network Inventory application.

#### Before you begin

Role required: sn\_ni\_core.inventory\_admin

### About this task

- Note:** By default, the Telecommunications Network Inventory application added request types for create equipment, create physical connection, create logical connection, and add interface card in this decision table.

### Procedure

1. Navigate to **All > System Definition > Decision Tables**.
2. Select the **TNI Request type to Record Producer Policy** decision table.
3. In the Conditions section of the decision table, select the **Add new decision row** button. On the **Change Tasks** tab of the added change model, when you select a change task, the assigned record producer form is displayed on the **Task attributes** tab.
4. Select a change task from the **value** field of the **Request Type** column.
5. Select a record producer to assign to the selected change task from **Record Producer** column.

### What to do next

Create a network instance instantiation. For information, see [Instantiating your network inventory by using design and assign](#).

## Customize the Validation of Revision CI

Customize the validation process of a CI (Configuration Item) using the Telecommunications Network Inventory application. You can customize the validation process by providing adjustable parameters based on the script.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin

### About this task

You can specify criteria and rules that fit your requirements, enabling a tailored approach to verify data accuracy and integrity.

### Procedure

1. Navigate to **All > Process Automation > Workflow Studio > Flow Designer > Actions**.
2. Select **Validate CI Revision**.
3. Select **Script Step** under Action Outline section.
4. From the script, you can change the values of the CI relations or related items or both to false. The field value having value as False isn't included in the validation process.

## Configure Telecommunications Network Inventory attributes

Configure the core equipment table to enable the collection of the common Telecommunications Network Inventory attributes appear in the CI record. You use these attributes to create a Telecommunications Network Inventory CI record.

### Before you begin

Role required: admin

### About this task

You update the Equipment generic classes in the core equipment table to display the **Set Inventory Attributes** button in the corresponding CI record (sub classes). Except for the Interface card table (cmdb\_ci\_interface\_card), all tables that are subclasses of the equipment generic classes are considered as Equipment.

## Procedure

1. Navigate to **All > System Properties > All Properties**.
2. Select the `sn_ni_core.equipment_tables` table.
3. In the **Value** field, enter the equipment generic classes using a comma as separator. You can add the following generic classes:
  - Computer (`cmdb_ci_computer`)
  - Network Gear (`cmdb_ci_netgear`)
  - Virtual Machine Object (`cmdb_ci_vm_object`)
  - Kubernetes Component (`cmdb_ci_kubernetes_component`)
  - Service Instance (`cmdb_ci_service_auto`)

## Configuring an attribute pack table

After you create an attribute pack table with the attributes that you define in the Telecommunications Network Inventory application, you can configure the mapping between the table and the inventory object that you want to use it with.

### Create an attribute pack table

Create an attribute pack table with the attributes that you define in the Telecommunications Network Inventory application so that you can use these attributes in the CI record.

### Before you begin

- Make sure that the Attribute Pack plugin is installed with the Telecommunications Network Inventory application.
- Switch the Application scope to Attribute Pack.

Role required: `admin`, `sn_ni_core.inventory_admin`

### About this task

Create an attribute pack table with attributes by extending the Pack Base (`sn_attribute_pack_base`) table. You define and store the attributes in the Pack base table. You can enable read or write permission for all application scopes.

## Procedure

1. Navigate to **All > System Definition > Tables**.
2. Select **New**.
3. On the form, fill in the fields.

### Attribute Pack Table form

Field	Value
Label	Name of the pack table.
Name	Auto-populated name that is based on the label name that you selected ( <code>sn_attribute_pack_&lt;label name&gt;</code> ).
Extends table	Pack ( <code>sn_attribute_pack_base</code> )

4. On the **Controls** tab, add the roles in the **User Role** field.  
You add the roles to grant the access to the pack table.
5. Select **Save**.
6. Add or delete attributes.
7. Select **Submit**.

### Result

The pack table is created with a set of attributes.

### What to do next

To use the pack table in inventory forms, you must configure it to map with the inventory objects. To learn more, see [Configure an attribute pack table against a configuration item](#).

## Configure an attribute pack table against a configuration item

Configure an attribute pack table against a configuration item (CI) with filter conditions in the Telecommunications Network Inventory application. As you configure the pack table, you can use the packs for creating a CI record.

### Before you begin

- Make sure that the Attribute Pack plugin is installed with the Telecommunications Network Inventory application.
- Create a pack table with a set of attributes. To learn more, see [Create an attribute pack table](#).

Role required: admin, sn\_ni\_core.inventory\_admin

### About this task

To use a pack table in the inventory forms, you must configure it against a CI with filter conditions. If the CI is related to another CI, you must set the filter conditions to map the pack table against the related CI.

### Procedure

1. Navigate to **All > Administration > Pack Config**.
2. Select **New**.
3. On the **Details** tab, fill in the fields.

#### Pack Config form

Field	Description
Name	Name of the pack configuration.
Active	Option to enable the pack table in a CI record.
Configuration Item	CI table that you want to map.
Filter	Filter condition attributes to customize how your pack table is filtered so that you can use it in the CI form. Select <b>Set conditions</b> and enter the field operator and value for the filter condition.
Pack Table	Pack table that you want to map against the CI.

Field	Description
Has Related Configuration Item	<p>Option to add related CI. When you select this check box, the following fields appear.</p> <p><b>Related Configuration Item</b></p> <p>Related CI table that you want to map.</p> <p><b>Related Filter</b></p> <p>Filter condition attributes to customize how your pack table is filtered so that you can use them in the related CI form. Select <b>Set conditions</b> and enter the field operator and value for the filter condition.</p> <p><b>Note:</b> If the filter condition for the CI isn't met, the system doesn't check filter conditions for the related CI. If the filter conditions of CI and related CI are met, the system maps the pack table against the related CI.</p>

**4. Select Save.**

**Result**

The pack table is mapped against the CI and is displayed in the Pack Config list.

**What to do next**

Use the pack tables in the CI record. To learn more, see [Use an attribute pack in the CI record.](#)

## Configuring capacity management

Create and configure the capacity management function, definition, and metric in the Telecommunications Network Inventory application. By using capacity management, you can calculate the maximum, occupied, and available capacity of your network assets.

**Related topics**

[Capacity management](#)

[Revision, operationalization, and decommission of a Configuration Item](#)

### Create capacity function

Create a capacity function in the Telecommunications Network Inventory application. You can use this function to calculate the capacity of your network assets.

**Before you begin**

Make sure that the Capacity Management plugin is installed with the Telecommunications Network Inventory application.

Role required: sn\_ni\_core.inventory\_admin

**About this task**

Create a capacity function to calculate the maximum, occupied, and available capacity of your network assets. You can use different strategies to calculate the capacity. When you create a capacity function, it stores the record in the Capacity Function [sn\_cap\_mgmt\_function] table.

The system selects the capacity functions based on their priority to calculate the capacity. The following points are considered to set the priority for capacity calculations.

- If two capacity functions have same Function type and Measurement type, the one with the lowest Order value gets prioritized.
- If two capacity functions have same Function type, Measurement type, and Order, the one that was most recently updated is given priority.

## Procedure

1. Navigate to **All > Capacity Management > Functions**.
2. Select **New**.
3. On the form, fill in the fields.  
To learn more about the fields, see [Capacity Function form](#).
4. Select **Submit**.

## Result

The capacity function record is created.

## What to do next

You can use the function for capacity calculation or use it within the definition record to determine the capacity. To learn more about how to create a capacity definition, see [Create capacity definition](#).

## Related topics

[Capacity management](#)

## Create capacity definition

Create a capacity definition in the Telecommunications Network Inventory application. You can use multiple functions in the capacity definition to calculate the capacity of your network assets.

## Before you begin

- Make sure that the Capacity Management plugin is installed with the Telecommunications Network Inventory application.
- You create capacity function records.

Role required: sn\_ni\_core.inventory\_admin

## About this task

The capacity definition is an asynchronous way to trigger the capacity functions. You can use multiple functions in the capacity definition to calculate the maximum, occupied, and available capacity of your network assets. When you create a capacity definition, it stores the record in the Capacity Definition [sn\_cap\_mgmt\_definition] table.

## Procedure

1. Navigate to **All > Capacity Management > Definitions**.
2. Select **New**.
3. On the form, fill in the fields.  
To learn more about the fields, see [Capacity Definition form](#).
4. Select **Submit**.

## Result

The capacity definition record is created.

### What to do next

You can use the definition for capacity calculation. When you run the capacity definition, it creates the metric and the results aggregate to it. You can navigate to **All > Capacity Management > Metrics** and open the capacity metric record, which you want to see the details.

### Related topics

[Capacity management](#)

### View a capacity metric


View a capacity metric record in the Telecommunications Network Inventory application. You can use the capacity metric to get the consolidated information of the capacity calculations.

### Before you begin

- Make sure that the Capacity Management plugin is installed with the Telecommunications Network Inventory application.
- You run the capacity function or definition records and create capacity metric records.

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### Procedure

1. Navigate to **All > Capacity Management > Metrics**.
2. Select the info icon (  ) beside a capacity metric record to view the details.  
You see the following details:

#### Capacity Definition form

Field	Value
Capacity definition	Name of the capacity definition record.
Function	Type of capacity function.
Value	Capacity calculated value.
Measurement type	Measurement Type used to calculate the capacity.
Capacity function	Name of the capacity function record.

### Related topics

[Capacity management](#)

### Collect operational values for datacenter

Record and update operational values manually for datacenters performance tracking in the Telecommunications Network Inventory application. You can use this data for further analysis and reporting.



### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent, sn\_ni\_core.dc\_ops\_agent

### About this task

Enter the operational data for power and temperature manually and store it in the ClothoDB. You can use this data to display the operational details in a floor map. You can enter data for your datacenter, cabinet, rack, and cage.

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace.k**
2. Select the list icon () and then go to **Inventory > Racks**.
3. Select the rack that you want to update operational data.
4. Select the more options icon () and then select **Collect Operational Data**.
5. On the form, fill in the fields.

### Collect Operational Data form

Field	Description
Timestamp	Select a data and time for the data to be collected.
Real Power (kW)	Active power of your network asset.
Contractual Power (kVA)	Maximum apparent power of your network asset.
Apparent Power (kVA)	Apparent Power of your network asset.
Temperature (C)	Temperature of your network asset.

6. Select Submit.

## Result

The instance stores the operational data in the clothoDB.

## Configuring overlays on floor map

Update the decision table to configure the operational data overlay on the floor map. You can view the operational data of the datacenters for a selected time range as colored layer on the floor map in the Telecommunications Network Inventory application.

### Related topics

[Visualization of floor map](#)

[Capacity management](#)

[Upload and manage floor map for your datacenter](#)

## Customize overlays on the floor map

Update the decision table to configure the overlays appearing on the floor map. You can view the operational data of the datacenters as overlay on the floor map in the Telecommunications Network Inventory application.

### Before you begin

Role required: admin, sn\_ni\_core.inventory\_admin

### About this task

When you select an overlay and time duration on the floor map, the system uses **TNI Data Center Overlay Configuration** decision table to determine the corresponding operational data. The decision table pulls the average metric value for each Configuration Item (CI) over that duration from ClothoDB. Based on the value, the system assigns the predetermined color code. The floor map updates with these colors, so you can quickly see the status of operational status of each CI.


For example, when you select **Temperature** overlay and time duration as **Past 3 hours**, the system automatically collects the data from ClothoBD. If the current time is 9:00 PM, the system queries data from 6:00 PM to 9:00 PM. Clotho returns the average metric value for each CI over that duration. This average is then evaluated against the decision table to determine the corresponding range and associated color code. Finally, each CI is visually updated on the floor map using that color, enabling you to understand the health of the datacenters.

You can edit the overlay option in the floor map by configuring the decision table. You can add or delete an overlay option and also set up the color options.

**Note:** Decision table inputs should remain unedited. You can add or update decision table rows to customize colors or overlay ranges as needed.

**Procedure**

1. Navigate to **All > System Definition > Decision Tables**.
2. Select the **TNI Data Center Overlay Configuration** decision table.
3. Select **Create Draft**.
4. Do one of the following.

Action	Details
<b>Add a new overlay</b>	<ol style="list-style-type: none"> <li>a. Select the <b>Type</b> field.</li> <li>b. Select <b>Choice list source</b> as <b>Create new choice list</b>.</li> <li>c. Type new overlay name in the <b>Choices</b> field.</li> <li>d. Select <b>Add</b>.</li> <li>e. Select <b>Done</b>.</li> <li>f. In the Condition section, add the metric values and color code.</li> </ol>
<b>Edit an existing overlay</b>	<ol style="list-style-type: none"> <li>a. Select the <b>Type</b> field.</li> <li>b. Edit the overlay name that you want to update in the <b>Choices</b> field.</li> <li>c. Select <b>Done</b>.</li> <li>d. In the Condition section, edit the metric values and color code.</li> </ol>
<b>Delete an overlay</b>	<ol style="list-style-type: none"> <li>a. Select the <b>Type</b> field.</li> <li>b. Select the delete icon (  ) to delete an overlay.</li> <li>c. In the Condition section, delete the corresponding overlay rows.</li> </ol>

5. Select **Publish**.

**Result**

Customized overlay options are displayed on the floor map, and the color legend updates accordingly.

### What to do next

Set up time duration for the operational data. To learn more, see [Customize overlay time series on the floor map](#).

### Related topics

[Capacity management](#)

[Time series metrics for datacenter](#)

## Customize overlay time series on the floor map

Update the decision table to configure the time duration option on the floor map. You can view the operational data of the datacenters for a selected time range as overlay on the floor map in the Telecommunications Network Inventory application.

### Before you begin

Role required: admin, sn\_ni\_core.inventory\_admin

### About this task


You can modify the time duration option on the floor map by configuring the **TNI Data Center Time Duration Configuration** decision table. The operational data for the time series you selected appears as a colored layer on the floor map.

For the time duration configuration, if the time value is set to one second, the latest metric value is retrieved from the ClothoDB. For all other time durations, the system returns the average metric value over the specified duration.

### Procedure

1. Navigate to **All > System Definition > Decision Tables**.
2. Select the **TNI Data Center Time Duration Configuration** decision table.
3. Select **Create Draft**.
4. Do one of the following.

Action	Details
<b>Add time duration for a new overlay</b>	<ol style="list-style-type: none"> <li>a. Select the <b>Type</b> field.</li> <li>b. Select <b>Choice list source</b> as <b>Create new choice list</b>.</li> <li>c. Type new overlay name in the <b>Choices</b> field.</li> <li>d. Select <b>Add</b>.</li> <li>e. Select <b>Done</b>.</li> <li>f. In the Condition section, add the time duration values for the new overlay.</li> </ol>
<b>Edit time duration for an existing overlay</b>	In the Time Duration Value section, edit the time duration for the overlay that you want to customize.

Action	Details
<b>Delete time duration for an overlay</b>	<ol style="list-style-type: none"> <li>a. Select the Menu Type field.</li> <li>b. Select the delete icon (  ) to delete an overlay.</li> <li>c. In the Condition section, delete the corresponding time duration rows.</li> </ol>

5. Select **Publish**.

**Result**

Customized time duration options are available on the floor map.

## Configuring Design and Assign function for your network services

Create and configure a Design and Assign function in the Telecommunications Network Inventory application. You can use it to design your network service and assign the network resources.

The Design and Assign function is created and configured in the Workflow Studio using the playbook experience. Some of the configuration is performed in ServiceNow AI Platform. These settings include creating record producers, Change model, and request definitions. You can fully automate your Design and Assign function by linking flows, actions, and subflows together in a playbook.

Follow the steps to create and configure a Design and Assign function.

1. [Create a Change Model.](#)
2. [Create record producers.](#)
3. [Add input variables to the record producer.](#)
4. [Add variable set to the record producer.](#)
5. [Create subflows.](#)
6. [Create request definitions.](#)
7. [Create a playbook for design and assign function.](#)
8. [Update the system property to configure the Design and Assign home page.](#)

On completing these activities, a UI action displays on the Design and Assign home page to launch the function. Select the UI action to launch your new Design and Assign function.


### Configuring a Design and Assign function example

Watch this video to learn how to create and configure a Design and Assign function for a network service through an example.

[https://player.vimeo.com/video/1093821482?h=f50e2973ae&badge=0&autoplay=0&player\\_id=0&app\\_id=58479](https://player.vimeo.com/video/1093821482?h=f50e2973ae&badge=0&autoplay=0&player_id=0&app_id=58479)

To learn more, see [Configure a Design and Assign function example](#).

**Related topics**

- [Design and assign your network services](#)
- [Telecommunications Network Inventory subflows](#)
- [Building playbooks](#) 

**Create a Change Model for Design and Assign function**

Create a Change model and add the model states and model state transitions. You can use this Change model to configure a Design and Assign function.

**Before you begin**

Role required: admin, sn\_ni\_core.inventory\_admin

**About this task**

You create a change model to configure a Design and Assign function for a network service. You must add model states to the change model to move and track change requests through several states.

**Procedure**

1. Navigate to **All > Change > Administration > Change Models**.
2. Select **New**.
3. On the form, fill in the fields.


**Change Model form**


Field	Description
Name	Unique name for the Change model.
Active	Option for enabling that this model is available for selection when creating a change request.

4. Select **Save**.  
The Model States context menu appears. You can select the states for your Change model.
5. On the **Model States** tab, select **New**.
6. On the form, fill in the fields.

**Model State form**

Field	Description
State	<p>State that you want to include in your Change model. You can add the following state models.</p> <p><b>Design in progress</b> The activities are in progress.</p> <p><b>Design in review</b> The activities are completed and the change request is in review for approval.</p> <p><b>Design complete</b></p>

Field	Description
	<p>The change request is approved.</p> <p><b>Closed</b></p> <p>The change request is closed.</p> <p>You can also add a new model state to the Change model based on the requirements of your Design and Assign function. To learn more, see <a href="#">add multi-layer model states</a> .</p>
Initial State	<p>Option to enable this state as the initial state for your model. This field is automatically selected when you add the first state to your model. For Design and Assign function, you can set <b>Design in progress</b> state as initial state.</p>

- To save the state and return to the Change Model form, select **Submit**.
- To add a transition between the states, select the display/hide hierarchical lists icon () for the model state that you want to apply the transition to. The Model State Transitions context menu appears.
- Select **New**.
- On the **Model State Transition** form, fill in the fields.

**Model State transition form**

Field	Description
From	State that the change request is moving from.
To	State that the change request is moving to.
Automatic Transition	Option for enabling automatic transition to the change request when the defined conditions are met. Selecting this option also helps prevent you from manually selecting the <b>State</b> field on the Change request form.

- To save the state and return to the Change Model form, select **Submit**.
- Select **Submit**.

**Result**

A Change model is created with the model states and model state transitions.

**What to do next**

Create a record producer to configure an activity in the playbook. To learn more, see [Create a record producer for the Design and Assign function](#).

**Related topics**

[Create a Change model](#) 

[State model and transitions](#) 

[Configuring Design and Assign function for your network services](#)

[Configure a Design and Assign function example](#)

## Create a record producer for the Design and Assign function

Create a record producer in the Telecommunications Network Inventory application. You can use this record producer to configure an activity in the playbook for the Design and Assign function.

### Before you begin

Role required: admin, sn\_ni\_core.inventory\_admin

### About this task

### Procedure

1. Navigate to **All > Service Catalog > Catalog Definitions > Record Producers**.
2. Select **New**.
3. On the Record Producer form, fill in the fields.

#### Record Producer form

Field	Description
Name	The descriptive name for the record producer.
Table name	The table in which the record producer creates records.

4. Select **Submit**.

### Result

A record producer is created.

### What to do next

- Add variables to the record producer. To learn more, see [Create variables for Design and Assign function](#).
- Add variable set to the record producer. To learn more, see [Add variable set to the record producer for Design and Assign function](#).

### Related topics

[Record Producer](#) 

[Configuring Design and Assign function for your network services](#)

[Configure a Design and Assign function example](#)

## Create variables for Design and Assign function

Create the variables for a record producer in the Telecommunications Network Inventory application. You can use these variables as input fields in an activity card in the playbook for the Design and Assign function.

### Before you begin

Role required: admin, sn\_ni\_core.inventory\_admin


### About this task

Create and add input variables to the record producer. The variables are displayed on the activity card in the playbook as input fields.

### Procedure

1. Navigate to **All > Service Catalog > Catalog Definitions > Record Producers**.
2. Select a record producer that you want to create variables for.
3. On the **Variables** tab, select **New**.
4. On the **Variable** form, fill in the fields.

#### Record Producer form

Field	Description
Type	Select the variable type.
Catalog item	By default, the record producer name is displayed.
Question	Question that you can ask users who are using the catalog item to obtain related information.
Name	Name to identify the question.   <b>Note:</b> If this field is empty, its value is auto-populated based on the Question field.
Type Specification	Values specific to the type of variables.

5. Select **Submit**.

Repeat the preceding steps to create additional variables for the record producer.

6. Select **Submit**.

### Result

The input variables are created and added to the record producer.

### What to do next

Add variables set to the record producer. To learn more, see [Add variable set to the record producer for Design and Assign function](#).

### Related topics

[Record Producer](#) 

[Service catalog variables](#) 

[Configuring Design and Assign function for your network services](#)

[Configure a Design and Assign function example](#)

## Add variable set to the record producer for Design and Assign function

Add a variable set to a record producer in the Telecommunications Network Inventory application. You can use the variable set as input fields in an activity card for the Design and Assign function.

### Before you begin

Role required: admin, sn\_ni\_core.inventory\_admin

### About this task

The variable set has common attributes which are retrieved during the change task creation. You can use an existing variable set or create a variable set depending on your requirement. To configure an activity in the Design and Assign playbook, use the **DA common variables** variable set.

### Procedure

1. Navigate to **All > Service Catalog > Catalog Definitions > Record Producers**.
2. Select a record producer that you want to create variables for.
3. On the **Variable Sets** tab, select **Edit**.
4. Select **DA common variables**.  
The **DA common variables** set provides the common variables for the design and assign function.
5. Select **Submit**.

### Result

The variable set is added to the record producer.

### What to do next

Create a subflow for the activity. [Create subflow for Design and Assign function](#).

### Related topics

[Service catalog variable sets](#) 

[Configuring Design and Assign function for your network services](#)

[Configure a Design and Assign function example](#)

## Create subflow for Design and Assign function

Create a subflow in the Workflow Studio. You can use this subflow to configure an activity in the playbook for the Design and Assign function.

### Before you begin

Role required: admin, sn\_ni\_core.inventory\_admin

### About this task

You create a subflow by defining the input data that the subflow uses and the output data it generates. Then you link the subflow to a request definition. You can use this request definition to configure an activity to automate the design and assign function using a playbook. The subflows associated with request definitions are triggered by the TNI Design Assign process flow after you submit them.

### Procedure

1. Navigate to **All > Process Automation > Flow Designer**.
2. Select **New** and then select **Subflow** from the option list.

3. Fill in the following fields:

Field	Description
Subflow name	Name of the subflow.
Description	Description of the subflow.
Application	Application scope to create the subflow in. You can select <b>Network Inventory Advanced</b> .

4. Create the subflow input and assign an appropriate value to the subflow output according to your requirement.

To learn more, see [Create a subflow in Workflow Studio](#).

**Note:** The subflows are triggered by the TNI Design Assign process flow on submission, and the following inputs are required.

- Ignore validation error
- Change task

**What to do next**

- Test the subflow, and publish it when it’s ready to be added to the record producer.
- Create a request definition and associate the subflow. To learn more, see [Create a request definition for Design and Assign function](#).

**Related topics**

- [Building subflows](#)
- [Telecommunications Network Inventory subflows](#)
- [Configuring Design and Assign function for your network services](#)
- [Configure a Design and Assign function example](#)

**Create a request definition for Design and Assign function**

Create a request definition and use it to configure the Design and Assign playbook. You can use this request definition to configure an activity for the Design and Assign playbook.

**Before you begin**

Role required: admin, sn\_ni\_core.inventory\_admin

**About this task**

You create a request definition and attach the subflow to it. You can use the request definition to configure the activity in the playbook for the Design and Assign function.

**Procedure**

1. Navigate to **All > Telecom Network Inventory > Administration > Request Definitions**.
2. Select **New**.
3. On the Request Definition form, fill in the fields.

### Request Definition form

Field	Description
ID	Unique identifier for the request definition.  <b>Note:</b> You can't modify an ID after the request definition is created.
Name	Name to identify the request definition.
Task type	Task table that is associated with the change request. Set the <b>Task type</b> field as <b>Change Task</b> .
Flow	Subflow that is associated with the request definition.

#### 4. Select **Submit**.

#### Result

A request definition is created.

#### What to do next

Create and configure the playbook for Design and Assign function. To learn more, see [Create a playbook for the Design and Assign function](#).

#### Related topics

[Configuring Design and Assign function for your network services](#)

[Configure a Design and Assign function example](#)

### Create a playbook for the Design and Assign function

Create a playbook for the Design and Assign function in the Workflow Studio. You can use the playbook to design and assign a network service in the Telecommunications Network Inventory application.

#### Before you begin

- [Create a Change Model](#).
- [Create record producers](#).
- [Add input variables to the record producer](#).
- [Add variable set to the record producer](#).
- [Create subflows](#).
- [Create request definitions](#).

You create and configure the playbook in the Workflow Studio to fulfill a service request from the customer. Following are the configuration steps.

1. Create a playbook.
2. Add a stage.
3. Set up the trigger.

4. Add and configure activities.
5. Activate the playbook.

Role required: admin, playbook.admin

### Procedure

1. Navigate to **All > Workflow Studio > Playbooks**.
2. Select **New** and then select **Playbook** from the option list.
3. Fill in the following fields.

#### Playbook

Field	Description
Playbook name	Enter a unique, user-facing name for your playbook. This name appears to agents and fulfillers during runtime of your playbook.
Description	Optionally, enter some descriptive details about your playbook.
Application	Choose an application scope that you want your playbook to run in. You can select <b>Network Inventory Advanced</b> .

The builder displays in **Diagram view** by default, but you can select **Board view** to switch views.

4. Add and configure your trigger.
  - To learn more, see [Add and configure a trigger in a playbook](#).
  - a. Select the more options icon (⋮) and select **Properties**.
  - b. On the **Schedule** tab, fill in the fields.

#### Schedule tab

Field	Description
Define your own conditions for when your process runs	Select the trigger type from the list. You can select <b>Record Create</b> .
Table	Select a table to trigger your playbook to run. For Design and Assign function, select <b>Change Request</b> . When you create a change request, the playbook gets triggered.
Trigger condition	The conditions that cause your playbook to run. Select your Change model as Trigger condition.
Run my trigger	Select an option to run your trigger. You can select <b>Once</b> so that only one playbook process instance is created for design and assign.

- c. Select **Done**.

5. Select **Add Stage** to add a stage.

You must add only one stage for the Design and Assign function. To learn more about the playbook stage, see [Add and configure a stage in a playbook](#).

**6. Add and configure the activity.**

**a. Select **Add activity**.**

**b. Select the activity that you want to add in the playbook.**

You can select an existing activity that is associated with the Network Inventory Advanced application and update them according to your requirement. You can also create and add new activity. To learn more about creating an activity, see [Add and configure an activity in a playbook](#).

**Default Activities for Design and Assign playbook**

Activity	Description
Auto Create Change Task	<p>This activity is used to invoke a record producer to create change task record and then display the change task form view. This activity does the following.</p> <ul style="list-style-type: none"> <li>▪ Automatically creates change task.</li> <li>▪ Invokes the associated record producer.</li> <li>▪ Creates change task record with record producer variables.</li> <li>▪ Displays change task form view in the activity card.</li> </ul>
Display Form	This activity displays the form view according to the selected table and view.
Review and submit design assign	This activity is used to review and submit a design and assign request. It automatically creates a change task.

You can also create an activity. To learn more, see [Add and configure an activity in a playbook](#).

Your new activity appears in the stage, and the Activity properties panel appears.

**c. On the **Details** tab, fill in the fields.**

**Details tab**


Field	Description
Label	Enter a unique, user-facing name for your activity. This name appears to agents and fulfillers during runtime of your playbook.
Description	Optionally, enter some descriptive details about your activity.

**d. Open the **Automation** tab.**

Automation, Inputs, and Outputs sections appear.

**e. Select **Show additional options** to view all fields.**

f. Under the Inputs section, define the values of the activity's inputs.

Configure inputs with a hard-coded value, or by selecting the data pill picker icon () to use data from previous activities or the playbook trigger.

g. Open the **UI Layout** tab and fill in the fields.

Depending on the UI Layout associated with the activity, different sections and fields appear on this tab. These sections and fields let you set up the activity data that renders during the runtime Playbook Experience.

h. Select **Save and close**.

7. Keep adding activities according to your design requirement.

8. After you have added all appropriate activities to your playbook, select **Activate** in the header. Activating your playbook publishes it so that it runs when triggered.

## Result

When your playbook's trigger conditions are met, your playbook runs.

## What to do next

Update the system property to add the playbook in the Design and Assign home page. To learn more, see [Update system property to configure the Design and Assign home page](#).

## Related topics

[Playbooks in Workflow Studio](#) 

[Configuring Design and Assign function for your network services](#)

[Configure a Design and Assign function example](#)

## Update system property to configure the Design and Assign home page

Update the system property to add a playbook to the Design and Assign home page in the Telecommunications Network Inventory application. You can launch the Design and Assign function from the home page and execute the steps to achieve your goal.

## Before you begin


Role required: admin, sn\_ni\_core.inventory\_admin

## About this task

Add the change model in the system property to use the playbook for the Design and Assign function. As you add, the Design and Assign home page lists a UI action to launch the playbook.

## Procedure

1. Navigate to **All > System Properties > All**.
2. Open the **sn\_ni\_ws.tni\_design\_assign\_chg\_models** record.
3. In the **Value** field, add the sys\_id of the change model.

 **Note:** The default value is the sys\_id of the logical connection model that is available in the Design and Assign home page.

4. Select **Update**.

## Result

The Change model name appears as a UI action in the Design and Assign home page. Selecting the UI action launches the playbook.

## What to do next

Use the playbook to design and assign a service request. To learn more, see [Using Design and Assign function](#).

## Related topics

[Configuring Design and Assign function for your network services](#)

[Configure a Design and Assign function example](#)

## Modify the Design and Assign function layout

Modify the Design and Assign function layout in the Telecommunications Network Inventory application by configuring the endpoint. You can create the layout according to your network service requirement

## Before you begin

Role required: admin, sn\_ni\_core.inventory\_admin

## About this task

By default, the Design and assign function layout shows three sections such as activity picker, activity viewer, and network diagram. Currently the network diagram shows the circuit map for logical connection. You can customize the network diagram according to your requirement by configuring the `sn_ni_ws.TNIDesignAssignConfiguration` endpoint. You can also remove the network diagram from the layout by deleting the associated script.

## Procedure

1. Navigate to **All > System Extension Points > Scripted Extension Points**.
2. Open the `sn_ni_ws.TNIDesignAssignConfiguration` record.
3. Edit the script according to your requirement.
4. Select **Update**.

## Configure a Design and Assign function example

This example demonstrates how you can create and configure a playbook to design and assign a network service in the Telecommunications Network Inventory application.

## Example overview

Consider you have an order requests from a customer to fulfill a network service that must create Optical Network Terminals (ONT) for a specified location. To design and assign this network service, you must capture the ONT details such as an ONT site and equipment template details. By creating and configuring a playbook for the Design and Assign function, you can automate these tasks by following step-by-step guidance for designing the network service.

As a playbook admin, you create and configure the playbook to design and assign your inventory for the network service. The playbook contains the following activities to create the ONT device.

1. Setup Network Service - Collects service details of your design request.
2. Capture ONT Details - Capture the ONT site and inventory template details to instantiate the equipment.
3. Review and Submit - You review the activity details and creates the ONT devices for the specific location according to the template.

As a part of this playbook workflow, you automate the following.

- Creates a change request for the ONT design.
- Creates change tasks for the activities such as capturing ONT details.
- Execute the change tasks to instantiate the equipment using an inventory template.

As a playbook agent, you can fulfill your customer orders and requests for the network service by using this Design and Assign function.

### Prerequisites

Prior to creating a playbook, as an inventory core admin, you create and configure the following.

1. Create a Change model and add model states.

#### Change model details

Item	Description
Change model name	Set name as <b>Network Service Automated Flow</b> .
Model state	<p>Add the following model states and set the model state transitions.</p> <p><b>Design in progress</b> Set model state transition to <b>Design complete</b>.</p> <p><b>Design complete</b> Set model state transition to <b>Closed</b>.</p> <p><b>Closed</b> Don't set any model state transition for this state.</p> <p><b>Note:</b> You must add Allow CI Modification attribute to the <b>Design in progress</b> and <b>Design complete</b> model states.</p>

To learn more about the detailed steps, see [Create a Change Model for Design and Assign function](#).

2. Create a record producer to capture the ONT input details such as ONT site and inventory template. This record producer is used in the second activity in the playbook.

#### Record producer details

Item	Description
Record producer	<ul style="list-style-type: none"> <li>○ Set the record producer name as <b>Capture ONT Details</b>.</li> <li>○ Set the <b>Table</b> field as <b>Change Task</b>.</li> </ul>

To learn more about the detailed steps, see [Create a record producer for the Design and Assign function](#).

3. Add variables to the record producer.

**Variable details**

Item	Description
Variable 1	<p>Set the following details for Variable 1.</p> <ul style="list-style-type: none"> <li>Set the <b>Type</b> field as <b>Reference</b>.</li> <li>On the <b>Question</b> tab, set the <b>Question</b> field as <b>ONT site</b>.</li> <li>On the <b>Specification</b> tab, set <b>Reference</b> field as <b>Network Site [cmdb_ci_ni_site]</b>.</li> </ul>
Variable 2	<p>Set the following details for Variable 1.</p> <ul style="list-style-type: none"> <li>Set the <b>Type</b> field as <b>Reference</b>.</li> <li>On the <b>Question</b> tab, set the <b>ONT Template</b> field as <b>ONT site</b>.</li> <li>On the <b>Specification</b> tab, set <b>Reference</b> field as <b>Inventory Template [sn_ni_core_inventory_template]</b>.</li> </ul>

To learn more about the detailed steps, see [Create variables for Design and Assign function](#).

4. Select **DA common variables** as a variable set to the record producer.

To learn more about the detailed steps, see [Add variable set to the record producer for Design and Assign function](#).

5. Create a subflow for the request definition that you use to configure the second activity in the playbook.

**Subflow details**

Item	Description
Subflow name	Set the subflow name as <b>Capture ONT Details</b> .
Input fields	<p>Add the following input fields for the subflow.</p> <ul style="list-style-type: none"> <li>Set Label as <b>Ignore Validation Error</b> and the Type as <b>true/false</b> for input 1.</li> <li>Set Label as <b>Change task</b> and the Type as <b>Reference.Change Task</b> for input 2.</li> </ul>
Actions	<p>Add the following actions to the subflow.</p> <ul style="list-style-type: none"> <li>Add the <b>Get Catalog Variable</b> action to read the details from the record producer.</li> <li>Add the <b>TNI Create CI from Template</b> action to create the equipment from the inventory template.</li> <li>Add the <b>Update Record</b> action to update the equipment to the affected Configuration Items (CI)</li> </ul>

To learn more about the detailed steps, see [Create subflow for Design and Assign function](#).

6. Create a request definition that you use to configure the second activity in the playbook.

### Request definition details

Item	Description
Request definition name	<p>Set the following details for the request definition.</p> <ul style="list-style-type: none"> <li>○ Set the request definition name as <b>Capture ONT Details</b>.</li> <li>○ Set the <b>Task type</b> field as <b>Change Task</b>.</li> </ul>

To learn more about the detailed steps, see [Create subflow for Design and Assign function](#).

### Creating and configuring a playbook

As a playbook admin, you create and configure the playbook for the Design and Assign function in the Workflow Studio. For the detailed information about the following steps, see [Create a playbook for the Design and Assign function](#).

1. Create a playbook and set the name as **Design Network Service**.
2. Add and configure your trigger.

#### Trigger details

Item	Description
Additional properties window	<p>On the <b>Schedule</b> tab, set the following details for the trigger.</p> <ul style="list-style-type: none"> <li>○ Set the <b>Define your own conditions for when your process runs</b> as <b>Create Record</b>.</li> <li>○ Set trigger condition as <b>Network Service Automated Flow Change model</b>. You configure additional property to trigger the playbook when a change request is created using the <b>Network Service Automated Flow Change model</b>.</li> </ul>

3. Create a stage and add activities such as Setup Network Service, Capture ONT Details, and Review and Submit.
  - a. Create and configure the Setup Network Service activity.

#### Setup Network Service activity details

Item	Description
Add activity	Select the <b>Display Form</b> default activity.
Details tab	Rename the activity as <b>Setup Network Service</b> .
UI Layout tab	<p>Set the following details in the <b>UI Layout</b> tab.</p> <ul style="list-style-type: none"> <li>▪ Set the <b>Associated table</b> field as <b>Chang Request</b>.</li> <li>▪ Set the <b>Associated record</b> field as <b>Flow DataTrigger - change_request &gt; change_request Record</b></li> <li>▪ Set the <b>Experience Status Table</b> field as <b>Flow Data</b>.</li> <li>▪ Set the <b>Experience Status Record</b> field as <b>Automation plan &gt; Create Flow Data &gt; Outputs &gt; Flow Data Record</b>.</li> <li>▪ Set the <b>Form View</b> field as <b>Playbook</b>.</li> </ul>

b. Create and configure the Capture ONT Details activity.

**Capture ONT Details activity details**

Item	Description
Add activity	Select the <b>Auto Create Change Task</b> default activity.
Details tab	Rename the activity as <b>Capture ONT Details</b> .
Automation tab	Set the following details in the <b>Automation</b> tab. <ul style="list-style-type: none"> <li>▪ Set the <b>Request Type</b> field as <b>Capture ONT Details</b>. The <b>Capture ONT Details</b> is the request definition that you created.</li> <li>▪ Set the <b>Record Producer</b> field as <b>Capture ONT Details</b>.</li> <li>▪ Set the <b>Change Request</b> field as <b>Flow DataTrigger - change_request &gt; change_request Record</b></li> </ul>
UI Layout tab	Set the following details in the <b>UI Layout</b> tab. <ul style="list-style-type: none"> <li>▪ Set the <b>Associated table</b> field as <b>Chang Task</b>.</li> <li>▪ Set the <b>Associated record</b> field as <b>Automation plan &gt; Create Change Task Data &gt; Outputs &gt; Change Tasks</b>.</li> <li>▪ Set the <b>Experience Status Table</b> field as <b>Flow Data</b>.</li> <li>▪ Set the <b>Experience Status Record</b> field as <b>Automation plan &gt; Create Flow Data &gt; Outputs &gt; Flow Data Record</b>.</li> <li>▪ Set the <b>Form View</b> field as <b>Playbook</b>.</li> </ul>

c. Create and configure the Review and Submit activity.

**Review and Submit activity details**

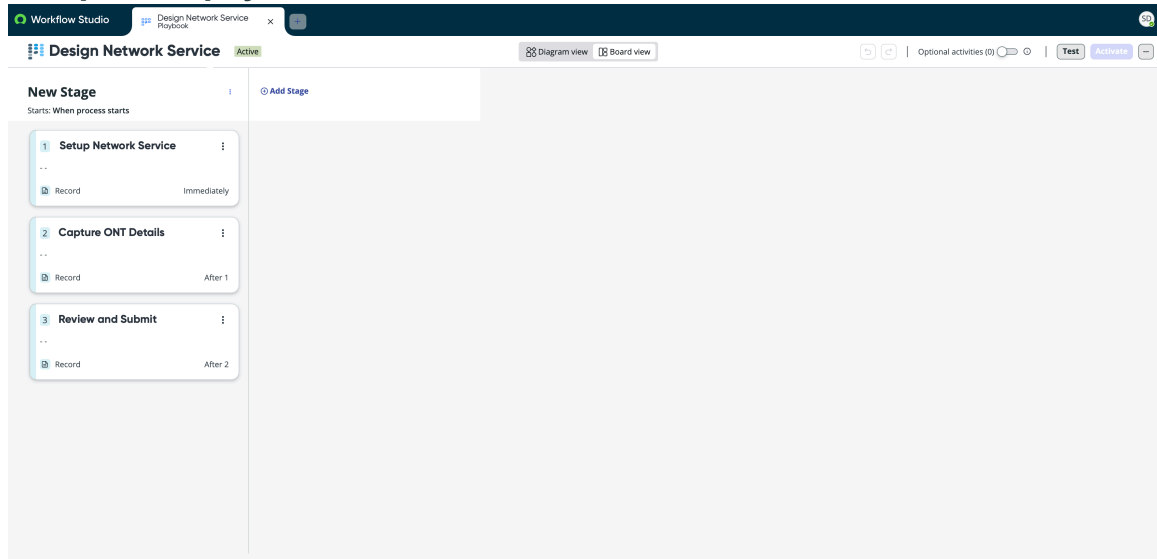
Item	Description
Add activity	Select the <b>Display Form</b> default activity.
Details tab	Rename the activity as <b>Review and Submit</b> .
UI Layout tab	Set the following details in the <b>UI Layout</b> tab. <ul style="list-style-type: none"> <li>▪ Set the <b>Associated table</b> field as <b>Chang Task</b>.</li> <li>▪ Set the <b>Associated record</b> field as <b>Automation plan &gt; Create Change Task Data &gt; Outputs &gt; Change Tasks</b>.</li> <li>▪ Set the <b>Experience Status Table</b> field as <b>Flow Data</b>.</li> <li>▪ Set the <b>Experience Status Record</b> field as <b>Automation plan &gt; Create Flow Data &gt; Outputs &gt; Flow Data Record</b>.</li> <li>▪ Set the <b>Form View</b> field as <b>Playbook</b>.</li> </ul>

d. Select **Save and close**.

**4. Select **Activate**.**

The following example shows the playbook that you created and configured in the Workflow Studio.

## Example of the playbook in Workflow Studio




### Adding playbook to home page

You add the `sys_id` of the Network Service Automated Flow Change model in the `sn_ni_ws.tni_design_assign_chg_models` record. To learn more about the detailed steps, see [Update system property to configure the Design and Assign home page](#).

### Using a Design and Assign function

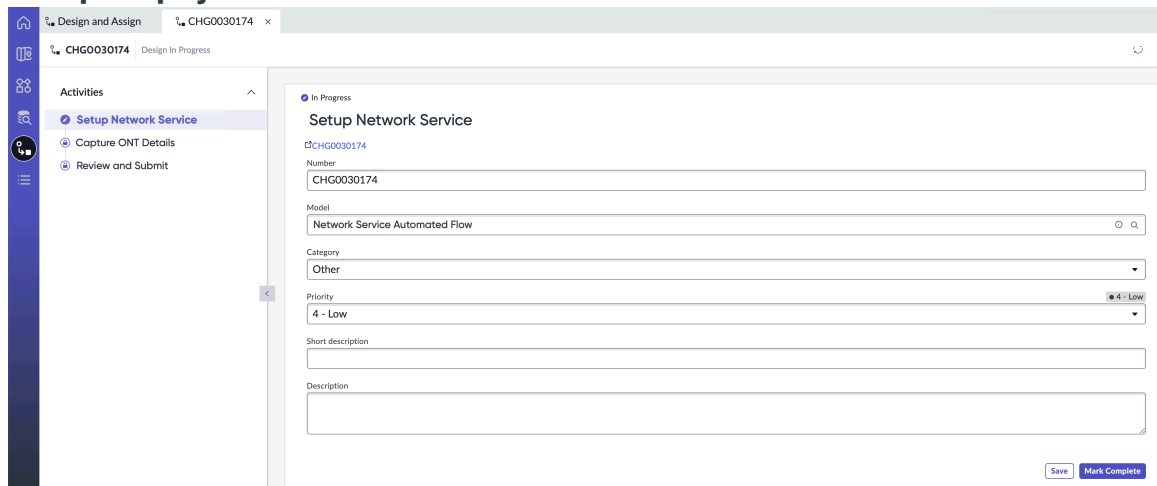
As an agent, you use the playbook for the Design and Assign function to fulfill the requirement of the network service by following the steps.

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the design and assign icon (  ) to open the Design and Assign home page.
3. On the Design Assign home page, select **New > Network Service Automated Flow**.
4. Complete the activities on the playbook to design and assign your network service.

This process creates an ONT device based on the template and site that you selected in the playbook activity.

The following example is the Design and Assign function that you created.

### Example of playbook



## Related topics

[Configuring Design and Assign function for your network services](#)


# Integrating Telecommunications Network Inventory with other applications

You can extend the capabilities of the Telecommunications Network Inventory application and connect with other departments to assist with problem resolution by integrating with other applications.


## Telecommunications Network Inventory integration with Hardware Asset Management

By integrating the Telecommunications Network Inventory application with the Hardware Asset Management (HAM) application, you can use an inventory template to create a service request. You can also associate the assets that are available in a stock room to instantiate the equipment.

### HAM integration overview

With this integration, you can enable the Telecommunications Network Inventory application to create the bill of materials for your assets by using a record producer. Then, you can create a service request to get those assets. To learn more about record producers, see [Record Producer](#) .

Before creating the service request, you must publish the asset to the hardware catalog by adding it to the Catalog Definition table. To learn more, see [Publish an asset to the hardware catalog](#).

The Hardware Asset Management fulfills the service request and executes the workflow to procure the assets in the Hardware Asset Management Workspace. To learn more about the Hardware Asset Management workflow, see [Procurement](#) .

After the assets are acquired or available in a stockroom, the procurement managers can use the ServiceNow<sup>®</sup> Procurement application to create the configuration items (CIs) for these assets. You can use these CIs for equipment instantiation by tagging them.

When you instantiate equipment at a network site with an inventory template, the system picks the assets that match with the interface card models if they're in the same network site location. Otherwise, the application creates a CI for the interface card. The system makes a relationship with the other assets that are available in a stockroom. These relationships are made only if the related assets are available in a stockroom.

### Hardware Asset Management integration workflow

This integration enables you to do the following tasks:

1. Create a service request for the bill of materials. To learn more, see [Create a service request to procure assets](#).
2. Associate the assets from an available stock room. You can associate the asset when you create equipment by using the change model. To learn more, see [Create a change request from Network Inventory Workspace](#).

## Create a service request to procure assets

Create a bill of materials for assets by using a record producer, and then create a service request to procure those assets. You can do both these actions by using the Telecommunications Network Inventory application integrations with the Hardware Asset Management application.

### Before you begin


Make sure to add the asset that you want to procure in the hardware catalog. To learn more, see [Publish an asset to the hardware catalog](#).

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

To procure the assets, you can create a service request for a bill of materials by using the Material Request using Inventory Template record producer. To learn more about record producers, see [Record Producer](#).

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Procurement > Requests**.
3. Select **New**.
4. In the Material Request using Inventory Template record producer, fill in the fields.

#### Material Request using Inventory Template record producer

Field	Description
Inventory Template	Inventory template that includes the assets that you want to procure. When you select the template, the related assets list is displayed in the Material Count section.
Quantity	Quantity of the assets. Enter the required quantity of each asset in the <b>Quantity</b> field.

5. Select **Submit**.

### Result

A service request is created to procure the assets.

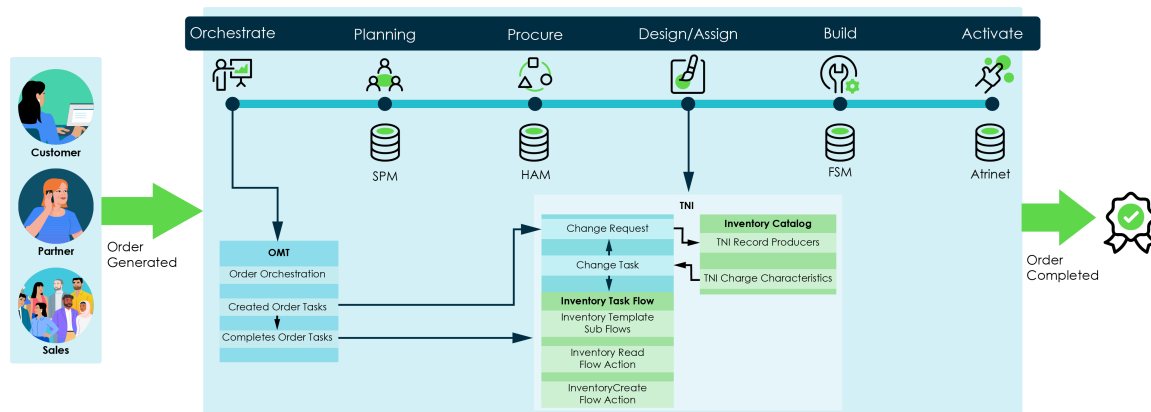
## Telecommunications Network Inventory and Order Management for Telecommunications and Media

With the Order Management for Telecommunications and Media (OMT) application, you can manage all your product and service orders from one place. These product orders are divided into service orders that are further divided into resource orders.

### Introduction to OMT integration

The order workflow generates the order tasks that fulfill the customer-facing service order (CFS) and resource-facing service order (RFS). Network-related tasks that involve the inventory configuration items (CIs), models, and templates, may interact with the Telecommunications Network Inventory application to create network CIs. For all network-related order tasks, you must create a change request in the Telecommunications Network Inventory application.

The following diagram shows the high-level process of managing a service request and detailed workflow of the Telecommunications Network Inventory and Order Management for Telecommunications applications.



Following are the stages of the workflow:

1. **Orchestration:** In this stage, the Order Management for Telecommunications application fulfills the function of order orchestration. It generates resource orders to execute a variety of order-related tasks, encompassing network planning. These resource orders can be initiated by either a service agent or through the TMF 641.
2. **Plan:** In this stage, the SPM leverages pre-defined SPM project template to initiate project creation. Subsequently, the SPM utilizes the established integration with the Order Management for Telecommunications to facilitate further project processing.
3. **Procure:** In this stage, instantiation of procurement activity for hardware assets to fulfill the request is obtained.
4. **Design Assign:** In this stage, the Telecommunications Network Inventory application initiates the following process:
  - a. creates change request that triggers the respective change model based on the analyzed change characteristics.
  - b. creates change tasks based on the change characteristics.
  - c. completes all the tasks through the inventory task flow that includes template sub flow, read flow action, and create flow action. After which required CIs or resources are read or created.
5. **Build:** In this stage, the service is physically built or implemented through FSM.
6. **Activate:** The service is deployed using activation procedure.

To create a network CI, the Telecommunications Network Inventory and Order Management for Telecommunications applications are integrated to perform service or product tasks, such as design and assign. A change request is initiated for the tasks that need a network inventory-related action.

You must ensure that these conditions are met:

1. You must have the license of both the Telecommunications Network Inventory and Order Management for Telecommunications applications in the same instance.
2. In this integration, only the ADD action service order request from Order Management for Telecommunications and Media is provided.

### For admins

To create a change request, an admin must perform the following tasks for an order task that needs the network inventory actions:

1. Create a record producer. To learn more, see [Create a record producer](#).
2. Create a change model. To learn more, see [Create a change model](#).

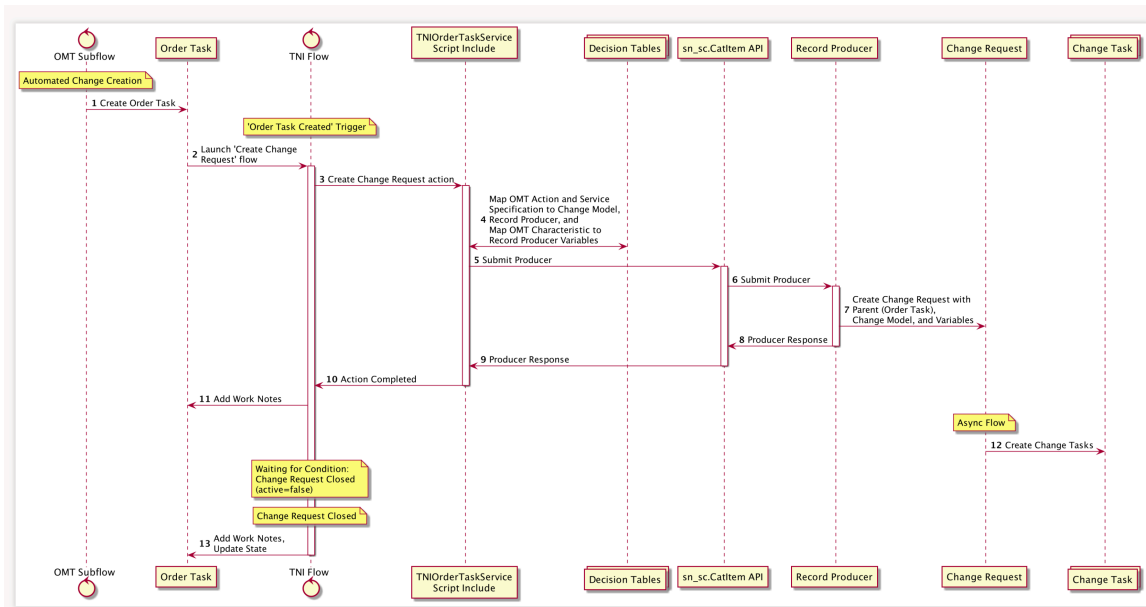
By default, the Telecommunications Network Inventory application provides the change models that are described in the following table.

### Default Change Models

Change Models	Description
Provision LAG	Creates Ethernet links across ports, and a LAG circuit over those Ethernet links. LAG has virtual interfaces. The VLAN ranges are also created and associated with LAG.
GPON broadband Service (Automated)	Provisions a GPON service over the existing network.
Fiber-wise Mobility Infrastructure	Provisions a mobility infrastructure over the existing network.
Design and Assign Telco Equipment	Creates equipment according to the predefined template at a particular network site.

The states are New, Implement, Review, and Closed for the earlier change models. By default, all new change model states are set as New.

3. Create a decision entry in the decision table provided by the Telecommunications Network Inventory application. See [Order Management for Telecommunications integration](#) to learn how to create an entry.



The workflow for creating a change task using TNI-OMT integration is as follows:

1. The OMT subflow creates an order task.
2. When the Order Task Created trigger is received, the TNI flow launches the Create Change Request and later creates a Change Request action.

3. The OMT action and Service Specification are mapped to the Change Model, Record Producer in the TNI Order Task Submit Script Include and Decision Tables. Then the OMT characteristic is mapped to the Record Producer variables.
4. The Producer is then submitted to the Record Producer via the `sn_sc.CatItem` API.
5. It creates a Change Request with respect to the Order Task, Change Model, and Variables. Also, it uses the `sn_sc.CatItem` API to return the result to the TNI flow.
6. When this action is completed, it adds work notes to the Order task.
7. After the Change Request is closed, it adds work notes to the Order task.

## For inventory agents

An inventory agent can open, verify, implement, and close the assigned change tasks. After implemented, the created CIs are added under the **Affected CIs** tab. The work notes of the order task are updated when the order task is closed.

As a result, the Order Management for Telecommunications and Media application fetches the list of the affected CIs and creates an install base item to relate the product order to the CI. To learn more, see [Configuring order fulfillment in Order Management for Telecommunications, Media, and Technology](#).

### **Note:**

- A change request for an order task is created automatically only if a decision entry is created.
- A number of change requests is created based on the need for inventory action of an order task.
- As a demo data:
  - In the Order Management for Telecommunications and Media application, the SD-WAN product has an Allocate and Install CPE task that triggers an equipment creation change request to the Telecommunications Network Inventory application.
  - The Telecommunications Network Inventory application has demo data that you can use to create equipment, provision a link aggregation group (LAG), automate a Gigabyte Passive Optical Network (GPON) broadband, and fiber wise mobility infra as Telecommunications Network Inventory workflows.

## Using Telecommunications Network Inventory

With the Telecommunications Network Inventory application, you can build a digital representation of your physical and logical networks. This network inventory contains the assets, services, and the relationships that define the infrastructure of your telecommunications networks.

Multiple methods are available for creating the network asset records that comprise a comprehensive digital model of your telecommunications network inventory in the Telecommunications Network Inventory application.

### Generation of network assets using inventory models and templates

Inventory models and templates provide a framework for creating representations of the telco equipment in the Telecommunications Network Inventory application. By using the inventory templates and models that you define, you can generate the individual network asset instances that make up the digital model of your network. When you create the model and template relationships, the generation function also creates the formal relationships between each

individual network asset. Performing this task in this manner is often a less labor-intensive method of creating the digital model of your network inventory than doing it manually.

To learn about how to use the Change form in Design and Assign to perform equipment instantiation, see:

- [Data model for Telecommunications Network Inventory](#)
- [Manually creating and reviewing your network asset instances](#)
- [Creating your inventory models](#)
- [Creating inventory template for network asset instantiation](#)
- [Instantiating your network inventory by using design and assign](#)

## Manual creation of individual network asset instances in your network inventory

Instead of defining the inventory models and templates for automated generation of network asset instances, you can manually create your network assets and a digital model of your network. You use a series of forms that you access from the Network Inventory Workspace to manually create and review individual network asset instances, and then define the relationships between each individual asset.. To learn more, see:

- [Reviewing and updating your network inventory with the Network Inventory Workspace](#)
- [Manually creating and reviewing your network asset instances](#)

### Related topics

[Exploring Telecommunications Network Inventory](#)

## Reviewing and updating your network inventory with the Network Inventory Workspace

You use the Network Inventory Workspace to manage your inventory and perform the tasks in the Telecommunications Network Inventory application.

### Related topics

[Modeling your Telecommunications Network Inventory workflow](#)

[Data model for Telecommunications Network Inventory](#)

## Manually creating and reviewing your network asset instances

A key function that you can perform in the network inventory workspace is to manually create your network assets and a digital model of your network in the Telecommunications Network Inventory application. With this information, you can provision new services, modify existing services, maintain the network, and plan the forecast for your network growth.

To manually create and to review your individual network inventory records, and define the relationships between each asset, you can easily access the appropriate forms from the workspace landing page. For example, you can select the **Interface cards** count in the Network entities by categories widget on the Network Inventory Workspace landing page to create an interface card instance.

**Note:** As an alternative to manually creating individual network asset instances, you can instead use a more automated, and potentially less labor-intensive method to do so. To learn more, see the following:

- [Data model for Telecommunications Network Inventory](#)
- [Manually creating and reviewing your network asset instances](#)
- [Creating your inventory models](#)
- [Creating inventory template for network asset instantiation](#)
- [Instantiating your network inventory by using design and assign](#)

## Process

To manually create a comprehensive digital model of your telecommunications network, access the following forms from the Network Inventory Workspace landing page and the Lists view. To learn more, see [Reviewing and updating your network inventory with the Network Inventory Workspace](#).

1. In the Network Site or Data Center form, create the site records for the individual locations that house your network equipment. To learn more about network site, see [product/tmt-telecom-network-inventory/task/define-tni-sites.dita](#). To learn more about data centers, see [Define the datacenter details](#).
2. In the Telco Equipment form, create the individual network asset instances for your telecommunications equipment. To learn more, see [product/tmt-telecom-network-inventory/task/define-tni-equipment.dita](#).
3. In the Equipment Holder form, create the individual network asset instances for your equipment holders. To learn more, see [product/tmt-telecom-network-inventory/task/define-tni-equipment-holders.dita](#).
4. In the Interface Cards form, create the individual network asset instances for your interface cards. To learn more, see [Define the card details](#).
5. In the Network Interface form, create the individual network asset instances for your network interfaces. To learn more, see [Define the network interface details](#).
6. In the Physical connection form, create the individual network asset instances for each physical or wired connection. To learn more, see [Define the physical connection details](#).
7. In the Logical connection form, create the individual network asset instances for each logical connection. To learn more, see [Define the logical connection details](#).
8. Create the logical and physical relationships between each asset in your network inventory.
9. Define the numbering for your virtual local-area network (VLAN) or link aggregation group (LAG) connections in the Telecommunications Network Inventory application. To learn more, see [Define your inventory numbering](#).

## Related topics

[Modeling your Telecommunications Network Inventory workflow](#)

### Define the network site details

Review, update, or create your network site records in the Telecommunications Network Inventory application. These records enable you to view the location-specific attributes for each network site, including the network centers, buildings, floors, and rooms where your equipment is located.

### Before you begin

Role required: `sn_ni_core.inventory_admin`, `sn_ni_core.inventory_agent`

## About this task

Your network sites are those physical locations where you keep your network equipment. Network site records enable you to view all your equipment at a specific location. You can filter the locations by their assigned type, role, and function categories. To learn more, see [Viewing your network inventory configuration items with CMDB Workspace](#).

When you create a network site record, it creates a corresponding configuration item (CI) record in the Network Site [cldb\_ci\_ni\_site] table. To learn more, see [Data model for Telecommunications Network Inventory](#).

The Telecommunications Network Inventory application stores the physical network connections, the logical network connections, and the resources that contain the overall network and the services provisioned on the network. The TNI data model adheres to a hierarchical structure. The foundation is the Network Site (referred to here as a network site).

The Network Site class represents the physical locations on the network where the equipment and resources are stored and maintained, and where the network connections originate and terminate. The network site has a reference to a physical location and derives the key attributes like the address, latitude, and longitude from it.

Although the network sites and locations are similar, their differences are important within the context of the TNI data model. A network site is a configuration item (CI) in TNI. It has an operational status, which is derived from the equipment and connections within the network site. As a CI, a network site can also be mapped as an inherent aspect of your service topology. The network site and location complement one another, which provides more value to your organization.

You can relate your physical locations to your network sites in TNI so that you can visualize these network sites on a map. Your organization can maximize the value of the network site and all the underlying inventory components that reside at the site. With the TNI data model, you can identify incidents, correlate events, and analyze the root cause of your network faults or outages.

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.

2. Click the list icon () and then go to **Sites > Network Sites**.

You can view the sites that you manage by going to **Sites > My Sites**.

**Note:** You can also access the Total Sites list by clicking the **Total sites** or **In maintenance sites** counts in the Network sites overview widget in the Network Inventory Workspace landing page. To learn more, see [Reviewing and updating your network inventory with the Network Inventory Workspace](#).

3. Click **New**.

4. On the **Details** tab, in the Network Site section, fill in the fields.

To learn more about the fields that are unique to the Network Site form, see [Network site form](#).

To learn about the remaining identification fields that are common to most of the Inventory and Inventory number allocation menu forms, see [Commonly used network asset instance identification fields](#).

5. On the **Details** tab, in the Site Details section, fill in the site detail information.

The following table lists the fields that are unique to the Site Details section.

To learn about the remaining configuration fields that are common to most of the Inventory menu forms, see [Commonly used network asset instance configuration fields](#).

**Network Site form - Site Details**

Field	Description
Serving wire center	Common Location Identifier Code (CLLI) code that represents the telephony company central office that is serving this network site with telephone service.
LATA	Assigned Local Access and Transport Area (LATA) code for the network asset. It represents the geographical area in the United States in which the network site is located.
Data center code	Identifier for this datacenter.
Altitude	Altitude of the network site that you select as feet or meters in the <b>Altitude units</b> field. The altitude measurement enables your enterprise to comply with Federal Aviation Administration (FAA) regulations.
Altitude units	Unit of measurement in which you're expressing the altitude of the network site in the <b>Altitude</b> field. Select one of the following options:  <b>Feet</b> Altitude of the network site that is measured in feet. This is the default value.  <b>Meters</b> Altitude of the network site that is measured in meters.

- To create the Telecommunications Network Inventory attributes for the Network Site form, click **Set Inventory Attributes**.

When you click the **Set Inventory Attributes** button, it creates a reference in the CI table.

**Note:**

If you click **Save** without clicking **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record.


- On the TNI CI Attributes form, fill in the fields.

To learn more about the Telecommunications Network Inventory attribute fields, see [TNI CI Attributes form](#).

- Click **Save**.

The Telecommunications Network Inventory attribute fields are displayed on the Network Site form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.


- Optional:** To add the attachments, such as graphics or documents, click the attachment icon


() in the right panel.

- Click **Save**.

The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).

**11. Optional:** View the visual representation of the selected record by selecting **Open Map**.


**12. Optional:** Select the more options icon () and then select **Add Packs** to capture the attributes for a configuration item (CI) record.  
To learn more, see [Using an attribute pack for a CI record](#).

**13. Optional:** To view the Dependency views map, select the more options icon () and then select **Dependency View**.

(Optional) The Dependency Views map graphically displays the CIs that support the specific network asset and the relationships between the CIs.

**14. Optional:** To view the associated network inventories, click the brick icon (.

(Optional) The Infrastructure Relationships section shows all the associated network inventories grouped by the individual network asset instances.

**15. Optional:** Select the more options icon () and then select **Decommission** to decommission a CI record.  
To learn more, see [Decommission an inventory record](#).

## What to do next

- If you want to establish relationships with the other network assets, enter the details in the related tabs. To learn more, see [Related tabs in the Network inventory forms](#).
- To delete an inventory record, see [Delete a record](#).

## Related topics

[Modeling your Telecommunications Network Inventory workflow](#)

### Define the datacenter details

Define your datacenter record in the Telecommunications Network Inventory application. These records enable you to view the location-specific attributes for each datacenter, including the network centers, buildings, floors, and rooms where your network assets are located.

### Before you begin


Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

Your datacenter is a secure facility that houses critical IT and network infrastructure needed to support the telecommunications network. Datacenter records enable you to view all network assets at a specific location. A datacenter has details about the location, building, floor, and all network assets placed at that location.

When you create a datacenter record, it creates a corresponding configuration item (CI) record in the data center [cmdb\_ci\_datacenter] table. Datacenter is a subcategory of a network site.

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () and then go to **Sites > Data Centers**.

You can view the datacenters that you manage by going to **Sites > My Sites**.

**3. Select New.**

**4. On the Details tab, fill in the fields.**

To learn more about the fields that are unique to the Data Center form, see [Network site form](#).

To learn about the remaining identification fields that are common to most of the Inventory and Inventory number allocation menu forms, see [Commonly used network asset instance identification fields](#).

**5. On the Details tab, in the Site Details section, fill in the site detail information.**

The following table lists the fields that are unique to the Site Details section.

To learn about the remaining configuration fields that are common to most of the Inventory menu forms, see [Commonly used network asset instance configuration fields](#).

**Network Site form - Site Details**

Field	Description
Serving wire center	Common Location Identifier Code (CLLI) code that represents the telephony company central office that is serving this network site with telephone service.
LATA	Assigned Local Access and Transport Area (LATA) code for the network asset. It represents the geographical area in the United States in which the network site is located.
Data center code	Identifier for this datacenter.
Altitude	Altitude of the network site that you select as feet or meters in the <b>Altitude units</b> field. The altitude measurement enables your enterprise to comply with Federal Aviation Administration (FAA) regulations.
Altitude units	Unit of measurement in which you're expressing the altitude of the network site in the <b>Altitude</b> field. Select one of the following options:  <b>Feet</b> Altitude of the network site that is measured in feet. This is the default value.  <b>Meters</b> Altitude of the network site that is measured in meters.

**6. To create the Telecommunications Network Inventory attributes for the Network Site form, select Set Inventory Attributes.**

When you select the **Set Inventory Attributes** button, it creates a reference in the CI table.

**Note:**


If you select **Save** without selecting **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record.

7. On the TNI CI Attributes form, fill in the fields.

To learn more about the Telecommunications Network Inventory attribute fields, see [TNI CI Attributes form](#).

8. Select **Save**.


The Telecommunications Network Inventory attribute fields are displayed on the Network Site form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.


9. **Optional:** To add the attachments, such as graphics or documents, select the attachment icon ()

10. Select **Save**.

The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).

11. **Optional:** View the visual representation of the selected record by selecting **Open Map**.


12. **Optional:** Select the more options icon () and then select **Add Packs** to capture the attributes for a configuration item (CI) record.  
To learn more, see [Using an attribute pack for a CI record](#).

13. **Optional:** To view the Dependency views map, select the more options icon () and then select **Dependency View**.

(Optional) The Dependency Views map graphically displays the CIs that support the specific network asset and the relationships between the CIs.

14. **Optional:** To view the associated network inventories, select the brick icon ()

(Optional) The infrastructure Relationships section shows all the associated network inventories grouped by the individual network asset instances.

15. **Optional:** Select the more options icon () and then select **Decommission** to decommission a CI record.  
To learn more, see [Decommission an inventory record](#).

## What to do next

- If you want to establish relationships with the other network assets, enter the details in the related tabs. To learn more, see [Related tabs in the Network inventory forms](#).
- To delete an inventory record, see [Delete a record](#).

## Define the facility hardware details

Define the facility hardware record to represent power, thermal, network components and their connectivity in a datacenter. By defining the facility records, you can track and manage your network assets in the Telecommunications Network Inventory application.


## Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

## About this task

When you create a facility hardware record, it creates a corresponding configuration item (CI) record in the facility extension class table. To learn more about the Equipment Holder extension class table, see [Network inventory facility classes](#).

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory > All Facilities**.
3. Select **New** and then select the facility type from the list.  
To learn more about the facility types, see [Network inventory facility classes](#).
4. Select **Submit**.  
The Facility form is displayed for the selected facility type.
5. On the **Details** tab, fill in the form.  
To learn more about the field information, see [Equipment Holder form](#)
6. Create the Telecommunications Network Inventory attributes for the Facility record by selecting **Set Inventory Attributes**.  
When you select the **Set Inventory Attributes** button, it creates a reference in the CI table.

### Note:


If you select **Save** without selecting **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record.

7. On the TNI CI Attributes form, fill in the fields.

To learn more about the Telecommunications Network Inventory attribute fields, see [TNI CI Attributes form](#).

8. Select **Save**.

The Telecommunications Network Inventory attribute fields are displayed on the Facility form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.

9. Add the attachments, such as the graphics or documents, by selecting the attachment icon ().

10. Select **Save**.

The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Telecommunications Network Inventory](#).

11. View the associated network inventories by selecting the brick icon ().

The Infrastructure Relationships section shows all the associated network inventories grouped by the individual network asset instances.

## What to do next

If you want to establish relationships with the other network assets, enter the details in the related tabs. To learn more, see [Related tabs in the Network inventory forms](#).

## Related topics

[Data model for Telecommunications Network Inventory](#)

### Create a telecommunications equipment instance

Create a telecommunications equipment instance in your network. You define the equipment instances so that you can track and manage your network assets in the Telecommunications Network Inventory application.


#### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent



#### About this task

You can create the equipment instances that have the inventory category set as Equipment. When you create an equipment record, it creates a configuration item (CI) record in the corresponding equipment table. To learn more about the equipment extended classes, see [Data model for Telecommunications Network Inventory](#).

#### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory > All Equipment**.

You can create the following equipment types by selecting the options from the List menu.

Option	Description
<b>IP Routers, IP Switches, IP Firewalls, IP Load Balancers, Servers, or Virtual Machines</b>	Creates a record that you've selected. To learn more about the fields in the form, see <a href="#">Router, Switch, Firewall, Virtual Machine, Load Balancer, and Server forms</a> .
<b>Kubernetes Clusters</b>	Creates a Kubernetes cluster instance. To learn more about the fields in the form, see <a href="#">Kubernetes discovery</a> 
<b>Kubernetes Pods</b>	Creates a Kubernetes pod machine instance. To learn more about the fields in the form, see <a href="#">Kubernetes discov</a> 

3. Select **New** and then select the equipment type from the list.  
To learn more about the equipment extended classes, see [Equipment extension classes](#).
4. In the Equipment form, fill in the fields.  
  
To learn more about the fields in the Equipment form, see [product/tmt-telecom-network-inventory/task/define-tni-equipment.dita](#).
5. Create the Telecommunications Network Inventory attributes for the Telco Equipment form by selecting **Set Inventory Attributes**.  
When you select the **Set Inventory Attributes** button, it creates a reference in the CI table.

#### Note:

If you select **Save** without selecting **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record.

6. On the TNI CI Attributes form, fill in the fields.

To learn more about the Telecommunications Network Inventory attribute fields, see the [TNI CI Attributes form](#).

#### 7. Select **Save**.

The Telecommunications Network Inventory attribute fields are displayed on the Telco Equipment form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.

#### 8. **Optional:** To view the Dependency views map, select the more options icon () and then select **Dependency View**.

(Optional) The Dependency Views map graphically displays the CIs that support the specific network asset and the relationships between the CIs.

#### 9. **Optional:** Select the more options icon () and then select **Add Packs** to capture the attributes for a configuration item (CI) record. To learn more, see [Using an attribute pack for a CI record](#).

#### 10. **Optional:** Select the more options icon () and then select **Decommission** to decommission a CI record. To learn more, see [Decommission an inventory record](#).

#### 11. Select **Submit**.

The inventory record is created for the equipment type that you've selected.

### What to do next

- If you want to establish relationships with the other network assets, enter the details in the related tabs. To learn more, see [Related tabs in the Network inventory forms](#).
- To delete an inventory record, see [Delete a record](#).

### Related topics

[Modeling your Telecommunications Network Inventory workflow](#)

### Review and update the telecommunications equipment details


Review and update a network asset instance for your telecommunications equipment. You define the equipment instances so that you can track and manage your network assets in the Telecommunications Network Inventory application.

### Before you begin

You create the equipment form. To learn more, see [Create a telecommunications equipment instance](#).

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### Procedure


1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () and then go to **Inventory > All Equipment**.  
The All Equipment window lists the configuration item (CI) records, which have an inventory category set as Equipment.
3. Select the CI record that you want to update.

**4. On the **Details** tab, fill in the fields.**

The following table lists the fields that are unique to the Telco Equipment form.

To learn about the remaining identification fields that are common to most of the Inventory and Inventory number allocation menu forms, see [Commonly used network asset instance identification fields](#).

**Telco Equipment form**

Field	Description
Name	Name of this telecommunications equipment. The ServiceNow AI Platform uses this name to identify it in your network inventory.
Product model	Name of the product model that this telco equipment belongs to. Select the search icon (  ) and select a model. To learn more, see <a href="#">Create an equipment model</a> .


**5. On the **Details** tab, in the Configuration section, fill in the configuration information for the telco equipment.**

To learn more about the fields that are unique to the Configuration section in the Telco Equipment form, see [Telco Equipment form](#).

To learn about the remaining configuration fields that are common to most of the Inventory menu forms, see [Commonly used network asset instance configuration fields](#).


**6. Select **Save**.**

The Telecommunications Network Inventory attribute fields are displayed on the Telco Equipment form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.

**7. Add the attachments, such as the graphics or documents by selecting the attachment icon (  ) in the right panel.**


**8. Select **Save**.**

The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).

**9. To view the Dependency Views map, select the more options icon (  ) and then select **Dependency View**.**

The Dependency Views map graphically displays the CIs that support the network asset and the relationships between the CIs.

**10. View the visual representation of the selected record by selecting the **Open Map** button.**

**Note:** Install CMDB Workspace 3.5.0 or a later version to get this button in your instance. To learn more, see [CMDB Workspace](#) .

**11. View the associated network inventories by selecting the brick icon (  ).**

The Infrastructure Relationships section shows all the associated network inventories grouped by the individual network asset instances.

**What to do next**

If you want to establish relationships with the other network assets, enter the details in the related tabs. To learn more, see [Related tabs in the Network inventory forms](#).

## Related topics

[Modeling your Telecommunications Network Inventory workflow](#)

## Define the equipment holders

Define the equipment holder that contains your telecommunications equipment, including the cabinets, racks, shelves, and slots. By defining the equipment holders, you can track and manage your network assets in the Telecommunications Network Inventory application.


## Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

## About this task



When you create an equipment holder record, it creates a corresponding configuration item (CI) record in the Equipment Holder extension class table. To learn more about the Equipment Holder extension class table, see [Equipment holder extension classes](#).

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory > Equipment Holders**.
3. Select **New** and then select the equipment holder type from the list.  
To learn more about the equipment holder types, see [Equipment holder extension classes](#).
4. Select **Submit**.  
The inventory form is displayed for the selected equipment holder type.
5. On the **Details** tab, fill in the form.  
To learn more about the field information, see [Equipment Holder form](#)
6. Create the [Telecommunications Network Inventory](#) attributes for the Equipment Holder form by selecting **Set Inventory Attributes**.  
When you select the **Set Inventory Attributes** button, it creates a reference in the CI table.

### **Note:**

If you select **Save** without selecting **Set Inventory Attributes**, it creates a CI record but not a [Telecommunications Network Inventory](#) CI record.

7. On the TNI CI Attributes form, fill in the fields.  
  
To learn more about the [Telecommunications Network Inventory](#) attribute fields, see [TNI CI Attributes form](#).
8. Select **Save**.  
  
The [Telecommunications Network Inventory](#) attribute fields are displayed on the Equipment Holder form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.
9. Add the attachments, such as the graphics or documents, by selecting the attachment icon () in the right panel.
10. Select **Save**.  
The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Telecommunications Network Inventory](#).
11. View the associated network inventories by selecting the brick icon () .

The Infrastructure Relationships section shows all the associated network inventories grouped by the individual network asset instances.

12. View the visual representation of the selected record by selecting **Open Map**.

**Note:** Install CMDB Workspace 3.5.0 or a later version to get this button in your instance. To learn more, see [CMDB Workspace](#).

13. **Optional:** To view the Dependency views map, select the more options icon (⋮) and then select **Dependency View**.

(Optional) The Dependency Views map graphically displays the CIs that support the specific network asset and the relationships between the CIs.

14. **Optional:** Select the more options icon (⋮) and then select **Add Packs** to capture the attributes for a configuration item (CI) record.  
To learn more, see [Using an attribute pack for a CI record](#).

15. **Optional:** Select the more options icon (⋮) and then select **Decommission** to decommission a CI record.  
To learn more, see [Decommission an inventory record](#).

## What to do next

- If you want to establish relationships with the other network assets, enter the details in the related tabs. To learn more, see [Related tabs in the Network inventory forms](#).
- To delete an inventory record, see [Delete a record](#).

## Related topics

[Modeling your Telecommunications Network Inventory workflow](#)

### Create and maintain racks and cabinets

Create and perform subsequent actions on the racks and cabinets using the Telecommunications Network Inventory application.

#### Create a rack

Create a rack to add, organize equipment, rack units, and manage all assets. You can also edit a rack using the Telecommunications Network Inventory application.


### Before you begin

- Role required: `sn_ni_core.inventory_admin`, `sn_ni_core.inventory_agent`, `sn_ni_core.inventory_template_manager`, `sn_ni_core.telco_inventory_catalog_manager`
- You must create slots as Rack Units and create a relationship with the rack to represent the rack with rack units.

### About this task

A rack contains rack units represented as slots having shelves, and equipment in it. When you create a rack record, it creates a corresponding configuration item (CI) record in the Rack [`cmdb_ci_container_rack`] table.

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory > Rack**.
3. Select **New**.
4. On the Equipment Holder form, fill in the fields.  
To learn more, see [Equipment Holder form](#).
5. Select **Set Inventory Attributes**.
6. On the TNI CI Attributes form, fill in the fields.  
To learn more about the fields, see [TNI CI Attributes form](#).
7. Select **Save**.

## Result

A rack record is created and related tabs are created. To learn more, see [Related tabs in the Network inventory forms](#).

## What to do next

See [Optimizing rack and cabinet usage](#) to learn about the next steps.

## Edit rack

Edit a rack to remove, add, or move the equipment from the selected rack. Organize and upgrade the components within the rack using the Telecommunications Network Inventory application.


## Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent


## About this task

By editing a rack, you can see all the equipment added to the rack along with its details.




## Procedure


1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory > Rack**.
3. Select a rack from the displayed list.  
After selecting a KPI (Key Performance Indicator), a list of the equipment contributing to that respective metric is displayed.  
A dashboard displays the KPIs (occupied units, weight capacity, power usage, and equipment types) along with the front and rear views of the rack.
4. Select **Edit Rack**.  
A list of all equipment, and the front view of both the edited configuration and the current configuration is displayed.
5. From the displayed list of equipment, search for the equipment to add in the rack by using either the filters or the search box.

**Note:**

- The existing filters automatically clear on entering a search. And, applying a filter clears your search terms.
- The equipment list can also be sorted based on latest creation date, highest number of Rack Units and weight.
- The list shows all the equipment records included in the sn\_ni\_core.equipment system property, and the equipment that aren't in the rack. However, the equipment installed within the rack is visible in the list, but remains inactive.
- The info (  ) expands and displays the equipment details on selecting an equipment or the info button.

**6.** Perform any of the following while editing a rack.

Actions	Steps
Add	<p><b>a.</b> Select (  ) &gt; <b>Add to Rack.</b></p> <p><b>b.</b> Fill in the fields and select <b>Add.</b></p> <p>To learn more about the fields, see add equipment to rack table of <a href="#">Change request and change task forms.</a></p> <p><b>Note:</b> You can drag the equipment from the corner to the desired rack unit. For non-TNI, a TNI entity with category as equipment is created. Changes can be undone or redone.</p>
Move	<p><b>a.</b> Select (  ) &gt; <b>Move.</b></p> <p><b>b.</b> Fill in the fields and select <b>Move.</b> To learn more about the fields, see add equipment to rack table of <a href="#">Change request and change task forms.</a></p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>○ You can also drag the equipment from the corner to the desired rack unit.</li> <li>○ You can undo or redo the changes</li> </ul>
Remove	Select (  ) > <b>Remove.</b>

Actions	Steps
	<p><b>Note:</b></p> <ul style="list-style-type: none"> <li>You can undo or redo the changes</li> <li>Multiple change tasks are created on multiple removals of equipment. Additionally, both removed equipment and racks are added under <b>Affected CIs</b>.</li> </ul>
Reserve a rack unit	<p>Select Options (  ) of the rack unit that you want to reserve and select <b>Reserve</b>.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>You can undo or redo the changes</li> <li>On reserving a rack unit, its life-cycle stage is set to Deployed and its life-cycle stage status is set to Reserved.</li> </ul>

**7. Select Save.**

A change request is created with the implemented modifications under the **Change Tasks** tab. The short description of each change task is updated based on the modifications. Once the changes are applied, work notes of the tasks are updated and are marked as closed.

**Note:**

- Select the displayed change request to see change tasks and more.
- The short description is updated as `Initiated to add Equipment equipment_name to Rack rack_name .` if the equipment is added to the rack. `Initiated to remove Equipment equipment_name from Rack rack_name .` if it's removed from the rack. `Initiated to move the Equipment equipment_name within the Rack rack_name,` if it's moved within the rack. `Initiated to reserve a unit of Rack rack_name for Equipment equipment_name,` if a rack slot is reserved.
- A change request is created only if the rack is modified.
- A change request isn't created in the following situations.
  - if the same equipment is added and then removed.
  - if the equipment is removed and added it back to the rack in the same slot.
  - if the equipment is added and then moved it to another position in the rack, only one add is created with the latest rack slot details.
  - if any technical error occurs. However, work notes are updated with the error details.
- A change request can contain different change tasks.

**Create a cabinet**

Create a cabinet to add, organize equipment, and manage all assets. You can also edit a cabinet using the Telecommunications Network Inventory application.


**Before you begin**

Role required: `sn_ni_core.inventory_admin`, `sn_ni_core.inventory_agent`

## About this task

When you create a cabinet record, it creates a corresponding configuration item (CI) record in the Cabinet [cmdb\_ci\_container\_cabinet] table.

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory > Cabinet**.
3. Select **New** to create a cabinet.
4. In the displayed form, fill in the fields.  
To learn more, see [Equipment Holder form](#).
5. Select **Set Inventory Attributes**.
6. In the displayed form, fill in the fields.  
To learn more about the fields, see [TNI CI Attributes form](#).
7. Select **Save**.  
A cabinet record is created and related tabs are created. To learn more, see [Related tabs in the Network inventory forms](#)

## Related topics

[Edit a cabinet](#)



### Edit a cabinet

Edit a cabinet to remove, add, or move the equipment from the selected cabinet. Organize and upgrade the components within the cabinet using the Telecommunications Network Inventory application.





## Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory > Cabinet**.
3. Select a cabinet from the displayed list.  
A dashboard displays all equipment types added under the cabinet along with the cabinet view and information of the selected equipment.
4. Select **Edit Cabinet**.  
Instead of the equipment types and cabinet view, a list of all equipment, and the front view of both edit configuration and current configuration is displayed.
5. From the displayed list of equipment, search for the equipment to add in a cabinet by using either the filters or the search box.
  - The existing filters automatically clear on entering a search. And, applying a filter clears your search terms.
  - The equipment list can also be sorted based on latest creation date, highest number of Rack Units, and weight.
  - The list shows all the equipment records included in the sn\_ni\_core.equipment system property, and the equipment that aren't in the cabinet.
  - The info () expands and displays the equipment details on selecting an equipment or the info button.

6. Perform any of the following actions while editing a cabinet.

Actions	Steps
Add	<p><b>a.</b> Select (  ) &gt; <b>Add to Cabinet.</b></p> <p><b>b.</b> Fill in the fields and select <b>Add.</b></p> <p>To learn more about the fields, see add equipment to rack/cabinet table of <a href="#">Change request and change task forms.</a></p> <p>You can also drag the equipment from the corner to the desired rack unit.</p>
Move	<p><b>a.</b> Select (  ) &gt; <b>Move.</b></p> <p><b>b.</b> Fill in the fields and select <b>Move.</b></p> <p>To learn more about the fields, see add equipment to rack/cabinet table of <a href="#">Change request and change task forms.</a></p> <p>You can also drag the equipment from the corner to the desired rack unit.</p>
Remove	<p>Select (  ) &gt; <b>Remove.</b></p>
Reserve a rack unit	<p>Select Options (  ) of the rack unit that you want to reserve and select <b>Reserve.</b></p>

7. Select **Save.**

A change request is created with the implemented modifications under the **Change Tasks** tab. Once the changes are applied, work notes of the tasks are updated and are marked as closed.

Select the displayed change request to see change tasks and more.

**Note:** A change request is created only if the cabinet is modified.

**What to do next**

To perform further actions, see [Optimizing rack and cabinet usage.](#)


**Optimizing rack and cabinet usage**

Optimize your rack's capacity by following these guidelines for adding, configuring, and calculating other components using the Telecommunications Network Inventory application.

**Before you begin**






Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace.**
2. Select the list icon (  ), and then go to **Inventory > Rack.**
3. Select a rack from the displayed list.

4. From the rack or cabinet view, perform one of the following actions.

**Action on a rack**

Actions	Steps
Edit rack	To learn more, see <a href="#">Edit rack</a> .
Edit cabinet	To learn more, see <a href="#">Edit a cabinet</a> .
Refresh rack equipment	Select refresh (  ) icon to see updated equipment of the rack if any changes are performed.
Create equipment	Select (  ) > <b>Create equipment</b> . In the displayed form, fill in the fields. To learn more, see <a href="#">Create equipment from rack view</a> .
Save	Save the rack or cabinet.
Add packs	Select the more options icon (  ) and then select <b>Add Packs</b> to capture the attributes for a configuration item (CI) record. To learn more, see <a href="#">Using an attribute pack for a CI record</a> .
Calculate Capacity	Select and redirect to <b>Capacity Metrics</b> tab to see the updated capacity metrics.
Decommission	Select (  ) > <b>Decommission</b> to decommission this rack. To learn more, see <a href="#">Decommission an inventory record</a> .
Delete	Select (  ) > <b>Delete</b> to delete this rack or cabinet. On deleting this rack or cabinet, all related records are deleted.

**Related topics**

[Edit rack](#)

**Create a slot for equipment**

Create a slot to provide a designated space for the equipment to maintain, update and access all types of equipment. You can route cables using the Telecommunications Network Inventory application.

**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent, sn\_ni\_core.inventory\_template\_manager, sn\_ni\_core.telco\_inventory\_catalog\_manager

**About this task**

Slots help a rack to distribute the weight of the equipment across the rack evenly. On creating a slot, a record is created in the Slot [cmdb\_ci\_container\_slot] table.

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.

2. Select the list icon (  ), and then go to **Inventory > Slot**.

3. Create a slot by selecting **New**.
4. On the Equipment Holder form, fill in the fields.  
To learn more, see [Equipment Holder form](#).
5. Select **Set Inventory Attributes**.
6. On the TNI CI Attributes form, fill in the fields.  
To learn more about the fields, see [TNI CI Attributes form](#).
7. Select **Save**.

### Define the card details

Review, update, or create a network asset instance for a card that you use in your telecommunications equipment. You define these attributes so that you can track and manage your network assets in the Telecommunications Network Inventory application.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

The equipment ports can be physical or logical (virtual). The network interface data includes the port availability, bandwidths, slots, software version, MAC address, firmware manufacturer, and version. When you create a card record, it creates a corresponding configuration item (CI) record in the Card [cmdb\_ci\_ni\_interface\_card] table. To learn more, see [Data model for Telecommunications Network Inventory](#).

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory > Cards**.
3. Select **New**.
4. On the **Details** tab, in the Card section, fill in the general information for the card.  
[Card form](#) describes fields that are unique to the Card form.

To learn about the remaining identification fields that are common to most of the Inventory and Inventory number allocation menu forms, see [Commonly used network asset instance identification fields](#).

5. On the **Details** tab, in the Configuration section, fill in the configuration information for the card. The following table lists the fields that are unique to the Configuration section.

To learn about the remaining configuration fields that are common to most of the Inventory menu forms, see [Commonly used network asset instance configuration fields](#).

### Card form - Configuration

Field	Description
Software Version	Version of the firmware that is used in this network asset.
MAC Address	Assigned Media Access Control (MAC) address for the network asset. It's the network address that is used in communications within a network segment.
Firmware manufacturer	Manufacturer of the firmware.

Field	Description
Firmware version	Version of the firmware that is used in this network asset.

6. To create the Telecommunications Network Inventory attributes for the Card form, click **Set Inventory Attributes**.

When you select the **Set Inventory Attributes** button, it creates a reference in the CI table.

**Note:**


If you click **Save** without clicking **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record.

7. On the TNI CI Attributes form, fill in the fields.

To learn more about the Telecommunications Network Inventory attribute fields, see [TNI CI Attributes form](#).


8. Click **Save**.

The Telecommunications Network Inventory attribute fields are displayed on the Card form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.

9. To add the attachments, such as graphics or documents, click the attachment icon () in the right panel.

10. Select **Save**.


The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).


11. **Optional:** To view the Dependency views map, select the more options icon () and then select **Dependency View**.

(Optional) The Dependency Views map graphically displays the CIs that support the specific network asset and the relationships between the CIs.

12. To view the visual representation of the selected record, select **Open Map** button.

**Note:** Install CMDB Workspace 3.5.0 or greater version to get this button in your instance. To learn more, see [CMDB Workspace](#).

13. **Optional:** Select the more options icon () and then select **Add Packs** to capture the attributes for a configuration item (CI) record. To learn more, see [Using an attribute pack for a CI record](#).

14. **Optional:** Select the more options icon () and then select **Decommission** to decommission a CI record. To learn more, see [Decommission an inventory record](#).

15. To view the associated network inventories, select the brick icon ()

The Infrastructure Relationships section shows all the associated network inventories grouped by the individual network asset instances.

## What to do next

- If you want to establish relationships with the other network assets, enter the details in the related tabs. To learn more, see [Related tabs in the Network inventory forms](#).
- To delete an inventory record, see [Delete a record](#).

## Define the network interface details

Review, update, or create a network instance for a network interface that controls the signaling and management functions between your networks. You define these attributes so that you can track and manage your network instances in the Telecommunications Network Inventory application.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

Network interfaces are used for the interconnection of signaling, or for the Internet Protocol (IP) or ATM networks. When you create a network interface record, it creates a corresponding configuration item (CI) record in the Network Interface [cmdb\_ci\_interface] table. To learn more, see [Data model for Telecommunications Network Inventory](#).

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. From the list icon () go to **Inventory > Network Interfaces**.
3. Select **New**.
4. On the **Details** tab, in the Network Interface section, fill in the general information for the network interface.

The fields in the following table are unique to the Network Interface form.

To learn about the remaining identification fields that are common to most of the Inventory and Inventory number allocation menu forms, see [Commonly used network asset instance identification fields](#).

### Network Interface form

Field	Description
Name	Name of the network interface. The ServiceNow AI Platform uses this name to identify it in your network inventory.

5. On the **Details** tab, in the Configuration section, fill in the configuration information for the network interface.
- The following table lists the fields that are unique to the Configuration section.

To learn about the remaining configuration fields that are common to most of the Inventory menu forms, see [Commonly used network asset instance configuration fields](#).

### Network Interface form - Configuration

Field	Description
Equipment	Device that provides the technical functionality to a network.

Field	Description
Management option	Attribute that indicates who or what is responsible for managing this endpoint.
Connector type	Type of physical cable connector that is used for the connection of the cable to the network interface. Select one of the following options: <ul style="list-style-type: none"> <li>○ BNC (Bayonet Neill-Concelman) - Type of miniature radio frequency connector used for coaxial cables.</li> <li>○ SC (Square Connector)- Square, common type of Fiber optic connector used as push-pull latch, to align the optical fibers for efficient light transmission.</li> <li>○ LC (Lucent Connector)- Another version of the SC connector designed for high-density applications.</li> <li>○ ST (Straight Trip)- a type of fiber optic connector commonly used for connecting optical fibers in telecommunications and data communication applications.</li> <li>○ Wire Wrap -A technique for creating electrical connections on circuit boards.</li> <li>○ RJ45 - Also known as 8P8C (8 Position 8 Contact) connector, is widely used type of connector for wired Ethernet networks.</li> </ul>
Port Type	Types of port on the network interface. Select one of the following options: <ul style="list-style-type: none"> <li>○ Ethernet- Physical connection and speed capabilities of a device for connecting to a network. It involves cable type, speed, and standard.</li> <li>○ Optical- specific design of a connector used in an optical transceiver. There are various types of optical interfaces, each with different shapes and data speed capabilities.</li> <li>○ Serial- A serial interface transmits data one bit at a time, in contrast to a parallel interface that sends multiple bits simultaneously.</li> </ul>
Directionality	Type of the connections between the nodes of a network. Select one of the following options: <ul style="list-style-type: none"> <li>○ Tx- TX stands for Transmit. It refers to the direction in which data is being sent from a device.</li> <li>○ Rx- RX signifies the endpoint that receives data. It's the input side for receiving information transmitted from another source, often labeled as TX (Transmit).</li> <li>○ Tx/Rx</li> <li>○ Bus- Bus directionality refers to the flow of data on a communication channel.</li> <li>○ Broadcast- Broadcast directionality refers to the nature of signal transmission and reception in a broadcast system.</li> </ul>
Port Bandwidth	Measured bandwidth for the ports on this network interface. Select the search icon ( 🔍 ) and select a bandwidth.

Field	Description
Endpoint role	Endpoint role that is associated with the service endpoint for this network asset. An endpoint role is the function that is served by the endpoint of the service that you're providing. Select one of the following options: <ul style="list-style-type: none"> <li>○ <b>ROOT</b> or <b>LEAF</b> endpoint role, as defined by the Metro Ethernet Forum (MEF).</li> <li>○ <b>--None--</b> for no assigned endpoint role.</li> </ul>
Virtual	Option to verify whether the network interface is physical or virtual. <p><b>i Note:</b> If you select <b>Virtual</b>, then the <b>Connector Type</b> field doesn't appear.</p>
Cabled	Option to verify if the interface is pre-cabled or not.
Wavelength	Optical wavelength of a port.

- To create the Telecommunications Network Inventory attributes for the Network Interface form, click **Set Inventory Attributes**.  
When you click the **Set Inventory Attributes** button, it creates the TNI CI Attributes record in the CI table as well as the Telecommunications Network Inventory CI Attributes tables and makes a relationship with the CI record.

**i Note:**


If you click **Save** without clicking **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record. In the network inventory workspace, the **Set Inventory Attributes** is visible only for the Telecommunications Network Inventory roles.


- On the TNI CI Attributes form, fill in the fields.

To learn more about the Telecommunications Network Inventory attribute fields, see [TNI CI Attributes form](#).

- Click **Save**.

The Telecommunications Network Inventory attribute fields are displayed on the Network Interface form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.



- To add the attachments, such as graphics or documents, click the attachment icon () in the right panel.

- Optional:** To view the Dependency views map, select the more options icon () and then select **Dependency View**.

(Optional) The Dependency Views map graphically displays the CIs that support the specific network asset and the relationships between the CIs.

- Optional:** Select the more options icon () and then select **Add Packs** to capture the attributes for a configuration item (CI) record.

To learn more, see [Using an attribute pack for a CI record](#).

- 12. Optional:** Select the more options icon () and then select **Decommission** to decommission a CI record.  
To learn more, see [Decommission an inventory record](#).
- 13.** Click **Save**.  
The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).
- 14.** To view the associated network inventories, click the brick icon ()

The Infrastructure Relationships section shows all the associated network inventories grouped by the individual network instances.

## What to do next

- If you want to establish relationships with the other network assets, enter the details in the related tabs. To learn more, see [Related tabs in the Network inventory forms](#).
- To delete an inventory record, see [Delete a record](#).

## Related topics

[Modeling your Telecommunications Network Inventory workflow](#)

### Define the cable details

Review, update, or create a network asset instance for the cable connecting the various sites within your network. You define these attributes so that you can track and manage your network assets in the Telecommunications Network Inventory application.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

Optical fiber cables are installed between sites with open endpoints, indicating that the cables don't terminate directly on equipment. The cables are pulled through utility holes and spliced together to extend the connection between sites, depending on the distance requirements. When you create a cable record, it creates a corresponding configuration item (CI) record in the Fiber Optical Cable [cmdb\_ci\_fiber\_optical\_cable] table. To learn more, see [Data model for Telecommunications Network Inventory](#).

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () and then go to **Inventory > Cables**.
3. Select **New** and then select the **Optical Fiber Cable** from the list.
4. On the **Details** tab, fill in the fields.  
To learn more about the fields in the Cable form, see [Cable form](#).
5. To create the Telecommunications Network Inventory attributes for the Cable form, select **Set Inventory Attributes**.  
When you select the **Set Inventory Attributes** button, it creates the TNI CI Attributes record in the CI table as well as the Telecommunications Network Inventory CI Attributes tables and makes a relationship with the CI record.

**Note:**


If you select **Save** without selecting **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record. In the network inventory workspace, the **Set Inventory Attributes** is visible only for the Telecommunications Network Inventory roles.

**6.** On the TNI CI Attributes form, fill in the fields.


To learn more about the Telecommunications Network Inventory attribute fields, see [TNI CI Attributes form](#).

**7.** Select **Save**.

The Telecommunications Network Inventory attribute fields are displayed on the Cable form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.

**8.** To add the attachments, such as graphics or documents, select the attachment icon () in the right panel.**9.** Select **Save**.

The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).

**10.** To view the visual representation of the selected record, select the more options icon () and then select **Open Map**.

**Note:** Install CMDB Workspace 3.5.0 or greater version to get this button in your instance. To learn more, see [CMDB Workspace](#).

**11. Optional:** Capture the attributes for a configuration item (CI) record by selecting **Add Packs**. To learn more, see [Using an attribute pack for a CI record](#).**12.** To view the associated network inventories, select the brick icon ()

The Infrastructure Relationships section shows all the associated network inventories grouped by the individual network asset instances.

**Related topics**

[Modeling your Telecommunications Network Inventory workflow](#)

**Define the strand details**

Review, update, or create a network asset instance for a strand in the cable. You define these attributes so that you can track and manage your network assets in the Telecommunications Network Inventory application.


**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

**About this task**

A strand refers to an individual conductor or wire within the cable. Cables are composed of multiple strands twisted or grouped. When you create a strand record, it creates a corresponding configuration item (CI) record in the Fiber Strand [cmdb\_ci\_fiber\_strand] table. To learn more, see [Data model for Telecommunications Network Inventory](#).

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () and then go to **Inventory > Strands**.
3. Select **New** and then select the **Optical Fiber Strand** from the list.
4. On the **Details** tab, fill in the fields.  
To learn more about the fields, see [Strand form](#).
5. Create the Telecommunications Network Inventory attributes for the Strand form by selecting **Set Inventory Attributes**.  
When you select the **Set Inventory Attributes** button, it creates the TNI CI Attributes record in the CI table as well as the Telecommunications Network Inventory CI Attributes tables and makes a relationship with the CI record.

### **Note:**


If you select **Save** without selecting **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record. In the network inventory workspace, the **Set Inventory Attributes** is visible only for the Telecommunications Network Inventory roles.

6. On the TNI CI Attributes form, fill in the fields.

To learn more about the Telecommunications Network Inventory attribute fields, see [TNI CI Attributes form](#).

7. Select **Save**.



The Telecommunications Network Inventory attribute fields are displayed on the Strand form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.

8. Add the attachments, such as graphics or documents, by selecting the attachment icon () in the right panel.

9. Select **Save**.

The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).

10. View the visual representation of the selected record by selecting the **Open Map** button.

 **Note:** Install CMDB Workspace 3.5.0 or greater version to get this button in your instance. To learn more, see [CMDB Workspace](#) .

11. **Optional:** Capture the attributes for a configuration item (CI) record by selecting **Add Packs**.  
To learn more, see [Using an attribute pack for a CI record](#).

12. View the associated network inventories by selecting the brick icon ()

The Infrastructure Relationships section shows all the associated network inventories grouped by the individual network asset instances.

## Related topics

[Modeling your Telecommunications Network Inventory workflow](#)

## Define the physical connection details

Review update, or create a network asset instance for the physical port connection on the interface cards in your networks. You define these attributes so that you can track and manage your network assets in the Telecommunications Network Inventory application.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

The physical connection data includes the link types, bandwidths, ports, sites, and topologies. When you create a physical connection record, it creates a corresponding configuration item (CI) record in the Physical Connection [cmdb\_ci\_ni\_physical\_link] table. To learn more, see [Data model for Telecommunications Network Inventory](#).

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory > Physical Connections**.
3. Select **New**.
4. On the **Details** tab, in the Physical connection section, fill in the general information for the physical connection.  
To learn more about the fields that are unique to the Physical Connection form, see [Physical Connection form](#).

To learn about the remaining identification fields that are common to most of the Inventory and Inventory number allocation menu forms, see [Commonly used network asset instance identification fields](#).

If you selected **Optical Fiber Cable** in the **Product Model** field, the Cable parameters form appears so that you can enter some information about the cable parameters. To learn more about the fields, see [Cable Parameters form](#).

5. On the **Details** tab, in the Configuration section, fill in the configuration information for the physical connection.  
To learn more about the fields that are unique to the Configuration section, see [Physical Connection form - Configuration](#).

To learn about the remaining configuration fields that are common to most of the Inventory menu forms, see [Commonly used network asset instance configuration fields](#).

6. To create the Telecommunications Network Inventory attributes for the Physical Connection form, select **Set Inventory Attributes**.  
When you select the **Set Inventory Attributes** button, it creates the TNI CI Attributes record in the CI table as well as the Telecommunications Network Inventory CI Attributes tables and makes a relationship with the CI record.

### Note:

If you select **Save** without selecting **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record. In the network inventory workspace, the **Set Inventory Attributes** is visible only for the Telecommunications Network Inventory roles.

7. On the TNI CI Attributes form, fill in the fields.

To learn more about the Telecommunications Network Inventory attribute fields, see [TNI CI Attributes form](#).

#### 8. Select **Save**.


The Telecommunications Network Inventory attribute fields are displayed on the Physical Connection form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.

#### 9. To add the attachments, such as graphics or documents, select the attachment icon () in the right panel.

#### 10. Select **Save**.

The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).

#### 11. To view the visual representation of the selected record, select the more options icon () and then select **Open Map**.

**Note:** Install CMDB Workspace 3.5.0 or greater version to get this button in your instance. To learn more, see [CMDB Workspace](#) .

#### 12. **Optional:** Select the more options icon () and then select **Add Packs** to capture the attributes for a configuration item (CI) record. To learn more, see [Using an attribute pack for a CI record](#).

#### 13. **Optional:** Select the more options icon () and then select **Decommission** to decommission a CI record. To learn more, see [Decommission an inventory record](#).

#### 14. To view the associated network inventories, select the brick icon (.

The Infrastructure Relationships section shows all the associated network inventories grouped by the individual network asset instances.

### What to do next

- If you want to establish relationships with the other network assets, enter the details in the related tabs. To learn more, see [Related tabs in the Network inventory forms](#).
- To delete an inventory record, see [Delete a record](#).

### Related topics

[Modeling your Telecommunications Network Inventory workflow](#)

### Define the logical connection details

Review, update, or create a network asset instance for a logical or virtual port connection on your network interface cards. You define these attributes so that you can track and manage your network assets in the Telecommunications Network Inventory application.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

A logical connection typically represents the multiple physical connections on an interface card. The logical connection data includes the link types, bandwidths, port, and site.

When you create a logical connection record, it creates a corresponding configuration item (CI) record in the Logical Connection [cmdb\_ci\_ni\_logical\_path] table. To learn more, see [Data model for Telecommunications Network Inventory](#).

The **Overview** tab in the logical connection record displays a consolidated detail of the logical connection, its connection elements, and A and Z ends. You can customize the connection elements table by creating a custom implementation for the extension point `sn_ni_adv.TNIConnectionOverview`. Also, you can decide the number of rows in this table by setting the system property `sn_ni_adv.clr_max_rows`. The default value for this property is 500.

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.

2. Select the list icon () , and then select **Inventory > Logical Connections**.

**Note:** You can also access the logical connection list by selecting the **Logical connection** count in the Network entities. Logical connection count is under the categories widget of the Network Inventory Workspace landing page. To learn more, see [Reviewing and updating your network inventory with the Network Inventory Workspace](#).

3. Select **New**.

4. On the **Details** tab, in the Logical Connection section, fill in the general information for the logical connection.

To learn more about the fields that are unique to the Logical Connection form, see [Logical Connection form](#).

To learn about the remaining identification fields that are common to most of the Inventory and Inventory number allocation menu forms, see [Commonly used network asset instance identification fields](#).

5. On the **Details** tab, in the Configuration section, fill in the configuration information for the logical connection.

To learn more about the fields that are unique to the Configuration section, see [Logical Connection form - Configuration](#).

To learn about the remaining configuration fields that are common to most of the Inventory menu forms, see [Commonly used network asset instance configuration fields](#).

6. To create the Telecommunications Network Inventory attributes for the Logical Connection form, select **Set Inventory Attributes**.

When you select the **Set Inventory Attributes** button, it creates the TNI CI Attributes record in the CI table as well as the Telecommunications Network Inventory CI Attributes tables and makes a relationship with the CI record.

**Note:**


If you select **Save** without selecting **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record. In the network inventory workspace, the **Set Inventory Attributes** is visible only for the Telecommunications Network Inventory roles.

7. On the TNI CI Attributes form, fill in the fields.

To learn more about the Telecommunications Network Inventory attribute fields, see [TNI CI Attributes form](#).


**8. Select Save.**


The Telecommunications Network Inventory attribute fields are displayed on the Logical Connection form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.


**9.** To add the attachments, such as graphics or documents, select the attachment icon () in the right panel.


**10. Select Save.**

The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).

**11.** To view the visual representation of the selected record, select the more options icon () and then select **Open Map**.

**i Note:** Install CMDB Workspace 3.5.0 or greater version to get this button in your instance. To learn more, see [CMDB Workspace](#) .

**12. Optional:** Select the more options icon () and then select **Add Packs** to capture the attributes for a configuration item (CI) record. To learn more, see [Using an attribute pack for a CI record](#).

**13. Optional:** Select the more options icon () and then select **Decommission** to decommission a CI record. To learn more, see [Decommission an inventory record](#).

**14.** To view the associated network inventories, select the brick icon ()

The Infrastructure Relationships section shows all the associated network inventories grouped by the individual network asset instances.

**What to do next**

- If you want to establish relationships with the other network assets, enter the details in the related tabs. To learn more, see [Related tabs in the Network inventory forms](#).
- To delete an inventory record, see [Delete a record](#).

**Related topics**

[Modeling your Telecommunications Network Inventory workflow](#)

**Define the power circuit details**

Define the power circuit record to represent the electrical pathway that delivers power in a datacenter. By defining the power circuit records, you can track and manage your network assets in the Telecommunications Network Inventory application.


**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

**About this task**

When you create a power circuit connection record, it creates a corresponding configuration item (CI) record in the circuit [cmdb\_ci\_circuit] table. To learn more, see [Data model for Telecommunications Network Inventory](#).

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () and then select **Inventory > Power Circuits**.
3. Select **New**.
4. On the **Details** tab, in the Circuit section, fill in the fields.  
To learn more about the fields, see [Power circuit form](#).
5. On the **Details** tab, in the Configuration section, fill in the configuration information for the power circuit.  
To learn about the configuration fields, see [Commonly used network asset instance configuration fields](#).
6. To create the Telecommunications Network Inventory attributes for the Power Circuit form, select **Set Inventory Attributes**.  
When you select the **Set Inventory Attributes** button, it creates the TNI CI Attributes record in the CI table as well as the Telecommunications Network Inventory CI Attributes tables and makes a relationship with the CI record.



### Note:

If you select **Save** without selecting **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record. In the network inventory workspace, the **Set Inventory Attributes** is visible only for the Telecommunications Network Inventory roles.

7. On the TNI CI Attributes form, fill in the fields.  
  
To learn more about the Telecommunications Network Inventory attribute fields, see [TNI CI Attributes form](#).

8. Select **Save**.

The Telecommunications Network Inventory attribute fields are displayed on the Power Circuit form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.

9. To add the attachments, such as graphics or documents, select the attachment icon ()
10. Select **Save**.  
The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).
11. To view the associated network inventories, select the brick icon ()

The Infrastructure Relationships section shows all the associated network inventories grouped by the individual network asset instances.

## What to do next

If you want to establish relationships with the other network assets, enter the details in the related tabs. To learn more, see [Related tabs in the Network inventory forms](#).

## Related topics

[Data model for Telecommunications Network Inventory](#)

## Manually create a network topology

Create a topology record for the network that you want to visualize in the organization of its network elements. By creating the network topology, you can visualize how the network elements are organized and connected to one another in the Telecommunications Network Inventory application.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

When you create a network topology record, it creates a corresponding configuration item (CI) record in the Network Topology [cmdb\_ci\_network\_topology] table. And the root nodes are stored in the Topology Root Node [cmdb\_network\_topology\_root\_node] table. To learn more about the topology data model, see [Data model for Telecommunications Network Inventory](#).

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. From the list icon () , go to **Inventory > Network Topology**.
3. Select **New**.
4. On the **Details** tab, fill in the form.  
To learn about the fields in the Network Topology form, see [Network topology form](#).
5. On the **Network Topology Root Nodes** tab, select **New** and fill in the fields to add the root node.

#### Network Topology Root Nodes form

Field	Description
Root Node	Root node for the topology.
Network Topology	Network Topology that you have created.

6. Select **Save**.
7. On the **Details** tab, select **Submit**.

### What to do next

You can view the topology in the Network Viewer window. To learn more, see [Viewing a network topology](#).

### Related topics

[Visualization of network topology](#)

### Define your inventory groups

An inventory group is a collection of CIs that lets you apply CI actions collectively to all the CIs in Telecommunications Network Inventory application. By defining inventory groups, you can group different CIs, and apply actions to all CIs.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent


- Note:** An inventory agent and inventory admin only can review, create, and update an inventory group. Also, only an inventory admin can delete a group.

**About this task**

An inventory group represents a group of configuration items(CIs). In a group, you can add any CI but you cannot be duplicate a CI.


When you create an inventory group, it creates a group in the inventory group[cmdb\_group] table. To learn more, see [Data model for Telecommunications Network Inventory](#).

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Click the list icon () , and then click **Inventory > Inventory Groups**
3. Click **New**.
4. On the **Details** tab, in the CMDB Group section, fill the form.

**CMDB Group**

Field	Description
Group Name	Name of the inventory group
Group type	Select one of the following group type <ul style="list-style-type: none"> <li>○ CMDB Workspace</li> <li>○ Default</li> <li>○ Health</li> <li>○ Network Inventory Group</li> </ul>
Description	Describe your inventory group
Category	Select one of the following category <ul style="list-style-type: none"> <li>○ Segment</li> <li>○ Section</li> <li>○ Route</li> <li>○ Others</li> </ul>

5. To add the attachments, such as graphics or documents, click the attachment icon () in the right panel.
6. Click **Save**.  
The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).

**Note:** To see the last modified or updated information, see the list view of the Inventory Groups.

**What to do next**

If you want to establish relationships with the other network assets, enter the details in the related tabs. To learn more, see [Related tabs in the Network inventory forms](#).

**Decommission an inventory record**

Decommission an inventory record that you want to remove from Telecommunications Network Inventory.



**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, and sn\_ni\_core.inventory\_template\_manager

**About this task**

When you decommission a CI record, all the related tables of the CI are removed and the **Life Cycle Stage**, **Life Cycle Stage Status** of this CI changes.

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory**.
3. Open the inventory list and select an inventory CI record that you want to decommission.
4. Select the more options icon () and then select **Decommission**.  
All the related tables are removed. Also, the **Life Cycle Stage** field is set to **End of Life** and the **Life Cycle Stage Status** field is set to **Retired** if the **Asset** is not used by the CI. Otherwise, the **Life Cycle Stage** field is set to **Inventory** and the **Life Cycle Stage Status** field is set to **Available**.

 **Note:** Decommission fails if the selected CI has any child CIs as follows.

Inventory name	Relationship that fails decommission
Network site	Site, equipment, or equipment holder
Interface card	Interface used by any physical or logical connection
Network interface	Interface linked with physical or logical connection
Physical/Logical connection	Any connection that is used by another connection as a connection element.
Equipment holder	Rack linked with an equipment or shelf, a shelf linked to an equipment, slot, or subslot linked to a card.
Equipment	Physical or logical interface linked to a connection or to a physical interface that has a logical connection.

**Delete a record**

Delete an inventory record that is no longer relevant or needed in the Telecommunications Network Inventory application.



**Before you begin**

Role required: admin

**About this task**

When you delete a configuration item (CI) record, the child elements associated with the CI won't be deleted. You must manually delete them.

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Click the list icon ()
3. Select a category from the displayed list.
4. Select the CI record that you want to delete.
5. Click the more options icon () and then select **Delete**.
6. Select **Yes** to confirm the deletion

## Result

The CI record is deleted and no longer available in the Telecommunications Network Inventory application.

## Inventory number allocation

The inventory number allocation in the Telecommunications Network Inventory application enables you to manage LAG, VLAN, IP addresses, and telephone numbers. You can review, create, update, or delete the different LAG, VLAN, IP address, and telephone number records.

To learn more, see [Create IP address allocation](#) and [Create a telephone infrastructure](#).

## Define your inventory numbering

Define the numbering for your virtual local area network (VLAN) or link aggregation group (LAG) connections in the Telecommunications Network Inventory application. By defining these inventory numbers, you can configure your network assets to activate a network connection.



## Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent, sn\_ni\_core.inventory\_template\_manager, sn\_ni\_core.telco\_inventory\_catalog\_manager

## About this task

The numbering that you define in this process creates VLAN and LAG number ranges, allowing for the assignment of numbers from those ranges to network connections and equipment ports. When you provision a network connection over an Ethernet network interface to fulfill a customer order, you create a VLAN interface to support your network topology. You must assign a VLAN number from 1 through 4096 for this interface. You use this VLAN number to create an interface name so that you can activate the interface on the network.

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Number Allocation > Inventory Numbers**.
3. Select **New**.
4. On the **Details** tab, fill in the general information for inventory numbering.  
To learn more about the fields that are unique to the Inventory Numbers form, see [Inventory Numbers form](#).
5. To add the attachments, such as graphics or documents, select the attachment icon () in the right panel.
6. Select **Save**.  
The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).

## What to do next

To update or delete an inventory number record, see [Update or delete a record of an inventory number allocation](#).

## Create IP address allocation

Create IP address allocation by creating, reviewing, updating, and deleting an IP pool, IP network subnet, allocated IP address, and IP address records. You can manage all your IP addresses by using the Telecommunications Network Inventory application.

## Create an IP pool record

Create an IP pool record so that you can organize and categorize all your sequential IP addresses within a network. You can create an IP pool record by using the Telecommunications Network Inventory application.


## Before you begin

- Get access to the IP subnetwork by ensuring that you've installed all advanced plugins.
- Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

## About this task

You can review, create, or delete an IP pool in your network.

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Number Allocation > IP Pools**.
3. Select **New**
4. On the **Details** tab, in the IP address section, fill in the fields.

### IP Network Subnet form

Field	Description
Name	User-friendly name for this IP pool.

To learn about the other fields, see [Inventory number allocation fields](#).



5. Create the Telecommunications Network Inventory attributes for this IP pool form by selecting the **Set Inventory Attributes** button.  
When you select the **Set Inventory Attributes** button, it creates the TNI CI Attributes record in the CI table and in the Telecommunications Network Inventory CI Attributes tables and makes a relationship with the CI record.

### Note:

- If you select **Save** without selecting **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record. In the network inventory workspace, the **Set Inventory Attributes** is visible only for the Telecommunications Network Inventory roles.
- In the TNI CI attributes form, by default, the name is fetched from the **Name** field and the **Inventory Category** is set as **IP Address**.

6. Add packs to this service by selecting **Add Packs**.

To learn more about the packs, see [Attribute packs](#).

7. Add the attachments, such as the graphics or documents, by selecting the attachment icon () in the right panel.
8. Select **Save**.  
The related tabs appear on the form. To learn more, see [Related tabs in the Network inventory forms](#).
9. View the hierarchy or flow chart of the created IP pool by selecting the **Dependency View** button.
10. View the related network inventories by selecting the brick icon ()

The Infrastructure Relationships section shows all the related network inventories that are grouped by the individual network instance.

### What to do next

You can review and update the fields, create a related tab record, or delete a record. To learn more, see [Update or delete a record of an inventory number allocation](#).

### Create an IP network subnet record

Define an IP network subnet so that you can categorize and manage all the child IP network subnets in your network by using the Telecommunications Network Inventory application. You can also review, create, or delete an IP subnetwork.


### Before you begin

- Get access to the IP subnetwork by ensuring that you've installed all advanced plugins.
- Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

When you create a IP network subnet record, it creates a corresponding configuration item (CI) record in the IP Network Subnet [cmdb\_ci\_ip\_network\_subnet] table.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory > IP Network Subnets**.
3. Select **New**
4. On the **Details** tab, in the IP Network Subnet section, fill in the fields.

#### IP Network Subnet form

Field	Description
Name	User-friendly name for this IP network subnet.

To learn about the other fields, see [Inventory number allocation fields](#).

5. Create the Telecommunications Network Inventory attributes for this IP network subnet form by selecting **Set Inventory Attributes**.  
When you select the **Set Inventory Attributes** button, it creates the TNI CI Attributes record in the CI table and in the Telecommunications Network Inventory CI Attributes tables and makes a relationship with the CI record.


**Note:**

- If you select **Save** without selecting **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record. In the network inventory workspace, the **Set Inventory Attributes** is visible only for the Telecommunications Network Inventory roles.
- In the TNI CI attributes form, by default, the name is fetched from the **Name** field and the **Inventory Category** is set as **IP Address**.

**6. Add packs to this service by selecting **Add Packs**.**

To learn more about the packs, see [Attribute packs](#).

**7. Add the attachments, such as the graphics or documents, by selecting the attachment icon**

() in the right panel.

**8. Select **Save**.****9. View the hierarchy or flow chart of the created IP pool by selecting the **Dependency View** button.****10. View the associated network inventories by selecting the brick icon ()**.

The Infrastructure Relationships section shows all the associated network inventories that are grouped by the individual network instances.

**What to do next**

You can review and update the fields, create a related tab record, or delete a record. To learn more, see [Update or delete a record of an inventory number allocation](#).

**Create an allocated IP address record**

Define and categorize all IP addresses that are ready for allocation by using the Telecommunications Network Inventory application. You can review, create, update, or delete an allocated IP address in your network.


**Before you begin**

- Get access to an IP subnetwork by ensuring that you install all advanced plugins.
- Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

**About this task**

To understand how the IP pools, IP subnetworks, and allocated IP addresses are related to each other, see [IP address inventory management data model](#).

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory > Allocated IP Addresses**.
3. Select **New**.
4. On the **Details** tab, in the IP address section, fill in the fields.

### Allocated IP Address form

Field	Description
Name	User-friendly name for this IP address.
IP Address	IPv4 or IPv6 IP address.
Is Broadcast	Value that you set to true if this IP address is a broadcast type IP address.
Is DHCP	Value that you set to true to override the Grid Level DHCP option with this option at the network level.
Is DNS	Value that you set to true if a Domain Name System (DNS) name is provided for this IP address.

5. Create the Telecommunications Network Inventory attributes for this IP pool form by selecting the **Set Inventory Attributes** button.


When you select the **Set Inventory Attributes** button, it creates the TNI CI Attributes record in the CI table and the Telecommunications Network Inventory CI Attributes tables and makes a relationship with the CI record.

**Note:**

- If you select **Save** without selecting the **Set Inventory Attributes** button, it creates a CI record but not a Telecommunications Network Inventory CI record. In the network inventory workspace, the **Set Inventory Attributes** is visible only for the Telecommunications Network Inventory roles.
- In the TNI CI attributes form, by default, the name is fetched from the **Name** field and the **Inventory Category** is set as **IP Address**.

6. Add packs to this service by selecting **Add Packs**.

To learn more about the packs, see [Attribute packs](#).

7. Add the attachments, such as the graphics or documents, by selecting the attachment icon () in the right panel.

8. Select **Save**.

9. View the hierarchy or flow chart of the created IP pool by selecting the **Dependency View** button.

10. View the associated network inventories by selecting the brick icon ()

The Infrastructure Relationships section shows all the associated network inventories that are grouped by the individual network instances.

### What to do next

You can review and update the fields, create a related tab record, or delete a record. To learn more, see [Update or delete a record of an inventory number allocation](#).

### Create IP addresses

Define the attributes for IP addresses so that you can track and manage them in the Telecommunications Network Inventory application. You can also review, update, or create IP addresses.


**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent, sn\_ni\_core.inventory\_template\_manager, sn\_ni\_core.telco\_inventory\_catalog\_manager

**About this task**

**Note:** An inventory agent can create, review, update, and delete an IP address.

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory > IP Addresses**.
3. Select **New**
4. On the **Details** tab, in the IP address section, fill in the general information.

**IP Address form**

Field	Description
IP Address	Name of this network function that you use in the ServiceNow AI Platform to identify it in your network inventory.
IP Version	Name of the database. Select one from the following: <ul style="list-style-type: none"> <li>○ IPv4 - Fourth version of the Internet Protocol,</li> <li>○ IPv6 - Sixth version of the Internet Protocol</li> </ul>
Netmask	Unique ID of the network instance.
Owned by Configuration item	Type of network function, Virtual Network Function (VNF), or Cloud Native Function (CNF).


5. To create the Telecommunications Network Inventory attributes for this IP pool form, select the **Set Inventory Attributes** button.

When you select the **Set Inventory Attributes** button, it creates the TNI CI Attributes record in the CI table as well as the Telecommunications Network Inventory CI Attributes tables and makes a relationship with the CI record.

**Note:**

- If you select **Save** without selecting **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record. In the network inventory workspace, the **Set Inventory Attributes** is visible only for the Telecommunications Network Inventory roles.
- In the TNI CI attributes form, by default, the name is fetched from the **Name** field and the **Inventory Category** is set as **IP Address**.

6. Select **Add Packs** to add packs to this service.  
To learn more about packs, see [Attribute packs](#).

7. To add the attachments, such as graphics or documents, select the attachment icon () in the right panel.

**8. Select Save.**

The related tabs appear on the form. You can view or modify the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms.](#)

**9. To view the associated network inventories, select the brick icon (.**

The Infrastructure Relationships section shows all the associated network inventories that are grouped by the individual network instances.

**What to do next**

You can review, or update the fields, create a related tab record, or can delete a record. To learn more, see [Update or delete a record of an inventory number allocation.](#)

**Create a telephone infrastructure**

Create telephone blocks and number allocations, and assign telephone numbers by using the telephone infrastructure provided by the Telecommunications Network Inventory application.

**Create a telephone block**

Create a telephone block to organize and categorize all sequential telephone numbers that are within an area by using the Telecommunications Network Inventory application.

**Before you begin**

- Ensure that the Telecommunications Network Inventory application includes all the required components of your telephone number. To learn more, see [Create the components of a telephone number.](#)
- Role required: sn\_inv\_num\_mgmt.inventory\_number\_manager

**About this task**

You can create multiple telephone number allocations and telephone numbers for one telephone block. Also, you can also review, create, update, or delete a telephone block.

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace.**
2. Select the list icon () , and then go to **Inventory Number Allocation > Telephone Blocks.**
3. Select **New.**

**Note:** You can create and allocate telephone numbers without using a block for the port-in numbers or for the numbers that don't want a block.


**4. On the form, fill in the fields.**

**Telephone Number Block**

Fields	Description
Create telephone allocation and numbers	By default, the field is set as true. The result is that the individual telephone numbers and telephone number allocations are created using the provided from and to number. When you clear this check box, only a telephone block is created.

Fields	Description
	<p><b>Note:</b></p> <ul style="list-style-type: none"> <li>a. The created number of allocations and the telephone numbers are shown as available to allocate.</li> <li>b. By default, the status of the created numbers is set as new.</li> </ul>
From number	Starting number of the series from where you want to start adding numbers to this block.
To number	<p>Last number of the series where you want to stop adding numbers to this block.</p> <p><b>Note:</b> The same or overlapping series of numbers aren't enabled to include in a block. For example, if a block 100–200 exists, then the new block of 150-200 or 100–200 can't be enabled.</p>

To learn about the other fields, see [Inventory number allocation fields](#).

5. Add the attachments, such as the graphics or documents, by selecting the attachment icon () in the right panel.
6. Select **Submit**.  
Depending on the details that you provided, a telephone block is created.
7. On the **Details** tab, under telephone block form, fill in the additional fields.

### Telephone number block form

Field	Description
Quantity	<p>Number of telephone numbers that are in the selected telephone number blocks.</p> <p><b>Note:</b> This field is auto-populated after creating a telephone block. However, you can always update this field as required.</p>
Available quantity	<p>Number of telephone numbers that aren't assigned or available.</p> <p><b>Note:</b> This field is auto-populated after creating a telephone block. However, you can always update this field as required.</p>

To learn about the remaining identification fields that are common to most of the Inventory and Inventory number allocation menu forms, see [Commonly used network asset instance identification fields](#).

8. Select **Save**.

9. On the related tabs, view or update the related tab information.

To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).

10. View the related network inventories by selecting the brick icon ()

The Infrastructure Relationships section shows all the related network inventories that are grouped by the network instances.

**What to do next**

You can review and update the fields, create a related tab record, or delete a record. To learn more, see [Update or delete a record of an inventory number allocation](#).

**Create a telephone number allocation**

Create a telephone number allocation so that you can group a set of telephone numbers and apply the required conditions to it by using the Telecommunications Network Inventory application. You can also review, create, update, or delete a telephone number allocation.

**Before you begin**


- Ensure that the Telecommunications Network Inventory application includes all the required components of your telephone number. Otherwise, see [Create the components of a telephone number](#).
- Role required: sn\_inv\_num\_mgmt.inventory\_number\_manager

**About this task**


Setting the Create telephone allocations and numbers checkbox as true, while creating a telephone block, creates individual numbers and telephone allocation. You can assign multiple telephone numbers to a telephone allocation. When you assign a single telephone number allocation to a telephone number block, you can assign a series of numbers to that block.

On completing this task, assigning a single telephone number allocation to a telephone number block results in assigning a series of numbers to that block.

**Procedure**


1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Number Allocation > Telephone Number**.
3. Select **New**.
4. On the **Details** tab, on the IP address section form, fill in the fields.

**Telephone Number Allocation form**

Fields	Description
Name	Name for this allocation.
Telephone number block	Telephone number block that you want to add the numbers to.   <b>Note:</b> For the port-in numbers or the numbers that you don't want to assign a block to, you can create the telephone numbers and telephone allocation without referring to a block.

Fields	Description
Availability	Availability of this block. If this block is available, set the availability as true. Also, you can specify how many numbers are under the unassigned status and are available.
Start number	Starting phone number of the series from where you can assign this block to.
End number	Ending phone number of the series that you can assign to this block to.

To learn about the other fields, see [Inventory number allocation fields](#).

5. Add the attachments, such as the graphics or documents, by selecting the attachment icon () in the right panel.

6. Select **Save**.

The related tabs appear on the form. You can view or change the related tab information. To learn more about the related tabs, see [Related tabs in the Network inventory forms](#).

**Note:** Based on the assigned or allocated telephone numbers, the existing allocation divides into separate allocations. For example, in a series of 1-100, if 1-10 and 90-100 are assigned, then the 1-100 allocation divides into three allocations. The three allocations, 1-10 and 90-100 with availability as No and 11-89 as Yes are created.

### Create a telephone number to an area or region

Create a telephone number to add that number to an area or to a region by using the Telecommunications Network Inventory application. You can review, create, update, or delete a telephone number.


#### Before you begin

- Ensure that the Telecommunications Network Inventory application includes all the required components of your telephone number. Otherwise, see [Create the components of a telephone number](#).
- Role required: sn\_inv\_num\_mgmt.inventory\_number\_manager

#### About this task

Setting the Create telephone allocations and numbers checkbox as true, while creating a telephone block, creates individual numbers and telephone allocation. You can also add a telephone number to a telephone number allocation.


#### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Number Allocation > Telephone Numbers**.
3. Select **New**
4. On the **Details** tab, in the telephone number section, fill in the fields.

### Telephone Number form

Field name	Description
Switch CLLI	A reference to any Configuration Item but is ideally recommended to telco equipment.
Line number	<p>Portion of a telephone number that uniquely identifies an individual telephone line within an area. You can provide a series or individual line numbers in an xxxx-xxxx or xxxx, xxxx-xxxx format.</p> <p><b>Note:</b> If the provided line number isn't in a series of numbers, multiple number allocations are created.</p>

To learn about the other fields, see [Inventory number allocation fields](#).

5. Add the attachments, such as the graphics or documents, by selecting the attachment icon () in the right panel.
6. Select **Save**.  
A telephone number is created with an area code, central office code, status of the number, switch CLLI, line number, and telephone number.

#### What to do next

You can review and update the fields, create a related tab record, or delete a record. To learn more, see [Update or delete a record of an inventory number allocation](#).

#### Create Managed Network

Create a managed network to manage all your networks and IP addresses using the Telecommunications Network Inventory application. You can create, review, update, and delete a network.


#### Before you begin

- Install network discovery plugins. To learn more, see [Network discovery](#).
- Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent, sn\_ni\_core.inventory\_template\_manager, sn\_ni\_core.telco\_inventory\_catalog\_manager.



#### About this task

Managed network enables you to add IP pool and IP network subnet in your network. Also, a network can't have a duplicated IP address.

#### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Number Allocation > Managed Network**.
3. Select **New**.
4. Under the **Details** tab, on the form, fill in the fields.  
To learn more, see [Managed Network form](#).
5. Add packs to this service by selecting **Add Packs**.

To learn more about the packs, see [Attribute packs](#).

6. Add the attachments, such as the graphics or documents, by selecting the attachment icon () in the right panel.
7. Select **Save**.  
CMDB 360 data and packs related tabs appear on the form. To learn more, see [Related tabs in the Network inventory forms](#).
8. View the related network inventories by selecting the brick icon ()

The Infrastructure Relationships section shows all the related network inventories that are grouped by the individual network asset instances.

### What to do next

You can review, or update the fields, create a related tab record, or can delete a record. To learn more, see [Update or delete a record of an inventory number allocation](#).

### Update or delete a record of an inventory number allocation

Review, update, and delete a record of an IP address space element using the Telecommunications Network Inventory application.



### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

This task enables you to update, and delete a record of an item of any inventory number allocation.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory number allocation**.
3. Select any one of the following items of inventory number allocation.
  - Telephone block
  - Telephone allocation
  - Telephone number
  - Inventory numbers
  - IP pool
  - IP network subnet
  - Allocated IP address
  - IP address
  - Managed network
4. Select a record that you want to update from the displayed list of the respective item.  
To delete a record, after selecting a record, follow the following steps.
  - a. Select options () icon.
  - b. Select **Delete**.

**Note:** The warning window shows the list of the topics that are affected due to this deletion.

- c. Select **Delete** to delete the record or select **Cancel** to cancel the deletion.
5. To update the general information, access the **Details** tab.  
Further, to update the related tabs associated with this item, choose the corresponding tab designated for that purpose. Let's say, if **Telephone number allocation** is a related tab for the business application, navigate to that tab to make the necessary updates.
6. Change the value of the field that you wanted to update in the detail tab form.
7. Select any one related tab of the opened item.
8. In the related tabs, you can:
  - View the existing related tab record details.
  - Select the existing record and update the fields.
  - Select **New** to create another record of the related tab.
  - On selecting the **New** in the related tab, a corresponding form in the related tab appears. On the form, fill in the fields and select **Save**.
  - The newly created record is automatically associated with the currently opened item of inventory number allocation.
9. Select **Save**.  
Fields and the records list are updated.

## Managing your network functions

Create application services, business applications, and network interfaces to manage all type of network functions. Here you can create, review, update, and delete application services, and business applications using the Telecommunications Network Inventory application.

To model your 5G network, perform the following:

- Create a network function record. To learn more, see [Define the network function details](#).
- Create network service instances. To learn more, see [Define the network service instance details](#).
- Create a network interface and create relationship with an application service. To learn more, see [Define the network interface details](#).

### Define the network service instance details

Create an application service instance using the Telecommunications Network Inventory application. You can create service instances to model different types of network functions.


#### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent, sn\_ni\_core.telco\_inventory\_catalog\_manager.

#### About this task

When you create a network service instance record, it creates a corresponding configuration item (CI) record in the Network Service Instance [cmdb\_ci\_network\_service\_instance] table.

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then select **Services > Service Instance**.
3. Select **New**.
4. On the Service Instance form, fill in the fields.  
To learn more about fields, see [Service Instance form](#).
5. To create the Telecommunications Network Inventory attributes for the Service Instance form, select **Set Inventory Attributes**.  
When you select the **Set Inventory Attributes** button, it creates a reference in the CI table.

### Note:

If you select **Save** without selecting **Set Inventory Attributes**, it creates a CI record but not a Telecommunications Network Inventory CI record.

6. On the TNI CI Attributes form, fill in the fields.

To learn more about the Telecommunications Network Inventory attribute fields, see [TNI CI Attributes form](#).

7. Select **Save**.

The Telecommunications Network Inventory attribute fields are displayed on the Service Instance form after you save the TNI CI Attributes form. The **Set Inventory Attributes** doesn't appear when you reopen the CI record.

## Define the network function details

Create a network function record in the Telecommunications Network Inventory application. You can manage the network functions such as 5Physical Network Function (PNF), Virtual Network Function (VNF) and so on.



### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent, sn\_ni\_core.telco\_inventory\_catalog\_manager

### About this task

When you create a network function record, it creates a corresponding configuration item (CI) record in the Network Function [cmdb\_ci\_network\_function\_application] table. By default, 19 functions are included and each record is a function.

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then select **Inventory > Network Function**.
3. Select **New**
4. On the form, fill in the fields.  
To see a description of the fields, see [Design domain in the CSDM framework](#) .
5. Select **Submit**.

## Update or delete a service record

Review, update, or delete a service record by using the Telecommunications Network Inventory application.



### Before you begin


Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

This task enables you to review, update, or delete a record of any business, application, technical service, or business application.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory number allocation**.
3. Select one of the following items of the inventory number allocation:
  - Business services
  - Application services
  - Technical services
  - Business applications
4. Select a record that you want to update from the displayed list of the item.  
To delete a record, do the following actions:
  - a. Select the options icon () icon.
  - b. Select **Delete**.

 **Note:** The warning window shows the list of the topics that are affected due to this deletion.

  - c. Select **Delete** to delete the record or select **Cancel** to cancel the deletion.
5. On the **Details** tab, update the general information.  
To update the related tabs that are associated with this item, select the tab that is designated for that purpose. For example, if **CMDB 360 Data** is a related tab for the business application, navigate to that tab to make the updates.
6. Change the value of the field that you want to update in the Detail Tab form.
7. Select any related tab of the opened item.
8. In the related tabs, you can do the following tasks:
  - View the existing related tab record details.
  - Select the existing record and update the fields.
  - Create another record of the related tab by selecting **New**. When selecting the **New** button in the related tab, a form in the related tab appears. On the form, fill in the fields and select **Save**. The new record is automatically associated with the opened item of the inventory number allocation.
9. Select **Save**.  
The fields and the records list are updated.

## Data collection and refresh for the Network Inventory Workspace widgets

Learn how the Telecommunications Network Inventory data that appears on the Network Inventory Workspace landing page is collected and refreshed.

To increase the responsiveness and speed of the Network Inventory Workspace, a scheduled job runs once a day to collect the count data that appears on the landing page. This job collects this data from the Configuration Management Database (CMDB) Groups [cmdb\_group] table.

Each landing page section, or widget, has a Configuration Management Database (CMDB) group that is assigned to it, and it provides the count data that you see. For example, the Network sites overview widget contains the counts for the total number of your sites, and for your sites that are currently in maintenance. The Network entities by category widget contains the counts for each category of network equipment that your organization has, such as the interface cards and connections.

### CMDB Groups table

The CMDB Groups table contains the Component Item (CI) records on which the count totals in each landing page widget are based. When the scheduled job runs on the CMDB Group database, it performs the following actions:

1. Evaluates the query condition that is stated in the CMDB group and then collects the count data. Administrative users with certain assigned roles can define and apply the specific conditions that it uses for these queries to collect the count data for the landing page. To learn more, see [Customizing the content in your Network Inventory Workspace widgets](#).
2. Generates records in the CMDB Group Metadata [sn\_cmdb\_ws\_group\_metadata] table.
3. By using the collected data in the CMDB Group Metadata table, it refreshes each count that appears on the landing page.

### Related topics

[Network Inventory Workspace](#)

## Customizing the content in your Network Inventory Workspace widgets

The Network Inventory Workspace is delivered in the base system with a standard set of information in each landing page widget. You can easily customize this content to include other Telecommunications Network Inventory data.

### Standard CMDB groups and naming conventions for Network Inventory Workspace widget data

The data collection process for the Network Inventory Workspace landing page uses a standard CMDB group structure to retrieve data that appears in its widgets, including:

- Network sites overview
- Network entities by category
- Network equipment by manufacturer
- Network equipment by states

For example, the following shows a listing of some of the CMDB groups that are used for the Network Inventory Workspace data collection:

## Standard CMDB groups for the Network Inventory Workspace

Group Name	Description
Core Available Status Equipment	Created for TNI Workspace
Mobility Pending Repair Status Equipment	Created for TNI Workspace
Telco In Maintenance Status Equipment	Created for TNI Workspace
Core Pending Repair Status Equipment	Created for TNI Workspace
Devices	
Core In Use Status Equipment	Created for TNI Workspace
Mobility In Use Status Equipment	Created for TNI Workspace
Telco Reserved Status Equipment	Created for TNI Workspace
All In Use Status Equipment	Created for TNI Workspace
Mobility Available Status Equipment	Created for TNI Workspace
Mobility Nokia Manufacturer Equipment	Created for TNI Workspace
All Network Interfaces	
All Equipment Holders	
All Interface Cards	
All In Maintenance Status Equipment	Created for TNI Workspace
PC	
Core Logical Connections	Created for TNI Workspace
Telco Network Equipment	Created for TNI Workspace
Core Network Sites	Created for TNI Workspace
All Juniper Manufacturer Equipment	Created for TNI Workspace

**Note:** To learn how the data collection process operates, see [Data collection and refresh for the Network Inventory Workspace widgets](#).

These CMDB groups follow the following standard naming convention:

- The first segment represents the assigned domain for the network sites and entities. You use the Network domain selector in the Network Inventory Workspace to filter the data that appears by selecting one of the following types of network domains:

### Core

Network domain for the core telecom equipment.

### Mobility

Network domain for the mobile telecom equipment.

### Telco

Network domain for the telecom equipment in general.

### All

All equipment network domains that are combined into a single one for reporting purposes.

- The remaining segments represent a specific type of field data. For example:

### Available Status Equipment

Reports the Available status for the equipment.

### Pending Repair Status Equipment

Reports the Pending Repair status for the equipment.

### Ericsson Manufacturer Equipment

Reports the percentage of the total equipment that is supplied by Ericsson.

### Nokia Manufacturer Equipment

Reports the percentage of the total equipment that is supplied by Nokia.

The following examples show how the name segments are combined in the CMDB groups to report the data that appears in the widgets in the Network Inventory Workspace:

#### All Available Status Equipment

CMDB group data that is used in the Network equipment by states widget to report the percentage of equipment that is in the Available status in all network domains.

#### Core Available Status Equipment

CMDB group data used in the Network equipment by states widget to report the percentage of equipment that is in an Available status in the Core network domain.

#### Mobility Pending Repair Status Equipment

CMDB group data used in the Network equipment by states widget to report the percentage of equipment that is in a Pending Repair status in the Mobility network domain.

#### All Ericsson Manufacturer Equipment

CMDB group data that is used in the Network equipment by manufacturer widget to report the total piece count for the equipment that is supplied by Ericsson in all network domains.

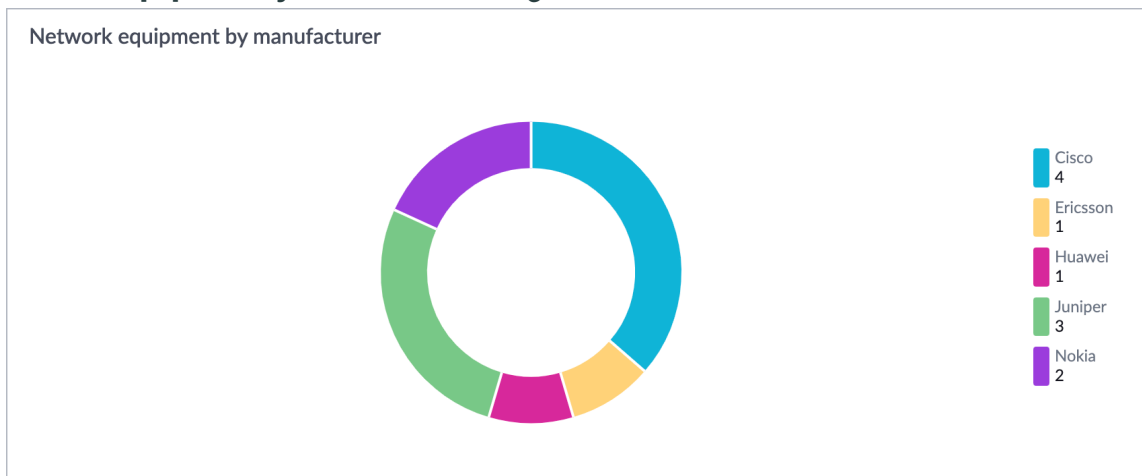
#### Telecom Nokia Manufacturer Equipment

CMDB group data that is used in the Network equipment by manufacturer widget to report the total piece count for the equipment that is supplied by Nokia in the Telecom network domain.

## Modifying the Network equipment by manufacturer widget

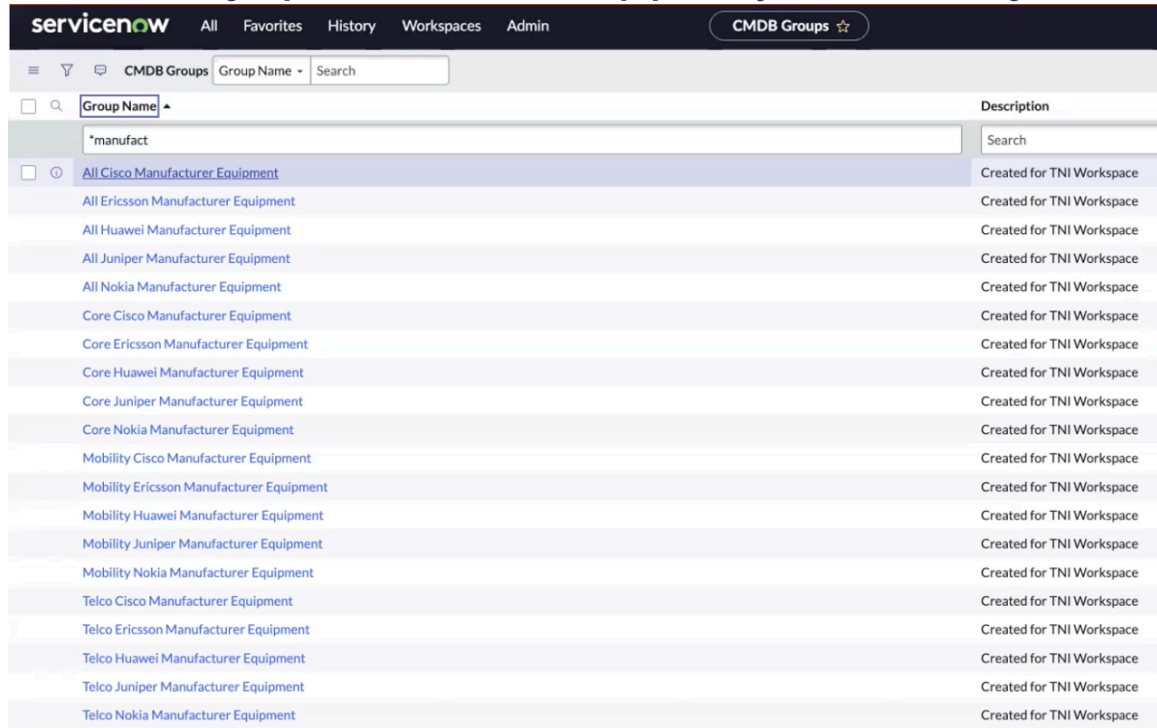
This widget contains a pie chart with a standard set of the five most recognizable telecommunications equipment manufacturers.

### Network equipment by manufacturer widget



A pre-defined CMDB group structure supports retrieval of the data that appears in the widget pie chart. The following example shows the standard CMDB groups that are used to retrieve the manufacturer data for the Network Inventory Workspace.

## Standard CMDB groups used for the Network equipment by manufacturer widget



To add or change the data in a widget, use the CMDB Groups function to create CMDB group codes or modify the accompanying query conditions for existing ones. To update any of the existing CMDB groups, you must follow the standard CMDB group naming convention used for the Network Inventory Workspace widgets.

**Note:** To learn more about creating, updating, or naming CMDB groups, see [CMDB groups](#).

For example, let's say that you want to add another equipment manufacturer to the widget. To accomplish this task, you can use existing CMDB groups for a manufacturer, for each of the network domains, as the base for the new manufacturer. In this example, you use the existing CMDB groups for Ericsson as the base for the CMDB groups that you create for the new manufacturer.

This table shows what the existing CMDB group codes look like for Ericsson, and what they look like when you create the CMDB group codes for Dell.

### CMDB group example

Existing CMDB Group	Existing CMDB Group
All Ericsson Manufacturer Equipment	All Dell Manufacturer Equipment
Core Ericsson Manufacturer Equipment	Core Dell Manufacturer Equipment
Mobility Ericsson Manufacturer Equipment	Mobility Dell Manufacturer Equipment
Telco Ericsson Manufacturer Equipment	Telco Dell Manufacturer Equipment

### Related topics

[Network Inventory Workspace](#)

## Update CMDB groups for use in the data collection process

Add or change the data that you see in a Network Inventory Workspace widget by using the CMDB Groups function. You create CMDB group codes as needed or modify the query conditions for existing ones. By changing the CMDB groups, you affect what data the collection process retrieves for the widgets on the Network Inventory Workspace landing page.

### Before you begin

Role required: admin, cmdb\_query\_builder, itil, sn\_cmdb\_editor

### About this task

You must follow the standard CMDB group naming convention that is used for the Network Inventory Workspace widgets. To learn more, see the section called Standard CMDB groups and naming conventions for the Network Inventory Workspace widget data. To learn more about creating, updating, or naming CMDB groups, see [CMDB groups](#).

### Procedure

1. Navigate to **All > Configuration > CMDB Groups**.
2. To view the listings of the CMDB groups that are associated with the Network Inventory Workspace widgets, see the following table.

Type of CMDB Group	Description
<b>All CMDB groups created for Network Inventory Workspace widgets</b>	In the <b>Description</b> field, enter * tni.
<b>Only CMDB groups created for the Network equipment by manufacturer widget</b>	In the <b>Group Name</b> field, enter * manu fact.

3. In the Group Naming listing, select a CMDB group for an existing manufacturer in the All domain.  
For example, select **All Ericsson Manufacturer Equipment**. The CMDB Group form appears.
4. In the **Name** field, overwrite Ericsson with the name of the manufacturer that you want to add.  
For example, change **All Ericsson Manufacturer Equipment** to **All Dell Manufacturer Equipment**.
5. Click the **CMDB Group Contains Encoded Queries (n)** tab, where (n) represents the number of encoded queries for the CMDB group.
6. In the **CMDB Group Contains Encoded Queries (n)** tab, in the **Class** field, select **cmdb\_ci\_ni\_telco\_equipment**.  
After you select the CMDB group, the encoded query detail for the selected CMDB group class appears.
7. In the **Condition** field, overwrite Ericsson with the name of the manufacturer that you want to add.  
For example, overwrite Ericsson with Dell.
8. Click **Update**.
9. Repeat these steps for each of the remaining network domains for the new manufacturer.  
In the following table, you would create the following CMDB groups for the remaining network domains. These groups are based on the CMDB codes for Ericsson.

### CMDB group example

Existing CMDB Group	Existing CMDB Group
Core Ericsson Manufacturer Equipment	Core Dell Manufacturer Equipment
Mobility Ericsson Manufacturer Equipment	Mobility Dell Manufacturer Equipment
Telco Ericsson Manufacturer Equipment	Telco Dell Manufacturer Equipment

### Result

After the data collection process runs for the Network Inventory Workspace, the new network manufacturer appears in the pie chart in the Network Equipment by manufacturer widget. The new CMDB group includes the network equipment records that are assigned to your new manufacturer.

### Related topics

[Network Inventory Workspace](#)

## Access Network Inventory Workspace

You set the network domain in the Network Inventory Workspace to view your inventory data and your assignments based on the domain that you select.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent, sn\_ni\_core.inventory\_template\_manager, sn\_ni\_core.telco\_inventory\_catalog\_manager

### About this task

You set the network domain to view your inventory and assignments.

- The information that appears in each of the landing page widgets then refreshes, depending on the selected domain.
- The landing page continues to show the data for the selected domain until you change the domain filtering.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. To filter the data that appears in the Network Inventory Workspace, select **Network Domain**  
By default, the data that appears on the Network Inventory Workspace landing page is for all network domains.
3. Select **Network Domain**.  
The network domain that you select appears in the **Applied** field.
4. In the **Available** field, search for a network domain or select a name when it appears in the box below it.  
You can select one of the following domains:

Option	Details
<b>Core</b>	Network domain for the core telecommunications equipment.
<b>Mobility</b>	Network domain for the mobile telecommunications equipment.

Option	Details
<b>Telco</b>	Network domain for the telecommunications equipment in general.

5. Select **Apply**.

### Related topics

[Network Inventory Workspace](#)

## Publish an asset to the hardware catalog

Publish an asset to the hardware catalog so that you can procure the asset by using the Telecommunications Network Inventory application integration with the Hardware Asset Management application.

### Before you begin


Before you can publish an asset to the hardware catalog, make sure that an inventory model record has already been created for that asset. If there's no record, you can create an inventory model record. To learn more, see [Creating your inventory models](#).

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager

### About this task

You can publish an asset to the hardware catalog to make it available as a catalog item. You can procure the asset by creating a service request. To learn more about how to create a service request, see [Create a service request to procure assets](#).

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Models > Equipment Models**.  
To publish an interface card, select **Interface Card Models**.
3. From the list of records, select the inventory model record that you want.
4. Select **Publish to Hardware Catalog**.  
If the inventory model is already added to the hardware catalog, the **Publish to Hardware Catalog** button doesn't appear.
5. In the **Category** field, select the hardware asset.
6. Select **OK**.

### Result

A catalog item is created for your asset.

### Related topics

[Telecommunications Network Inventory integration with Hardware Asset Management](#)

## Creating your inventory models

As an inventory catalog manager, you can use a series of forms to define the metadata for each network model in the Telecommunications Network Inventory. During this process, you also specify the relationships between each of these models.

## Inventory models overview

The metadata that you define in an inventory model serves an important purpose when you create an associated template or instantiate an instance of equipment. It ensures that you adhere to the validations put in place by the equipment vendor so that you don't create a non-supported piece of equipment.

- The metadata that the inventory models contain, such as the name, model number, height, and depth, remain consistent across all individual instances of that particular type of equipment.
- When you generate the equipment instances for an inventory model, they all contain this standard manufacturer information.

**Note:** To learn more about creating templates and generating network assets from your model and template records, see

- [Creating inventory template for network asset instantiation](#)
- [Instantiating your network inventory by using design and assign](#)

To create a comprehensive digital model of your telecommunications network, do the following tasks:

1. In the Equipment Model form, create inventory models for your telecommunications equipment.
  - Creating an equipment inventory model is the first requirement for setting up the process to generate network asset instances when using inventory templates.
  - You create an equipment model record every time a vendor or original equipment manufacturer (OEM) introduces new equipment for your use. To learn more, see [Create an equipment model](#).
2. In the Equipment Holder Model form, create the inventory model records for your equipment holders. To learn more, see [Create an equipment holder model](#).
3. In the Network Interface Model form, create the inventory model records for your network interfaces. To learn more, see [Create a card model](#).
4. In the Interface Cards Model form, create the inventory model records for your network interface cards. To learn more, see [Create a network interface model](#).
5. In the Physical Connection Model form, create the inventory model records for each physical or wired connection. To learn more, see [Create a physical connection model](#).
6. In the Logical Connection Model form, create inventory model records for each logical connection. To learn more, see [Create a logical connection model](#).
7. In the Network Model Relationship form, define the relationships between each model record in your network inventory. To learn more, see [Define a network model relationship](#).

## Inventory model related tabs

After you create inventory models, the information in the following table appears on these tabs in each inventory model record.

### Inventory model tabs

Tab	Contains
Bandwidth Capabilities	Relation between the bandwidth and the physical and logical connection models that need to be added.

### Inventory model tabs (continued)

Tab	Contains
	<p><b>Note:</b> The <b>Bandwidth Capabilities</b> tab is available only on the physical and logical models.</p>
Assets	Network asset information.
Configuration Items	Configuration Item (CI) that is associated with the model.
Model Components	Components in the model.
Vendor Catalog Items	Available network assets from various vendors.
Hardware Model Lifecycles	Life cycle information about the network asset.
Network Model Relationships	Related network inventory models.

#### Related topics

[Network inventory models](#)

### Create a facility model

Create a facility model in the Telecommunications Network Inventory application to define the physical characteristics data of the facility record according to the product manufacturer's recommendations.


#### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager

#### About this task

When you create a facility model, it creates the model record in the facility model [sn\_ent\_facility\_model] table.

#### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Models > Facility Models**.
3. Select **New**.
4. On the **Details** tab, fill in the fields.

#### Facility Model form

Field	Description
Display name	Name that appears for the facility model. The <code>glide.cmdb_model.display_name.shorten</code> system property controls how display names are generated for the equipment holder model.

Field	Description
Manufacturer	Name of the network asset's manufacturer. Select the search icon ( 🔍 ) and select a manufacturer code. To learn more, see <a href="#">Create manufacturer and vendor codes</a> .
Name	Name of the facility model. The ServiceNow AI Platform uses this name to identify it in your network inventory.

5. On the **Details** tab, fill in the General section.

**Note:** To learn more about the fields, see [Inventory Model form - General](#).

6. On the **Details** tab, fill in the Information section.

**Note:** To learn more about the fields, see [Inventory Model form - Information](#).

7. Select **Save**.

### Result

The related tabs appear on the form. You can view or modify the tabs information. To learn more about the related tabs, see [Inventory models additional tabs](#).

### Related topics

[Network inventory models](#)

## Create an equipment model

Create an equipment model in the Telecommunications Network Inventory application as the first requirement for setting up the process to generate your network asset instances. You create an equipment model record every time a vendor or original equipment manufacturer (OEM) introduces new equipment for your use.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager

### About this task

An equipment model represents the metadata that is provided by a vendor or manufacturer for the equipment. It defines the consistent characteristics across the various instances that are created for the equipment. An instance is an individual occurrence of a network asset at a site or datacenter. With this application, you define the physical characteristics data of the network equipment per the product manufacturer's recommendations. When you create an equipment model record, it creates the model record in the Equipment Model [sn\_ent\_nw\_equipment\_model] table.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon (  ), and then go to **Inventory Models > Equipment Models**.
3. Select **New**.
4. On the **Details** tab, fill in the fields.

## Equipment Model

Field	Description
Display name	Name that appears for the equipment model. The <code>glide.cmdb_model.display_name.shorten</code> system property controls how display names are generated for the equipment model.
Manufacturer	Name of the network asset's manufacturer. Select the search icon ( 🔍 ) and select a manufacturer code. To learn more, see <a href="#">Create manufacturer and vendor codes</a> .
Name	Name of the equipment model. The ServiceNow AI Platform uses this name to identify it in your network inventory.

5. On the **Details** tab, fill in the Information section.

**Note:** To learn more about the fields, see [Inventory Model form - Information](#).

6. On the **Details** tab, fill in the General section.

**Note:** To learn more about the fields, see [Inventory Model form - General](#).

7. To add the compatible equipment models, select **Add Compatible**.

You can track the network assets that work with the equipment model.

**Note:** In the classic environment, this function is available only for administrators.

8. To add the substitute equipment models, select **Add Substitutions**.

You can track the equipment models that you can use to substitute another equipment model with.

**Note:** In the classic environment, this function is available only for administrators.

9. To add the attachments, such as graphics or documents, select the attachment icon ( 📎 ) in the right panel.

10. Select **Save**.

The related tabs appear on the form. You can view or modify information in these tabs. To learn more about the related tabs, see [Inventory models additional tabs](#).

11. To delete a model, select the options icon ( ⋮ ) next to the **Save** button, and select **Delete**.

### Related topics

[Network inventory models](#)

## Create an equipment holder model

Create an equipment holder model in the Telecommunications Network Inventory application to define the physical characteristics data of the equipment holder according to the product manufacturer's recommendations. You create an equipment holder model every time a vendor or original equipment manufacturer (OEM) introduces a new equipment holder for your use.


**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager


**About this task**






When you create an equipment holder model, it creates the model record in the equipment holder model [sn\_ent\_nw\_holder\_model] table.

**Procedure**


1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Models > Equipment Holder Models**.
3. Select **New**.
4. On the **Details** tab, fill in the fields.

**Equipment Holder Model**

Field	Description
Display name	Name that appears for the equipment holder model. The <i>glide.cmdb_model.display_name.shorten</i> system property controls how display names are generated for the equipment holder model.
Manufacturer	Name of the network asset's manufacturer. Select the search icon (  ) and select a manufacturer code. To learn more, see <a href="#">Create manufacturer and vendor codes</a> .
Name	Name of the equipment holder model. The ServiceNow AI Platform uses this name to identify it in your network inventory.

5. On the **Details** tab, fill in the General section.
  -  **Note:** To learn more about the fields, see [Inventory Model form - General](#).
6. On the **Details** tab, fill in the Information section.
  -  **Note:** To learn more about the fields, see [Inventory Model form - Information](#).
7. To add the compatible equipment holder models, select **Add Compatible**.  
You can track the network assets that can work with the equipment model.
  -  **Note:** In the classic environment, this function is available only for administrators.
8. To add the substitute equipment holder models, select **Add Substitutions**.  
You can track the equipment models that you use to substitute another equipment model with.
  -  **Note:** In the classic environment, this function is available only for administrators.
9. To add attachments, such as graphics or documents, select the attachment icon () in the right panel.
10. Select **Save**.

The related tabs appear on the form. You can view or modify the tabs information. To learn more about the related tabs, see [Inventory models additional tabs](#).

- To delete a model, select the options icon (  ) next to the **Save** button, and select **Delete**.

**Related topics**

[Network inventory models](#)

**Create a card model**

Create a card model in the Telecommunications Network Inventory application to define the physical characteristics data of the card as per the product manufacturer's recommendations.


**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager


**About this task**

A card model defines the card's metadata, which are the attributes that are consistent across the various instantiated cards of that model. When you create a card model, it creates the model record in the card model [sn\_ent\_nw\_card\_model] table.

**Procedure**

- Navigate to **Workspaces > Network Inventory Workspace**.
- Select the list icon (  ), and then go to **Inventory Models > Card Models**.
- Select **New**.
- On the **Details** tab, fill in the fields.


**Card Model**

Field	Description
Display name	Name that appears for the card model. The <i>glide.cmdb_model.display_name.shorten</i> system property controls how display names are generated for the interface card model.
Manufacturer	Name of the network asset's manufacturer. Select the search icon (  ) and select a manufacturer code. To learn more, see <a href="#">Create manufacturer and vendor codes</a> .
Name	Name of the card model. The ServiceNow AI Platform uses this name to identify it in your network inventory.

- On the **Details** tab, fill in the General section.

 **Note:** To learn more about the fields, see [Inventory Model form - General](#).

- On the **Details** tab, fill in the Information section.

 **Note:** To learn more about the fields, see [Inventory Model form - Information](#).


- To add the compatible card models, select **Add Compatible**.  
You can track the network assets that work with the card model.

**Note:** In the classic environment, this function is available only for administrators.

8. To add the substitute card models, select **Add Substitutions**.

You can track the card models that you use to substitute another card model with.

**Note:** In the classic environment, this function is available only for administrators.

9. To add the attachments, such as graphics or documents, select the attachment icon () in the right panel.

10. Select **Save**.

The related tabs appear on the form. You can view or modify the tabs information. To learn more about the related tabs, see [Inventory models additional tabs](#).

11. To delete a model, select the options icon () next to the **Save** button, and click **Delete**.

### Related topics

[Network inventory models](#)

## Create a network interface model

Create a network interface model in the Telecommunications Network Inventory application to define the physical characteristics data of the network interface as per the product recommendations of the manufacturer.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager


### About this task

When you create a network interface model, it creates the model record in the Network Interface Model [sn\_ent\_nw\_interface\_model] table.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Models > Interface Models**.
3. Select **New**.
4. On the **Details** tab, fill in the fields.

### Network Interface Model

Field	Description
Display name	Name that appears for the network interface model. The <i>glide.cmdb_model.display_name.shorten</i> system property controls how display names are generated for the network interface model.
Manufacturer	Name of the network asset's manufacturer. Select the search icon (  ) and select a manufacturer code. To learn more, see <a href="#">Create manufacturer and vendor codes</a> .
Name	Name of the network interface model. The ServiceNow AI Platform uses this name to identify it in your network inventory.

5. On the **Details** tab, fill in the General section.

**Note:** To learn more about the fields, see [Inventory Model form - General](#).

6. Under the **Details** tab, on the form, fill in the fields.


**Note:** To learn more about the fields, see [Network Interface Model form - Information tab](#).

7. To add the compatible network interface models, select **Add Compatible**.  
You can track the network assets that work with the network interface model.

**Note:** In the classic environment, this function is available only for administrators.


8. To add the substitute network interface models, select **Add Substitutions**.  
You can track the network interface models that you use to substitute another network interface model with.

**Note:** In the classic environment, this function is available only for administrators.

9. To add the attachments, such as graphics or documents, select the attachment icon () in the right panel.

10. Select **Save**.

The related tabs appear on the form. You can view or modify the tabs information. To learn more about the related tabs, see [Inventory models additional tabs](#).

11. To delete a model, select the options icon () next to the **Save** button, and select **Delete**.

## Related topics

[Network inventory models](#)

## Create a cable model

Create a cable model in the Telecommunications Network Inventory application to define the physical characteristics data of the cable according to the product recommendations of the manufacturer.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager


### About this task

When you create a cable model, it creates the model record in the Cable Model [sn\_ent\_cable\_model] table.

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Models > Cable Models**.
3. Select **New**.
4. On the **Details** tab, fill in the fields.

**Note:** To learn more about the fields, see [Cable model form](#).

5. Add the attachments, such as graphics or documents by selecting the attachment icon () in the right panel.
6. Select **Save**.  
The related tabs appear on the form. You can view or modify the tabs information. To learn more about the related tabs, see [Inventory models additional tabs](#).

### What to do next

To delete a model, select the options icon () next to the **Save** button, and select **Delete**.

### Related topics

[Network inventory models](#)

## Create a strand model

Create a strand model in the Telecommunications Network Inventory application to define the physical characteristics data of the strand according to the product recommendations of the manufacturer.


### Before you begin


Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager


### About this task

When you create a strand model, it creates the model record in the Strand Model [sn\_ent\_strand\_model] table.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Models > Strand Models**.
3. Select **New**.
4. On the **Details** tab, fill in the fields.

 **Note:** To learn more about the fields, see [Strand model form](#).

5. Add the attachments, such as graphics or documents by selecting the attachment icon () in the right panel.
6. Select **Save**.  
The related tabs appear on the form. You can view or modify the tabs information. To learn more about the related tabs, see [Inventory models additional tabs](#).

### What to do next

To delete a model, select the options icon () next to the **Save** button, and select **Delete**.

### Related topics

[Network inventory models](#)

## Create a physical connection model

Create a physical connection model in the Telecommunications Network Inventory application to define the metadata for the different physical connections. In the physical connection model, you can import models, attach a file or an image, add or remove optional fields, and add compatibilities and substitutions.


**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager

**About this task**

When you create a physical connection model record, it creates a model in the Physical Connection Models [sn\_ent\_physical\_nw\_connection\_model] table.


**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Models > Physical Connection Models**.
3. Select **New**.
4. On the **Details** tab, fill in the common information for the physical connection model. The following table lists the fields that are unique to the Physical Connection form.

**Physical Connection Model**


Field	Description
Display name	Name that appears for the physical connection model. The <i>glide.cmdb_model.display_name.shorten</i> system property controls how display names are generated for the physical connection model.
Manufacturer	Select the manufacturer name of the physical connection model.
Name	Manufacturer-assigned name of the physical connection model that is specified by the model manager.


5. On the **Details** tab, fill in the general section of the form for the physical connection model.
  - Note:** To learn more about the fields, see [Inventory Model form - General](#).
6. On the **Details** tab, fill in the information section of the form for the physical connection model. To learn more about the fields, see [Inventory Model form - Information](#).
7. To add the compatible models, select **Add Compatible**.
 

You can personalize the list of compatibles by using the gear icon ().

  - Note:** In the classic environment, this function is available only for administrators.
8. To add the substitute physical connection models, select **Add Substitution**.
 

You can track the network interface models that you use to substitute another network interface model with.

  - Note:** In the classic environment, this function is available only for administrators.
9. To add the attachments, such as graphics or documents, select the attachment icon () in the right panel.
10. Select **Save**.
 

The related tabs appear on the form. You can view or modify the tabs information. To learn more about the related tabs, see [Inventory models additional tabs](#).
11. To delete a model, select the options icon () next to the **Save** button, and click **Delete**.

**Related topics**

[Network inventory models](#)

**Create a logical connection model**

Create a logical connection model in the ServiceNow Telecommunications Network Inventory application to define the metadata for the different logical connections. In the logical connection model, you can import models, attach a file or an image, add or remove optional fields, and add compatibilities and substitutions.


**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager


**About this task**

When you create a logical connection model record, it creates a model in the Logical Connection Models [sn\_ent\_logical\_nw\_connection\_model] table.

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Models > Logical Connection Models**.
3. Select **New**.
4. On the **Details** tab, fill in the common information for the logical connection model. The following table lists the fields that are unique to the logical connection form.

**Logical Connection Model**

Field	Description
Display name	Name that appears for the logical connection model. The <i>glide.cmdb_model.display_name.shorten</i> system property controls how display names are generated for the logical connection model.
Manufacturer	Name of the network asset's manufacturer. Select the search icon (  ) and select a manufacturer code. To learn more, see <a href="#">Create manufacturer and vendor codes</a> .
Name	Manufacturer-assigned name of the logical connection model that is specified by the model manager.

5. On the **Details** tab, fill in the general section information for the logical connection model.

**Note:** To learn more about the fields, see [Inventory Model form - General](#).

6. On the **Details** tab, fill in the information section for the logical connection model. To learn more about the fields, see [Inventory Model form - Information](#).

7. To add the compatible models, select **Add Compatible**.

You can personalize the list of compatibles table by using the gear () icon.

**Note:** In the classic environment, this function is available only for administrators.

8. To add the substitute logical connection models, select **Add Substitution**.

You can track the network interface models that you use to substitute another network interface model with.

**Note:** In the classic environment, this function is available only for administrators.

9. To add the attachments, such as graphics or documents, select the attachment icon (📎) in the right panel.
10. Select **Save**.  
The related tabs appear on the form. You can view or modify the tabs information. To learn more about the related tabs, see [Inventory models additional tabs](#).
11. To delete a model, select the options icon (⋮) next to the **Save** button, and select **Delete**.

**Related topics**

[Network inventory models](#)

**Create a network topology model**

Create a network topology model in the Telecommunications Network Inventory application to define the metadata for the topology according to your recommendations. You can use a topology model to create a record by using the design and assign function.

**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager

**About this task**

When you create a network topology model record, it creates a model in the Network Topology Models [sn\_ent\_network\_topology\_model] table.

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon (☰), and then go to **Inventory Models > Network Topology Models**.
3. Select **New**.
4. On the **Details** tab, fill in the fields.

**Network Topology Model form**

Field	Description
Behavior	<p>Type of topology structure. Select one from the following options.</p> <p><b>Ring</b> Each node is linked with its neighbor to form a closed network.</p> <p><b>Linear Bus</b> All the nodes are connected one after the other in a sequential chain.</p> <p><b>Mesh</b> The nodes are connected directly, dynamically, and non-hierarchically to as many other nodes as possible and cooperate with one another to route data.</p> <p><b>Star</b></p>

Field	Description
	<p>All nodes are connected to a central hub using a communication link.</p> <p><b>Tree</b></p> <p>The nodes are arranged in a configuration that resembles a tree's leaves, branches, and trunk.</p>
Number of allowed nodes	Total number of nodes that are allowed in the topology.
Type	<p>Type of topology. Select one from the following:</p> <ul style="list-style-type: none"> <li><input type="radio"/> Generic</li> <li><input type="radio"/> Product</li> </ul>

To learn more about common fields, see [Inventory Model form - General](#).

##### 5. Select **Save**.

The related tabs appear on the form. You can view or modify the tabs information. To learn more about the related tabs, see [Inventory models additional tabs](#).

### What to do next

You use the design and assign function to create a topology record. To learn more, see [Create a network topology record by using design and assign](#).

### Related topics

[Visualization of network topology](#)

[Network inventory models](#)

## Define a network model relationship

Create a network model relationship in the Telecommunications Network Inventory application that captures the relationships between your network model entities.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager

### About this task

A model relationship captures the relationships between the inventory models. By defining the relationships between the various network model entities, you can also define the compatibility between these entities.

For example, if you select **Equipment to Slot** in the **Relationship Type** field, you can define the relationship between a specific equipment inventory model and a specific slot inventory model. In this case, you would see that the number of slots in the specified slot model are compatible with the specified equipment model. To learn more, see [Modeling your network inventory relationships](#).



When you create a network model relationship, it creates a model in the Network Model [sn\_ni\_core\_network\_model\_relationship] table.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Click the list icon () and then go to **Inventory Models > Network Model Relationships**.

3. Click **New**.
4. Fill in the general information to create a network model relationship.

**Note:** To learn more about the fields, see [Network Model Relationship fields](#).

5. To add attachments, such as graphics or documents, click the attachment icon () in the right panel.
6. Click **Save**.
7. To delete a model, click the options icon () next to the **Save** button, and click **Delete**.

### Related topics

[Network inventory models](#)

[Modeling your network inventory relationships](#)

## Creating inventory template for network asset instantiation

As an inventory template manager, you create templates using functions you access from the Lists view in the Network Inventory Workspace. These templates contain the detailed business guidance rules so that you can properly configure your equipment. During this process, you also specify the relationships between each inventory template.

An inventory template includes the rules on the proper way to configure the equipment. These rules are based on the operating requirements from the manufacturer. A template also includes such information as the number of available slots and whether the hardware in a piece of equipment is compatible with the equipment that is related to it.

Your network inventory templates represent a unique configuration of a network entity that a network service provider would instantiate based on their business guidance. If you properly define your templates and their relationships, the instantiation process uses the configuration rules from the vendor and you do not generate unsupported network asset instances.

**Note:** To learn more about creating templates and generating network assets from your model and template records, see [Modeling your Telecommunications Network Inventory workflow](#).

### Related topics

[Network inventory templates](#)

## Create an inventory template

Create an inventory template in the Telecommunications Network Inventory application to represent a configuration of the created inventory model.

### Before you begin


Role required: `sn_ni_core.inventory_admin`, and `sn_ni_core.inventory_template_manager`

### About this task





A network inventory template contains a set of detailed business guidance rules from a telecommunications provider. These rules state how the equipment configurations should be generated, based on certain operating requirements. When you create an inventory template, it creates a template in the Inventory Templates [`sn_ni_core_inventory_template`] table. To learn more about inventory templates, see the following topics:


- [Network inventory templates](#)
- [Creating inventory template relationship](#)

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Network Inventory Templates > Inventory Templates**.
3. Select **New**.
4. On the **Details** tab, fill in the general information to create an inventory template.  
The following table lists the fields that are unique to the inventory template.

**Inventory Template**

Field	Description
Name	Manufacturer-assigned name for this inventory template, as specified by the model manager.
Inventory model	List of all product models related to the Telecommunications Network Inventory. Select the search icon (  ) and select a model. To learn more, see <a href="#">Creating your inventory models</a> .
Default field values	Default template where the default CI attribute values can be defined. The values in the list depend on the selected inventory model. Select the search icon (  ) and select a type code. To learn more, see <a href="#">Create a default template</a> .
Version	Version of the template
Parent bandwidth	Bandwidth of the parent product model.   <b>Note:</b> This attribute is only visible when you select a logical connection model and that has a relationship type as <b>Logical Connection to Channel</b> .
Child bandwidth	Bandwidth of the child product model.   <b>Note:</b> This attribute is only visible when you select a logical connection model and that has a relationship type as <b>Logical Connection to Channel</b> .

5. To add attachments, such as graphics or documents, select the attachment icon ().
6. Select **Save**.

The **Related Templates** tabs appear next to the **Details** tab where you can view, add, update, and delete the related templates. You can also add a related template under a related template.

### **Note:**

- a. If you've defined the network model relationship between the rack and slot, equipment and slot, equipment and interface, interface card and slot, or interface card and interface, the slots and interfaces are automatically created under the **Related Templates** for the equipment or interface cards. Otherwise, manually add using **New**.
- b. Add shelves/equipment to racks or shelves in the **Related Templates** tab of each created rack unit or slots. You can also add equipment to each shelf. To learn more, see [Related templates form](#).
- c. You can update the naming pattern of each template directly from the Name Pattern column under the related templates. The name pattern of the created slots or interfaces is fetched from the default pattern of the models. To learn more, see [Inventory Model form - Information](#).
- d. To add an interface card in a slot, navigate to **slot > Related Templates > New** and fill in the required details.

### What to do next

To delete a template, select the options icon () , and then select **Delete**.

### Create a default template

Create a default template in the Telecommunications Network Inventory application to capture the default attribute definition for a specific configuration item (CI) class.

### Before you begin


Role required: sn\_ni\_core.inventory\_admin, and sn\_ni\_core.inventory\_template\_manager

### About this task

Default templates capture the default attribute values for a configuration item (CI) class. A template defines the set of attribute values for any resource (equipment, card, and so on). When this default template is associated with an inventory template, it adds these attribute values to the resource that is instantiated using that template.

When you use the **Template** field to select the table that stores the CI class information, you can select specific attributes and set the default values for each attribute. When you create a default template, it creates a default template record in the Templates [sn\_ni\_core\_default\_template] table. To learn more about the default templates, see [Network inventory templates](#).

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Click the list icon () , and then go to **Network Inventory Templates > Default Templates**.
3. Click **New**.
4. On the form, fill in the general information to create a default template.  
To learn more about the fields, see [Default Template form](#).
5. Click **Save**.
6. To schedule the form, click **Schedule** and fill in the Scheduled Entity Generation form.

**Note:** Scheduling is only available in the classic environment.

To learn more about the fields, see [Scheduled Entity Generation form](#).

## Creating inventory template relationship

Use this sequence as a guide when creating inventory templates for your equipment and establishing the proper template relationships in the Telecommunications Network Inventory application.

### Sequence for creating template relationships

Equipment instantiation, or the task of generating network asset instances from the inventory template relationships that you create, is a key function in the Telecommunications Network Inventory application. To operate properly, it depends on you creating accurate inventory models, default templates, and inventory templates, in a certain sequence, to establish proper equipment relationships.

**Note:** To learn more about equipment instantiation, see [Telecommunications design and assign](#).

When you create an equipment or card template, the associated slots and interface templates are automatically created by using the data from the model relationship. If the model relationships aren't made, it doesn't create the associated templates. In this case, you must create the templates manually. To learn more about the model relationship, see [Creating inventory template for network asset instantiation](#). For example, when you create a template for an equipment model, the associated templates, such as the Telco equipment holder (slot) and interface, are automatically created.

The names for these associated templates are mapped from the **Slot naming pattern** or **Interface naming pattern** fields in the **Information** tab of the Equipment Model or Interface Model forms.

- To learn more about the **Slot naming pattern** or **Interface naming pattern** fields, see [Inventory Model form - Information](#).
- To learn more about the naming convention, see [Naming convention for associated templates](#).

To establish the proper relationships between these elements for your equipment, perform these tasks in the following order.

### Establishing a default template

The first step in this process is to create an appropriate default template for use in your inventory template relationship sequence.

Default templates capture the default attribute values for a configuration item (CI) class. A template defines the set of attribute values for any resource (equipment, card, and so on). When this default template is associated with an inventory template, it adds these attribute values to the resource that is instantiated using that template.

To learn more, see [Create a default template](#).

### What's next

After establishing a default template, begin the sequence by creating an inventory template for the equipment model. To learn more, see [Creating an inventory template for the equipment model](#).

**Related topics**

[Creating inventory template for network asset instantiation](#)

**Creating an inventory template for the equipment model**

In the Inventory Template form in the Network Inventory Workspace Lists view, you can create an inventory template for the equipment model.

**Procedure**

When you create an equipment inventory model, you must enter the following information:

1. In the **Name** and **Inventory Model** fields, your names and inventory model number must be unique for that piece of equipment, and can't be the same as any other piece of equipment.
2. In the **Inventory Model** field, you must enter a reference qualifier to the equipment model.
3. In the **Default Field Values** field, you need to select a default template for the tagging of the default attribute values.

**Note:** These rules also apply to the remaining steps to this process. To learn more, see:

- [Create an inventory template](#)
- [Create a default template](#)

**Inventory template for equipment model**

The screenshot shows the 'Inventory Template' form for '7450 ESS-1 Template'. The form is divided into two main sections: 'Inventory Template' and 'Attachments'. The 'Inventory Template' section contains the following fields:

- Name \***: 7450 ESS-1 Template
- Inventory model \***: Nokia 7450 ESS-1
- Inventory template**: (empty)
- Parent**: (empty)
- Available templates**: (empty)
- Default Field Values**: Edge Router Default Data
- Version**: (empty)
- Name Pattern**: (empty)

The 'Attachments' section on the right shows 'No Attachments Available' and a 'Browse' button to add a file.

**What's next**

Next, create inventory templates for related interface card models. To learn more, see [Creating inventory templates for related interface card models](#).

**Related topics**

[Creating inventory template for network asset instantiation](#)

**Creating inventory templates for related interface card models**

In the Inventory Template form in the Network Inventory Workspace Lists view, you can create inventory templates for the interface card models that are associated with the equipment inventory template.

## Procedure

The following example shows an inventory template for an interface card model.

**Inventory template for the interface card model**

List Nokia 7450 ESS-1 MDA Card Template

Details

**Nokia 7450 ESS-1 MDA Card Template** Save

Details Related Templates (1)

**Inventory Template**

Name \*  
Nokia 7450 ESS-1 MDA Card Template

Inventory template

Inventory model \*  
Nokia 7450 ESS-1 MDA CARD MODULE

Parent

Available templates

Default Field Values  
Edge Interface Card Default Data

Version

Name Pattern  
Nokia 7450 ESS-1 MDA Card Template

**Attachments**

No Attachments Available  
Browse for a file to add it as an attachment

Browse

**Note:** If the equipment model supports multiple models of an interface card, you must create an individual inventory template for each model.

## What's next

Next, create inventory templates for the related network interface models. To learn more, see [Creating inventory templates for related network interface models](#).

## Related topics

[Creating inventory template for network asset instantiation](#)

## Creating inventory templates for related network interface models

In the Inventory Template form in the Network Inventory Workspace Lists view, you can create inventory templates for the network interface models that are associated with the equipment inventory template.

## Procedure

The following example shows an inventory template for a network interface model.

## Inventory template for a network interface model

**Note:** If the equipment model supports multiple models of network interfaces, you must create an individual inventory template for each model.

### What's next

Next, add slots to the equipment template. To learn more, see [Adding slots to the equipment inventory template](#).

### Related topics

[Creating inventory template for network asset instantiation](#)

## Adding slots to the equipment inventory template

In the equipment inventory template that you created in the Network Inventory Workspace Lists view, use the Related Templates tab to create the associations for the slots. The following example shows how you add a related inventory template for an equipment model.

### Procedure

1. In the **Related Templates** tab, click **New**.

#### Equipment model inventory template - related templates

2. In the **Name** field, enter a unique name for the slot. When you generate a network asset instance, the generation process assigns this name to the slot.
3. In the **Inventory model** field, the equipment holder model that is associated with this equipment inventory template appears. If there is no existing relationship with an equipment holder relationship, you can select any slot model as needed.

**Note:** While it appears that inventory templates are created for the slots that are attached to the **Related Templates** tab, only the default template values are created and stored for them. The records created for them are not considered formal inventory templates but are flagged internally with an attribute of Template=N.

## Adding an interface card to a slot

After you create all the associated slots, they all appear in the **Related Templates** tab.

## Equipment inventory template with all associated slots

Name	Inventory model	Available templates	Updated	Name Pattern
Slot-2	Nokia 7450 ESS-1 Traffic Slot		2022-06-13 05:05:32	Slot-2
Slot-1	Nokia 7450 ESS-1 Traffic Slot		2022-06-13 05:12:08	Slot-1

**Note:** If there are no inventory templates for the slots, you select a default template in the **Default Field Values** field to set the default attributes for the assigned slots.

### What's next

Next, add a network interface to the equipment template. To learn more, see [Adding a network interface to the equipment template](#).

### Related topics

[Creating inventory template for network asset instantiation](#)

## Adding a network interface to the equipment template

In the equipment inventory template that you created in the Network Inventory Workspace Lists view, use the Related Templates tab to add the associated network interface.

## Procedure

To add a network interface, you do it in the same manner as you added slots. To learn more, see [Adding slots to the equipment inventory template](#).

### Inventory template for equipment model - related templates

1. In the **Related Templates** tab, click **New**.
2. In the **Name** field, enter a unique name for the network interface. When you generate a network asset instance, the generation process assigns this name to the slot.

In the **Inventory model** field, the equipment inventory model that is associated with the equipment inventory template appears. If there is an associated inventory model, you can select one as needed.

### Adding a network interface

## What's next

Next, add interface cards to the slots. To learn more, see [Adding interface card templates to the slot templates](#).

**Related topics**

[Creating inventory template for network asset instantiation](#)

**Adding interface card templates to the slot templates**

In the equipment inventory template that you created in the Network Inventory Workspace Lists view, use the Related Templates tab to add the interface cards to the selected slots.

**Procedure**

In the **Related Templates** tab, select the slot that you want to add the interface card to.

**Equipment inventory template with all associated slots**

The screenshot shows the '7450 ESS-1 Template' page. The 'Related Templates' tab is active, displaying a table with the following data:

Name	Inventory model	Available templates	Updated	Name Pattern
Slot-2	Nokia 7450 ESS-1 Traffic Slot		2022-06-13 05:05:32	Slot-2
Slot-1	Nokia 7450 ESS-1 Traffic Slot		2022-06-13 05:12:08	Slot-1

To the right of the table is an 'Attachments' panel with the message 'No Attachments Available' and a 'Browse' button.

When the slot record appears, in the **Related Templates** tab, click **New**. Create an inventory template for the associated interface card.

**Inventory template for the associated interface card**

The screenshot shows the 'card compatibilities of ESS' form. The 'Inventory Template' section contains the following fields:

- Name: card compatibilities of ESS
- Inventory model: Nokia 7450 ESS-1 MDA CARD MODULE
- Relationship type: Contains::Contained by
- Inventory template: Nokia 7450 ESS-1 MDA Card Template
- Available templates: ESP 20 Card Template, 4780423f54e18110f87749bbc4ad3822
- Default Field Values: (empty)
- Version: (empty)
- Name Pattern: card compatibilities of ESS

To the right is an 'Attachments' panel with the message 'No Attachments Available' and a 'Browse' button.

1. In the **Name** field, enter a name for the interface card.
2. In the **Inventory model** field, the associated network interface cards according to the specified slot-to-interface card model relationship. If there is an associated inventory model, you can select one as needed.

When you submit the form, the interface appears in the **Related Templates** tab for the associated slot. If there are associated interface cards, repeat this procedure until you've paired all slots in the equipment template.

The following example shows the inventory template for the slot with an associated interface card.

**Slot with associated interface card**

List 7450 ESS-1 Temp... x

Details Slot-1 x

**Slot-1** Save

Details Related Templates (1)

**Related Templates** 1 Last refreshed 4m ago

Name	Inventory model	Available templates	Updated
card compatibilities of ESS	Nokia 7450 ESS-1 MDA CARD MODULE	ESP 20 Card Template, 4780423f54e18110f87749bbc4ad3822	2022-06-12 02:49:29

**Attachments**

No Attachments Available  
Browse for a file to add it as an attachment

Browse

If the card model has a Slot Occupied attribute, and its value is greater than 1, a **Slot Occupied** field appears on the form. It ensures that you are able to identify that when this card is instantiated, other slots are also attached it. By using this field, you can indicate if the other slots that are attached to that piece of equipment are compatible to the network interface that you are selecting.

## What's next

Next, add subslots to the network interface template. To learn more, see [Adding subslot templates to the interface card template](#).

## Related topics

[Creating inventory template for network asset instantiation](#)

## Adding subslot templates to the interface card template

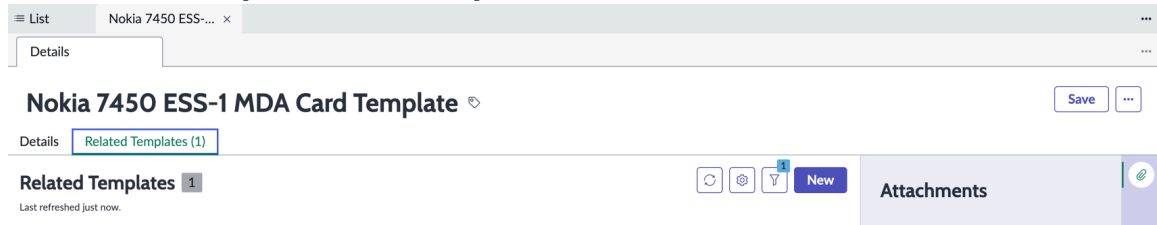
In the Inventory Template form in the Network Inventory Workspace Lists view, you can add subslots to the interface card template that you created. You perform this procedure any time that you add a new card model to an existing equipment inventory template.

## Procedure

If the interface card supports SFP (Small Form Pluggable), the card has slots. To create this relationship, you can use the same procedures that you used to add slots to in the equipment inventory template. To learn more, see [Adding slots to the equipment inventory template](#).

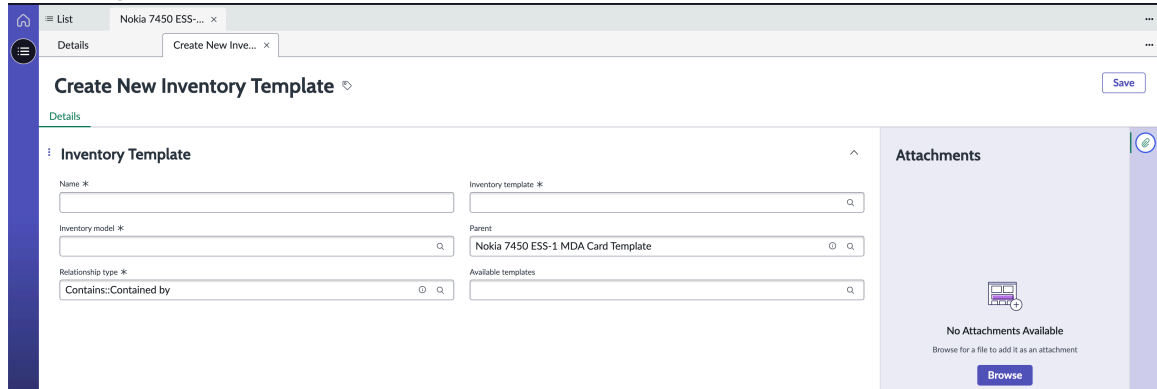
The following example shows an inventory card template where subslots were added.

## Interface card template - related templates



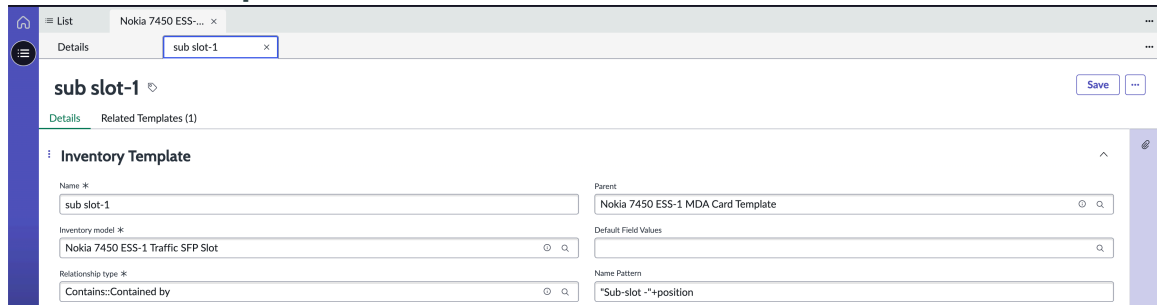
In the interface card template, in the **Related Templates** tab, click **New** to create a subslot inventory template.

## Inventory template for subslot



After you submit the subslot inventory template, it appears on the **Related Templates** tab for the interface card.

## Interface card template with related subslot



## What's next

Next, add a network interface to an interface card template. To learn more, see [Adding a network interface template to an interface card template](#).

## Related topics

[Creating inventory template for network asset instantiation](#)

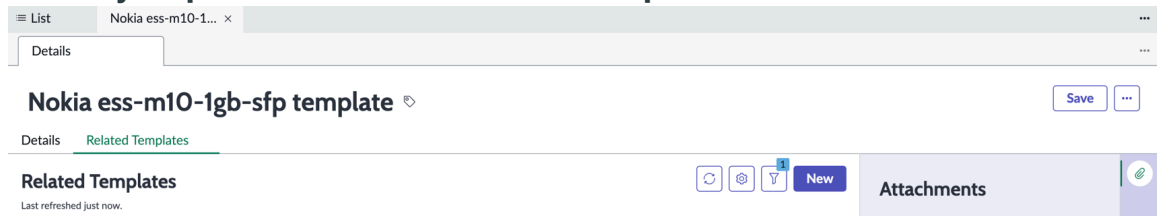
## Adding a network interface template to an interface card template

If the interface card supports network interfaces directly to it, create an interface template relationship between the two interfaces in the Network Inventory Workspace Lists view.

## Procedure

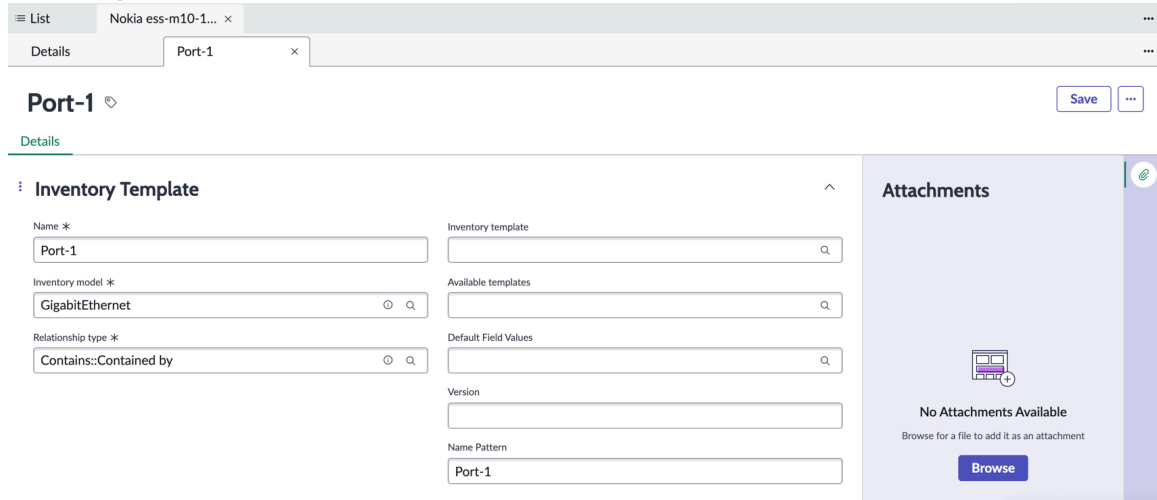
In the Interface template, in the **Related Templates** tab, click **New** to create an interface card template.

## Inventory template for interface card - related templates



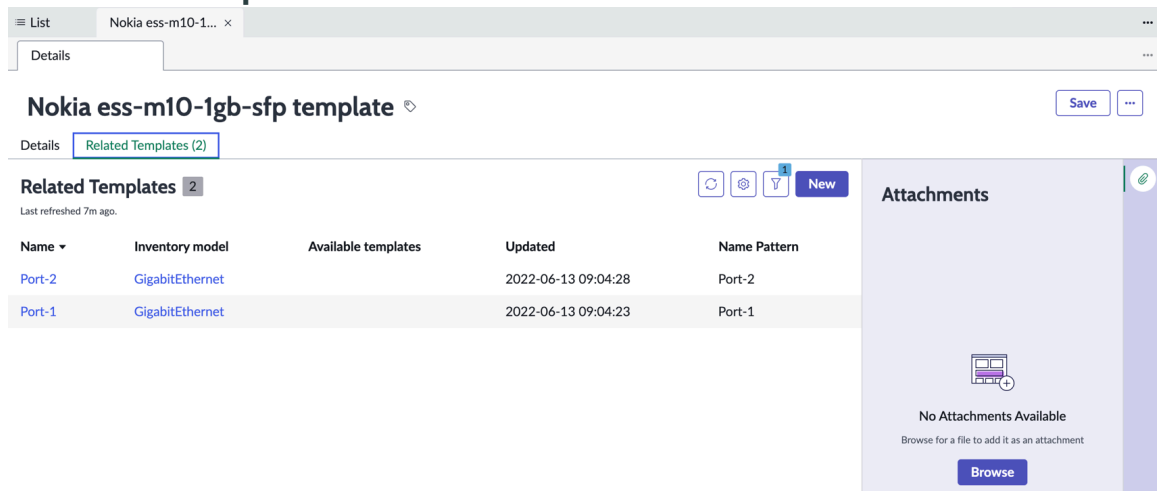
In the Inventory Templates form, create an inventory template for the interface card in the Telecommunications Network Inventory application.

## Inventory template for network interface



When you submit the inventory template, the relationship appears in the **Related Templates** tab for the interface card.

## Interface card template with related interface cards



## What's next

Next, add an interface card to subslots. To learn more, see [Adding an interface card template to the subslot templates.](#)

## Related topics

[Creating inventory template for network asset instantiation](#)

## Adding an interface card template to the subslot templates

Add an interface card to the subslots that are associated with a piece of equipment in the Network Inventory Workspace Lists view.

### Procedure

You perform this task in the same manner as you did for the Adding the related interface cards to the equipment template procedure. To learn more about this earlier procedure, see [Adding a network interface to the equipment template](#).

The following example shows an interface card model that is assigned to a subslot.

**Interface cards assigned to a subslot**

sub slot-1

Details Related Templates (1)

**Related Templates** 1

Last refreshed just now.

Name	Inventory model	Available templates	Updated	Name Pattern
<a href="#">Nokia ess-m10-1gb-sfp slot addition</a>	Nokia ess-m10-1gb-sfp		2022-06-01 04:25:50	Nokia ess-m10-1

**Attachments**

No Attachments Available  
Browse for a file to add it as an attachment

[Browse](#)

## Adding more subslots to child cards

Interface card templates that you add to subslots to are referred to as child and daughter cards.

- An interface card template that goes inside these subslots are referred to as a child card.
- A child card can slot have subslots, and an interface card template that goes inside the subslot of a child card is referred to as a daughter card.

### What's next

Next, add a network interface to a child or daughter card. To learn more, see [Adding a network interface template to a child or daughter card template](#).

### Related topics

[Creating inventory template for network asset instantiation](#)

## Adding a network interface template to a child or daughter card template

As a last step, you can optionally add a network interface template to a child and daughter card template in the Network Inventory Workspace Lists view.

### Procedure

The following example shows a network interface template that was added to a child or daughter card.

## Inventory Template - Network Interface Card

**Nokia ess-m10-1gb-sfp template** Save

Details [Related Templates \(2\)](#)

**Related Templates** 2 New

Last refreshed just now.

Name	Inventory model	Available templates	Updated	Name Pattern
Port-2	GigabitEthernet		2022-06-13 09:04:28	Port-2
Port-1	GigabitEthernet		2022-06-13 09:04:23	Port-1

**Attachments**

No Attachments Available  
Browse for a file to add it as an attachment

Browse

**Note:** Not all inventory templates have a relationship with a network interface template. Some equipment inventory templates only have a single network interface relationship, while some interface card templates don't have any relationship to slots as a parent. However, an equipment and interface card template must have those many slots or interfaces defined as per their model relationship.

### What's next

You're done with creating inventory template relationships for this piece of equipment. To create another inventory template for another piece of equipment, do the following actions:

1. Create a default template for use in that inventory template relationship sequence.
2. Proceed to the Creating an inventory template for the equipment model topic, and repeat the entire process again. To learn more, see [Creating an inventory template for the equipment model](#).

### Related topics

[Creating inventory template for network asset instantiation](#)

### Creating an inventory template for cable models

Create an inventory template for the cable models in the Telecommunications Network Inventory application. You can use this template to instantiate a cable record and related stand records.

### Use case

The following example shows an inventory template for a cable model.

#### Inventory template for the card model

**4 Strand Optical Fiber Cable Template** Export Hierarchy Save

Details [Related Templates \(4\)](#)

**Inventory Template**

Name \*  
4 Strand Optical Fiber Cable Template

Inventory model \*  
Optical Fiber Cable OP\_FC

Default Field Values

Version

Slot Span

After saving the inventory record, it creates the related strand templates depending on the count mentioned in the network model relationship.

### Related strand templates of a cable template

Name	Inventory model	Available templates	Updated	Name Pattern
Strand-000	Optical Fiber Strand OP_FS		2024-04-22 09:10:18	*Strand-+position
Strand-003	Optical Fiber Strand OP_FS		2024-04-22 09:10:18	*Strand-+position
Strand-001	Optical Fiber Strand OP_FS		2024-04-22 09:10:18	*Strand-+position
Strand-002	Optical Fiber Strand OP_FS		2024-04-22 09:10:18	*Strand-+position

The default naming pattern of a strand record is "Strand-+position". You can edit the **Name Pattern** field.

### Details of a strand template

**Strand-000**

**Inventory Template**

Name: Strand-000

Inventory model: Optical Fiber Strand OP\_FS

Relationship type: Contains:Contained by

Parent: 4 Strand Optical Fiber Cable Template

Default Field Values: --

Slot Span:

### What's next

Use a cable template to instantiate cable and strand records using design and assign. To learn more, see [Create a cable record by using design and assign](#).

### Related topics

- [Create a cable model](#)
- [Network inventory templates](#)
- [Modeling your Telecommunications Network Inventory workflow](#)

### Creating an inventory template for a logical composite

Create an inventory template for the logical composite in the Telecommunications Network Inventory application. You can use this template to instantiate a logical composite record and its related equipment and rack records.

### Use case

The following example shows an inventory template for a logical composite.

## Inventory template for a logical composite

Create New Inventory Template

Save

Details

### Inventory Template

Name *	Leaf template	Default field values	
Inventory model *	3Com X Leaf	Version	

The inventory model has inventory relationships such as **Multi Chassis to Equipment** and **Multi Chassis to Rack** attached to it.

## Example of the network relationship

Create New Network Model Relationships

Save

Details

### Network Model Relationships

Name	3Com X Leaf to 7450	Parent product model *	3Com X Leaf
Relationship type *	Multi Chassis to Equipment	Child product model *	Nokia 7450 ESS-1
Count		Is Extensible	<input type="checkbox"/>

After saving the inventory template, it creates the related equipment and rack templates depending on the count mentioned in the network model relationship.

## Related templates of a logical composite template

Demo x leaf template

Details Related Templates (3)

Related Templates 3

Last refreshed just now

Name	Inventory model	Available templates	Updated	Name Pattern
Equipment-000	Nokia 7450 ESS-1		2024-10-28 08:04:37	"Equipment-"+position
Equipment-001	Nokia 7450 ESS-1		2024-10-28 08:04:37	"Equipment-"+position
Equipment Rack-000	Demo_Rack_Model		2024-10-28 08:04:38	"Equipment Rack-"+position

## Details of a logical composite related template

Equipment-000

Details Related Templates

### Inventory Template

Name *	Equipment-000	Inventory template	7450 ESS-1 Template
Inventory model *	Nokia 7450 ESS-1	Parent	leaf template
Relationship type *	Contains::Contained by	Available templates	
		Default field values	
		Slot Span	

The default naming patterns of slot, subslot, and port records that are created under the equipment are as follows:

**Naming pattern**

Inventory record	Naming pattern
Slot	"slot-"+"chassis_position+"/"+"position"
Subslot	"subslot-"+"chassis_position +"/"+"equipment_slot_position+"/"+"position"
Port	"port-"+chassis_position +"/"+"equipment_slot_position +"/"+"parent_slot_position+"/"+"position"

You can edit the **Name Pattern** field.

**What's next**

Use a this template to instantiate logical composites and related equipment and rack records using design and assign. To learn more, see [Create an equipment record by using design and assign](#).

**Related topics**

- [Define a network model relationship](#)
- [Create an equipment record by using design and assign](#)
- [Equipment extension classes](#)

**Import Models and Templates**

Import models and templates to ensure consistency, reusability and reduce errors. You can import pre-defined template excels to streamline the tasks using the Telecommunications Network Inventory application.

**Import a model**

Create an import model request to import your collection of models, and streamline the workflow using the Telecommunications Network Inventory application.


**Before you begin**

Role required: sn\_ni\_core.telco\_inventory\_catalog\_manager

**About this task**

After you create an import template request, a detailed summary is generated that categorizes the processed records, such as total records, skipped, inserted, ignored, updated, and failed records.

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Import > Imports**.
3. Select **New**.
4. On the Select an Import File Type window, select **Import Models (xls)** from the list.
5. On the **Details** tab, fill in the general information.

The following table lists the fields that are unique to the import model request.

**Import model request**

Field	Description
Name	Identification of the import model.
Description	Short description of the import model.
File	Select <b>Attach File</b> to attach the import model file.

**Note:**

- Models import is only for **Equipment Model, Equipment Holder Model, Card Model, and Interface Model.**
- Import doesn't support images.

**6. Optional:** Download the demo data and model template by selecting **Create Excel Template.**

- The excel template is created based on the Import model template [sn\_ni\_adv\_import\_model\_template] table. An admin can customize the template and update it as required.
- The following relationship types are supported for import models.
  - Equipment to slot
  - Slot to card
  - Equipment to network interface
  - Card to network interface
  - Rack/cabinet to rack/cabinet slot
  - Rack/cabinet slot to equipment

**7. Select Import.**

- During the data import procedure:
  - Integration Commons for CMDB: The plugin is automatically activated and by default. To learn more, see [Integration Commons for CMDB](#).
  - Normalization Data Service Client (Optional): If installed and configured, the following normalization rules are applied.
    - Removes special characters from the **Manufacturer** name.
    - The new value is replaced if it matches with five characters of the existing value.
    - Downloads standard and variant company names.
    - Replaces company names with their standard equivalents. To learn more, see [Normalization data services](#). To customize the normalization rules, see [Normalized company names table](#).
- The generation of a record triggers its automatic addition to the **Import Results**. From this tab, you can see the import status and can select the generated model.
- A dedicated inventory template is generated for every rack/cabinet equipment holders, equipment models, and card models. Moreover, the related templates are generated based on the defined model relationship.

## Result

The **Import Results** tab appears next to the **Details** tab where you can view, add, update, and delete the import set row.

## What to do next

- Redirect to the generated model from **Import Results** tab.
- Delete a record. To learn more, see [Delete a record](#).

## Import templates

Create an import template request to import your inventory templates, enforce data formatting, and streamline the process using the Telecommunications Network Inventory application.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager, and sn\_ni\_core.inventory\_template\_manager

### About this task

After you create an import template request, a detailed summary is generated that categorizes the processed records, such as total records, skipped, inserted, ignored, updated, and failed records.

## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Import > Imports**.
3. Select **New**.
4. On the Select an Import File Type window, select **Import Templates (xls)** from the list.
5. On the **Details** tab, fill in the general information.  
The following table lists the fields that are unique to the import template request.

### Import template request

Field	Description
Name	Identification of the import template.
Description	Short description of the import template.
File	Select <b>Attach File</b> to attach the import inventory template file.

**6. Optional:** Download the demo data and the template by selecting **Create Excel Template**. The template is created based on the Import template template [sn\_ni\_adv\_import\_template\_template] table. You can customize the template and update it as required.

**7. Select Import.**

- The generation of a record triggers its automatic addition to the **Import Results**. From this tab, you can see the import status and can select the generated inventory template.
- The related templates are generated only if the model relationship is defined, such as, for rack or equipment or card inventory template, related templates of slots are generated.

### Result

The **Import Results** tab appears next to the Details tab where you can view, add, update, and delete the import set row.

### What to do next

- Redirect to the generated inventory template from the **Import Results** tab.
- Delete a record. To learn more, see [Delete a record](#).

## Import models and templates in JSON format

Create an import request to import your collection of models and templates in JSON format, and streamline the workflow using the Telecommunications Network Inventory application.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin

### About this task

After you create an import template request, a detailed summary is generated that categorizes the processed records, such as total records, skipped, inserted, ignored, updated, and failed records.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Import > Imports**.
3. Select **New**.
4. On the Select an Import File Type window, select **Import Models and Templates (JSON)** from the list.
5. On the **Details** tab, fill in the general information.  
The following table lists the fields that are unique to the import model request.

### Import model request

Field	Description
Name	Identification of the import model or template.
Description	Short description of the import models or templates.
File	<p>Select <b>Attach File</b> to attach the import model file in JSON format.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>Models import is only for <b>Equipment Model, Equipment Holder Model, Card Model, and Interface Model</b>.</li> <li>Import doesn't support images.</li> </ul>

**6. Optional:** Download the demo data and model template by selecting **Create Excel Template**.

#### 7. Select **Import**.

- During the data import procedure:
  - Integration Commons for CMDB: The plugin is automatically activated and by default. To learn more, see [Integration Commons for CMDB](#).
  - Normalization Data Service Client (Optional): If installed and configured, the following normalization rules are applied.
    - Removes special characters from the **Manufacturer** name.
    - The new value is replaced if it matches with five characters of the existing value.
    - Downloads standard and variant company names.
    - Replaces company names with their standard equivalents. To learn more, see [Normalization data services](#). To customize the normalization rules, see [Normalized company names table](#).
- The generation of a record triggers its automatic addition to the **Import Results**. From this tab, you can see the import status and can select the generated model.
- A dedicated inventory template is generated for every rack/cabinet equipment holders, equipment models, and card models. Moreover, the related templates are generated based on the defined model relationship.


## Export hierarchy of models and templates

Export a hierarchy of models, inventory templates, and all related records efficiently using the application.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin


### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to any model or inventory template.
3. Select a desired record.
4. Export all related records of the selected model or inventory template by selecting **Export Hierarchy**.

You can also select up to five models or templates and select the **Export Hierarchy** from the list view.

A list of all related records of the selected model or inventory template is displayed.

5. Select a related record link.

6. Select  > **Export**.

7. On the Export window, select the desired file type to export the data.

You can export the file in the following formats:

- Excel
- CSV
- JSON
- PDF

8. On the Export window, select the desired delivery type to export the data

You can select the following formats:

- Download
- Email

9. Select **Export**.

When exporting a model or template with parent-child relationships, only the parent and its children are included. Siblings aren't be exported.

## Result

The selected model or inventory template with all related records is downloaded in the selected format.

## Instantiating your network inventory by using design and assign

By instantiating your network inventory in the Telecommunications Network Inventory application, you can generate and validate your inventory records at the site level. You can also generate your individual network instances from your defined inventory templates and models and then verify that they're properly configured.

### Design and assign overview

You can instantiate a network inventory by using the design and assign function by doing the following tasks:

1. Create a change request by using the change model.

A change request records the details about the change, such as the reason of the change in any network, priority, risk, type of change, and change category. By using a change request, you can change any existing network workflow. You can also expand the application capabilities, request new services, modify network structures, and much more. To learn more, see [Create a change request from Network Inventory Workspace](#).

2. Execute a change task.

The list of tasks are created from a change-triggered workflow or you can create a change task manually. The change tasks help you to track and manage the various tasks required to implement the requested changes. By using a list of change tasks, you can assign a task to an inventory agent who can then execute the actions and create a configuration item. At the same time, other agents can work on their assigned change tasks. After all tasks are completed and closed by the agents, the change request can also be closed with comments. To learn more, see [Create and execute a change task in Telecommunications Network Inventory](#).

## Using a record producer in the design and assign function

If a record producer form is assigned to the selected change model, based on the provided input, a change request is automatically generated. If a record producer form isn't assigned, you can assign a record producer. To learn more, see [Assign a record producer form to a change model](#).

The record producers capture the data that you must enter to perform the inventory allocation task. By mapping a record producer form, you can do the following tasks:

- Pass third-party application parameters to the Telecommunications Network Inventory application. The Order Management for Telecommunications and Media (OMT) integration is an example. After you assign a record producer form to the change model, the assigned form appears when you select that change model. When you complete the form, the details are filled in the change request form, and the change tasks are created automatically. To learn more, see [Assign a record producer form to a change model](#).
- Change the type of change request. The change task form includes a **Request type** field that describes the type of change request. Based on your selection, a form appears on the **Task Attributes** tab. By assigning a record producer form to the request type field of the change task, you can determine which form appears when you select a type. Based on the selected **Request type** field, a form appears under the **Task Attributes** tab. After filling out the fields in the form, the change request form updates. To learn more, see [Assign a record producer form for a request type of a change task](#).

## Create a change request from Network Inventory Workspace

Create, review, update, or close a change request for a change model from the network inventory workspace of the Telecommunications Network Inventory application. You can also analyze the instantiation details of the network instance.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent, sn\_ni\_core.inventory\_template\_manager, sn\_ni\_core.telco\_inventory\_catalog\_manager

### About this task

You can create, review, update, or close a change request task in the Telecommunications Network Inventory application.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () and then go to **Changes > All**.
3. **Optional:** View the list of your assigned change tasks by selecting **Assigned to me**.

**Note:** The list view of **Changes** displays the list of all change requests, regardless of the domain. Add a filter to see only the telecommunications network inventory (TNI)-related change requests.

4. Select **New**.
5. In the search field, use the filter to select any one of the following change models that you want to create a change request for:
  - Add card
  - Create Inventory Equipment
  - Create Logical Connection

- Create Physical Connection
- Create Rack/Cabinet
- Add equipment to Rack/Cabinet
- Remove Equipment/Shelf from Rack/Cabinet
- IP Address Allocation
- Phone Number Allocation

**Note:** For design assign link aggregation group and GPON broadband service, see [Create a Link Aggregation Group using design and assign function](#) and [Design your GPON Broadband Service](#).

**6. Select Next.**

A record producer or a change request form is displayed depending on the decision table entry. To learn more, see [Assign a record producer form to a change model](#).

**7. Select Save.**

A change request is created and related tabs appear. To learn more, see [Change request related tabs](#).

**8. On the Overview tab, do one or more of the following actions:**

- View or update a summary of this change request.
- Add scopes.

To learn more, see [Scopes](#).

- Assign this change request to a group or a person.

**Note:** To assign this change request, select **Assign > fill in the assignment group and assigned to > Save**.

- Set a schedule for this change request. To learn more, see [Schedules](#).
- Calculate the risks for this change request.

When you select **Calculate Risk**, it analyzes an update in the **Risk** field on the **Details** tab.

- View and create the change tasks by selecting **New**.

To learn more, see [Create and execute a change task in Telecommunications Network Inventory](#).

**9. On the Details tab, fill in the fields.**

For a description of the field values, see [Change request and change task forms](#).

**10. Select Save.**

A change task is created and based on the details provided. The other related tabs are also updated, such as the Affected CIs, and the Impacted services/CIs.

**11. Optional:** Select a tab to see the impact that it has on the change request.

**What to do next**

Create, review, update, or close the change tasks.

For more information, see [Create and execute a change task in Telecommunications Network Inventory](#).


## Create a Link Aggregation Group using design and assign function

Design and assign a Link Aggregation Group (LAG) with the creation of Ethernet connections in the Telecommunications Network Inventory application. By creating a LAG connection, you can fulfill an order request from the customer.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Changes > All**.
3. Select the **New** button.
4. Select **Design assign link aggregation group**.
5. Select **Next**.
6. On the Provision LAG form, fill in the fields.  
To learn more about the fields, see [Provision LAG form](#).
7. Select **Submit**.  
A new change request is created and the Change TNI LAG Template workflow is triggered. Three change tasks have been created.
8. Expand the change task section on the **Overview** tab or select the **Change Tasks** tab.
  - Note:** To learn more about the **Overview** tab, see [Create a change request from Network Inventory Workspace](#).

To create change tasks, see [Create and execute a change task in Telecommunications Network Inventory](#).
9. Open a task.
10. On the **Details** tab, on the change task form, fill in the fields.  
For a description of the field values, see the Change task form in [Change request and change task forms](#).
11. Create, review, update, or delete an affected configuration item by selecting the **Affected CIs** related tab.
12. Select **Save**.

### What to do next

Add or remove a member to LAG using [Add or remove a member to Link Aggregation](#).


## Add or remove a member to Link Aggregation

Create a change request to add or remove a member to the design assign link aggregation change request by using the Telecommunications Network Inventory application.

### Before you begin

Role required: sn\_ni\_core.inventory\_agent

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Changes > All**.

3. Select the **New** button.
4. Select **Add/Remove member to Link Aggregation**.
5. Select **Next**.
6. On the Add/Remove member to Link Aggregation form, fill in the fields.  
To learn more about the fields, see [Add or Remove member to Link Aggregation form](#).
7. Select **Submit**.
8. **Optional:** Select the **Affected CIs** tab.
9. **Optional:** Select the revised CI having V1 as the suffix.  
The revised CI is added under the **Affected CIs** tab only if the **Create revision** check box is selected.
10. **Optional:** Modify the fields as required.
  - Adding a new member interface automatically creates a new ENET with a corresponding logical interface.
  - Adding an interface that belongs to an existing ENET connection, the system automatically links it to the existing ENET connection instead of creating an ENET.
11. **Optional:** Create a change task for operationalization.  
To learn more, see [Operationalize a configuration item](#).

## Design your GPON Broadband Service

Design and assign your Gigabyte Passive Optical Network (GPON) broadband service in the Telecommunications Network Inventory application. The GPON Broadband Service change model enables you to create multiple change tasks so that you can fulfill an order request for a GPON broadband service.

### Before you begin

Before you can establish a GPON Broadband Service change request and complete the related change tasks, your inventory catalog and template managers must do the following network configuration setup:

1. Navigate to **Telecom Network Inventory > Inventory Models**, create your inventory models, and define their relationships.

To learn more, see [Manually creating and reviewing your network asset instances](#).


2. Navigate to **Telecom Network Inventory > Network Inventory Templates**, create the inventory templates for your equipment, and establish the template relationships.

To learn more, see [Creating inventory template for network asset instantiation](#).

Install the Telecommunications Network Inventory Advanced and Core demo data.

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Changes > All**.
3. Select the **New** button.
4. Select **GPON Broadband Service > Next**.
5. On the record producer form, you can update the fields.

The fields of the record producer form are auto-populated. This demonstration displays how to create configuration items (CIs) to show the design and assign of a GPON broadband service. You can change the flow as needed. To learn more about the fields, see [Change request and change task forms](#).

**6. Select Save.**

The Change (Design & Assign) flow is triggered and a change request is created. Depending on the given inputs, change tasks are automatically created and other related tabs appear. To learn more, see [Change request related tabs](#).

**7. Open and review each change task record.**

On the Task Attributes form, fill in the fields. For a description of the field values, see [Change request and change task forms](#).

**8. Select Submit.**

The **Details** tab is updated.

**9. On the Affected CIs related tab, see all the configuration items that are impacted due to this change task.**

**10. Select Save.**

## Modify logical connection endpoints model


Modify logical connection endpoints and its details using design and assign function in the Telecommunications Network Inventory application. By making changes in the logical connection endpoints, you can fulfill an order request from the customer.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### Procedure

**1. Navigate to Workspaces > Network Inventory Workspace.**

**2. Select the list icon () , and then go to Changes > All.**

**3. Select the New button.**

**4. Select Modify Logical Connection endpoints > Next.**

**5. On the form, fill in the fields.**

To learn more, see [Change request and change task forms](#).

**6. Select Submit.**

A new change request is created. Furthermore, a change task is automatically created and other related tabs appear. To learn more, see [Change request related tabs](#)

**7. Select the Change Tasks tab.**

**8. Open and review the change task record.**

**9. On the Logical connection modification request form, update the logical connection endpoints and details, as required.**

To learn more about the fields, see [Logical connection modification request form](#).

**10. Select Submit.**

The **Details** tab is updated.

**11. On the Affected CIs related tab, see all the configuration items that are impacted due to this change task.**

**12. Select Save.**


## Modify physical connection endpoints

Modify physical connection endpoints and its details using design and assign function in the Telecommunications Network Inventory application. By making changes in the physical connection endpoints, you can fulfill an order request from the customer.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Changes > All**.
3. Select the **New** button.
4. Select **Modify Physical Connection endpoints > Next**.
5. On the form, fill in the fields.  
To learn more, see [Change request and change task forms](#).
6. Select **Submit**.  
A new change request is created. Further, a change task is automatically created and other related tabs appear. To learn more, see [Change request related tabs](#)
7. Select **Change Tasks** tab.
8. Open and review the change task record.
9. On the Physical connection modification request form, update the physical connection endpoints and details, as required.  
To learn more about the fields, see [Physical connection modification request form](#).
10. Select **Submit**.  
The **Details** tab is updated.
11. On the **Affected CIs** related tab, see all the configuration items that are impacted due to this change task.
12. Select **Save**.

## Create a network topology record by using design and assign

Create a network topology record using the design and assign function in the Telecommunications Network Inventory application. By creating the network topology, you can visualize how the network elements are organized and connected to one another.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

When you instantiate a template, it creates a corresponding configuration item (CI) record in the Network Topology [cmdb\_ci\_network\_topology] table. And the root nodes are stored in the Topology Root Node [cmdb\_network\_topology\_root\_node] table. To learn more about the topology data model, see [Data model for Telecommunications Network Inventory](#).

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Changes > All**.
3. Select the **New** button.

4. Select **Design & Assign topology**.
5. Select **Next**.
6. On the **Details** tab, fill in the fields.  
For a description of the field values, see [Change request and change task forms](#).
7. Select **Save**.  
A change task is created.
8. Open the change task.
9. On the **Task Attribute** tab, fill in the fields.  
To learn more, see [Task attributes in Topology form](#).
10. Select **Submit**.

### Result

The topology and network topology root node records are created.

### What to do next

You can view the topology in the Network Viewer window. To learn more, see [Viewing a network topology](#).

### Related topics

[Create a network topology model](#)


## Add or remove a member to network topology record

Modify a network topology record using the design and assign function in the Telecommunications Network Inventory application. You can add or delete the elements in an existing network topology record and visualize how the network elements are organized and connected to one another.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Changes > All**.
3. Select the **New** button.
4. Select **Add/Remove member to Topology**.
5. Select **Next**.
6. In the **Select topology** field, select the network topology record that you want to modify.  
You can add or delete the following field values:
  - Topology nodes
  - Topology sites
  - Root nodes
  - Topology connections
7. Select **Submit**.

### Result

When modifying a network topology record, the following actions occur:

- When you remove a topology site, all nodes and connections associated with that site within the topology are removed from the relationship.
- When you remove a topology or root node, all connections associated with the node within the topology are removed from the relationship.
- When you remove a topology connection, it's removed from the relationship.
- When a node is removed from the relationship, if it's part of a root node, that entry will also be removed.

**Related topics**

[Visualization of network topology](#)

[Using the network topology](#)

**Create a cable record by using design and assign**

Create a cable record using the design and assign function in the Telecommunications Network Inventory application. By creating the cable and related strand records, you can fulfill an order request for a fiber optical cable record.


**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

**About this task**

When you instantiate a cable template, it creates the corresponding configuration item (CI) records in the Fiber Optical Cable [cmdb\_ci\_fiber\_optical\_cable] and Fiber Strand [cmdb\_ci\_fiber\_strand] tables. To learn more about the cable data model, see [Data model for Telecommunications Network Inventory](#).

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Changes > All**.
3. Select the **New** button.
4. Select **Add cable**.
5. Select **Next**.
6. On the **Details** tab, fill in the fields.  
For a description of the field values, see [Change request and change task forms](#).
7. Select **Save**.  
A change task is created.
8. Open the change task.
9. On the **Task Attributes** tab, fill in the fields.

**Add cable form - Task attributes tab**

Field	Description
A end termination	Network site where this cable is starting from.
Z end termination	Network site where the cable is ending.

Field	Description
Inventory template	Name of the inventory template for the cable model.

## 10. Select **Submit**.

### Result

The cable and related strand records are created.

### Related topics

[Creating an inventory template for cable models](#)

[Create a cable model](#)

## Create an equipment record by using design and assign

Create an equipment record using the design and assign function in the Telecommunications Network Inventory application. By creating the equipment and its related inventory records, you can fulfill an order request for an equipment record.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

When you instantiate an equipment template, it creates the corresponding configuration item (CI) records in the equipment table. To learn more about the equipment tables, see [Equipment extension classes](#).

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. **Optional:** Create a change request to instantiate an equipment record.

- a. Select the list icon () , and then go to **Inventory > All Equipment**.

**Note:** To create an equipments from the rack record, go to **Inventory > Rack** and open the rack record. And then select **Create equipment** from more options menu.

- b. Select **Create equipment**.


- c. Select the inventory template in the **Apply inventory template** field.

- d. On the **Add equipment details** section, fill in the fields.  
For a description of the field values To learn more about the fields, see [Equipment form](#).

- e. Select **Next**.

- f. Confirm the details and select **Create**.

The equipment record is created.

3. Select the list icon () , and then go to **Changes > All**.
4. Select the **New** button.
5. Select **Create Inventory Equipment**.

6. Select **Next**.  
A change request is created.
7. On the **Details** tab, fill in the fields.  
For a description of the field values, see [Change request and change task forms](#).
8. Select **Save**.  
A change task is created.
9. Open the change task.
10. On the **Task Attribute** tab, fill in the fields.  
For a description of the field values, see [Equipment task attribute form](#).
11. Select **Submit**.

### Result

The equipment record is created along with the associated inventory records. These records are generated depending on the model relationship attached with the inventory model.

### Related topics

- [Creating an inventory template for a logical composite](#)
- [Add an equipment or rack to logical composite](#)
- [Remove an equipment or rack from logical composite](#)

## Create and execute a change task in Telecommunications Network Inventory

Create a change task after you create a change request in the Telecommunications Network Inventory application. By creating a change task, you can complete the requested change.

### Before you begin

- 1. Navigate to **Telecom Network Inventory > Inventory Models**, create your inventory models, and define their relationships.

To learn more, see [Manually creating and reviewing your network asset instances](#).

- 2. Navigate to **Telecom Network Inventory > Network Inventory Templates**, create the inventory templates for your equipment, and establish the template relationships.


To learn more, see [Creating inventory template for network asset instantiation](#).

- Role required: sn\_ni\_core.inventory\_template\_manager, sn\_ni\_core.inventory\_admin, sn\_ni\_core.telco\_inventory\_catalog\_manager, sn\_ni\_core.inventory\_agent.

### About this task

Based on the details in the change request form, a change task is created automatically. You can view, create, update, or close the change tasks from the **Overview** tab or from the **Change Tasks** tab of a change request. You can also assign a record producer form to a change task. To learn more, see [Assign a record producer form for a request type of a change task](#).

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Changes > All**.
3. Open your change request.
4. On the **Overview** tab, scroll down and expand the Change task section.

**5. Optional:** Select the **Change Tasks** tab.

**6.** After a change request is created, on the **Overview** tab, scroll down and expand the Change task section.

You can also navigate to the **Overview** tab and initiate the creation of a change task.

**7.** Select **New**.

**8.** Choose a change task type:

- Planning
- Implementation
- Testing
- Review

**9.** Select **Create**.

A change task form that is based on the selected change model is displayed.

**10. Optional:** Select the existing change task.

**11.** On the form, fill in the fields.

To learn more about the fields, see [Change request and change task forms](#).

**i Note:** For the design assign link aggregation group and GPON broadband service, see [Create a Link Aggregation Group using design and assign function](#) and [Design your GPON Broadband Service](#).

**12.** Select **Submit**.

The **Details** tab is updated with the provided details and required modification to the CI is performed. All performed changes are updated in the work notes. To learn more about the fields, see [Change request and change task forms](#).

**i Note:** The removal of equipment or a shelf from a rack also removes all associated CI relationships between the equipment/shelf and the rack, along with the selected CI.

**13.** On the **Affected CIs** related tab, see all the configuration items that are impacted due to this change task.

After creating a rack, navigate to **Configuration item**, or **Affected CIs** to visualize the front view and rear view of a rack.

**14. Optional:** If your change model is a rack, select the **Configuration item** to visualize the rack.

**15.** Select **Save**.

## Add a card to equipment


Add a card to equipment record using design and assign function in the Telecommunications Network Inventory application. By adding a card, you can fulfill an order request for a customer requirement.

### Before you begin

- Make sure that you defined the card record, models, model relationships, templates, and template relationships for your design criteria.
- Role required: sn\_ni\_core.inventory\_agent

## About this task

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () and then go to **Changes > All**.
3. Select the **New** button.
4. Select **Add Card**.
5. Select **Next**.  
A change request is created.
6. On the **Details** tab, fill in the fields.  
For a description of the field values, see [Change request and change task forms](#).
7. Select **Save**.  
A change task is created.
8. On the **Change Task** tab, select the change task.
9. On the **Task Attributes** tab, fill in the fields.  
To learn more, see [Task attributes in Add Card form](#).
10. Select **Submit**.

### Related topics

- [Define the card details](#)
- [Create a card model](#)
- [Define a network model relationship](#)

## Add an equipment or rack to logical composite

Add equipment or rack to a logical composite using design and assign.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

You can add only equipment or rack to a logical composite. The logical composite model must have Multi Chassis to Equipment or Multi Chassis to Rack relationship with the equipment or rack models.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () and then go to **Changes > All**.
3. Select the **New** button.
4. Select **Add Equipment/Rack to Multi Chassis Equipment**.
5. Select **Next**.  
A change request is created.
6. On the **Details** tab, fill in the fields.  
For a description of the field values, see [Change request and change task forms](#).
7. Select **Save**.  
A change task is created.

8. Open the change task.
9. On the **Task Attributes** tab, fill in the fields.

**Add Equipment/Rack to Multi Chassis Equipment form**

Field	Description
Multi Chassis Equipment	Logical composite where you add the equipment or rack.
Entity Type	Type of equipment or rack that you want to add to the logical composite. Select one from the following:  <b>Equipment Rack</b> Select this option to add a rack to the logical composite.  <b>Equipment</b> Select this option to add an equipment to the logical composite.
Rack List	List of racks that you want to add to the logical composite.  <b>Note:</b> This field is available only when you select <b>Equipment Rack</b> as <b>Entity Type</b> .
Equipment List	List of equipment that you want to add to the logical composite.  <b>Note:</b> This field is available only when you select <b>Equipment</b> as <b>Entity Type</b> .

10. Select **Submit**.

**Result**

The equipment or rack record is added to the logical composite record.

**Related topics**

- [Create an equipment record by using design and assign](#)
- [Define a network model relationship](#)


**Remove an equipment or rack from logical composite**

Remove a rack or equipment from a logical composite using design and assign.

**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Changes > All**.
3. Select the **New** button.
4. Select **Remove Equipment/Rack from Multi Chassis Equipment**.
5. Select **Next**.  
A change request is created.

6. On the **Details** tab, fill in the fields.  
For a description of the field values, see [Change request and change task forms](#).
7. Select **Save**.  
A change task is created.
8. Open the change task.
9. On the **Task Attributes** tab, fill in the fields.

**Strand form**

Field	Description
Multi Chassis Equipment	Logical composite from where you remove the equipment or rack.
Equipment / Rack	Equipment or rack that you want to remove from logical composite.
Attachments	Select <b>Add</b> to add any attachments.

10. Select **Submit**.

**Result**

The equipment or rack record is removed from the logical composite record.

**Related topics**

- [Create an equipment record by using design and assign](#)
- [Define a network model relationship](#)


**Add an equipment to rack or cabinet**

Add equipment to a rack or cabinet using design and assign function in the Telecommunications Network Inventory application. By adding the equipment to rack, you can fulfill a customer order request.

**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Changes > All**.
3. Select the **New** button.
4. Select **Add Equipment to Rack/Cabinet**.
5. Select **Next**.  
A change request is created.
6. On the **Details** tab, fill in the fields.  
For a description of the field values, see [Change request and change task forms](#).
7. Select **Save**.  
A change task is created.
8. Open the change task.
9. On the **Task Attributes** tab, fill in the fields.  
To learn more, see [Task attributes in Add Equipment to Rack or Cabinet form](#).
10. Select **Submit**.

**Result**

The equipment record is added in the Rack view. You can edit the rack. The relationship or affected CIs are also updated with the datacenter or site information.


**Remove an equipment or shelf from a rack or cabinet**

Remove an equipment or shelf from a rack or cabinet using design and assign function in the Telecommunications Network Inventory application. By removing the equipment from rack, you can fulfill a customer order request.

**Before you begin**

Role required: sn\_ni\_core.inventory\_agent

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Changes > All**.
3. Select the **New** button.
4. Select **Remove Equipment/Shelf from Rack/Cabinet**.
5. Select **Next**.  
A change request is created.
6. On the **Details** tab, fill in the fields.  
For a description of the field values, see [Change request and change task forms](#).
7. Select **Save**.  
A change task is created.
8. Open the change task.
9. On the **Task Attributes** tab, fill in the fields.

**Remove Equipment or Shelf from Rack/Cabinet form - Task Attributes tab**

Field	Description
Network Site	Network site or data center that contains the equipment or shelf that you want to remove.  <b>Note:</b> The list only displays the sites that have a rack in it.
Rack/Cabinet	Rack or cabinet name for the equipment that you want to remove.
Equipment/ Shelf	Equipment or shelf that you want to remove from the selected rack or cabinet.

10. Select **Submit**.

**Create logical connection record using design and assign**

Create a logical connection record using the design and assign function in the Telecommunications Network Inventory application. By creating the logical connection and its related inventory records, you can fulfill an order request for an equipment record.


**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

When you instantiate a logical connection template, it creates the corresponding configuration item (CI) records in the Logical Connection [cmdb\_ci\_ni\_logical\_path] table. To learn more, see [Data model for Telecommunications Network Inventory](#).

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Changes > All**.
3. Select the **New** button.
4. Select **Create Logical Connection**.
5. Select **Next**.  
A change request is created.
6. On the **Details** tab, fill in the fields.  
For a description of the field values, see [Change request and change task forms](#).
7. Select **Save**.  
A change task is created.
8. Open the change task.
9. On the **Task Attributes** tab, fill in the fields.  
To learn more, see [Task attributes in Create logical connection form](#).
10. Select **Submit**.

### Create physical connection using design and assign

Create an physical connection record using the design and assign function in the Telecommunications Network Inventory application. By creating the physical connection and its related inventory records, you can fulfill an order request for an equipment record.


### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### About this task

When you create a physical connection, it creates the corresponding configuration item (CI) records in the Physical Connection [cmdb\_ci\_ni\_physical\_link] table. To learn more, see [Data model for Telecommunications Network Inventory](#).

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Changes > All**.
3. Select the **New** button.
4. Select **Create Physical Connection**.
5. Select **Next**.  
A change request is created.
6. On the **Details** tab, fill in the fields.  
For a description of the field values, see [Change request and change task forms](#).
7. Select **Save**.  
A change task is created.
8. Open the change task.

9. On the **Task Attributes** tab, fill in the fields.

To learn more, see [Task attributes in Create physical connection form](#).

10. Select **Submit**.

## Revise a configuration item using design and assign


Revise a CI (Configuration Item) of the connection to update a CI in the Telecommunications Network Inventory application.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.

2. Select the list icon () , and then go to **Changes > All**.

3. Select the desired change request.

To create a change request, see [Create a change request from Network Inventory Workspace](#).

4. Select the **Change Tasks** tab.

5. Select **New**.

6. Choose a change task type:

- Planning
- Implementation
- Testing
- Review

7. Select **Create**.

A change task form based on the selected change model is displayed.

8. Select **Revise CI** in the **Request type** field and fill other fields.

To learn more about other fields, see [Change request and change task forms](#).

9. Select **Save**.

10. On the **Task Attributes** form, select a CI from the list of **CI to be revised** field.

11. Select **Submit**.

A record is created in the Inventory Revision Histories table. The selected CI and related tables are cloned and the cloned CI name is populated in the **Configuration item** field. Also, both the original and cloned CIs are added under the **Affected CIs** tab.

**Note:**

- To customize the cloning process and the related tables that must be cloned, see `#unique_92`.
- The revision data is automatically archived to the revision history archival rule (Archive Rules → Inventory Revision History Archival Rule[`sn_ni_core_inventory_revision_history`]) table after a period of one year of the CI creation. Subsequently, all data within the archival table is permanently deleted (`ar_sn_ni_core_inventory_revision_history`) after an additional year. Customization can be achieved by modifying the relevant tables.
- The revision history currently captures only Configuration Item (CI) attributes, related data, and CI relationships. To include additional data from other tables, logical connection (`audit_reference_tableinfo_logical_connection`) and physical connection (`audit_reference_tableinfo_physical_connection`) system properties can be updated. The format for specifying table and column names within these properties is - `table1_name:column1_name, table2_name:column2_name`.

**12. Optional:** Navigate to a change task and select **Validate Revision** to validate both original and revised CI.

- Before operationalization, you can validate to track the changes performed on the cloned CIs. If the data isn't matching with the original CI, the validation fails and a message is displayed that the cloned CI is updated after the cloning.
- To customize the validation process, update the Validate CI Revision action flow. To learn more, see [Customize the Validation of Revision CI](#).
- To skip a field in the validation process, edit (`sn_ni_core.revision_val_ignore_fields_logical_connection`) table for logical connection CIs and (`sn_ni_core.revision_val_ignore_fields_physical_connection`) table for physical connection CIs.

**What to do next**

You can update the cloned CI and operationalize the CIs. To learn more about operationalization, see [Operationalize a configuration item](#).

**Related topics**

[Revision, operationalization, and decommission of a Configuration Item](#)


**Operationalize a configuration item**

Operationalize a Configuration Item so that you can finalize the changes and apply them on the original CI.

**Before you begin**

- Ensure to have a revised CI.
- Role required: `sn_ni_core.inventory_admin`

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () and then go to **Changes > All**.
3. Select the desired change request.  
To create a change request, see [Create a change request from Network Inventory Workspace](#).

4. Select the **Change Tasks** tab.
5. Select **New**.
6. Choose a change task type:
  - Planning
  - Implementation
  - Testing
  - Review
7. Select **Create**.  
A change task form based on the selected change model is displayed.
8. Select **Operationalize CI** in the **Request type** field and fill other fields.  
To learn more about other fields, see [Change request and change task forms](#).
9. Select **Save**.
10. On the **Task Attributes** form, either select a CI from the list of **CI to be operationalized** field or select a change request from the **Change request ID** field.
11. Select **Submit**.  
The **State** of the change task changes to Closed. The work notes are updated with the details of operationalized CIs.

**Note:** On selecting a change request, all the revised Configuration Items (CIs) listed under the **Affected CIs** tab are operationalized and the work notes are updated accordingly.

## Viewing your network inventory configuration items with CMDB Workspace

You can use CMDB Workspace to search and explore the CMDB, examine its health and recent activity, and access various dashboards and tools to support the tasks in your organization.

### Prerequisites for the CMDB Workspace

- **Plugins:** You must activate the following plugins before you can use CMDB Workspace:
  - CMDB CSDM Support (com.snc.cmdm.csdm)
  - CMDB Activation (com.snc.cmdm.csdm.activation)
- **Roles:** To access CMDB Workspace, you must, at a minimum, have one of the following roles:
  - sn\_cmdm\_admin
  - sn\_cmdm\_editor
  - sn\_cmdm\_user

**Note:** In CMDB Workspace, some dashboards and list views require specific roles in addition to the key admin, editor, or user roles. Depending on which role is assigned to you, you might only have access to some of the features that are available in the CMDB Workspace

- **Features:** CMDB Workspace provides access to a wide range of applications and features. However, to provide meaningful reports, overviews, and trends, you must set up and configure some of those features so that CMDB Workspace can use the data that is generated.

## Accessing CMDB Workspace

After you install the app from the ServiceNow Store, navigate to **Network Inventory > CMDB Workspace**.

### CI searches

Specify up to five conditions to search for the configuration items (network asset CI) of a class. These conditions are based on the attributes for a selected class. In the results list, click a network asset CI to see the details about the network asset CI, including a time line, health overview, and attributes for the network asset CI.

For more information, see the CI Details page section.

### CI overview

Get an overview of the network asset CIs in CMDB that are grouped by common class categories as *Applications*, *Cloud*, and *Server*.

Select a class group to see all the classes that are included in the group, and then select the class whose network asset CIs you want to see.

In the Results list, you can click a network asset CI to see an overview page with a time line, health overview, and attributes for the network asset CI. For more information, see the CI Details page section.

### CMDB health

Get the metrics for the network asset CIs and see the health of the relationships. Click the percentage numbers to navigate to the CMDB Health and CMDB Relationship Health dashboards where you can see the following information:

- The overall percentage number represents the health of all network asset CIs as an aggregation of all three key performance indicators (KPIs), which are correctness, compliance, and completeness. Each network asset CI contains submetrics.
- The relationship percentage number represents the overall health of the relationships as an aggregation of the orphan, duplicate, and stale relationship KPIs.

### 7-day activity trends

CMDB Workspace includes the following charts that provide an overview of the activity in the CMDB for the last seven days:

#### CI Activity in Last 7 Days

See a chart that shows the metrics that are related to the network asset CIs. For example, you can see the metrics for the number of new network asset CIs, updated network asset CIs, and duplicate network asset CIs.

#### Application Service Activity in 7 Days

See a chart that shows the metrics that are related to the application services. For example, you can see the total number of Application Services, new Application Services, updated Application Services, and the number of Application Services with outages.

## CIs managed by me

See a list of network asset CIs that you manage, grouped by the network asset CI class. Network asset CIs appear in this list if you are a member of the group that is assigned to the network asset CI's *Managed by Group* attribute.

## Quick links

See a list of the links to the CMDB dashboards and tools:

**i Note:** Links are conditionally available based on the installation of applications, active plugins, and your assigned role. If a link doesn't appear, make sure that all the requirements for the link are met.

- **CI Class Manager:** You can view, create, or edit the basic class definitions and class settings for Identification and Reconciliation (IRE) and CMDB Health.
- **CMDB Health Dashboard:** You can view the health reports and configure the health KPIs and metrics that the network asset CIs are evaluated by in the CMDB Health dashboards.

## CI details page

When you drill down to a network asset CI record, you can see the following details for the network asset CI:

- **CI Timeline - Last 14 days:** A time line of the network asset CI activities, such as change requests.
- **CI Health:** A summary of the health of the network asset CI that shows the related items such as critical incidents, incomplete attributes, and stale relationships for the network asset CI.
- **Details:** Network asset CI attributes, grouped into categories such as Key attributes, Asset attributes, Discovery attributes, Operational attributes, and More attributes.

**i Note:** You can configure the appearance of the attributes by using the *CMDB - Workspace* form view for a network asset CI class.

- **Activity:** An activity stream to track what's changed in the network asset CI record.
- **Infrastructure Relationships:** A list of the infrastructure network asset CIs that are related to the network asset CI.
- **Service Relationships:** A list of business applications, service offerings, and application services that the network asset CI may be related to.

On the CI details page, you can do the following actions:

- To open Dependency Views and to get a graphic infrastructure view of the network asset CI record, click **Open Dependency View**.
- To open the Multisource Data Report Builder and track how the CMDB is populated by the various discovery sources at the network asset CI attribute level of the network asset CI record, click **View Multisource Data**.
- To save your changes to the attributes for the network asset CI record, click **Save**.

## CI error message

The following table helps you to understand the CI error message that appears during the CI deletion and the solution that you can use to resolve the error:

**Error message**

Error	Resolution
<p><b>The current operation ended in state: ERROR. Detail: Operation(Delete All TNI CI Hierarchy./end) failed with error: Error: The CI "XXXX/XXXX/Copper Link/000118" cannot be deleted since there is a related CI "XXXX/XXXX/PON Access Path/100Mbps/000030" (sys_script_include.989afcd1cb330110202b2c52f8076d7e.script; line 52)</b></p>	<p>Delete the child or related CI (Configuration Item) to delete the parent CI.</p> <ol style="list-style-type: none"> <li>1. Click the related or the child CI under <b>Related Templates</b>.</li> <li>2. Click <b>Delete</b>.</li> </ol> <p>However, an Admin can always customize the deletion action. To learn more, see <a href="#">Customizing deletion action</a>.</p>

**Customizing deletion action**

Customizing deletion action enables you to create your own process of the deletion.

**Before you begin**

Role required: Admin

**Procedure**

1. Navigate to **All > Process Automation > Flow Designer > New > Action**.
2. Fill the **Action Properties** form to create an **Action**.
3. Click **Submit**.
4. Navigate to **Decision Management** → **Decision Builder** to apply the new action.
5. Select **TNI CI Deletion Policy**.
6. Under **Decision table**, update the **Action Type** against the appropriate **CI Type**.

**Using the network diagram**

Use the network diagram in the Telecommunications Network Inventory application to view a hierarchical map of the circuit and its underlying connection elements.

**Related topics**

[Visualization of circuits](#)

**View the details of a network diagram**

View the details of a connection node and visualize the underlying connection elements of a logical connection by using the network diagram in the Telecommunications Network Inventory. You can understand the detailed overview of the logical connection and how the connection elements are connected to each other.

**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent


**About this task**







With the use of a network diagram, you can do the following:

- Drill down into the network diagram to view the underlying elements.
- View the details of a connection node that makes up the network diagram.

- View the details of the revision of a logical connection.
- View the protection paths for a logical connection.

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon (.
3. Go to **Inventory > Logical Connections**.
4. Open a record and then select **View connection**.
5. View the underlying elements or the details of the connection node.  
On the network diagram you can do the following actions:

Option	Details
<p><b>Expand the network diagram and view the underlying elements</b></p>	<p>a. Expand the hierarchy level by selecting the add icon () on the connection node.</p> <p>b. Expand further by selecting the add icon () of the underlying connection nodes.</p> <p><b>Note:</b> When there are underlying connection elements in a logical connection, the connection node appears as a stacked pill shape. After expansion, it transforms into a box shape.</p>
<p><b>View the revision of the logical connection</b></p>	<p>a. Select the clock icon (). The revision of the logical connection is displayed on the <b>Revision view</b> tab</p> <p><b>Note:</b> The clock icon () is displayed on the map only when the logical connection record has a revision.</p> <p>b. Select <b>Current view</b> to view the original logical connection.</p> <p>You can toggle the view between the original logical connection and revision of the logical connection to compare the differences.</p>
<p><b>View the protection path</b></p>	<p>Select the protection path icon () to view the protection paths for the logical connection.</p> <p><b>Note:</b> The protection path icon () is displayed on the map only when the logical connection record has a protection path.</p>

Option	Details
	<p>You can't expand the underlying connection elements of a protection path. To view the details of the protection path, select the protection path node, and then select <b>View Details</b> in the details pane.</p> <p>To learn more about to create a protection path, see <a href="#">Create a protection path</a>.</p>
<p><b>View the details of a connection node</b></p>	<ol style="list-style-type: none"> <li>a. Select the connection node and view the related information in the details pane.</li> <li>b. Redirect to the CI record by selecting <b>View Details</b> in the details pane.</li> </ol>

**Related topics**

[Visualization of circuits](#)

**Download a network diagram**

Download the entire canvas of the network diagram based on your map selection in the Telecommunications Network Inventory application. You can use it as a reference to visualize the circuit.




**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

**About this task**

You can download the entire canvas of a network diagram in the PNG format and save the entire diagram to your local system.

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon (.
3. Go to **Inventory > Logical Connections**.
4. Open a record, and then select **View connection**.
5. Select the add icon () to expand the node and get the desired view.
6. On the map pane, select the download icon (.

**Result**

The image is downloaded in PNG format.

**Related topics**

[Visualization of circuits](#)


**Create a protection path**

Create a protection path for the logical connection in the Telecommunications Network Inventory application. You can use this protection path as an alternative route in case the primary path (logical connection) fails or experiences significant issues.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon ()
3. Go to **Inventory > Logical Connections**.
4. Open a record and then select **View connection**.
5. Select the **Protection path** tab and then select **New**.
6. On the form, fill the following fields.

#### CI Relationship form

Field	Description
Parent	Parent CI where you want to add the protection path.
Type	CI Relationship type. For protection path, the CI relationship type is <b>Redundancy Provided by::Redundancy provided for</b> .
Child	Logical connection record that you want to add as a protection path.

### What to do next

You can view the protection path in the network diagram. To learn more, see [View the details of a network diagram](#).

## Using an attribute pack for a CI record

Use an attribute pack to capture the attributes that you define for a configuration item (CI) record in the Telecommunications Network Inventory application and update the attribute values.


### Use an attribute pack in the CI record

Use an attribute pack to capture the attributes that you define for a configuration item (CI) record in the Telecommunications Network Inventory application.

### Before you begin

Role required: sn\_ni\_core.inventory\_agent

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then open a new inventory class.
3. Select **New**.
4. Select **Add Packs**.
5. Select **Submit**.

### Result

The attribute pack tables are added on the **Packs** tab.

### What to do next

You can update the fields in the pack table that you've added. To learn more, see [Review and update a pack for a CI record](#).

## Review and update a pack for a CI record


Review and update the attributes that you've defined in the pack table for a configuration item (CI) record in the Telecommunications Network Inventory application.

### Before you begin

Add the pack table for the CI record. To learn more, see [Use an attribute pack in the CI record](#).

Role required: sn\_ni\_core.inventory\_agent

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then open the inventory record where you want to update the pack table attributes.
3. On the **Pack** tab, select the pack table that you want to update.
4. Fill in the fields.
5. Select **Save**.

## Using Design and Assign function

Use the Design and Assign function for a network service in the Telecommunications Network Inventory application. The inventory agents can use the playbook to complete the guided tasks to design and assign a network inventory record and its associated Configuration Items (CI) records.

A Design and Assign function includes multiple activities for an agent to fulfill the requirement of a design request. When using a Design and Assign function, agents can:

- View the activities in the playbook.
- Select an activity and perform the work necessary to complete that activity.
- Mark an activity as complete and move to the next activity.
- Complete the activities necessary to design and assign an inventory record.

### Related topics

[Design and assign your network services](#)

## Create a logical connection record using the Design and Assign function

Use the Design and Assign function to create a logical connection in the Telecommunications Network Inventory application. By creating a logical connection, you can fulfill the design request for a network service.

### Before you begin

Define the inventory records, models, model relationships, templates, and template relationships for your design criteria.

Role required: sn\_ni\_core.inventory\_agent, sn\_ni\_core.network\_planning\_manager

### About this task

The Design and Assign home page lists the change requests that are in the Design in progress state. You can either select a change request from the list or create a change request to design a logical connection depending on your requirement. Completion of each activity in the playbook for the Design and Assign function creates a change task for the next activity.

After you complete each activity, the network diagram updates and displays the data. You can review the network diagram for any incompleteness and update the activities accordingly.

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the design and assign icon (🔗).  
The Design and Assign home page is displayed.
3. Select **New > Create Logical Connection**.  
A change request is created with **Design in progress** and the Design and Assign window is displayed.
4. On the **Setup request details** card, fill in the fields.

**Setup request details form**

Field	Description
Number	Change request number is automatically generated to instantiate a logical connection with the Design in progress state.
Category	Category of this change request. Select Other if your category isn't in the list.
Priority	Priority of this change request.
Short description	Summary of the design.
Description	Description of the design in detail.

5. Select **Mark complete**.
6. On the **Setup logical connection** card, fill in the fields.

**Setup logical connection form**

Field	Description
Logical connection model	Logical connection model where this logical connection is configured.
Bandwidth	Bandwidth for this logical connection. Only bandwidths compatible with the logical connection model are listed here.  <b>Note:</b> Lists all bandwidths if no compatible bandwidth is available.
Network domain	Domain of ownership and responsibility for this network asset or connection. Select one of the following options:  <b>Mobility</b> Network asset that is associated with the mobility equipment domain.  <b>Telco</b>

Field	Description
	<p>Network asset that is associated with the telco equipment domain.</p> <p><b>Core</b></p> <p>Network asset that is associated with the core equipment domain.</p>
Logical connection template	List of all templates based on the selected logical connection model.

7. Select **Mark complete**.

8. On the **Define end points** card, fill in the fields.

**Define end points form**

Field	Description
Start site	Originating network site for this connection.
Start equipment	Originating equipment for this connection.
Start interface	Originating network interface for this connection.
End site	Destination network site for this connection.
End equipment	Destination equipment for this connection.
End interface	Destination network interface for this connection.

9. Select **Mark complete**.

10. On the **Assign connection element** card, select **Add** and fill in the fields to select the connection element.

To skip this activity, select **Skip**.

**Assign connection element form**

Field	Description
Element type	<p>Type of connection element. Select one from the list.</p> <ul style="list-style-type: none"> <li>○ Network Interface</li> <li>○ Physical Connection</li> <li>○ Logical Connection</li> <li>○ Equipment</li> <li>○ Topology</li> </ul>
Element name	Connection element based on the event type that you're selected. By selecting the connection element, the Available capacity and Used capacity fields displays the capacity information of the connection element.
Model	Model where this connection element is configured. Only compatible models based on the model relationship are displayed.
Start Site	Originating network site for this connection element.

Field	Description
	<b>Note:</b> This field is available for Physical Connection and Logical Connection element types.
End Site	Destination network site for this connection element. <b>Note:</b> This field is available only for Physical Connection and Logical Connection element types.
Start equipment	Originating equipment for this connection element. <b>Note:</b> This field is available only for Physical Connection and Logical Connection element types.
End equipment	Destination equipment for this connection element. <b>Note:</b> This field is available only for Physical Connection and Logical Connection element types.
Route	Number of routes.
Sequence	Number of sequences.

11. Select **Mark complete**.

12. On the **Assign protection element** card, select **Add** and fill in the fields to select the protection element.

To skip this step, select **Skip**.

**Assign protection element form**

Field	Description
Start Site	Originating network site for this protection path.
Start equipment	Originating equipment for this protection path.
Model	Model where this protection logical connection is configured. Only compatible models based on the model relationship are displayed.
End Site	Destination network site for this protection path.
End equipment	Destination equipment for this protection path.
Protecting logical connection	Logical connection that acts as redundancy path.

13. Select **Mark complete**.

14. On the **Define number element** card, select **Add** and fill in the fields to select the number element.

To skip this step, select **Skip**.

**Define number element form**

Field	Description
Owned by configuration item	Configuration item (CI) that is related to the Inventory number record.
Parent number type	Type of inventory number parent record belongs to. Select one from the following. <ul style="list-style-type: none"> <li>○ LAG</li> <li>○ LAG Range</li> <li>○ VLAN</li> <li>○ VLAN range</li> </ul>
Parent number range	Range of parent number.
Number Type	Type of inventory number this network inventory belongs to. Select one from the following. <ul style="list-style-type: none"> <li>○ LAG</li> <li>○ LAG Range</li> <li>○ VLAN</li> <li>○ VLAN range</li> </ul>
Number	Unassigned numbers are displayed here, and you can select multiple ones.

**15. Select Mark complete.**

**16. On the Define IP address card, select Add and fill in the fields to select the IP address.**

To skip this step, select **Skip**.

**Define IP address card**

Field	Description
IP pool	Parent pool of this IP address allocation.
IP sub network	IP network subnet of this IP address allocation.
Allocated IP address	Select the allocated IP addresses.

**17. Optional: Select Mark complete.**

**18. Optional: On the Set attributes card, select Add and fill in the fields to select the connection element.**

(Optional) If you want to skip this step, select **Skip**.

**Set attributes card**

Field	Description
Connection name	Name of the logical connection record. Add connection name, otherwise default name is added

Field	Description
Life cycle stage	<p>Stage of the life cycle that this network asset is in:</p> <p><b>Deploy</b> Network asset that is deployed in your network.</p> <p><b>Design</b> Network asset that is being used for design purposes.</p> <p><b>End of life</b> Network asset that is at the end of its useful life.</p> <p><b>Inventory</b> Network asset that is an inventory item in use in the network.</p> <p><b>End of life</b> Network asset that is missing and can't be located.</p> <p><b>Operational</b> Network asset that is operational.</p> <p><b>Purchase</b> Network asset that is in the purchase phase of its life.</p>
Life cycle stage status	<p>Status of the network asset as it relates to the life cycle stage that it is in:</p> <p><b>In Maintenance</b> Network asset that is currently in maintenance.</p> <p><b>In Use</b> Network asset that is currently in use.</p> <p><b>Pending Retirement</b> Network asset that is currently in maintenance.</p>
Supported by	Name of the person who supports this network asset.
Supported by group	Group that supports the network inventory.
Comments (Customer visible)	Any comments.
Operational notes	(Optional) Free-form operation note text for this network asset. For example, <code>Check diesel fuel for generator.</code>

19. On the **Review and submit** card, fill in the fields.

**Review and submit form**

Field	Description
Notes	Any additional notes.

20. Select **Submit**.

## Result

The change tasks are created and executed for each activity. The logical connection record is created with the associated Configuration items (CI).

## Related topics

[Design and Assign function for logical connections](#)

## Using Network visualization view

Use the Network visualization view in the Telecommunications Network Inventory application to explore your network site details, datacenters's floor map, and network topology.

## Using the floor map

Use the floor map in the Telecommunications Network Inventory application to view the datacenters floor details and monitor the operational data.

## Upload and manage floor map for your datacenter

Create, manage, and update your datacenter map objects in the Indoor Mapping Map Studio interface. You can view the datacenter's network infrastructure in Telecommunications Network Inventory application.

## Before you begin

- Make sure to install Indoor Mapping (sn\_map\_core) application.
- Role required: sn\_ni\_core.dc\_floor\_designer

## About this task


With Indoor Mapping Map Studio, you can manage and edit map objects related to your datacenter infrastructure in one place. First, create a campus record with details about the building and floor. Then, upload a source image (CAD file or raster image) of the floor layout. With this layout, you can make architectural diagrams to show your datacenter facilities. You can define places using points or polygons. Link these places to place types like racks or transformers to categorize the network assets and different facilities.

Each place is marked with a title, making it easy to identify on the map. Once the campus record is created with building and floor details, you can map the campus with a datacenter using CMN location record. Then, you can map Configuration Items (CIs) to their corresponding places. Additionally, you can customize how operational data is displayed on the map, enabling real-time visualization of datacenter performance.


## Procedure

1. Create a campus with buildings and floors.

To learn more, see [Create a campus with buildings and floors](#) .

 **Note:** Make sure the campus and datacenter names that you want to map are the same.

2. Use the boundary editor to map your campus on the global map.

You can adjust the boundaries to show the location of your campus and buildings. Boundaries are used to differentiate between outdoor maps and indoor mapped areas. To learn more, see [Working with boundary editor](#) .

3. Upload your floor plan's CAD or raster file.

You can use the floor plan to make configuration changes and preview the CAD design layout. To learn more, see [Import CAD files to Map Studio](#). If you're uploading a raster file, then see [Import Raster files](#) for more details.

**4. Optional:** Import outdoor elements such as a logo or an outdoor cafeteria that you want to display on the indoor map.

To learn more, see [Import outdoor elements](#).

**5.** Add places, icons, and place types to locate your network assets and facilities on a floor.

To learn more, see [Manage places](#).

To create a place type, see [Create Indoor Mapping icons and place types](#). To learn about available place types, see [Data center place types](#).

**6.** Use the **Map Preview** to display maps and test directions that you have created.

**7. Optional:** Export the updated CAD changes to your CAD file.

Exporting the updated changes creates a copy of the modified CAD file in Indoor Mapping. To learn more about, see [Export CAD configuration](#).

## Result

A Indoor Mapping campus record is created with building and floor details.

## What to do next

After you create your Indoor Mapping campus record, do the following to view the datacenter infrastructure in floor map.

1. [Map Indoor Mapping campus to a datacenter](#)
2. [Map a Configuration Item to a floor map](#)
3. [Customize overlays on the floor map](#)
4. [Customize overlay time series on the floor map](#)
5. [View details of floor map](#)

## Related topics

[Indoor Mapping](#)

### Map Indoor Mapping campus to a datacenter

Map an Indoor Mapping campus to a datacenter Configuration Item (CI) so you can view the datacenter's network infrastructure in the Telecommunications Network Inventory.

## Before you begin

- Your campus record is created with building and floor details.
- Your campus record name is the same as the datacenter record.
- Make sure that you have configured Indoor Mapping campus with a floor plan and map objects. To learn more, see [Upload and manage floor map for your datacenter](#).
- Role required: sn\_ni\_core.dc\_ops\_agent

## About this task

After you create a Indoor Mapping campus record, you must map it to the datacenter Configuration Item (CI). Synchronize the campus with a location record, which is where the datacenter is located. Now you can open the campus in the floor map and view the datacenter infrastructure.

- Note:** If you use the same CMN location when creating the data center and campus, the campus will be automatically mapped to the CI.

## Procedure

1. Navigate to **All > Indoor Mapping > Campuses**.
2. Open the campus record that you want to map to the datacenter CI.
3. Select **Synchronize with CMN Locations**.  
The Indoor Map/CMN Location Synchronization form appears.
4. Select the location record in the **CMN Location Campus** field.  
If you don't have a location record for your datacenter location, create one. Make sure to use the same location as the datacenter you want to map. To learn more about how to create location record, see [product/tmt-telecom-network-inventory/task/define-tni-locations.dita](#).
5. Select **Update** to map the campus with the location record.
6. Open the campus record that you want to map to the datacenter record.
7. Select **Synchronize with CMN Locations**.  
The Indoor Map/CMN Location Synchronization form appears.
8. Complete the synchronization steps.  
To learn more about the synchronization steps, see [Synchronize Indoor Mapping map data with CMN location](#).

## Result

The Indoor Mapping campus record including buildings, floors, places are mapped to the datacenter CI.

## What to do next

View the details of your datacenter infrastructure using the floor map. To learn more, see [View details of floor map](#).

## Related topics

[Synchronize Indoor Mapping with CMN Locations](#)

[Visualization of floor map](#)

## Map a Configuration Item to a floor map

Map a Configuration Item (CI) to a place on your floor map in the Telecommunications Network Inventory application so you can view its details.


## Before you begin

Role required: sn\_ni\_core.dc\_ops\_agent



## About this task

Associate a CI such as facility hardware to a place on the floor map to view its details. You can also understand how your network assets are arranged and placed in the datacenter floor.


## Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the blue hub icon .  
The Network viewer window is displayed.
3. Select the **Floor map** tab.
4. In the **Choose location** field, select your Site, Building, and Floor.

The floor map appears.

5. Select a place on the map.  
If you're mapping an equipment rack, then select the location with Rack place type.
6. On the details pane, select the more options icon (  ), and then select **Create place mapping**.
7. **Optional:** On the details pane, select the more options icon (  ), and then select **Open record**.  
The place record opens. Select the **Place documents** tab, and then select **New**.
8. On the **Place document** form, fill in the fields.

**Place document form**

Field	Description
Place	The name of the place record automatically appears based on the place that you select on the floor.
Document table	Type of inventory class that you want to map.
Configuration Item	CI that you want to map to the place.   <b>Note:</b> A CI must be mapped to only one place. Mapping the same CI to multiple places cause visualization issues on the floor map.

9. Select **Save**.

**Result**

The CI is mapped to the place on the floor map. The color of the place is changed and reflects the selected inventory class according to the map legend. Select the CI on the map pane to view its details.

**Related topics**

- [Visualization of floor map](#)
- [Upload and manage floor map for your datacenter](#)

**View details of floor map**

Use the floor map in the Telecommunications Network Inventory application to view placement of network assets on a datacenter floor and their details such as asset specific and operational data.

**Before you begin**


- Make sure that a datacenter record is mapped to the campus whose details you want to view.
- Make sure that you have installed the Telecommunications Alarm Management Open API (sn\_ind\_tmf642) and Customer Service Problem Management (CSPM) (sn\_sprb\_mgmt) plugin to view alert and incident details.
- Role required: sn\_ni\_core.dc\_ops\_agent

**About this task**




Use the floor map to view the following:


- Details of the places on the floor.
- View alert information
- Visualize a rack
- View floor and rack health information
- View operational metrics

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the blue hub icon . The Network viewer window is displayed.
3. Select the **Floor map** tab.
4. In the **Choose location** field, select your Site, Building, and Floor. The floor map appears.
5. View the details of the floor map by performing the following actions on the map pane.

Action	Details
<p><b>View the details of floor</b></p>	<p>Select an empty space on the floor. You can view the following details on the details pane.</p> <p><b>Campus</b> Campus name</p> <p><b>Building</b> Building name</p> <p><b>Floor</b> Floor name</p> <p><b>Floor area</b> Total floor area in square feet</p> <p><b>Total cabinets</b> Total count of cabinets on the floor</p> <p><b>Total equipment</b> Total count of equipment on the floor</p> <p><b>Total interfaces</b> Total count of interfaces on the floor</p> <p><b>Available interfaces</b> Available count of interfaces on the floor</p> <p><b>Connections</b> Count of logical connections and power circuits related to datacenter</p>

Action	Details
<p><b>View the details of a place</b></p>	<p>Select a place on the map pane. The selected place is highlighted on map pane. You can view the place details on the details pane. If the place is mapped to a Configuration Item (CI), then you can see the CI-specific details.</p>
<p><b>View the alert information</b></p>	<p>Select the alert icon () on a place in the map pane. On the details pane, you can view the following information about the CI that is mapped on that place.</p> <ul style="list-style-type: none"> <li>○ Active alerts</li> <li>○ Active events</li> <li>○ Active change requests</li> </ul> <p>You can also select the green lightning bolt icon () to view the alert information.</p>
<p><b>Visualize a rack</b></p>	<p>Select a rack CI on the map pane. The Rack view opens. Do the following on the Rack view.</p> <ul style="list-style-type: none"> <li>○ To open the rack record, select <b>Open rack</b>.</li> <li>○ To view the back of the rack, select <b>View rear panel</b>.</li> </ul>
<p><b>View floor and rack health information</b></p>	<p>Select an empty space on the map pane to view the following floor health information on the details pane.</p> <ul style="list-style-type: none"> <li>○ Cabinet capacity</li> <li>○ Temperature</li> <li>○ Power usage</li> <li>○ Humidity</li> </ul> <p>Select a rack on the map pane to view the following health information.</p> <ul style="list-style-type: none"> <li>○ Rack usage</li> <li>○ Temperature</li> <li>○ Power usage</li> <li>○ Humidity</li> </ul> <p>Select the more option icon () in the health section, and select <b>Open metrics</b> to view the metric values.</p>
<p><b>View operational metrics</b></p>	<p>Overlays on a floor map are visual indicators displayed directly on a datacenter's floor map. These indicators show real-time or past operational metrics.</p>

Action	Details
	<p><b>a.</b> In the <b>View By</b> field, select an overlay. The following overlays are available.</p> <ul style="list-style-type: none"> <li>▪ Temperature</li> <li>▪ Power</li> <li>▪ RU utilization</li> </ul> <p><b>b.</b> Select the time duration that you want. The default time duration is set as <b>Recent</b>. The following time durations are available.</p> <ul style="list-style-type: none"> <li>▪ Recent</li> <li>▪ Past 3 hours</li> <li>▪ Past 6 hours</li> <li>▪ Past 12 hours</li> </ul> <p>For example, select <b>Temperature</b> overlay and <b>Past 3 hours</b> time duration. The floor map updates with the colors according to the map legend. If the current time is 9:00 PM, the map shows the average of operational values from 6:00 PM to 9:00 PM.</p> <p>To disable overlays, select <b>None</b> in the <b>View By</b> field.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>○ You can only use the <b>Recent</b> time series option with the <b>RU utilization</b> overlay.</li> <li>○ If no metric data available, system shows an error message No metrics found for the specified duration.</li> </ul> <p>To deselect overlay, select <b>None</b> in the <b>View By</b> field.</p>
<p><b>View floor map related to a company account</b></p>	<p>In the <b>Filter By Accounts</b> field, select an account. The map highlights the CIs related to that company account in bluish green color. CIs related to other accounts are grayed out. You can also select more than one account.</p>
<p><b>Open a record from details pane</b></p>	<p><b>a.</b> On the details pane, select the more options icon (  ) of a card. The card can be a place, CI, incident, alert, or change request.</p> <p><b>b.</b> Select <b>Open record</b>.</p> <p>The corresponding record opens. To open a rack record, you can also select <b>Open rack</b> on the Rack view.</p>

**Related topics**

[Visualization of floor map](#)

[Configuring overlays on floor map](#)

**Print a floor map**

Print the entire canvas of the floor map based on your map selection in the Telecommunications Network Inventory application. You can use it as a reference to view the floor map details.




**Before you begin**

Role required: sn\_ni\_core.dc\_ops\_agent

**About this task**

You can print the floor map by configuring relevant options and applying filters and save the copy to your local system.

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the blue hub icon . The Network viewer window is displayed.
3. Select the **Floor map** tab.
4. Apply filters and select your floor.
5. Select the print icon ().
6. On the map pane, select the download icon ().
7. On the Edit Map Content panel, configure the fields.

**Edit Map Content panel**

Field	Description
Show Pin on map	Option to display a pin on the map.
Remove Outdoor Background	Option to remove the map area outside the selected building.

8. **Optional:** Select a place to customize the place settings.

**Place Settings**

Field	Description
Show Space Text	Option to display the place label on the map.
Show Space Marker	Option to display the place icon on the map.
Order on Map	Order of the place text and marker on the map.

Field	Description
	<ul style="list-style-type: none"> <li>○ Bring to Top: Place text and marker are moved to the top layer of the map.</li> <li>○ Default: Place text and marker are on the default layer of the map.</li> <li>○ Send to Back: Place text and marker are moved to the lowest layer of the map.</li> </ul>
Space label text size	Size of the place label text on the map.

9. Select **Continue** to open the print layout page.
10. Select the paper size and orientation from the Print Layout panel.  
For more information about the options, see [Map printing options](#).
11. In the preview area, zoom and drag the map based on your requirement.  
You can use select and hold (or right-click) to rotate the map.
12. Configure the options in the Print Layout panel.  
For a description of the field values, see [Map printing options](#).
13. Select **Print**.

**Result**

You can use your web browser to print the map or save it as a PDF.

**Trouble?**

- If the aspect ratio of the map is not the same as your instance, verify that the layout settings (like page size and orientation) of the print dialog of your browser are the same as the settings on your instance.
- If the map is shifted on the printed page, or the position of icons or the pin isn't the same as your instance, set the margins in the print dialog of your browser to **None**.


**Open floor map from an incident or alert**

Open datacenter floor map from an incident or alert in Service Operations Workspace for Telecommunications Network Inventory. You can view the affected hardware details in the floor map.

**Before you begin**

Role required: sn\_ni\_core.dc\_ops\_agent

**Procedure**

1. Navigate to **Workspaces > Service Operations Workspace**.
2. Select the list icon () , and then go to **Incidents > All**.  
To open an alert, go to **Alerts > All**
3. Open the incident or alert record from which you want to view the floor map.
4. Select **View impact**.

**Result**

The floor map opens and the affected hardware is highlighted. If the issue is related to a rack or cabinet, then the Rack view also opens in the floor map.

## Using the geo map

Use the Geo map in the Telecommunications Network Inventory application to view the network site or data center location and its details.

### Related topics

[Visualization of geo map](#)

### View details of the geo map

Use the geo map to view the geographical location of a network site and datacenter and its details in the Telecommunications Network Inventory application. You can understand the detailed overview of the site and information about the connections.

### Before you begin


Role required: sn\_ni\_core.dc\_ops\_agent

### About this task

Use the geo map to do the following:

- View the details of a network site and datacenter.
- View the details of the sites in the same location.
- View the physical and logical connections and topology associated with the site.
- View the cable routes associated with a site.
- View the capacity information.

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the blue hub icon . The Network visualization window is displayed.
3. Select the **Geo map** tab.
4. View the details of the site by performing the following actions on the map pane.

Action	Details
<p><b>View the details of a site.</b></p>	<p>Hover over the map icon on the map pane and then select <b>View Details</b>. You can view the site details on the details pane. You can also view the image of the site. To learn more about how to upload an image, see <a href="#">Add images to a network inventory record</a>.</p> <p><b>Note:</b> If you select the datacenter on the map pane, select <b>View floor map</b> to view the floor map. The <b>View Floor Map</b> automatically populates the campus on ly. You must manually select a building and floor to view the corresponding floor map.</p>

Action	Details
<p><b>View the details of the sites in the same location.</b></p>	<p><b>a.</b> Hover over the map icon in the map pane and then select <b>View Details</b>.</p> <p><b>b.</b> Select next or previous buttons to view the details about other site.</p>
<p><b>View the physical and logical connections and topology details</b></p>	<p><b>a.</b> Select a site.</p> <p><b>b.</b> On the <b>Connectivity</b> filter option, select the option that you want to view the details.</p> <ul style="list-style-type: none"> <li>▪ Physical Connections</li> <li>▪ Logical Connections</li> <li>▪ Topologies</li> </ul> <p>These connection elements appear as dashed lines between the sites.</p> <p><b>c.</b> Select a line to view the details on the details pane. The bar chart graph shows the available connection elements.</p>
<p><b>View the cable route between sites</b></p>	<p><b>a.</b> Select a site.</p> <p><b>b.</b> On the Connectivity filter, select <b>Cables</b>.</p> <p>The map pane displays the cable route between the sites.</p> <p><b>i Note:</b> You must only select <b>Cables</b> to view the cable route.</p>
<p><b>View the capacity information</b></p>	<p>Select a site and view the capacity information on the details pane. The bar chart graph represents the available capacity of the following:</p> <ul style="list-style-type: none"> <li>○ Bearable weights</li> <li>○ Rack Units</li> <li>○ Allotted Power</li> <li>○ Equipment Slots</li> <li>○ Equipment Interfaces</li> <li>○ Equipment Bandwidth</li> <li>○ Card Slots</li> <li>○ Card Interfaces</li> <li>○ Card Bandwidth</li> </ul> <p>Select the a bar on the graph to redirect to the corresponding capacity metrics list.</p>

Action	Details
<b>View the change requests</b>	Select a site to view the number of associated change requests on the details pane. Only the change requests assigned to the logged-in user are displayed.

**Related topics**

[Visualization of geo map](#)


**Add images to a network inventory record**

Add image to a network inventory record. You can distinguish the network asset with the uploaded image.

**Before you begin**

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent, sn\_ni\_core.inventory\_template\_manager, sn\_ni\_core.telco\_inventory\_catalog\_manager

**Procedure**

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon (  ) and then go to **Network Sites > All Sites**.  
You can select the type of inventory that you want to add an image.
3. Open the record that you want to add image.
4. On the **Media** tab, select **New**.
5. On the **Details** tab, fill in the fields.

**Network Site form - Site Details**

Field	Description
Name	Image name.
Record Table	Table name where you want to upload the image. For example, if you add an image to a network site, select <b>Network Site</b> (cmdb_ci_ni_site).
Acquisition Date	The date on which the network resource legally acquired by the organization.
State	Current state of the image. Select <b>Active</b> to display the image in the inventory record.
Media Type	Type of media file.
Description	Brief description about the image.
Default	Select this check box to display the image on the inventory record.
Acquired by	Name the person who acquired this image.
Record ID	Inventory record.
Image	Select <b>Add Image</b> to upload the file.
View Type	Select the view type if you upload multiple images.

Field	Description
Sequence	Select sequence if you upload multiple images.

## 6. Select **Save**.

### Result

The image is added to the network inventory record.

### Related topics

[View details of the geo map](#)


### Open site map from a network site form

Open Network site map from a network site form in the Telecommunications Network Inventory application. You can understand the geographical location of the network site and information about the connections.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Click the list icon () and then go to **Network Sites > All Sites**.

You can view the sites that you manage by going to **Network Sites > My Sites**.

3. Open a network site that you want to see the details.
4. Select **Network Site Map**.

The network site form displays the **Network Site Map** button only if the site location has a valid latitude and longitude.

### Result

The Network site map page opens and displays your network site.

## Using the network topology

Use the network topology in the Telecommunications Network Inventory application to view how the different elements in a network are organized and connected to one another.

To view the network topology, you must create the topology record either manually or using a "design and assign" function. To learn more, see:

- [Manually create a network topology](#).
- [Create a network topology record by using design and assign](#).

### Related topics

[Visualization of network topology](#)



### Viewing a network topology

View the details of a network topology and visualize how the network elements are organized and connected to one another. You can understand the detailed overview of the network infrastructure of the topology in the Telecommunications Network Inventory application.

### Before you begin

Role required: sn\_ni\_core.inventory\_admin, sn\_ni\_core.inventory\_agent, sn\_ni\_core.inventory\_template\_manager, sn\_ni\_core.telco\_inventory\_catalog\_manager

### Procedure

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the blue hub icon . The Network viewer window is displayed.
3. Select the **Topology** tab.
4. Visualize a topology by typing the topology name in the search box and selecting it. You can select multiple topologies of your choice. You can also use the advanced filter options to find the topology by selecting the filter icon (  ).
5. Select the node that you want see the details, and view the related information in the details pane.
6. In the details pane, select **View Details** to redirect to the CI record (optional).

## Telecommunications Network Inventory reference

Reference topics provide additional information about Telecommunications Network Inventory.

### Add or Remove member to Link Aggregation form

The Add/Remove member to Link Aggregation form enables you to create, review, and modify the network asset details for Link Aggregation Group (LAG) connection in the Telecommunications Network Inventory application.

#### Add/Remove member to Link Aggregation form

Fields	Description
LAG	Select a LAG from the list
Bandwidth	Modify or select a bandwidth from the list for the selected LAG
Site A	Starting site.
Site Z	Ending site.
Equipment A	Equipment where the connection starts.
Equipment Z	Equipment where the connection ends.
Logical Interface A	Logical interface where the connection starts.
Logical Interface Z	Logical interface where the connection ends.
Create revision	Option to create a revision of the selected LAG.  <div style="border: 1px solid black; padding: 5px; display: inline-block;"> <b>Note:</b> Revision of a LAG is not possible while it is already undergoing an active revision process.         </div>

### Add/Remove member to Link Aggregation form (continued)

Fields	Description
Member interface A	<p>Interface A of the selected LAG. Add or remove to modify the member interface A of the selected LAG.</p> <p><b>Note:</b> The list displays only child model interfaces that are set as either Port A or Port Z of a physical connection.</p>
Member interface Z	<p>Interface Z of the selected LAG. Add or remove to modify the member interface Z of the selected LAG.</p> <p><b>Note:</b> The list displays only child model interfaces that are set as either Port A or Port Z of a physical connection.</p>


#### Related topics

[Add or remove a member to Link Aggregation](#)

## Cable form

The Cable form enables you to describe the details for an optical fiber cable record.

#### Cable form

Field	Description
Name	Name of this cable record. The ServiceNow AI Platform uses this name to identify it in your network inventory.
Support group	Group that supports the network inventory.
Asset	Name of the asset that is associated with this record.
Managed by	Name of the person who manages this network asset. Select the search icon (  ) and select a user from the listing.
Life Cycle Stage	<p>Stage of the life cycle that this network asset is in:</p> <p><b>Deploy</b> Network asset that is deployed in your network.</p> <p><b>Design</b> Network asset that is being used for design purposes.</p> <p><b>End of life</b> Network asset that is at the end of its useful life.</p> <p><b>Inventory</b></p>

**Cable form (continued)**

Field	Description
	<p>Network asset that is an inventory item in use in the network.</p> <p><b>End of life</b></p> <p>Network asset that is missing and can't be located.</p> <p><b>Operational</b></p> <p>Network asset that is operational.</p> <p><b>Purchase</b></p> <p>Network asset that is in the purchase phase of its life.</p>
Life Cycle Stage Status	<p>Status of the network asset as it relates to the life cycle stage that it is in:</p> <p><b>In Maintenance</b></p> <p>Network asset that is currently in maintenance.</p> <p><b>In Use</b></p> <p>Network asset that is currently in use.</p> <p><b>Pending Retirement</b></p> <p>Network asset that is currently in maintenance.</p>
Model ID	Model ID of the asset.
Domain	A unique name or address assigned to the device within the domain.
A end termination	Starting point such as an interface or slot where this cable is connected with.
Z end termination	Ending point such as an interface or slot where this cable is connected with.
A end connector	<p>Type of physical cable connector that is used for the starting point of the cable. Select one of the following options:</p> <p><b>BNC</b></p> <p>BNC connector is used for video and RF applications and found in the coaxial cable networks.</p> <p><b>SC</b></p> <p>A square-shaped snap-in connector.</p> <p><b>LC</b></p> <p>Small and a push-and-pull design with a latch mechanism.</p> <p><b>ST</b></p> <p>A bayonet-style twist lock and a long, cylindrical ferrule.</p> <p><b>Wire Wrap</b></p> <p>Wrapping a thin, stripped wire around a post or pin to establish a connection.</p> <p><b>RJ45</b></p> <p>Connectors have eight pins and are used on the ends of twisted-pair cables.</p>

**Cable form (continued)**

Field	Description
Z end connector	<p>Type of physical cable connector that is used for the ending point of the cable. Select one of the following options:</p> <p><b>BNC</b></p> <p>The Bayonet Neill Concelman (BNC) connector is used for video and RF applications and found in the coaxial cable networks.</p> <p><b>SC</b></p> <p>A square-shaped snap-in connector.</p> <p><b>LC</b></p> <p>Small and a push-and-pull design with a latch mechanism.</p> <p><b>ST</b></p> <p>A bayonet-style twist lock and a long, cylindrical ferrule.</p> <p><b>Wire Wrap</b></p> <p>Wrapping a thin, stripped wire around a post or pin to establish a connection.</p> <p><b>RJ45</b></p> <p>Connectors have eight pins and are used on the ends of twisted-pair cables.</p>
Length	Total length of the cable.
Length unit	<p>Unit of measure in which you're expressing the route length of the cable. Select one of the following options:</p> <p><b>--None--</b></p> <p>No distance measurement is expressed for the connection route length.</p> <p><b>Inches</b></p> <p>Distance is expressed in inch.</p> <p><b>Feet</b></p> <p>Distance is expressed in feet.</p> <p><b>Miles</b></p> <p>Distance is expressed in miles.</p> <p><b>Meters</b></p> <p>Distance is expressed in meters.</p> <p><b>Centimeters</b></p> <p>Distance is expressed in centimeters.</p> <p><b>Kilometers</b></p> <p>Distance is expressed in kilometers.</p>
Comments	Free form text that is used to comment on a network asset. For example, Duty tech is Rahul Dev.

### Cable form (continued)

Field	Description
Operational status	Operational status of the network inventory asset.

### Related topics

[Define the cable details](#)

## Cable model form

The Cable Model form enables you to describe the details for an optical fiber cable model record.

### Cable Model form

Field	Description
Manufacturer	Name of the network asset's manufacturer. Select the search icon ( 🔍 ) and select a manufacturer code. To learn more, see <a href="#">Create manufacturer and vendor codes</a> .
Name	Name of the cable model. The ServiceNow AI Platform uses this name to identify it in your network inventory.
Short description	Description of the cable model that you're defining.
Model categories	List of model categories that maps to a CI class. The model categories are part of the Product Catalog application.
Model number	The model number that is assigned to the model by the manufacturer.
Asset tracking strategy	Number of equipment holder units that are available for use in this network asset.
Barcode	A bar code number that is assigned to the model by the manufacturer.
Useful life (months)	Number of months that the model can be used for.
Asset tracking unit	Number of equipment holder units that are available for use in this network asset.
Owner	The person responsible for the model.
Acquisition method	Acquisition method for the model: <b>Buy</b> The model was purchased. <b>Leased</b> The model was leased.

**Cable Model form (continued)**

Field	Description
	<p><b>Both</b></p> <p>The model was bought and leased.</p>
Status	<p>Production status of the model:</p> <p><b>Build</b></p> <p>The model must be built.</p> <p><b>In Production</b></p> <p>The model is in production.</p> <p><b>Sold</b></p> <p>The model was sold.</p> <p><b>Retired</b></p> <p>The model has been retired.</p>
Cost	Cost of a single unit of the model.
Expenditure type	<p>Type of expenditure. Select one of the following options:</p> <p><b>Capex</b></p> <p>Capital expenditure is a one-time expenditure, where the value is realized over the years. For example, a photocopier.</p> <p><b>Opex</b></p> <p>Operational expenditure is an ongoing expenditure. For example, toners for the photocopier.</p>
Depreciation	Depreciation schedule of the cable model.
Certified	Option that designates if this network asset is certified.
Salvage value	The estimated value that an asset realizes when sold at the end of its useful life. This value must be less than or equal to the cost of the asset.
Comments	Any additional information on the model that would be useful.
Power (watts)	Electrical power of the network asset in watts.
Dimensions Unit	<p>Unit of measure in which you're expressing dimensions. Select one of the following options:</p> <p><b>--None--</b></p> <p>No distance measurement is expressed for the connection route length.</p> <p><b>Inches</b></p> <p>Distance is expressed in inch.</p> <p><b>Feet</b></p> <p>Distance is expressed in feet.</p> <p><b>Miles</b></p> <p>Distance is expressed in miles.</p>

**Cable Model form (continued)**

Field	Description
Sound Power (bels)	The rate at which the energy of the network asset is emitted in bels.
Length	<p>Length of the network asset, expressed in the unit of measure that you designate in the <b>Units</b> field.</p> <ul style="list-style-type: none"> <li>• For example, enter 12 if the asset is one foot, or enter 60 if the asset is 60 inches and you've selected Inches as the unit of measure in the <b>Units</b> field.</li> <li>• The ServiceNow AI Platform uses this information to calculate the cubic dimensions of the asset to determine its physical placement within the designated network site.</li> </ul>
Characteristic	<p>Type of the cable. Select one from the following.</p> <p><b>Optical</b> Transmits signals using light pulses.</p> <p><b>Electrical</b> Transmits signals using electrical currents.</p>
Width	<p>Length of the network asset, expressed in the unit of measure that you designate in the <b>Units</b> field.</p> <ul style="list-style-type: none"> <li>• For example, enter 12 if the asset is one foot, or enter 60 if the asset is 60 inches and you've selected Inches as the unit of measure in the <b>Units</b> field.</li> <li>• The ServiceNow AI Platform uses this information to calculate the cubic dimensions of the asset to determine its physical placement within the designated network site.</li> </ul>
Height	<p>Height of the network asset, expressed in the unit of measure that you designate in the <b>Units</b> field.</p> <ul style="list-style-type: none"> <li>• For example, enter 60 if the height of the asset is 60 inches and you've selected Inches as the unit of measure in the <b>Units</b> field.</li> <li>• The ServiceNow AI Platform uses this information to calculate the cubic dimensions of the asset to determine its physical placement within its designated network site.</li> </ul>
Depth	<p>Depth of the network asset that is expressed in the unit of measure that you designate in the <b>Units</b> field.</p> <p><b>i Note:</b> This field is applicable for the equipment models and equipment holder models.</p>

**Related topics**

[Create a cable model](#)

**Capacity Definition form**

The Capacity Definition form enables you to describe the details for a capacity definition record.

### Capacity Definition form

Field	Value
Name	Name of the capacity definition record.
Application	Application name for which the capacity functions are created.
Active	Option to enable the definition for capacity calculation.
Functions	Capacity function records that you want to use for calculating the capacity. You can select multiple functions.
Description	A brief description about the capacity definition.
Entity table	Entity table where you're querying. The sys class name must either be the entity table or a subclass derived from the entity table.
Conditions	Any additional query condition. The query condition must be valid to run the capacity definition.

#### Related topics

[Create capacity definition](#)

[Capacity management](#)

### Capacity function additional fields

Depending on the option that you selected in the Strategy field, the following fields appear in the capacity function form.

#### Static value - Additional fields

Field	Description
Static value	Number of counts for capacity calculation.

#### Aggregate query count - Additional fields

Field	Description
Entity table	Entity table within the database where you're querying.
Query table	Name of the table you're querying.
Query condition	Any additional query conditions.
Related field	Field in the query table that you're querying. Select one from the list.

#### Value field - Additional fields

Field	Description
Query table	Name of the table you're querying.
Query condition	Any additional query conditions.
Value field	Field in the record that you're querying. Select one from the list.

### Script - Additional fields

Field	Description
Entity table	Entity table within the database where you're querying.
Script	A script that determines how to query the desired data. The script must include an answer variable and the type of variable is a number or string.

### Related topics

[Capacity Function form](#)

[Create capacity function](#)

## Capacity Function form

The Capacity Function form enables you to describe the details for a capacity function record.

### Capacity Function form

Field	Value
Name	Name of the capacity function record.
Application	Application name for which the capacity functions are created.
Description	A brief description about the capacity function.
Function	Type of capacity calculation. Select one from the following. <ul style="list-style-type: none"> <li><b>Max</b> Maximum number of network assets.</li> <li><b>Occupied</b> Total number of network assets that are occupied.</li> <li><b>Available</b> Total number of network assets that are available. It's the difference between maximum and occupied assets.</li> <li><b>Max Contiguous</b> Maximum contiguous network assets that are available.</li> </ul>
Strategy	Methods for capacity calculation. Select one from the following. <ul style="list-style-type: none"> <li><b>Static Value</b> A fixed or constant value is used to calculate the capacity. The static value approach uses a predetermined metric to calculate the capacity without considering a field in the record that you query.</li> <li><b>Aggregate query count</b> A database query that uses an aggregate function to calculate the capacity. In this strategy, you query a related field in a record that is present in the entity table. This type of query is useful for getting summary information about the field in a table, such as the total number of records that meet specific conditions.</li> </ul>

### Capacity Function form (continued)

Field	Value
	<p><b>Value field</b></p> <p>Use this strategy to check a particular value in a query table, which is present in the database.</p> <p><b>Script</b></p> <p>An advanced strategy approach, where a script is used for querying.</p> <p>Depending on the strategy that you're selected, additional fields appear in the form. To learn more about the additional fields, see <a href="#">Capacity function additional fields</a>.</p>
Measurement type	<p>Unit of measurement depends on the type of capacity being calculated. Select one from the following.</p> <ul style="list-style-type: none"> <li>• Unit</li> <li>• Power</li> <li>• Weight</li> <li>• Slot Unit</li> <li>• Port Unit</li> </ul>
Order	Order field value.

#### Related topics

- [Create capacity function](#)
- [Capacity management](#)

## Card form

The Card form enables you create, review, and modify the network card details.

#### Interface Card form

Field	Description
Name	Name of this network interface card. The ServiceNow AI Platform uses this name to identify it in your network inventory.
Ports	Total number of ports on this network interface card.
Ports in use	Number of ports in use on this network interface card.
Slots	Total number of slots on this network interface card.

#### Related topics

- [Define the card details](#)

## Change request and change task forms

The change request forms enable you to request a change.

### Change task form of change models

Change model	Description
Add cable	Change model to create a change task for adding a card. To learn more, see the add card form in <a href="#">Change request and change task forms</a> .
Add Card	Change model to create a change request for adding an interface card. To learn more, see the add card form in <a href="#">Change request and change task forms</a> .
Create inventory equipment	Change model to create a change request for creating inventory equipment. To learn more, see the create equipment form in <a href="#">Change request and change task forms</a> .  <b>Note:</b> To see the compute and create logical connection form, see <a href="#">Compute and Create Logical Connection form</a> .
Create logical connection	Change model to create a change request for creating a logical connection. To learn more, see the <a href="#">Change request and change task forms</a> .  <b>Note:</b> <ul style="list-style-type: none"> <li>To update or revise a logical connection CI, see <a href="#">Revise a configuration item using design and assign</a>.</li> <li>To modify logical connection endpoints, see <a href="#">Modify logical connection endpoints model</a>.</li> </ul>
Create physical connection	Change model to create a change request for creating a physical connection. To learn more, see <a href="#">Change request and change task forms</a> .  <b>Note:</b> <ul style="list-style-type: none"> <li>To update or revise a physical connection CI, see <a href="#">Revise a configuration item using design and assign</a>.</li> <li>To modify physical connection endpoints, see <a href="#">Modify physical connection endpoints</a>.</li> </ul>
Create Rack/Cabinet	Change model to create a change request for creating and visualizing a rack or cabinet. To

**Change task form of change models (continued)**

Change model	Description
	<p>learn more, see <a href="#">Change request and change task forms</a>.</p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>For creating a rack or cabinet, ensure that the following exist:                             <ul style="list-style-type: none"> <li>A model in equipment holder model with <b>Model categories</b> as <b>Equipment Rack</b>.</li> <li>A relationship in network model relationships with the <b>Relationship type</b> as <b>Rack to Slot</b>.</li> <li>A template in the inventory template where the <b>inventory model</b> has a rack model.</li> </ul> </li> </ol> <p>A rack is created based on the selected rack model in the template, and the rack slots are created based on the rack template.</p> <ol style="list-style-type: none"> <li>To add equipment to a rack, see <a href="#">Create a change request from Network Inventory Workspace</a>.</li> </ol>
Add equipment to Rack/cabinet	Change model to add a new or existing equipment to a rack. To learn more, see <a href="#">Change request and change task forms</a> .
Remove Equipment or Shelf from Rack/Cabinet	<p>Change model to remove an equipment or a shelf from a rack or cabinet slot. To learn more, see <a href="#">Change request and change task forms</a>.</p> <p><b>Note:</b> Shelf cannot be removed if it is related to any equipment.</p>
IP address allocation	Change model to create a change request for IP address allocation. To learn more, see the IP address allocation form in <a href="#">Change request and change task forms</a> .
Phone number allocation	Change model to create a change request for a phone number allocation. To learn more, see the Manage phone number form in <a href="#">Change request and change task forms</a> .

**GPON Broadband - Record Producer form**

Fields	Description
Customer Site	Network site.

**GPON Broadband - Record Producer form (continued)**

Fields	Description
ONT equipment template	Equipment template.
Splitter	Equipment.
Splitter port	Port interface.
Pon Network Path	Pon logical connection.
ISPN VLAN	ISPN VLAN logical connection.
ISP EVPN VPWS	ISP EVPN VPWS logical connection.
IP Version	IP version.
Number of IP Addresses	Total number of IP addresses.
Start IP Address	Starting IP address.

**Change Request form**

Field	Description
Number	Change request number.
Requested by	User who has requested the change. This field is available in the Change Requests list view so that you can see who requested a particular change.
Category	Category of this change request. Select <b>Other</b> if your category isn't in the list.
Service	Business service that you want to make available for this change request.
Service offering	Service option that consists of one or more service commitments that uniquely define the level of service. You can select the different levels of performance and features for a service through service offerings. You must select a service to filter the available service offerings.
Configuration item	Configuration item (CI) that the change applies to.
Priority	Priority of this change request.
Risk	Risk level for the change.  Select one of the following options:  <ul style="list-style-type: none"> <li>• <b>High</b></li> <li>• <b>Moderate</b></li> <li>• <b>Low</b></li> </ul>
Impact	Measure of the effect of a change on the business processes.



Change Request form (continued)

Field	Description
Short description	Summary of the change.
Description	Description of the change in detail.
Model	<p>Change model that is associated with the Telecommunications Network Inventory change request.</p> <p>After selecting the change model tile, the associated model appears in this field. You can also manually select one of the following options:</p> <p><b>Add Interface Card</b></p> <p>Change model that is used to add an interface card in an equipment slot.</p> <p><b>Create Inventory Equipment</b></p> <p>Change model that is used to add equipment when using an inventory template in a site or equipment holder.</p> <p><b>Create Logical Connection</b></p> <p>Change model that is used to create a logical connection between two network interfaces.</p> <p><b>Create Physical Connection</b></p> <p>Change model that is used to create a physical connection between two network interfaces.</p> <p><b>Emergency</b></p> <p>Change model that is used for the Telecom Network Inventory emergency changes.</p> <p><b>GPON Broadband Service</b></p> <p>Change model that is used to fulfill a Gigabyte Passive Optical Network (GPON) broadband order request.</p> <p><b>Normal</b></p> <p>Change model that is used for the Telecommunications Network Inventory normal changes.</p> <p><b>Note:</b> These change models are available in the <b>Changes &gt; All &gt; New</b> window.</p>

**Change Request form (continued)**

Field	Description
State	Current state of this change request, New, or closed.
Assignment group	Group working on the change request.
Assigned to	User that the change is assigned to. If an assignment rule applies, the change is automatically assigned to the appropriate user or group. <ul style="list-style-type: none"> <li>• New</li> <li>• Design In Progress</li> <li>• Design Review</li> <li>• Design Complete</li> </ul>

**Change Request form- Schedule tab**

Field	Description
Planned start date	Projected start date for the implementation. The planned start date can be the current date or a future date. The default value for this field is the current date. To change the planned start date, select the calendar icon  and select a new date.
Planned end date	Projected end date for the implementation. The planned end date must be after the planned start date. The default value for this field is one day after the planned start date. To change the planned end date, select the calendar icon  and select a new date.
CAB required	Option that designates if this change request requires a Change Advisory Board (CAB) approval before implementation.
CAB date	CAB approval date for the implementation.
Actual start date	Actual start date for the implementation. The actual start date can be on or before the planned start date.
Actual end date	Actual end date for the implementation. The actual end date can be before the planned start date but not before the actual start date.
CAB delegate	User who attends the Change Advisory Board (CAB) meeting to describe the change.
CAB recommendation	Notes or recommendations that are related to the CAB meeting.

### Change Request form- Notes tab

Field	Description
Watch list	User who gets the notifications about the change request. Add the names of the users who receive notifications and can view the watch topic.
Additional comments (Customer visible)	Option that designates if the work notes need to be shared with the user who requested the change.
Work notes	Work notes for the change request.
Work notes list	Users who can get the notification about the work notes.

### Change Request form- Closure Information tab

Field	Description
Close code	Close code that best describes the reason you're closing this change request. Select one of the following options: <ul style="list-style-type: none"> <li>• <b>Successful</b></li> <li>• <b>Unsuccessful with issues</b></li> <li>• <b>Unsuccessful</b></li> </ul>
Close notes	Any additional notes that describe the outcome of closing this change request.

### Change Task form

Fields	Description
Number	Change task identification number.
Change request	Change request number under which this change task was created.
Configuration item	Configuration item (CI) that the change is applied to.
Request type	Request type. Depending on your selection, the record producer form under the task attributes gets updated. This field represents the type of change request. Select any one of the following: <p><b>Revise CI</b></p> <p>This type of request definition enables you to select a CI that you want to revise and clones the selected CI details and related items. The <b>Configuration item</b></p>

Change Task form (continued)

Fields	Description
	<p>field is automatically updated with the cloned CI name having suffix as revised.</p> <p>All the changes made to the CI are now applied to the cloned CI. Also, both original and duplicated CIs can be found under <b>Affected CIs</b> tab. To customize the cloning process, see #unique_92.</p> <p><b>Add cable</b></p> <p>This type of request definition enables you to create a cable record.</p> <p><b>Add Card</b></p> <p>This type of request definition enables you to select a site and equipment model when you add interface cards. To learn more about equipment instantiation, see <a href="#">Telecommunications design and assign</a>.</p> <p><b>Create equipment</b></p> <p>This type of request definition enables you to select a network site and an inventory template for equipment instantiation. If you want to place your equipment inside a rack, you can select an equipment holder.</p> <p><b>Create Physical Connection and Create Logical Connection</b></p> <p>These types of request definitions have similar sets of site and equipment selection fields for the physical or logical connections between your start (A) and end (Z) locations. You can only select those interfaces that are associated with the designated equipment model for the A-start and Z-end interfaces.</p> <p>For the instantiation of physical or logical connections, you must select a physical connection model or a logical connection model, depending on the type of connection that you want to</p>

Change Task form (continued)

Fields	Description
	<p>create between the two sites. For a logical connection, this internal code creates a CI record, and additional path elements.</p> <p><b>Logical connection - Path compute</b></p> <p>This type of request definition has a set of site and equipment fields for start and end locations.</p> <p>For initiation of the path compute of the logical connection, you must select logical connection model. To learn more, see <a href="#">Compute and Create Logical Connection form</a>.</p> <p><b>Modify members of a topology</b></p> <p>This type of request definition enables you to create a cable record. To learn more about modifying a network topology record, see <a href="#">Add or remove a member to network topology record</a>.</p> <p><b>IP Address Allocation</b></p> <p>This type of request definition enables you to instantiate an IP address allocation and assign new services to the IP addresses. To learn more, see IP address allocation form in <a href="#">Change request and change task forms</a>.</p> <p><b>Phone Number Allocation</b></p> <p>This type of request definition enables you to instantiate a phone number allocation. You can allocate, de-allocate, and create numbers that are provided externally. To learn more, see the Manage phone number form in <a href="#">Change request and change task forms</a>.</p>
Short description	Short description for this order task.
Description	Description of this order task.
State	<p>State of this change task. Select one of the following options:</p> <p><b>Pending</b></p>

### Change Task form (continued)

Fields	Description
	<p>Task is waiting for an action from the user.</p> <p><b>Open</b> No action is taken on this task yet.</p> <p><b>In Progress</b> Task processing is in progress.</p> <p><b>Closed</b> Change task is complete.</p> <p><b>Canceled</b> Change task has been canceled.</p>
Assignment group	Name of the group that is responsible for this task. Select the search icon ( 🔍 ) to select a group from the list.
Assigned to	Depending on the selected group, the users who are assigned to the list are shown. Select the search icon ( 🔍 ) to see the list of users.
Work notes	Free-form work order note text.
Update	Option to save changes that you made to the order task.
Close Task	Option to change the state of the order task to <b>Closed</b> .
Delete	Option to delete this order task.

### Create inventory equipment or Create Rack/Cabinet - Task Attributes

Fields	Description
Inventory template	<p>Name of the inventory template for the equipment model. The instantiation process uses it to generate a network asset instance in the designated network site.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>Depending on the selected inventory template, a list of the optional templates appears at the bottom of the form.</li> <li>When you select an optional template, the current template values are overwritten.</li> <li>This field is applicable only for Create inventory equipment.</li> </ul>

**Create inventory equipment or Create Rack/Cabinet - Task Attributes (continued)**

Fields	Description
Equipment holder	<p>Name of the telco equipment holder. Select a rack or a cabinet where the equipment can be installed.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Telco equipment holder</b> field lists all racks and cabinets.</li> <li>• This field is applicable only for Create inventory equipment.</li> </ul>
Network site	<p>Name of the network site in which the process is instantiating the equipment.</p>
Rack/Cabinet template	<p>Template name of the rack template where you want to add all the slots to.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• Based on the selected <b>Rack template</b>, <b>Stockroom location</b>, and <b>Asset</b> the slots, network sites, and related network sites are added.</li> <li>• This field is applicable only for Create rack.</li> </ul>
Stockroom Location	<p>Name of the stockroom location where the asset is located.</p> <p>To learn more, see <a href="#">Telecommunications Network Inventory integration with Hardware Asset Management</a>.</p>
Asset	<p>Name of the asset that is associated with this record.</p> <p>To learn more, see <a href="#">Telecommunications Network Inventory integration with Hardware Asset Management</a>.</p>

**IP Address Allocation form - Task Attributes**

Field	Description
Operation Type	<p>Type of operation. Select one of the following options:</p>

**IP Address Allocation form - Task Attributes (continued)**

Field	Description
	<ul style="list-style-type: none"> <li>• <b>Create IP network subnet:</b> Creates a network subnet with a CIDR value.</li> </ul> <p><b>Note:</b> For the IP network subnet creation, the Create IP Subnetwork flow action is initiated. To learn more, see <a href="#">Create IP subnetwork function</a>.</p> <ul style="list-style-type: none"> <li>• <b>Convert CIDR to IP addresses:</b> Converts a single or multiple CIDRs to IP addresses and stores them in an IP address allocation.</li> </ul> <p><b>Note:</b> For the CIDR-to-IP address conversion, the CIDR-to-IP range flow action is initiated. To learn more, see <a href="#">CIDR to IP range function</a>.</p>
Name	Name for this IP allocation.
IP pool	Parent pool of this IP address allocation.
IP network subnet CIDR	CIDR value.
Managed Network	IP address or allocation that you can select and assign a network to.
Owned by configuration item	Configuration item that owns this allocation.
IP network subnet	<p>Network subnet that you searched for and selected to convert its CIDR-to-IP addresses.</p> <p><b>Note:</b> This field is used only for converting the CIDR-to-IP address.</p>

**Manage Phone Number - Task Attributes**

Fields	Description
Action	<p>Action that you can select:</p> <ul style="list-style-type: none"> <li>• <b>Allocate:</b> Allocates the numbers from a block</li> <li>• <b>De-allocate:</b> De-allocates the numbers. The status of the numbers is changed to Quarantine.</li> </ul> <p><b>Note:</b> When you select this action, you must select an allocation or the selected numbers that you want to deallocate. This action results in changing the status to Quarantine.</p>

**Manage Phone Number - Task Attributes (continued)**

Fields	Description
	<ul style="list-style-type: none"> <li>• <b>Ported-in:</b> Includes the numbers that are moved from another operator. The numbers are stored in a telephone number allocation of telephone numbers only.</li> <li>• <b>Note:</b> Multiple allocations get created if the numbers aren't in a series of numbers. Also, by default, the numbers are changed to the assigned or the ported-in status.</li> <li>• <b>Create:</b> Creates the phone number allocation for the numbers that are assigned to an external telephone block. You're assigning the numbers to a network inventory-based phone number allocation.</li> </ul>
Service	<p>Service for these numbers. The selected service gets assigned to the numbers.</p> <p><b>Note:</b> Ensure that you've created a service for this phone number. To learn more, see <a href="#">Managing your network functions</a>.</p>
Quantity	<p>Total number of required phone numbers.</p> <p><b>Note:</b> This field disappears for a deallocated action.</p>
Phone number allocation	<p>Available number allocations that are based on the provided information that you enter. You can select a phone number allocation for your line number.</p>
Line number	<p>Enter your required line number in xxxx-xxxx or xxx-xxx or xxx, xxx-xxx format.</p> <p><b>Note:</b> Multiple telephone number allocations are created if the line number isn't in a series of numbers. Also, the status of these numbers gets updated to either assigned or ported-in and the availability is No.</p>

**Related topics**

[Instantiating your network inventory by using design and assign](#)

## Change request related tabs

The related tabs in the Change Request form display related records that dynamically change based on the context of the change request.

### Change Request related tabs

Tab	Description
Affected CIs	<p>List of configuration items (CI). These items (from the CMDB) are affected by the change request. You can associate multiple, affected CIs with a change.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Affected CIs</b> tab of the Change Request form lists all CIs that are created through the change tasks of that change request. This tab also lists all the affected CIs of the change tasks.</li> <li>• If a CI in the affected CIs list of a change task is manually (or through an API) changed to another CI, the changes are also updated in the affected CI list of the corresponding change request.</li> <li>• If a CI in the affected CI list of a change task is manually (or through an API) deleted, the same CI is deleted in the affected CI list of the corresponding change request.</li> </ul>
Impacted Services/CIs	<p>List of CIs, such as business services or from other CI classes. These items are impacted by the affected CIs in the change request. You can associate multiple, impacted CIs with a change.</p>
Approvers	<p>List of approvers. These items are automatically generated from the workflow. You can also view the group of approvers who are assigned to the task.</p>
Change Tasks	<p>List of change tasks. These items are created from a workflow. The default workflow generates tasks in the Implementation state. You can also create a new change task. The <b>Planned start date</b> and <b>Planned end date</b> in the task must fall within the planned start and end dates that are specified in the change request.</p>

**Change Request related tabs (continued)**

Tab	Description
Problems	List of problem statements. If the change was generated from a problem, this list is generated automatically.
Incidents Fixed By Change	Incidents that require a resolution for the change.
Incidents Caused By Change	List of incidents caused by the implementation of the change.
Task SLAs	List of Task SLA records for the SLAs that are attached to the particular change tasks.
Outages	List of CI unavailability or outages. If there is an actual down time for any of the CI items, the outage information is listed.

**Related topics**

[Create a change request from Network Inventory Workspace](#)

**Commonly used network asset instance identification fields**

Some network asset instance fields are common in the identification sections of the Telecommunications Network Inventory forms. The ServiceNow AI Platform uses these fields to identify and categorize your network inventory assets.

**Common identification fields**

Field	Description
Is Alarmable	Option that designates if an alarm system can be assigned to this network asset.
Asset	Name of the asset that is associated with this record.
Availability	Current status of whether a resource is used or not used. Select one of the following options: <ul style="list-style-type: none"> <li>• Available</li> <li>• Used</li> <li>• Reserved</li> <li>• Shared</li> </ul>
CLEI code	Assigned Common Language Equipment Identification (CLEI) for this network asset. CLEI codes are globally unique, 10-character alphanumeric intelligent codes that identify the equipment in a structured naming format. There's a one-to-one relationship between a CLEI code and a manufacturer's product code, which is a part number that includes the hardware version.

**Common identification fields (continued)**

Field	Description
CLLI code	Assigned equipment Common Location Identifier Code (CLLI) for this network asset. The North American telecommunications industry uses the CLLI code to specify the location and function of telecommunications equipment.
Function	Optional user-defined function code that you use to categorize the functions of the various network entities or assets. Select the search icon ( 🔍 ) and select a function code.
Life Cycle Stage	<p>Stage of the life cycle that this network asset is in:</p> <p><b>Deploy</b> Network asset that is deployed in your network.</p> <p><b>Design</b> Network asset that is being used for design purposes.</p> <p><b>End of life</b> Network asset that is at the end of its useful life.</p> <p><b>Inventory</b> Network asset that is an inventory item in use in the network.</p> <p><b>End of life</b> Network asset that is missing and can't be located.</p> <p><b>Operational</b> Network asset that is operational.</p> <p><b>Purchase</b> Network asset that is in the purchase phase of its life.</p>
Life Cycle Stage Status	<p>Status of the network asset as it relates to the life cycle stage that it is in:</p> <p><b>In Maintenance</b> Network asset that is currently in maintenance.</p> <p><b>In Use</b> Network asset that is currently in use.</p> <p><b>Pending Retirement</b> Network asset that is currently in maintenance.</p>
Location	Geographic location of the network site. Select the search icon ( 🔍 ) and select a location from the Location hierarchy. To learn more about the Location hierarchy, see <a href="https://product.tmt-telecom-network-inventory/task/define-tni-locations.dita">product/tmt-telecom-network-inventory/task/define-tni-locations.dita</a> .
Managed by	Name of the person who manages this network asset. Select the search icon ( 🔍 ) and select a user from the listing.

**Common identification fields (continued)**

Field	Description
Network domain	<p>Domain of ownership and responsibility for this network asset or connection. Select one of the following options:</p> <p><b>Mobility</b> Network asset that is associated with the mobility equipment domain.</p> <p><b>Telco</b> Network asset that is associated with the telco equipment domain.</p> <p><b>Core</b> Network asset that is associated with the core equipment domain.</p>
Product Model	Product model, if any, that is associated with this network asset. Select the search icon ( 🔍 ) and select a product model.
Replaceable	Option that designates if this network asset can be replaced if it malfunctions or is affected by a network outage.
Role	Optional user-defined role code that you use to categorize the roles or purposes of the various network entities or assets. Select the search icon ( 🔍 ) and select a role code.
Serial number	Assigned serial number for this network asset.
Support group	Group that supports the network inventory.
Type	Optional user-defined type code that you use to categorize the types of the various network entities or assets. Select the search icon ( 🔍 ) and select a type code.
Name	Descriptive name for this IP pool or IP network subnet.
CIDR	Classless Inter-Domain Routing (CIDR) that is associated with the subnet, the IP address of the gateway, and the subnet mask. For VMware, the CIDR, gateway, and subnet mask fields are mandatory.
Managed Network	Name of the managed network that is associated with this IP pool and IP subnetwork.
Parent Pool	Name of the IP pool that is the parent of this IP pool or IP network subnet.
Description	Descriptive information about this IP pool or IP network subnet.
DNS Domain	Name of the IP addresses.

**Common identification fields (continued)**

Field	Description
Reported Addresses in Use	Number of the addresses that are in use for this IP pool or IP subnet.
Reported Free Addresses	Number of the addresses that are free for this IP pool or IP subnet.
Reported Reserved Addresses	Number of the addresses that are reserved for this IP pool or IP subnet.

**Cable parameters form**

Field	Description
Cable type	Name of the cable type.
Cable number	Number of the cable that is used in the physical connection.
Stand count	Number of fibers that this cable contains.
Cable length	Length of the cable in millimeters (mm).
Parent cable	Option that designates the top-layer physical connection.
Color code	Color of the cable line.
Spare length A	Length of the cable that connects to site A in millimeters (mm).
Spare length Z	Length of the cable that connects to site Z in millimeters (mm).
KML Route	Option that designates the fiber route maps in a KML format.

**Commonly used network asset instance configuration fields**

These fields, listed in alphabetic order, are common to some or most of the Configuration sections in the Telecommunications Network Inventory forms. The ServiceNow AI Platform uses them to configure individual network assets when you define your network asset instances.

Field	Description
Comments	Free form text that is used to comment on a network asset. For example, Du ty tech is Rahul Dev.
Dimensions	Physical dimensions of the network asset.
Distinguished name	Alternate name reference for the network asset that is based on the concatenated names and IDs from the other related network assets.

Field	Description
Manufacturer	Name of the network asset's manufacturer. Select the search icon ( 🔍 ) and select a manufacturer code. To learn more, see <a href="#">Create manufacturer and vendor codes</a> .
Model number	Manufacturer's model number for this network asset.
Orientation	Physical orientation of the slots in this network asset: <b>--None--</b> No specific physical slot orientation. <b>Horizontal</b> Horizontal slot orientation. <b>Vertical</b> Vertical slot orientation.
Network domain	Domain of ownership and responsibility for this network asset or connection. Select one of the following options: <b>Mobility</b> Represents wireless devices and connections. <b>Telco</b> Represent the edge or access networks. <b>Core</b> Represents the core network infrastructure.
Operation notes	Free-form operation note text for this network asset. For example, <code>Check diesel fuel for generator.</code>
POTS Number	Plain Old Telephone Service number that you are associating with this network site.
Product Model	Product model, if any, that is associated with this network asset. Select the search icon ( 🔍 ) and select a product model.
Serial number	Assigned serial number for this network asset.

## Company form

The Company form enables you to review, create, and modify the company details for a company code.

### Company form

Field	Description
Name	Name of the company.

**Company form (continued)**

Field	Description
Phone	Company phone number.
Fax phone	Company fax number.
Customer	Option that indicates a customer of yours.
Stock symbol	Three or four-letter stock symbol for the company.
Stock price	Current price at which the company stock is sold.
Street	Mailing street address of the company.
City	City in which the company is located.
State / Province	State or province in which the company is located.
Zip/Postal code	Zip or postal code for the company.
Notes	Any information about the company that would be helpful for others to know.

**Related topics**

[Create manufacturer and vendor codes](#)

**Connection Element form**

The Connection Element form enables you to define the connection elements for the physical connections and logical connections in the Telecommunications Network Inventory application. You can create, review, update, and delete the elements in this form.

**Connection Element form**

Fields	Description
Logical connection	Name of the logical connection that the connection element is created for.
Physical connection	Name of the physical connection that the connection element is created for.
Element type	Types of connection elements that you can select: <ul style="list-style-type: none"> <li>• Network Interface</li> <li>• Physical connection</li> <li>• Logical connection</li> <li>• Managed network function</li> <li>• Equipment</li> <li>• Topology</li> </ul>
Element	Element of the element type.
Sequence	Number of sequences.
Route	Number of routes.

**Connection Element form (continued)**

Fields	Description
Cable	Cable for the physical element.
Strand number	Cable number of the physical element.

**Create equipment from rack view**

The Create new equipment form enables you to create an equipment from the selected rack using the Telecommunications Network Inventory application.

**Create new equipment**

Fields	Description
Apply inventory template	Select a template for the equipment
Name	Name of the equipment
Life Cycle Stage	<p>Stage of the life cycle that this network asset is in:</p> <p><b>Deploy</b> The network asset is deployed in your network.</p> <p><b>Design</b> The network asset is being used for design purposes.</p> <p><b>End of life</b> The network asset is at the end of its useful life.</p> <p><b>Inventory</b> The network asset is an inventory item in use in the network.</p> <p><b>End of life</b> The network asset is missing and can't be located.</p> <p><b>Operational</b> The network asset is operational.</p> <p><b>Purchase</b> The network asset is in the purchase phase of its life.</p>
Equipment CLLI	Assigned equipment Common Location Identifier Code (CLLI) for this network asset. The North American telecommunications industry uses the CLLI code to specify the location and function of telecommunications equipment.

**Create new equipment (continued)**

Fields	Description
Network domain	<p>Domain of ownership and responsibility for this network asset or connection. Select one of the following options:</p> <p><b>Mobility</b></p> <p>The network asset is associated with the mobility equipment domain.</p> <p><b>Telco</b></p> <p>The network asset is associated with the telco equipment domain.</p> <p><b>Core</b></p> <p>The network asset is associated with the core equipment domain.</p>
Managed by	<p>Name of the person who manages this network asset. Select the search icon ( 🔍 ) and select a user from the listing.</p>
Life Cycle Stage Status	<p>Status of the network asset as it relates to the life cycle stage that it is in:</p> <p><b>In Maintenance</b></p> <p>The network asset is currently in maintenance.</p> <p><b>In Use</b></p> <p>The network asset is currently in use.</p> <p><b>Pending Retirement</b></p> <p>The network asset is currently in maintenance.</p>
Support group	<p>Group that supports the network inventory.</p>
Network site	<p>Site of this equipment</p>
Configuration	<p>Under optional templates section, select a template for the multi slots.</p> <p><b>Note:</b> This field is displayed only for multi slots template.</p>

**Create Logical Connection form**

The Create Logical Connection form enables you to review, create, and modify the connection details for a logical connection change request.

### Create Logical Connection form

Fields	Description
A end Site	Starting network site where this logical connection is configured.
A end Equipment	Starting network equipment where this logical connection is configured.
A end Interface	Starting network interface where this logical connection is configured.
Logical Connection Model	Logical connection model where this logical connection is configured.  <b>Note:</b> The topology connection models are not listed if you are creating a logical connection in a change request.
Z end Site	Ending network site where this logical connection is configured.
Z end Equipment	Ending network equipment where this logical connection is configured.
Z end Interface	Ending network interface where this logical connection is configured.
Bandwidth	Bandwidth of this logical connection.

#### Related topics

[Designing and assigning a GPON broadband service](#)

### Create Physical Connection form

The Create Physical Connection form enables you to review, create, and modify the connection details for a physical connection change request.

#### Create Physical Connection form

Fields	Description
A end Site	Starting network site where this physical connection is configured.
A end Equipment	Starting network equipment where this physical connection is configured.
A end Interface	Starting network interface where this physical connection is configured.
Physical Connection Model	Logical connection model where this physical connection is configured.
Z end Site	Ending network site where this physical connection is configured.
Z end Equipment	Ending network equipment where this physical connection is configured.

### Create Physical Connection form (continued)

Fields	Description
Z end Interface	Ending network interface where this physical connection is configured.
Bandwidth	Bandwidth of this physical connection.

#### Related topics

[Designing and assigning a GPON broadband service](#)

## Data center place types

Place types are used to categorize the different places on your map. You can use place type to categorize your network assets and facilities on your map in the Telecommunications Network Inventory application.

#### Place types

Name	Description
Aisle	Corridor or walkway between rows of server racks.
Cage	Physically enclosed area within the data center that is dedicated to a single customer or tenant.
Floor PDU	Floor-mounted Power Distribution Unit. It is a large electrical device used to distribute electrical power from the main power source to individual racks or equipment throughout the data center
HVAC	A system responsible for maintaining heating, ventilation, and air conditioning.
HVAC zone	A specific area that is independently controlled for heating, ventilation, and air conditioning.
Monitoring room	A dedicated space where personnel monitor, manage, and control the operation of the entire data center.
Power room	A dedicated area that houses the main electrical infrastructure needed to supply, condition, and manage power for the entire facility
Rack	Standardized metal frame or enclosure used to house network assets such as servers, storage devices, and switches.
Rack row	A linear arrangement of multiple server racks positioned side by side.

### Place types (continued)

Name	Description
Server room	Secure space where IT equipment such as servers, storage systems, and network gear is installed and operated.

### Related topics

[Upload and manage floor map for your datacenter](#)

## Default Template forms

The Default Template form enables you to create, review and modify a default template and schedule generation of a template.

### Default Template form

The Default Template form enables you to create, review, and modify the details for a default template.

#### Default Template form

Field	Description
Name	Name for this default template.
Table	Name of the table that contains the configuration item (CI) class date that you are basing this default template on. Click the search icon ( 🔍 ) and select a table.
Active	Option that designates if this default template is active.
Short description	Short overview of this network asset.
Application	Name of the application that the default template is associated with. Network Inventory Core or Network Inventory Advanced appears, based on the license that your company purchased.
Domain	System domain in which the template is created.
User	Name of the user that is associated with this default template. Click the search icon ( 🔍 ) and select a user.
Groups	Name of the user group that is associated with this default template. Click the search icon ( 🔍 ) and select a user group.
Global	Option that indicates that the default template is in the global scope. If not, its assigned scope appears.
Template	Name of the table attribute and its value. You can use this field to select attributes from the table that you selected in the <b>Table</b> field and set specific values for each attribute. When you create a Create Equipment Inventory change request to generate the net asset instances by using this template, it enables you to pass specific values to the configuration that it generates.

### Related topics

[Create a default template](#)

## Scheduled Entity Generation form

The Scheduled Entity Generation form enables you to create, review and modify the schedule generation details for a default template.

### Scheduled Entity Generation form

Field	Description
Name	Name that identifies this scheduled job. The default value is the template name. If required, you can update this field.
Active	Option that indicates that the scheduled job is active and should be executed at a specified date and time.
Application	Name of the application that contains the entity. Global appears if the entity is in the global scope.
Run	Time interval to use for running the scheduled job. To learn more, see <a href="#">Automatically generate something from a template</a> .
Time zone	An area that follows a specific standard time for official purposes.
Time	Time of day at which the scheduled job should run, expressed in hours, minutes, and seconds on a 24-hour clock. The selection that you make in the <b>Time</b> zone field determines the time zone for this entry.
Conditional	Option for enabling the running of the scheduled job if certain conditions are met in the associated script.
Condition	Conditional script that determines if a scheduled job should run. The last expression of the script should evaluate to a Boolean (true or false) value. This text box appears only if you select <b>Condition</b> .
Generate this	Reference to the template record from which you are generating a scheduled job.

### Related topics

[Create a default template](#)

## Designing and assigning a GPON broadband service

With the Gigabyte Passive Optical Network (GPON) Broadband Service change model, you can create an automated set of tasks to fulfill a GPON broadband order request.

## GPON Broadband Service overview

As a product manager, you can use the GPON Broadband Service change model to design and allocate your inventory for GPON broadband services. With this model, you can fulfill your customer orders and requests for your network expansion.

### Change execution process for GPON Broadband Service request

The change request execution process includes the task stages that you need to complete for the GPON Broadband Service request. You must do these task stages in the following sequence to successfully complete the request.

#### Create the change request

Create the change request by using the GPON Broadband Service change model. To learn more, see [Create and execute a change task in Telecommunications Network Inventory](#).

#### Path compute and create logical connection

Identify the possible paths between the network sites and create a logical connection between each site. To learn more, see the next section in this topic called "Path computation for the GPON Broadband Service change model."

#### Create a logical connection

Add similar sets of site selection fields for the physical and logical connections between your start (A) and end (Z) locations. You can only select those interfaces that are associated with the designated equipment model for the A- and Z-end interfaces. To learn more, see [Change request and change task forms](#).

#### Create a physical connection

Add similar sets of site selection fields for the physical and logical connections between your start (A) and end (Z) locations to configure your inventory equipment. You can only select those interfaces that are associated with the designated equipment model for the A- and Z-end interfaces. To learn more, see the next section in this topic called "Path computation for the GPON Broadband Service change model."

#### Add an interface card

Select a site and equipment model when you add interface cards. Use the **Slot** field to select the slot that you want to add to the equipment model. To learn more, see [Change request and change task forms](#).

#### Create equipment

Select a network site and equipment model for your equipment instantiation. The instantiation process is when you generate and validate the equipment records at the site level. To learn more, see [Change request and change task forms](#) and [Change request and change task forms](#).

After you complete this sequence, you can complete the design and assign procedure for the GPON broadband services.

To execute this process successfully, you need to consider a set of conditions as well as scenarios. To learn more, see the next section in this topic called "Path computation for the GPON Broadband Service change model."

### Path computation for the GPON Broadband Service change model

An internal path computation function is part of the GPON Broadband Service change model. Its purpose is to identify the possible paths between your network sites. This computation is based

on the parameters that you enter when you complete each change task that is associated with the GPON Broadband Service change model.

When you create the change request with the GPON Broadband Service change model and save the request, five default change tasks are created. To learn more, see [Design your GPON Broadband Service](#).

The following scenarios are handled in the path computation when you execute the process to complete the GPON broadband service request:

- When all physical connections are available, the Passive Optical Network (PON) access path is created.
- If the physical connection between the splitter and PFP is used, the PON access path fails.
- If all physical connections are available, the PON network path is created.
- If a physical connection between OLT and FDP is used, the PON network path creation fails.
- If all logical connections are shared, the VLAN path search can create the connection.
- If a link aggregation group (LAG) path is used, the VLAN path search fails.

The path computation uses record producers in each change task that is associated with the GPON Broadband Service change model to collect the required data. It collects most of its connection data when you complete the Compute and Create logical connection change task that you created from a GPON Broadband Service change model.

1. The path search is between the equipment model that you specified for the A connection end of the connection and the equipment model that you specified in the Z end connection.
2. The path search is between the equipment model that you specified for the A connection end of the connection and the equipment type that you specified in the Z end connection.
  - The logical connection model indicates what model of logical connection must be created after the path computation.
  - The bandwidth refers to the bandwidth table.
  - The allowed physical connection model captures the physical connection CI model, which can be used to find a path and is added in the path element.

The path computation works on the following conditions:

1. The equipment hierarchy up to the interface has a *Contains::Contained By* relationship that is updated when you instantiate the piece of equipment by using the Create Inventory Equipment change model.
2. The equipment is related to the network site. This condition is also enforced when you instantiate the piece of equipment by using the Create Inventory Equipment change model.
3. The physical connection that you create between the interfaces is associated with valid models.
4. When you create a physical connection by using the Create Physical Connection change model, a CI relationship is created between the sites.
5. The logical connection that you create between the interfaces is associated with valid models.
6. When you create a logical connection by using the Create Physical Connection change model, a CI relationship is created between those sites.
7. Connection elements are added for the logical connections. These elements should be valid physical connections between the sites when the computation performs the path search.

- 8. Port A and Port Z must be populated for the physical and logical connections.
- 9. The **Availability** field for the physical and logical connections must be available to qualify those connections as possible underlying paths for routing. This validation ensures that a resource is not used multiple times.

To learn more about errors occur in the path computation, see [Path computation error messages](#).

**Related topics**

[Design your GPON Broadband Service](#)

## Domain separation in Telecommunications Network Inventory

Domain separation in Telecommunications Network Inventory provides a structured and efficient way to manage complex, multilevel organizational environments. It enables secure, tailored access and control, ensuring that users view data relevant to their domain.

**Support level: Basic**


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

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

## Equipment form

The Create new equipment form enables you to describe the details for an equipment record.

**Create new equipment form**

Field	Description
Name	Name of the equipment record.
Managed by	Name of the person who manages this network asset. Select the search icon (  ) and select a user from the listing.
Life Cycle Stage	<p>Stage of the life cycle that this network asset is in:</p> <p><b>Deploy</b> Network asset that is deployed in your network.</p> <p><b>Design</b> Network asset that is being used for design purposes.</p> <p><b>End of life</b> Network asset that is at the end of its useful life.</p> <p><b>Inventory</b> Network asset that is an inventory item in use in the network.</p> <p><b>End of life</b></p>

### Create new equipment form (continued)

Field	Description
	<p>Network asset that is missing and can't be located.</p> <p><b>Operational</b></p> <p>Network asset that is operational.</p> <p><b>Purchase</b></p> <p>Network asset that is in the purchase phase of its life.</p>
Life Cycle Stage Status	<p>Status of the network asset as it relates to the life cycle stage that it is in:</p> <p><b>In Maintenance</b></p> <p>Network asset that is currently in maintenance.</p> <p><b>In Use</b></p> <p>Network asset that is currently in use.</p> <p><b>Pending Retirement</b></p> <p>Network asset that is currently in maintenance.</p>
Equipment CLLI	Assigned equipment Common Location Identifier Code (CLLI) for this network asset. The North American telecommunications industry uses the CLLI code to specify the location and function of telecommunications equipment.
Support group	Group that supports the network inventory.
Network domain	<p>Domain of ownership and responsibility for this network asset or connection. Select one of the following options:</p> <p><b>Mobility</b></p> <p>Network asset that is associated with the mobility equipment domain.</p> <p><b>Telco</b></p> <p>Network asset that is associated with the telco equipment domain.</p> <p><b>Core</b></p> <p>Network asset that is associated with the core equipment domain.</p>
Site	Name of the network site or data center in which the process is instantiating the equipment.

#### Related topics

[Create an equipment record by using design and assign](#)


## Equipment Holder form

The Equipment Holder form enables you to create, review, and modify the network asset details for an equipment holder.

### Equipment Holder form - General

Field	Description
Name	Physical orientation of the slots in this network asset:

**Equipment Holder form - General (continued)**

Field	Description
	<p><b>--None--</b> No specific physical slot orientation.</p> <p><b>Horizontal</b> Horizontal slot orientation.</p> <p><b>Vertical</b> Vertical slot orientation.</p>
Serial number	Total number of equipment holder units, both occupied and available, in this network asset.
Asset	Number of equipment holder units that are in use in this network asset.
Support group	Number of equipment holder units that are available for use in this network asset.
Life Cycle Stage	<p>Stage of the life cycle that this network asset is in:</p> <p><b>Deploy</b> Network asset that is deployed in your network.</p> <p><b>Design</b> Network asset that is being used for design purposes.</p> <p><b>End of life</b> Network asset that is at the end of its useful life.</p> <p><b>Inventory</b> Network asset that is an inventory item in use in the network.</p> <p><b>End of life</b> Network asset that is missing and can't be located.</p> <p><b>Operational</b> Network asset that is operational.</p> <p><b>Purchase</b> Network asset that is in the purchase phase of its life.</p>
Managed by	Name of the person who manages this network asset. Select the search icon (  ) and select a user from the listing.
Life Cycle Stage Status	<p>Status of the network asset as it relates to the life cycle stage that it is in:</p> <p><b>In Maintenance</b> Network asset that is currently in maintenance.</p> <p><b>In Use</b> Network asset that is currently in use.</p>

**Equipment Holder form - General (continued)**

Field	Description
	<p><b>Pending Retirement</b></p> <p>Network asset that is currently in maintenance.</p>
Model ID	Manufacturer's model identification number for this network asset.
Alarmable	Option that designates if an alarm system can be assigned to this network asset.

**Equipment Holder form - Configuration**

Field	Description
Manufacturer	Name of the network asset's manufacturer. Select the search icon ( 🔍 ) and select a manufacturer code. To learn more, see <a href="#">Create manufacturer and vendor codes</a> .
Model number	Manufacturer's model number for this network asset.
Orientation	Physical orientation of the slots in this network asset: <p><b>--None--</b> No specific physical slot orientation.</p> <p><b>Horizontal</b> Horizontal slot orientation.</p> <p><b>Vertical</b> Vertical slot orientation.</p>
Unit position	Unit position of this network asset.
Network Domain	Domain of ownership and responsibility for this network asset or connection. Select one of the following options: <p><b>Mobility</b> Network asset that is associated with the mobility equipment domain.</p> <p><b>Telco</b> Network asset that is associated with the Telco equipment domain.</p> <p><b>Core</b> Network asset that is associated with the core equipment domain.</p>
Units occupied	Total number of equipment holder units, both occupied and available, in this network asset.

**Equipment Holder form - Configuration (continued)**

Field	Description
Units in use	Number of equipment holder units that are in use in this network asset.
Units available	Number of equipment holder units that are available for use in this network asset.
Comments	Free form text that is used to comment on a network asset. For example, Duty tech is Rahul Dev.
Allotted Electric Power	<p>Maximum power allotted to the asset.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>To maintain the power capacity of the rack/cabinet, it's essential to incorporate a minimum value of 10 Watts.</li> <li>By default, the value is converted to Kilowatts (KW), in the capacity metric and following is the conversion formula                             <ul style="list-style-type: none"> <li>Watts (W) - <math>\langle \text{power-in-watts} \rangle / 1000</math></li> <li>Megawatts (MW) - <math>1000 * \langle \text{power-in-mega-watts} \rangle</math></li> <li>Horsepower (HP) - <math>0.746 * \langle \text{power-in-horsepower} \rangle</math></li> </ul> </li> </ul>
Allotted Electric Power unit	<p>Units in which the allotted electric power of the asset is measured. Select any one of the following units.</p> <ul style="list-style-type: none"> <li>Watts (W)</li> <li>Kilowatts (KW)</li> <li>Megawatts (MW)</li> <li>Horsepower (HP)</li> </ul>
Unit of Measure System	<p>Measurement type based on which the <b>Max weight capacity unit</b> is fetched. Select any one of the following measurement types.</p> <ul style="list-style-type: none"> <li>Metric</li> <li>US Imperial</li> </ul>
Max weight capacity	<p>Maximum capacity of assets.</p> <p><b>Note:</b> By default, the value is converted to Pounds (lbs), in the capacity metric and following is the conversion formula</p> <ul style="list-style-type: none"> <li>Ounces: <math>\langle \text{weight-in-ounces} \rangle / 16</math></li> <li>Grams: <math>\langle \text{weight-in-grams} \rangle / 453.59</math></li> <li>Kilograms: <math>2.204 * \langle \text{weight-in-kilograms} \rangle</math></li> </ul>
Max weight capacity unit	Unit in which weight of the asset is measured. Select any one of the following.

### Equipment Holder form - Configuration (continued)

Field	Description
	<ul style="list-style-type: none"> <li>Grams (g)                             <p><b>Note:</b> This field is only accessible when the Metric system is used for unit of measurement.</p> </li> <li>Kilograms (kg)                             <p><b>Note:</b> This field is only accessible when the Metric system is used for unit of measurement.</p> </li> <li>Ounces (oz)                             <p><b>Note:</b> This field is only accessible when the US Imperial system is used for unit of measurement.</p> </li> <li>Pounds (lbs)                             <p><b>Note:</b> This field is only accessible when the US Imperial system is used for unit of measurement.</p> </li> </ul>

#### Related topics

<product/tmt-telecom-network-inventory/task/define-tni-equipment-holders.dita>

### Equipment holder extension classes

The Equipment Holder extension classes are the sub-classes that are extended from the Equipment Holder. You can define equipment holder records for these classes in the Telecommunications Network Inventory application.

#### Equipment Holder extended classes

Class Name	Table Name	Extends from	Description
Cabinet	cmdb_ci_container_cabinet	cmdb_ci_equipment_holder	A telecommunications cabinet, also known as a telecom cabinet or equipment cabinet, is a physical enclosure used to house and protect various telecommunications and network equipment, such as switches, routers, patch panels, and power supplies. It provides a secure and organized environment for

**Equipment Holder extended classes (continued)**

Class Name	Table Name	Extends from	Description
			the installation, management, and interconnection of telecommunications infrastructure within a network or data center.
Multi Rack	cmdb_ci_container_multi_rack	cmdb_ci_equipment_holder	A multi-rack, also referred to as a multi-rack system or multi-rack enclosure, is a configuration consisting of multiple interconnected equipment racks used for housing and organizing a large amount of telecommunications or network equipment in a centralized manner. It provides expanded capacity and scalability, allowing for efficient deployment and management of equipment within data centers or telecommunication facilities.
Rack	cmdb_ci_container_rack	cmdb_ci_equipment_holder	A rack, commonly known as a server rack or equipment rack, is a framework designed to securely hold and organize various IT and telecommunications equipment, such as servers, networking devices, and storage units. It provides a standardized form factor for easy installation, organization, and maintenance of equipment in data centers and

**Equipment Holder extended classes (continued)**

Class Name	Table Name	Extends from	Description
			other technology environments.
Shelf	cmdb_ci_container_shelf	cmdb_ci_equipment_holder	A shelf holder, also known as a rack shelf or equipment shelf, is a component designed to support and hold non-rackmount equipment or devices within a rack or equipment cabinet. It provides a stable platform for equipment that does not have built-in rackmount capabilities, allowing for efficient organization and integration of various devices within the rack infrastructure.
Slot	cmdb_ci_container_slot	cmdb_ci_equipment_holder	In the context of technology and hardware, a slot refers to a physical or virtual receptacle designed to hold and accommodate a specific type of component, such as an expansion card or memory module. It provides a standardized interface and location for inserting and connecting the component to the main system or device.  Dependent on Hardware (contains::contained by).  Name is usually discoverable. If not available, use the name of the card that

### Equipment Holder extended classes (continued)

Class Name	Table Name	Extends from	Description
			is contained in this slot.
Subslot	cmdb_ci_container_subslot	cmdb_ci_equipment_holder	<p>In our context, a slot that is present on a Card and can accommodate child cards is considered a subslot.</p> <p>Dependent on Hardware (contains::contained by).</p> <p>Identification: Name (100). Name is discovered from SNMP. If not available, use the name of the card that is contained in this subslot.</p>

#### Related topics

<product/tmt-telecom-network-inventory/task/define-tni-equipment-holders.dita>

## Equipment extension classes

The Equipment extension classes are the subclasses that are extended from the telco equipment, network gear, and hardware tables. You can define equipment records for these classes in the Telecommunications Network Inventory application.

### Equipment extended classes

Class Name	Table Name	Extends generic CI class	Description
Logical Composite	cmdb_ci_logical_composite	cmdb_ci	<p>A logical composite is a logical device that is composed of multiple distinct entities, which are aggregated together to provide a function. It refers to grouping of network elements such as equipment and racks that are logically connected to achieve a specific purpose or function, rather than being physically connected.</p>

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
Power Over Ethernet Device	cmdb_ci_power_over_ethernet_device	cmdb_ci_switch	Power over Ethernet (PoE) is a technology that enables for the transmission of both data and electrical power over a single Ethernet cable, simplifying the deployment and connectivity of network devices such as IP cameras, wireless access points, and VoIP phones by eliminating the need for separate power sources. This enables easier installation and flexibility in network infrastructure.
Service Aggregation Router	cmdb_ci_service_aggregation_router	cmdb_ci_router	A service aggregation router is a network device that consolidates and routes traffic from multiple service providers or network connections into a single network infrastructure, enabling efficient management and distribution of services to end-users or multiple locations. It acts as a centralized hub for aggregating and directing traffic from various sources to optimize network performance and simplify network management.
Residential Gateway	cmdb_ci_residential_gateway	cmdb_ci_modem_network_device	A residential gateway is a device that combines the functionality of a modem, router, and often other networking

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			components, providing internet connectivity, local network management, and potentially additional services such as Wi-Fi, firewall, and voice capabilities, to residential users or small home networks. It serves as the primary point of entry for internet access and enables the connection and communication of devices within a home network.
Multi Service Network Router	cmdb_ci_multi_service_network_router	cmdb_ci_netgear	A multi-service network router is a versatile networking device capable of supporting and routing various types of network traffic, such as data, voice, and video, over different network protocols or technologies, including Ethernet, MPLS, and IP. It provides the ability to handle multiple services and diverse traffic types within a single router infrastructure, facilitating efficient communication and connectivity for different applications and systems.
Fabric Interconnect	cmdb_ci_fabric_interconnect	cmdb_ci_netgear	A fabric interconnect is a network component in a data center architecture that serves as a central switch for connecting and managing multiple servers, storage systems, and other

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			network devices. It provides high-speed communication and enables efficient data flow between various components within the data center infrastructure.
Protocol Converter	cmdb_ci_protocol_converter	cmdb_ci_netgear	Device used to convert standard or proprietary protocol of one device to the protocol suitable for the other device or tools to achieve the interoperability.
Network Monitoring	cmdb_ci_network_monitoring	cmdb_ci_network_testing	A network monitoring unit is a dedicated device or software system that continuously monitors and analyzes network traffic, performance, and security in real-time, providing administrators with insights, alerts, and visibility into the health and status of the network infrastructure. It helps ensure optimal network performance, detect anomalies, troubleshoot issues, and maintain network security.
Network Tap	cmdb_ci_network_tap	cmdb_ci_network_monitoring	A network tap is a passive hardware device that allows for the non-intrusive monitoring or capturing of network traffic by providing a copy of the data passing through a specific network link to an external monitoring or analysis tool. It enables network

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			administrators to gain visibility into network traffic without disrupting or affecting the normal operation of the network.
Network Testing Unit	cmdb_ci_network_testing_unit	cmdb_ci_network_testing_unit	A network testing unit is a device or software tool used to evaluate and assess the performance, functionality, and reliability of a computer network. It helps measure network parameters, identify issues, validate configurations, and ensure optimal network performance, often through the generation of test traffic or simulated network conditions.
Radio Access Network	cmdb_ci_radio_access_network	network_ni_telco_equipment	A Radio Access Network (RAN) is a part of the mobile telecommunications system that encompasses the infrastructure and components responsible for wireless communication between user devices and the core network, enabling connectivity and data transmission over radio frequencies.
Radio Control Hardware	cmdb_ci_radio_control_hardware	hardware_radio_access_network	Radio control hardware refers to the devices, components, and systems that enable remote control of various devices or mechanisms through the use of radio frequency

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			signals. It typically includes transmitters, receivers, antennas, and associated circuitry, allowing users to wirelessly manipulate and control vehicles, drones, robotic systems, or other electronic equipment from a distance.
Distributed Antenna System Remote	cmdb_ci_distributed_antenna_remote	cmdb_ci_system_remote	A DAS remote, also known as a Distributed Antenna System remote, is a component of a wireless communication infrastructure that extends the coverage and capacity of wireless networks by connecting to a central DAS unit and distributing wireless signals to remote areas or buildings, ensuring reliable wireless connectivity in those locations.
Distributed Antenna System Controller	cmdb_ci_distributed_antenna_controller	cmdb_ci_system_controller	A DAS controller, or Distributed Antenna System controller, is a network device that manages and controls the operation of a Distributed Antenna System. It oversees signal distribution, optimization, and coordination of multiple DAS remotes, ensuring efficient coverage, capacity, and quality of wireless communications within a specific area or venue.
Small Cell Radio Gateway	cmdb_ci_small_cell_radio_gateway	cmdb_ci_radio_control	A small cell radio gateway is a device

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			that serves as an interface between small cell base stations and the core network infrastructure. It facilitates the communication between small cell radios and the wider network, enabling the extension of wireless coverage and capacity in areas with high user density or limited macrocell coverage.
Baseband Unit	cmdb_ci_baseband_unit	cmdb_ci_radio_control	<del>Radio</del> baseband unit (BBU) is a key component in a wireless communication system that processes and manages the digital baseband signals for transmitting and receiving data over the air. It performs functions such as modulation, coding, decoding, and signal processing, serving as the intelligence behind the radio access network.
EnodeB	cmdb_ci_enode_b	cmdb_ci_baseband_unit	An eNodeB, short for Evolved Node B, is a key component in the Long-Term Evolution (LTE™) network architecture that serves as the base station for wireless communication, connecting user devices to the core network and managing radio resources.
GnodeB	cmdb_ci_gnode_b	cmdb_ci_baseband_unit	GNodeB, or Next-Generation NodeB,

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			is a term used in the context of 5G networks to refer to the base station that serves as the interface between user devices and the 5G core network, enabling high-speed wireless communication and supporting advanced features such as massive connectivity and low latency.
Mixed NodeB	cmdb_ci_mixed_node_b	cmdb_ci_baseband_unit	A mixed NodeB device refers to a telecommunications equipment that supports multiple radio access technologies, typically combining both 2G and 3G technologies in a single base station.
Base Station Controller	cmdb_ci_base_station_controller	cmdb_ci_baseband_unit	A Base Station Controller (BSC) is a network element in a cellular system that manages and controls one or more base transceiver stations (BTS). It handles tasks such as radio resource management, call control, and handover management, ensuring efficient operation and communication between the BTS and the mobile switching center (MSC) or core network.
Radio Transmission Hardware	cmdb_ci_radio_transmission_hardware	cmdb_ci_radio_access_network	Radio transmission hardware refers to the physical components and equipment used in the process of

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			transmitting radio signals in a wireless communication system.
Small Cell Radio Node	cmdb_ci_small_cell_radio	cmdb_ci_radio_transmission	A small cell radio node is a compact and low-power base station that extends the coverage and capacity of a cellular network in areas with high user density or limited macrocell coverage. It provides localized wireless connectivity and offloads network traffic by serving a smaller geographic area, typically in urban environments or indoor settings.
Remote Radio Unit	cmdb_ci_remote_radio	cmdb_ci_radio_transmission	A remote radio node, also known as a remote radio head (RRH), is a component of a distributed antenna system (DAS) or a radio access network (RAN) that separates the radio frequency (RF) components from the baseband processing unit. It allows for the deployment of radio transceivers closer to the antenna, reducing signal loss and enabling flexible network design and optimization.
Repeater	cmdb_ci_repeater	cmdb_ci_radio_transmission	A repeater is a device used in telecommunications and networking to amplify or regenerate signals to extend their reach and improve signal quality. It receives

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			incoming signals, amplifies them, and retransmits them to cover larger distances or overcome signal degradation in wired or wireless communication.
Antenna Control	cmdb_ci_antenna_control	cmdb_ci_radio_transmission	<b>Air antenna controller</b> is a device or component that manages and controls the positioning, configuration, and operation of an antenna system. It regulates the movement, alignment, and parameters of the antenna to optimize signal reception, transmission, and coverage, typically in applications such as satellite communications, radar systems, or wireless networks.
Antenna	cmdb_ci_antenna	cmdb_ci_radio_transmission	<b>Air antenna</b> is a device that receives or transmits electromagnetic signals, typically used to facilitate wireless communication by converting electrical currents into radio waves or vice versa.
ONT	cmdb_ci_optical_network_terminal	cmdb_ci_telco_equipment	An <b>ONT, or Optical Network Terminal</b> , is a device used in fiber-optic networks to convert optical signals into electrical signals, enabling the delivery of high-speed internet, phone, and television services to end-users.

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
ONU	cmdb_ci_optical_network_unit	cmdb_ci_ni_telco_equipment	An ONU, or Optical Network Unit, is a device that resides at the customer premises in a fiber-optic network and serves as an interface between the optical network and the customer's devices, allowing the delivery of high-speed internet, phone, and television services.
Voice Gateway	cmdb_ci_voice_gateway	cmdb_ci_ni_telco_equipment	A voice gateway is a device that acts as an interface between traditional telephony systems (such as analog or digital phone lines) and IP-based networks, enabling the conversion of voice signals into digital data for transmission over the internet or other IP networks. It facilitates the integration of voice communication into IP-based communication systems.
Optical Line Amplifier	cmdb_ci_optical_line_amplifier	cmdb_ci_ni_telco_equipment	An optical line amplifier is a device used in fiber optic communication systems to boost or amplify optical signals traveling through a fiber optic cable, enabling long-distance transmission without the need for electronic conversion.
Battery Distribution Fuse Bay	cmdb_ci_battery_distribution_fuse_bay	cmdb_ci_ni_telco_equipment	A battery distribution fuse bay is a compartment or enclosure that houses fuses

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			designed to protect electrical systems connected to a battery by controlling and distributing power to various circuits, ensuring safe operation and preventing damage from overcurrent conditions.
Call Server	cmdb_ci_call_server	cmdb_ci_ni_telco_equip	A call server is a centralized communication system that manages and controls telephone calls, routing them to the appropriate destinations, handling call setup, termination, and other call-related functionalities within a telephony network or VoIP (Voice over Internet Protocol) system.
Channel Bank	cmdb_ci_channel_bank	cmdb_ci_ni_telco_equip	A channel bank is a device used in telecommunications to multiplex and demultiplex multiple analog or digital communication channels onto a single transmission medium, such as T1 or E1 lines, allowing efficient transmission and management of voice or data signals.
Media Converter	cmdb_ci_media_converter	cmdb_ci_ni_telco_equip	A media converter is a device that bridges different types of network media, such as converting signals between copper and fiber optic cables, enabling seamless communication

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			between disparate network technologies and extending the reach of network connections.
Digital Cross Connect System	cmdb_ci_digital_cross_connect_system	cmdb_ci_telco_equipment	A digital cross connect system (DCS) is a telecommunications device that allows efficient routing and management of digital voice or data channels within a network. It enables the flexible interconnection and reconfiguration of communication paths, facilitating reliable and scalable connectivity in complex network environments.
Echo Cancellation System	cmdb_ci_echo_cancellation_system	cmdb_ci_telco_equipment	An echo cancellation system is a signal processing technology or device that reduces or eliminates the echo effect caused by the reflection of transmitted audio signals back to the sender. It improves the audio quality and intelligibility of voice communication by suppressing unwanted echoes and improving the overall clarity of the conversation.
Voice Activity Detection Equipment	cmdb_ci_voice_activity_detection_equipment	cmdb_ci_telco_equipment	Voice activity detection (VAD) equipment is a system or device that analyzes audio signals to determine the presence or absence of human speech.

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			It is commonly used in various applications such as voice communication systems, voice-controlled devices, or speech recognition systems to accurately detect and differentiate between speech and non-speech segments.
Media Gateway	cmdb_ci_media_gateway	cmdb_ci_ni_telco_equipment	A media gateway is a network device that converts and bridges communication protocols between different types of networks, enabling seamless communication between diverse systems such as traditional telephony networks and Voice over IP (VoIP) networks. It facilitates the translation and transmission of voice, video, and data over different networks, ensuring interoperability and efficient communication.
Multi Service Switch	cmdb_ci_multi_service_switch	cmdb_ci_ni_telco_equipment	A multiservice switch is a network device that provides integrated switching capabilities for handling multiple types of traffic, such as voice, data, and video, over a single network infrastructure. It enables efficient and flexible traffic management, allowing the consolidation of various services onto a unified platform.

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
Mobility Management Entity	cmdb_ci_mobility_management_entity	cmdb_ci_telco_equipment_entity	A mobility management entity (MME) is a key component in LTE™* (Long-Term Evolution) and 5G wireless networks that handles the control plane functions for mobile devices, including authentication, mobility management, session management, and security. It acts as the primary control point for managing and coordinating the movement of mobile devices within the network.
Mobile Switching Center	cmdb_ci_mobile_switching_center	cmdb_ci_telco_equipment_entity	A mobile switching center (MSC) is a core component in cellular networks that connects mobile devices to the public switched telephone network (PSTN) or other mobile networks. It performs call routing, switching, and signaling functions, ensuring seamless connectivity and enabling voice and data communication between mobile subscribers and other networks.
Microwave Radio Equipment	cmdb_ci_microwave_radio_equipment	cmdb_ci_telco_equipment_entity	Microwave radio equipment refers to the hardware used in wireless communication systems that transmit and receive data using high-frequency microwave signals. It facilitates the transmission of voice, video, and data over

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			long distances without the need for physical cables, enabling point-to-point or point-to-multipoint wireless connectivity.
Network Interface Device	cmdb_ci_network_interface_device	cmdb_ci_telco_equipment	<b>NIID</b> (Network Interface Device) is a telecommunications device located at the customer premises that serves as the demarcation point between the service provider's network and the customer's internal network. It provides physical connectivity and often includes testing and diagnostic features for troubleshooting and monitoring the connection.
Network Interface Unit	cmdb_ci_network_interface_unit	cmdb_ci_telco_equipment	<b>NIU</b> (Network Interface Unit) is a device used in telecommunications networks that provides the interface between the service provider's network and the customer's premises, typically for data services. It may include functions such as signal conditioning, protocol conversion, and line termination to facilitate reliable data transmission.
Private Branch Exchange	cmdb_ci_private_branch_exchange	cmdb_ci_telco_equipment	<b>PBX</b> (Private Branch Exchange) is a telephony system used within an organization that allows for internal communication between different extensions and

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			facilitates external calls by connecting them to the public telephone network. It manages call routing, call forwarding, and other telephony features, providing an efficient and centralized communication solution for businesses.
Signal Transfer Point	cmdb_ci_signal_transfer_point	cmdb_ci_ni_telco_equipment	A Signal Transfer Point (STP) is a telecommunications network element that facilitates the routing and transfer of signaling messages between different networks, enabling interconnection and interoperability between various telecommunications systems. It acts as a central hub for managing signaling traffic and ensuring efficient communication between different nodes in the network.
Network Timing	cmdb_ci_network_timing_device	cmdb_ci_ni_telco_equipment	A network timing device, also known as a network time server or time synchronization device, is a device that provides accurate and synchronized time information to networked devices and systems. It ensures that various devices in a network maintain consistent and precise time for tasks such as logging, authentication, and

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			coordination of network activities.
Voicemail Equipment	cmdb_ci_voicemail_equipment	cmdb_ci_ni_telco_equipment	Voicemail equipment refers to the hardware or system used for recording, storing, and retrieving voice messages in a telecommunications network. It allows callers to leave recorded messages when the called party is unavailable and enables the recipient to listen to and manage these messages at their convenience.
Communication Distribution Panel	cmdb_ci_communication_distribution_panel	cmdb_ci_ni_telco_equipment	A communications distribution panel is a centralized device used to organize and distribute various communication signals, such as telephone, data, and video, within a building or premises. It acts as a hub for connecting and managing communication lines, allowing for easy access, organization, and troubleshooting of the network infrastructure.
Fiber Panel	cmdb_ci_fiber_distribution_panel	cmdb_ci_communication_distribution_panel	A fiber patch panel, also known as a fiber optic patch panel, is a hardware component used in fiber optic networks to provide a central point for terminating, organizing, and managing fiber optic cables. It allows for efficient connectivity, easy

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			maintenance, and flexibility in routing and patching fiber optic connections.
Fiber Serving Terminal	cmdb_ci_fiber_serving_terminati	cmdb_ci_communications	A distribution panel terminal (FST) is a device located at the customer premises in a fiber optic network that serves as the demarcation point between the service provider's fiber optic infrastructure and the customer's internal network. It provides termination and connection points for fiber optic cables, facilitating the delivery of high-speed broadband services to the customer's location.
PFP	cmdb_ci_primary_flexibility_point	cmdb_ci_communications	In the context of telecommunications infrastructure, a primary flexibility point (PFP) is a designated location where telecommunication cables and pathways converge to allow for easy accessibility and future modifications. It serves as a central hub for routing, terminating, and distributing cables, providing flexibility and scalability in network installations.
Serving Area Interface	cmdb_ci_serving_area_interface	cmdb_ci_communications	A serving area panel interface (SAI) is the boundary or demarcation point where the telecommunications service provider's network connects to the customer's

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			premises or internal network. It marks the transition between the service provider's responsibility for maintaining the network and the customer's responsibility for the wiring and equipment within their premises.
Digital Cross Connect Patch Panel	cmdb_ci_digital_cross_connect_patch_panel	cmdb_ci_patch_panel	A digital cross connect patch panel, also known as a DCS patch panel, is a hardware component used in telecommunications networks to facilitate the cross-connection and management of digital circuits or channels. It allows for easy reconfiguration and routing of digital signals, enabling efficient provisioning and troubleshooting of communication paths within the network infrastructure.
Fiber Cross Connect Panel	cmdb_ci_fiber_cross_connect_panel	cmdb_ci_communication_patch_panel	A fiber cross connect panel is a device used in fiber optic networks to facilitate the interconnection and management of fiber optic cables. It provides a centralized location for organizing, routing, and cross-connecting individual fiber optic strands, allowing for efficient maintenance, scalability, and flexibility in fiber optic network installations.
RJ45 Patch Panel	cmdb_ci_rj45_patch_panel	cmdb_ci_communication_patch_panel	An RJ45 patch panel is a hardware component used to

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			terminate and manage network connections in Ethernet systems. It provides multiple RJ45 ports that allow for the organized and convenient termination of Ethernet cables, enabling easy patching and rearrangement of network connections.
V35 Patch Panel	cmdb_ci_v35_patch_panel	cmdb_ci_communications_device	A V35 patch panel is a hardware component used in telecommunications and networking to facilitate the termination and management of V.35 cables. It provides multiple V.35 ports that allow for the organized and convenient termination of V.35 connections, enabling easy patching and rearrangement of V.35 circuits.
Digital Distribution Panel	cmdb_ci_digital_distribution_panel	cmdb_ci_communications_device	A digital distribution panel, also known as a digital distribution frame, is a device used in telecommunications networks to terminate, manage, and distribute digital signals, typically in the form of T1 or E1 lines. It provides a centralized point for organizing and cross-connecting digital circuits, facilitating efficient transmission and management of digital communication within the network.

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
Multiplexer	cmdb_ci_multiplexer	cmdb_ci_ni_telco_equip	A multiplexer, often referred to as a MUX, is a device used in telecommunications and data transmission to combine multiple signals or data streams into a single composite signal for more efficient transmission over a shared medium. It allows for the simultaneous transmission of different signals or data streams over a single channel, increasing the capacity and efficiency of communication systems.
DSLAM	cmdb_ci_dslam	cmdb_ci_multiplexer	A DSLAM (Digital Subscriber Line Access Multiplexer) is a network device used in telecommunications to aggregate and manage multiple digital subscriber lines (DSL) within a service provider's network. It enables the delivery of high-speed broadband services over existing copper telephone lines by separating voice and data traffic and routing it to the appropriate destinations.
IP DSLAM	cmdb_ci_ipdslam	cmdb_ci_multiplexer	An IP DSLAM (Internet Protocol Digital Subscriber Line Access Multiplexer) is a DSLAM that supports IP-based services, allowing for

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			the delivery of high-speed broadband internet services over digital subscriber lines. It provides the necessary IP routing and processing capabilities to handle IP-based traffic, enabling efficient and scalable delivery of internet connectivity to end-users.
WDM	cmdb_ci_wdm	cmdb_ci_multiplexer	WDM (Wavelength Division Multiplexing) is a technology used in fiber optic communication systems to increase the capacity of a single optical fiber by simultaneously transmitting multiple wavelengths of light. It allows for the multiplexing and demultiplexing of different optical signals, enabling higher data transmission rates and efficient utilization of fiber optic infrastructure.
OLT	cmdb_ci_optical_line_terminal	cmdb_ci_multiplexer	An OLT (Optical Line Terminal) is a network device used in fiber optic communication systems that serves as the endpoint of a passive optical network (PON). It connects the service provider's network to the subscriber's premises, managing and controlling the distribution of optical signals, and facilitating the communication between the service

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			provider and multiple ONUs (Optical Network Units) or ONTs (Optical Network Terminals) in the PON.
Optical Splitter	cmdb_ci_optical_splitter	cmdb_ci_multiplexer	An optical splitter, also known as a beam splitter, is a passive device used in fiber optic networks to divide an incoming optical signal into multiple output signals of equal or varying power levels. It enables the sharing of a single optical fiber connection among multiple users or devices, enabling for efficient distribution of optical signals in a network.
Optical Carrier Transport Node	cmdb_ci_optical_carrier	cmdb_ci_multiplexer	An optical carrier transport node, also known as an OXC (Optical Cross-Connect) or an OTN (Optical Transport Network) node, is a network element that facilitates the routing, grooming, and switching off high-capacity optical signals in an optical transport network. It enables efficient and flexible management of optical channels, enabling for the transport of large volumes of data over long distances in telecommunications networks.
Fan Shelf	cmdb_ci_fan_module	cmdb_ci_hardware	A fan shelf is a hardware component designed to provide active cooling and

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			airflow management within a rack or equipment cabinet. It typically contains multiple fans that help dissipate heat generated by the equipment, ensuring proper ventilation and preventing overheating.
Monitoring Unit Shelf	cmdb_ci_monitoring_unit	cmdb_ci_hardware	A monitoring unit shelf, also known as a monitoring unit rack or chassis, is a dedicated enclosure designed to house monitoring units or devices used for network monitoring and management purposes. It provides a centralized and secure location for installing and organizing monitoring equipment, such as network analyzers, probes, or monitoring appliances, enabling for efficient monitoring and analysis of network traffic and performance.
Keyboard Video Mouse Switch	cmdb_ci_keyboard_video_mouse	cmdb_ci_hardware	A keyboard video mouse (KVM) switch is a hardware device that enables a user to control multiple computers or servers using a single set of keyboard, monitor, and mouse device. It enables seamless switching and management of multiple systems from a central workstation.
Serving GPRS Support Node	cmdb_ci_serving_gprs_support_node	elco_equipment	A network node in a GSM (Global System for Mobile

**Equipment extended classes (continued)**

Class Name	Table Name	Extends generic CI class	Description
			Communications) or GPRS (General Packet Radio Service) network. Serving GPRS Support Node (SGSN) is responsible for the delivery of data packets from and to the mobile stations within its service area. It plays a crucial role in packet-switched networks, managing mobility and session information for devices like smartphones and other mobile communication devices.
Logical Composite	cmdb_ci_logical_composite	Grouping or combination of logical elements, components, or entities within a telecommunications network. These logical composites are often designed to work together to fulfill specific functions or services.	
Splice Closure	cmdb_ci_splice_closure	A protective enclosure used to cover and protect the spliced portions of optical fibers. Splice closures are essential components in fiber optic networks, providing physical protection for the spliced fibers from environmental factors such as moisture, dust, and temperature fluctuations.	

\*LTE is a trademark of ETSI.

**Related topics**

[Create a telecommunications equipment instance](#)

## Equipment task attribute form

The equipment task attribute form enables you to describe the details for an equipment record.

### Create Equipment - Task Attribute form

Field	Description
Inventory template	<p>Inventory template for the equipment model. The instantiation process uses it to generate a network asset instance in the designated network site.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>Depending on the selected inventory template, a list of the optional templates appears at the bottom of the form.</li> <li>When you select an optional template, the current template values are overwritten.</li> <li>This field is applicable only for Create inventory equipment.</li> </ul>
Stockroom Location	<p>Name of the stockroom location where the asset is located.</p> <p>To learn more, see <a href="#">Telecommunications Network Inventory integration with Hardware Asset Management</a>.</p>
Site	<p>Name of the network site or data center in which the process is instantiating the equipment.</p>
Equipment Rack/ Cabinet	<p>Rack or cabinet name for the equipment.</p>
Asset	<p>Name of the asset that is associated with this record.</p> <p>To learn more, see <a href="#">Telecommunications Network Inventory integration with Hardware Asset Management</a>.</p>

**Related topics**

[Create an equipment record by using design and assign](#)

## GPON Broadband Change model forms

The GPON Broadband Change model forms enables you to create, review, and modify the connection details of the physical connection, and the compute and create logical connection.

**Related topics**

[Designing and assigning a GPON broadband service](#)

### Create Physical Connection form

The Create Physical Connection form enables you to create, review, and modify the network details for a physical connection.

### Create Physical Connection form

Fields	Description
A end Site	Starting network site where this physical connection is configured.
A end Equipment	Starting network equipment where this physical connection is configured.
A end Interface	Starting network interface where this physical connection is configured.
Physical Connection Model	Physical connection model where this physical connection is configured.
Z end Site	Ending network site where this physical connection is configured.
Z end Equipment	Ending network equipment where this physical connection is configured.
Z end Interface	Ending network interface where this physical connection is configured.
Bandwidth	Bandwidth of this physical connection.

### Compute and Create Logical Connection form

The Compute and Create Logical Connection form enables you to create, review, and modify the connection details for a logical connection.

#### Compute and Create Logical Connection form

Fields	Description
Start site	Starting network site where this connection is configured.
Start equipment	Starting network equipment where this connection is configured.
Start interface	Starting network interface where this connection is configured.  <b>Note:</b> If this field is left empty, it's automatically set by using the path computation and created logical connection.
Logical connection Model	Logical connection model where this connection is configured.  <b>Note:</b> The topology connection models are not listed.
End site	Ending network site where this connection is configured.

**Compute and Create Logical Connection form (continued)**

Fields	Description
End equipment	Ending network equipment where this connection is configured.
End Interface	Ending network interface where this connection is configured.  <b>Note:</b> If this field is left empty, it's automatically set by using the path computation and created logical connection.
End equipment type	Ending network equipment type where this connection is configured.
End equipment role	Ending network equipment role where this connection is configured.
End equipment function	Ending network equipment function where this connection is configured.
Bandwidth	Bandwidth of this physical connection.
Allowed logical connection model	Filter that captures all the supported models for the logical connection.  <b>Note:</b> The list of available logical connection model changes when the <b>Logical connection model</b> is selected from the <b>Model relationship</b> field.
Allowed physical connection model	Filter that captures all the supported models for the physical connection.  <b>Note:</b> The list of available physical connection model changes when the <b>Logical connection model</b> is selected from the <b>Model relationship</b> field.

**Inventory Model forms**

The Inventory Model forms enable you to create, review, and modify the model details for equipment holders, equipment, interface cards, logical connections, physical connections, network interfaces, and network model relationships.

**Inventory Model form - General**

The General section in the Inventory Model form enables you to create, review, and modify the details of a model.

**General section - Inventory Model form**

Field	Description
Short description	Description of the equipment holder model that you're defining.
Model categories	<p>List of model categories that maps to a CI class. The model categories are part of the Product Catalog application.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>The instance is created in the mapped CI class of the selected model category.</li> <li>To achieve the Telecommunications Network Inventory functionalities, choose one of the following options: <ul style="list-style-type: none"> <li>Equipment rack</li> <li>Cabinet</li> <li>Slot</li> <li>Subslot</li> </ul> </li> <li>On selecting the <b>Equipment rack</b> as the category, the <b>RU naming pattern</b> and <b>Post Type</b> fields appear under the information section.</li> </ul>
Asset tracking strategy	<p>Process to track the model. Select one of the following options:</p> <ul style="list-style-type: none"> <li><b>Leave to Category:</b> The model is transparent and the category defines the asset class.</li> <li><b>Create Consumable Asset:</b> The model forces the asset class to be consumable, regardless of what the category defines as the asset class.</li> <li><b>Don't create assets:</b> The model blocks the asset instantiation, regardless of what the category defines as the asset class.</li> </ul>
Useful life (months)	Number of months that the model can be used for.
Asset tracking unit	Number of equipment holder units that are available for use in this network asset.
Acquisition method	<p>Acquisition method for the model:</p> <p><b>Buy</b> The model was purchased.</p> <p><b>Leased</b> The model was leased.</p> <p><b>Both</b> The model was bought and leased.</p>
Cost	Cost of a single unit of the model.
Depreciation	Depreciation schedule of the equipment model.

**General section - Inventory Model form (continued)**

Field	Description
Salvage value	The estimated value that an asset realizes when sold at the end of its useful life. This value must be less than or equal to the cost of the asset.
Comments	Any additional information on the model that would be useful.
Model number	The model number that is assigned to the model by the manufacturer.
Barcode	Bar code number that is assigned to the model by the manufacturer.
Owner	The person responsible for the model.
Status	<p>Production status of the model:</p> <p><b>Build</b> The model must be built.</p> <p><b>In Production</b> The model is in production.</p> <p><b>Sold</b> The model was sold.</p> <p><b>Retired</b> The model has been retired.</p>
Expenditure type	<p>Type of expenditure. Select one of the following options:</p> <p><b>Capex</b> Capital expenditure is a one-time expenditure, where the value is realized over the years. For example, a photocopier.</p> <p><b>Opex</b> Operational expenditure is an ongoing expenditure. For example, toners for the photocopier.</p>
Certified	Option that designates if this network asset is certified.

**Related topics**

[Creating your inventory models](#)

**Inventory Model form - Information**

The Information section of the Inventory Model form enables you to create, review, and modify the network asset details of a model.

**Information section - Inventory Model form**

Field	Description
Height (U)	<p>Number of rack units required for the model.</p> <p><b>Note:</b> This field is only applicable to the equipment models.</p>

Information section - Inventory Model form (continued)

Field	Description
Power	Electrical power, in watts.
Sound power	Noise measurement, in bels (1 bel=10 decibels).
Connection type	<p>Type of connection:</p> <p><b>Cable</b> Multi-colored cable connection.</p> <p><b>Connection</b> Standard connection that you establish with a piece of equipment. For example, the connection between a monitor and a computer.</p> <p><b>Strand</b> Multi-strand fiber connection.</p> <p><b>Wireless</b> 3G, 4G, or 5G wireless connection.</p>
Power unit	<p>Units in which the power of the asset is measured. Select any one of the following unit.</p> <ul style="list-style-type: none"> <li>• Watts (W)</li> <li>• Kilowatts (KW)</li> <li>• Megawatts (MW)</li> <li>• Horsepower (HP)</li> </ul>
Rated Power	Maximum power allotted to the asset.
Unit of Measurement System	<p>Measurement type based on which the <b>Max weight capacity unit</b> is fetched. Select any one of the following measurement type.</p> <ul style="list-style-type: none"> <li>• Metric</li> <li>• US Imperial</li> </ul>
Weight unit	<p>Unit in which weight of the asset is measured. Select any one of the following.</p> <ul style="list-style-type: none"> <li>• Grams (g)</li> <li> <p><b>Note:</b> This field is only accessible when the Metric system is used for unit of measurement.</p> </li> <li>• Kilograms (kg)</li> <li> <p><b>Note:</b> This field is only accessible when the Metric system is used for unit of measurement.</p> </li> <li>• Ounces (oz)</li> </ul>

Information section - Inventory Model form (continued)

Field	Description
	<p><b>i Note:</b> This field is only accessible when the US Imperial system is used for unit of measurement.</p> <ul style="list-style-type: none"> <li>• Pounds (lbs)</li> </ul> <p><b>i Note:</b> This field is only accessible when the US Imperial system is used for unit of measurement.</p>
Weight	Maximum weight of the rack or cabinet or slot or subslot.
Slot naming pattern	<p>Name patterns that are used to define the names that are generated for the slots and interfaces that are on the equipment or card. Because these name patterns are at the model level, they're applied by default to every template of that model. These name patterns are editable for the different instances of the same model. To learn more about the naming convention, see <a href="#">Naming convention for associated templates</a>.</p> <p>Although the names are generated automatically, you can manually edit the names of the templates.</p> <p><b>i Note:</b></p> <ol style="list-style-type: none"> <li>1. This field is applicable for the equipment models and the interface card models.</li> <li>2. The generated name remains empty if the following occurs: <ul style="list-style-type: none"> <li>○ The variable names are misspelled.</li> <li>○ You use the parent_slot or equipment_slot information for the interfaces or slots that are in the equipment.</li> </ul> </li> <li>3. If this field is left empty, then the default naming pattern is considered. Here, the default naming is Slot-001, where 001 is the slot start number.</li> </ol> <p>This field is applicable for the equipment models and the interface card models.</p>
Interface naming pattern	<p>Name patterns that are used to define the names that are generated for the slot and interfaces on the equipment or card. Because these name patterns are at the model level, they're applied by default to every template of that model. These name patterns are editable for the different instances of the same model. To learn more about the naming convention, see <a href="#">Naming convention for associated templates</a>.</p> <p>Although the names are generated automatically, you can manually edit the names of the templates.</p>

Information section - Inventory Model form (continued)

Field	Description
	<p><b>i Note:</b></p> <ul style="list-style-type: none"> <li>• This field is available only for <b>Equipment models</b> and <b>Interface card models</b>.</li> <li>• The generated name remains empty if the following occurs:               <ul style="list-style-type: none"> <li>◦ The variable names are misspelled.</li> <li>◦ You use the parent_slot or equipment_slot information for the interfaces or slots that are in the equipment.</li> </ul> </li> <li>• If this field is left empty, then the default naming pattern is considered. Here, the default naming is Port-001, where 001 is the interface start number.</li> </ul> <p>This field is available only for the equipment models and interface card models.</p>
<p>Dimensions unit</p>	<p>Unit in which the physical dimensions of the asset are measured. Select one from the following:</p> <ul style="list-style-type: none"> <li>• Inches (in)</li> <li>• Feet (ft)</li> <li>• Miles (mi)</li> </ul> <p><b>i Note:</b> This field is applicable for the equipment models, the equipment holder models, and the physical connection models.</p>
<p>Height</p>	<p>Height of the network asset, expressed in the unit of measure that you designate in the <b>Units</b> field.</p> <ul style="list-style-type: none"> <li>• For example, enter 60 if the height of the asset is 60 inches and you've selected Inches as the unit of measure in the <b>Units</b> field.</li> <li>• The ServiceNow AI Platform uses this information to calculate the cubic dimensions of the asset to determine its physical placement within its designated network site.</li> </ul> <p><b>i Note:</b> This field is applicable for the equipment models and the equipment holder models.</p>
<p>Width</p>	<p>Length of the network asset, expressed in the unit of measure that you designate in the <b>Units</b> field.</p> <ul style="list-style-type: none"> <li>• For example, enter 12 if the asset is one foot, or enter 60 if the asset is 60 inches and you've selected Inches as the unit of measure in the <b>Units</b> field.</li> <li>• The ServiceNow AI Platform uses this information to calculate the cubic dimensions of the asset to determine its physical placement within the designated network site.</li> </ul>

Information section - Inventory Model form (continued)

Field	Description
	<p><b>i Note:</b> This field is applicable for the equipment models and the equipment holder models.</p>
Depth	<p>Depth of the network asset that is expressed in the unit of measure that you designate in the <b>Units</b> field.</p> <p><b>i Note:</b> This field is applicable for the equipment models and equipment holder models.</p>
RU numbering direction	<p>Numbering sequence of rack units in the Rack view. Select one of the following.</p> <ul style="list-style-type: none"> <li>• Top to bottom - Numbering sequence that starts at the top of a list.</li> <li>• Bottom to top - Numbering sequence that starts at the bottom of a list.</li> </ul>
Slot start number	<p>The first number to assign to the slots in this model. The slot names are generated automatically depending on the starting number.</p> <p><b>i Note:</b></p> <ul style="list-style-type: none"> <li>• The entered value doesn't affect the unit position. The unit position always starts from 1 and is used in the slot naming pattern.</li> <li>• This field is applicable for the equipment models and the interface card models.</li> </ul>
Interface start number	<p>Starting number that you assign to the interfaces of the equipment or the card. For example, if the starting number is 10 for 20 interfaces, then the interface numbers start from 10, such as Port-010, Port-011, and so on to Port-029.</p> <p><b>i Note:</b></p> <ul style="list-style-type: none"> <li>• The interface numbers are generated automatically based on the entered value. The unit position isn't affected. The unit position always starts from 1 and is used in the interface naming pattern.</li> <li>• This field is applicable for Equipment models and Interface card models.</li> </ul>
CLEI code	<p>Assigned Common Language Equipment Identification (CLEI) for this network asset. CLEI codes are globally unique, 10-character alphanumeric intelligent codes that identify the equipment in a structured naming format. There's a one-to-one relationship between a CLEI code and a manufacturer's product code, which is a part number that includes the hardware version.</p> <p><b>i Note:</b> This field is applicable for all types of models except the physical connection models, the logical connection models, and the network interface models.</p>
Connector type	<p>Type of physical cable connector that is used for the connection of the cable to the network interface. Select one of the following options:</p>

Information section - Inventory Model form (continued)

Field	Description
	<ul style="list-style-type: none"> <li>• BNC (Bayonet Neill-Concelman) - Type of miniature radio frequency connector used for coaxial cables.</li> <li>• SC (Square Connector)- Square, common type of Fiber optic connector used as push-pull latch, to align the optical fibers for efficient light transmission.</li> <li>• LC (Lucent Connector)- Another version of the SC connector designed for high-density applications.</li> <li>• ST (Straight Trip)- a type of fiber optic connector commonly used for connecting optical fibers in telecommunications and data communication applications.</li> <li>• Wire Wrap -A technique for creating electrical connections on circuit boards.</li> <li>• RJ45 - Also known as 8P8C (8 Position 8 Contact) connector, is widely used type of connector for wired Ethernet networks.</li> </ul> <p><b>i Note:</b> This field is only applicable to Network interface models.</p>
Slots occupied	<p>Number of slots that are occupied in the card.</p> <p><b>i Note:</b> This field is only applicable to the interface card models.</p>
Length	<p>Length of the network asset, expressed in the unit of measure that you designate in the <b>Units</b> field.</p> <ul style="list-style-type: none"> <li>• For example, enter 12 if the asset is one foot, or enter 60 if the asset is 60 inches and you've selected Inches as the unit of measure in the <b>Units</b> field.</li> <li>• The ServiceNow AI Platform uses this information to calculate the cubic dimensions of the asset to determine its physical placement within the designated network site.</li> </ul>
Enable Interconnect	<p>Option that you can select so that all the interfaces on the equipment are interconnected to each other.</p> <p><b>i Note:</b></p> <ul style="list-style-type: none"> <li>• The default algorithm for the interconnection is <math>(N/2) + 1</math>, where N is the total number of interfaces on the equipment, is applied. For the odd port numbers, the system takes N as the previous number (N - 1) and creates the interconnections. For example, let's say that you have a piece of equipment that has 10 interfaces. If you select this option, the first interface is interconnected with the sixth interface, 2-7, 3-8, 4-9, and 5-10.</li> <li>• This field is only applicable to the equipment models.</li> </ul> <p>All the created interconnections are listed as a configuration item (CI) relationship.</p>
Orientation	<p>Physical orientation of the slots in this network asset:</p> <p><b>--None--</b></p> <p>No specific physical slot orientation.</p>

**Information section - Inventory Model form (continued)**

Field	Description
	<p><b>Horizontal</b> Horizontal slot orientation.</p> <p><b>Vertical</b> Vertical slot orientation.</p> <p><b>Note:</b> This field is only applicable to the equipment holder models.</p>
Virtual	<p>Option to verify whether the network interface is physical or virtual.</p> <p><b>Note:</b> If you select <b>Virtual</b>, then the <b>Connector Type</b> field doesn't appear.</p> <p>This field is applicable only for Network interface models.</p>
Max physical connection support	<p>Maximum connections that can be connected to this interface model. By default, it's considered as 1.</p> <p><b>Note:</b> This field is only applicable to the network interface models.</p>
Port bandwidth	<p>Measured bandwidth for the ports on this network interface. Select the search icon ( 🔍 ) and select a bandwidth.</p> <p><b>Note:</b> This field is only applicable to the network interface models.</p>
Directionality	<p>Type of the connections between the nodes of a network. Select one of the following options:</p> <ul style="list-style-type: none"> <li>• Tx- TX stands for Transmit. It refers to the direction in which data is being sent from a device.</li> <li>• Rx- RX signifies the endpoint that receives data. It's the input side for receiving information transmitted from another source, often labeled as TX (Transmit).</li> <li>• Tx/Rx</li> <li>• Bus- Bus directionality refers to the flow of data on a communication channel.</li> <li>• Broadcast- Broadcast directionality refers to the nature of signal transmission and reception in a broadcast system.</li> </ul> <p><b>Note:</b> This field is only applicable to the network interface models.</p>
Interface type	<p>Type of port on the network interface. Select one of the following options:</p>

**Information section - Inventory Model form (continued)**

Field	Description
	<ul style="list-style-type: none"> <li>• Ethernet- Physical connection and speed capabilities of a device for connecting to a network. It involves cable type, speed, and standard.</li> <li>• Optical- specific design of a connector used in an optical transceiver. There are various types of optical interfaces, each with different shapes and data speed capabilities.</li> <li>• Serial- A serial interface transmits data one bit at a time, in contrast to a parallel interface that sends multiple bits simultaneously.</li> </ul> <p><b>Note:</b> This field is only applicable to the network interface models.</p>
Behavior	<p>Option to choose the mode of connection. Select one of the following options:</p> <ul style="list-style-type: none"> <li>• Channel</li> <li>• Connection</li> </ul> <p><b>Note:</b> This field is only applicable to the logical connection models.</p>
Routing behavior	<p>Routing behavior attribute that controls routing enforcement.</p> <ul style="list-style-type: none"> <li>• Select <b>No route</b> if no route is required for this connection type, or</li> <li>• Select <b>Parallel sequential</b> to enable multi-route connection resources that are used to route a connection. Here, path elements are required for the routed connections.</li> </ul> <p><b>Note:</b> This field is only applicable to the logical connection models.</p>
Logical Interface Model	<p>List of all the logical interface models for the selected logical connection model.</p> <p><b>Note:</b> During the creation of a logical connection, the logical interfaces for port A and port Z are created based on the selected logical interface model.</p>
RU naming pattern	<p>Naming pattern for the rack templates.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• By default the naming pattern is "RU-"+position.</li> <li>• This field is visible only for <b>Equipment rack</b> model category.</li> </ul>
Post type	<p>Select any one of the following type</p> <ul style="list-style-type: none"> <li>• <b>2 Post:</b> Select if your rack has two vertical supports.</li> <li>• <b>4 Post:</b> Select if your rack has four vertical supports.</li> </ul> <p><b>Note:</b> This field is applicable only if the selected <b>Model categories</b> is <b>Equipment rack</b>.</p>

**Related topics**

[Creating your inventory models](#)

**Inventory models additional tabs**

The additional tabs of the inventory models appear after a model is created. These tabs display all the related information of a model. You can always view, update, save, and delete the information as required.

**Additional tabs of inventory models**

Name	Description
Assets	List of assets related to the model.
Configuration items	List of all the Configuration Items (CIs) created for the model.
Model components	List of components that constitutes the model.
Model life cycles	List of life cycles of the models.
Vendor catalog items	List of vendor catalog items associated to the product model.
Hardware model lifecycles	List of life cycle phases and life cycle type of a hardware model.
Network model relationships	List of all network model relationships of the model.  <b>Note:</b> This field is not applicable to the connection models.
Model images	Images of the model. The images uploaded here are shown in the Configuration Items created for this model.  <b>Note:</b> This field is applicable only to <b>Equipment models</b> .
Bandwidth compatibilities	List of bandwidths that are compatible to the respective connection. Further, you can create and update the associated connection model and bandwidth group.  <b>Note:</b> Bandwidth compatibilities field is applicable only to the connection models.

**Related topics**

[Creating your inventory models](#)

**Inventory number allocation fields**

The inventory number allocation fields enables you to describe the details for LAG, VLAN, IP address, and telephone number records.

### Inventory Number Allocation fields

Fields	Description
Telephone number	Telephone number that conforms with the e164 naming convention. For more information, see <a href="#">E.164 phone number field configuration</a> .
Telephone number allocation	Telephone number allocation record.
Country Code	Select the country where you create the telephone number.
Area code	Code that identifies a geographic region within a country or territory. It's usually the first three digits of a telephone number. The purpose of the area code is to route telephone calls to destinations that are based on the location of the recipient. For example, in the phone number (123) 456-7890, "123" represents the area code.
Central office code	<p>Central office code that is also referred to as NXX. The NXX portion of a telephone number provides information about the central office or local exchange that belongs to a particular geographic area. Each central office code is related to a geographic location or service provider within the area code.</p> <p>For example, in the phone number (123) 456-7890, "456" represents the central office code.</p>
Line number digits	<p>Set of digits following the area code and central office code. These digits identifies an individual line within the area served by the central office code.</p> <p>For example, in the phone number (123) 456-7890, the set of "7890" represents the line number digits which is 4 digits long.</p>
Status	<p>Status of the telephone number:</p> <ul style="list-style-type: none"> <li>• <b>New:</b> Indicates that this number is new.</li> <li>• <b>Reserved:</b> Indicates that the number is reserved for a service but isn't assigned yet.</li> <li>• <b>Unassigned:</b> Indicates that the number isn't assigned to anyone yet or the number has been in a quarantined status for a few days.</li> <li>• <b>Assigned:</b> Indicates that the number is assigned.</li> <li>• <b>Quarantined:</b> Indicates that the number hasn't been in use for a long time. Depending on the network operator, this</li> </ul>

Inventory Number Allocation fields (continued)

Fields	Description
	<p>number changes to a quarantined status after a few days. After a while, the status changes to unassigned.</p> <ul style="list-style-type: none"> <li>• <b>Ported in:</b> Indicates that the number used to belong to some other network and has now moved to this network.</li> <li>• <b>Ported out:</b> Indicates that the number has moved out to some other network.</li> </ul>
Number category	<p>Categories:</p> <ul style="list-style-type: none"> <li>• <b>Owned:</b> Indicates that these numbers are owned by your organization.</li> <li>• <b>Third party:</b> Indicates that these numbers are provided by a third-party organization.</li> <li>• <b>Ported in:</b> Indicates that these numbers are moved from another network.</li> </ul>
Carrier	<p>Name of the telecommunications company or service provider that owns and manages a range of telephone numbers within a block. They allocate the numbers to the customers and handle the routing of calls that are related to those numbers.</p>
Parent Block	<p>Parent block if there's any.</p>
Model ID	<p>Model ID of the asset.</p>
Number	<p>Name of the parent inventory that you're associating the child inventory with. The ServiceNow AI Platform automatically assigns this name.</p> <p><b>Note:</b> This field is available only for the number elements of the inventory numbers.</p>
Element type	<p>Type of network inventory that you want to associate your VLAN or LAG number with. Select one of the following options:</p> <ul style="list-style-type: none"> <li>• Network Interface</li> <li>• Physical Connection</li> <li>• Logical Connection</li> </ul> <p><b>Note:</b> This field is available only for the number elements of the inventory numbers.</p>

### Inventory Number Allocation fields (continued)

Fields	Description
Element	Network asset under an element type that you want to configure with.  <b>Note:</b> This field is available only for the number elements of the inventory numbers.
Sequence	Sequence number of the network connection.  <b>Note:</b> This field is available only for the number elements of the inventory numbers.
CIDR	Classless Inter-Domain Routing (CIDR) that is associated with the subnet, the IP address of the gateway, and the subnet mask. For VMware, the CIDR, gateway, and subnet mask fields are mandatory.
Managed Network	Name of the managed network that is associated with this IP pool and IP subnetwork.
Parent Pool	Name of the IP pool that is the parent of this IP pool or IP network subnet.
DNS Domain	Name of the IP addresses.
Reported Free Addresses	Number of the addresses that are free for this IP pool or IP subnet.
Reported Addresses In Use	Number of the addresses that are in use for this IP pool or IP subnet.
Reported Reserved Addresses	Number of the addresses that are reserved for this IP pool or IP subnet.
Service	Type of service.

#### Related topics

[Inventory number allocation](#)

## Inventory Numbers form

The Inventory Numbers form enables you to create, review, and modify the inventory details for a network inventory.

### Inventory Numbers form

Field	Description
Name	Name of the inventory that you want to configure. Use the <b>Type</b> field to select one from the list.

**Inventory Numbers form (continued)**

Field	Description
Number	Lowest value of the network inventory as specified by the technology standards.
End Number	Highest value of the network inventory.
Type	Type of inventory that this network asset belongs to. Select one of the following options: <b>VLAN Range</b> Range of VLAN numbers in which the network asset belongs. <b>VLAN Subrange</b> Subrange of VLAN numbers in which the network asset belongs. <b>VLAN</b> VLAN number for the network asset. <b>LAG Range</b> Range of LAG numbers in which the network asset belongs. <b>LAG</b> LAG number for the network asset.
Parent	Parent inventory number for the network asset: <ul style="list-style-type: none"> <li>• If it's a parent item, leave the field blank.</li> <li>• If it's a child inventory number, the ServiceNow AI Platform automatically assigns the value.</li> </ul>
Short description	Short description for the network inventory number.

**Related topics**

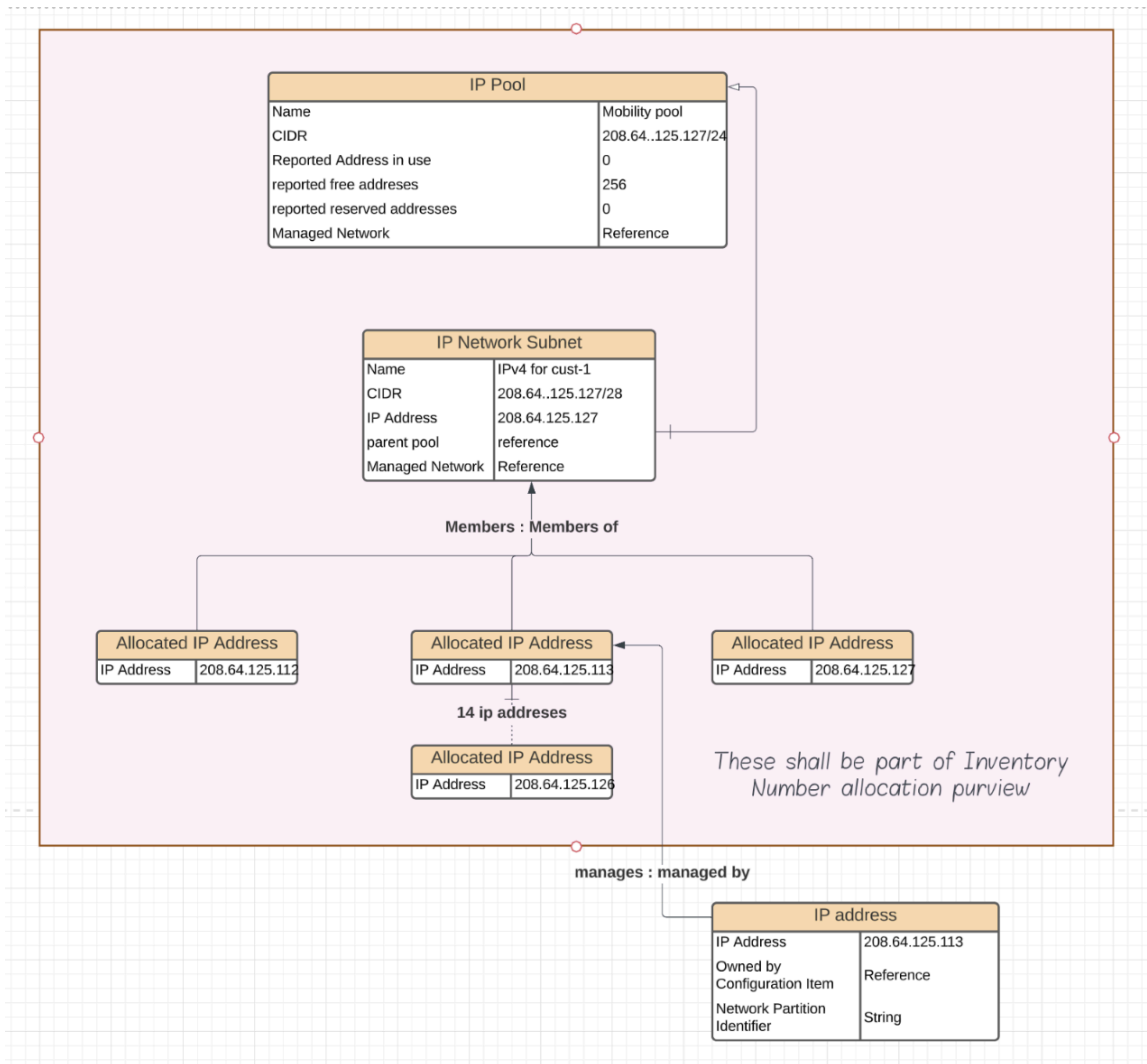
[Define your inventory numbering](#)

**IP address inventory management data model**

By using the IP address inventory management data model, you can understand how the tables that are used for the IP pools, IP subnetworks, allocated IP addresses, and IP addresses all relate to each other.

**Data model**

The following diagram shows the IP address inventory management data model.



With this data model, you can store the related tables of your IP pool, IP subnetwork addresses, or allocated IP addresses. You can also create an IP pool table or IP subnet table to allocate services. To do this task, you create an IP pool or IP subnet. Each IP address in the subnet is created in an allocated IP address table. You can then relate IP addresses from the allocated IP address table to the IP address table for discovery and configuration item (CI) mapping.

An IP address is allocated this way:

1. A telco operator gets an IP subnet that has been allocated from the external system for their customers. This IP subnet is stored in an IP network subnet table.
2. A telco operator can create an IP address of the subnet so that they can track the IP address allocation. In this case, each IP address of this subnet gets stored in the allocated IP address table.
3. The IP addresses that are ready to use in the allocated IP address table are then related to a record in the IP address table.

### Related topics

[Create IP address allocation](#)

[IP addresses allocation](#)

## Location forms

The Location forms enable you to create locations hierarchy to track and manage your network assets.

### Location form

The Location form enables you to create, review and modify the location details for a network asset.

#### Location form

Field	Description
Name	Descriptive name to identify the location.
Street	Street address that this location describes.
City	Name of the city that this location is in.
State / Province	Name of the state or province that this location is in.
Zip / Postal Code	Zip or postal code that this location is in.
Country	Name of the country that this location is in.
Contact	Name of the contact, if any, at this location. To select a contact, click the search icon ( 🔍 ).
Phone	Phone number of the contact, if any, at this location.
Fax phone	Fax number of the contact, if any, at this location.
Parent	Parent location, if any, for this location. Click the search icon ( 🔍 ) and select a location number that you already created. Using this field enables you to create a hierarchy of locations.
Latitude	Latitude of the location in decimal degrees. Positive numbers describe latitudes north of the equator, and negative numbers describe latitudes south of the equator.  The value of this property must be from -90.0 through 90.0.
Longitude	Longitude of the location in decimal degrees.

#### Related topics

[product/tmt-telecom-network-inventory/task/define-tni-locations.dita](https://docs.servicenow.com/docs?docId=sn7p121prod.tmt-telecom-network-inventory/task/define-tni-locations.dita)

### Location form - Parent

The Location form (parent) enables you to create, review and modify the parent location details for a network asset.

### Locations form

Field	Description
Parent	Parent location, if any, for this location. Click the search icon ( 🔍 ) and select a location number that you already created. Using this field enables you to create a hierarchy of locations.
Latitude	Latitude of the location in decimal degrees. Positive numbers describe latitudes north of the equator, and negative numbers describe latitudes south of the equator.  The value of this property must be from -90.0 through 90.0.
Location type	Type of location that this record represents: <ul style="list-style-type: none"> <li>• Country</li> <li>• State/ Region / Province</li> <li>• City</li> <li>• Building / Campus</li> <li>• Site</li> <li>• Ocean</li> <li>• Orbit</li> </ul>
Code	Geographic code that is assigned to this location. If none, leave the field empty.
Alternate code	Alternate geographic code that is assigned to this location. If none, leave the field empty.
Alternate name	Alternate geographic name that is assigned to this location. If none, leave the field empty.
Region	Name of the region that this location is in.
Sub-region	Name of the sub-region, if any, that this location is in.
Intermediate Region	Name of the intermediate region, if any, that this location is in.

### Logical Connection form

The Logical Connection form enables you to define a logical connection by describing its configuration and connection details.



#### Logical Connection form

The Logical Connection form enables you to describe the details for a logical connection.

#### Logical Connection form

Field	Description
Name	Name of this logical connection The ServiceNow AI Platform uses this name to identify it in your network inventory.

### Logical Connection form (continued)

Field	Description
Max percent over subscription	Percent of subscription allowed for a logical connection with respect to the bandwidth.
Site A	Originating network site for this connection. Select the search icon (  ) and select a network site. To learn more, see <a href="https://product.tmt-telecom-network-inventory/task/define-tni-sites.dita">product/tmt-telecom-network-inventory/task/define-tni-sites.dita</a> .
Site Z	Destination network site for this connection. Select the search icon (  ) and select a network site. To learn more, see <a href="https://product.tmt-telecom-network-inventory/task/define-tni-sites.dita">product/tmt-telecom-network-inventory/task/define-tni-sites.dita</a> .


#### Related topics

[Define the logical connection details](#)


### Logical Connection form - Configuration

The Configuration section in the Logical Connection form enables you to create a logical connection.

#### Logical Connection form - Configuration

Field	Description
Port A	Network interface that is used in the Port A connection. Select the search icon (  ) and select a network interface. To learn more, see <a href="#">Define the network interface details</a> .
Bandwidth AtoZ	Total bandwidth capacity from Site A to Site Z for this network connection.
Planned date	Projected date for the implementation.
Framing type	Type of frame used in the connection. Select one of the following: <ul style="list-style-type: none"> <li>• None</li> <li>• AMI (Alternate Mark Inversion) - A line coding scheme where zeros are represented by no voltage, and ones are represented by alternating positive and negative voltages.</li> <li>• B4ZS (Bipolar with Four-Zero Substitution) - A technique that replaces sequences of four consecutive zeros in a digital signal with a special pattern to maintain synchronization.</li> <li>• B8ZS (Bipolar with Eight-Zero Substitution) - Similar to B4ZS, but it replaces sequences of eight consecutive zeros with a special pattern to maintain synchronization in high-speed digital signals.</li> </ul>

**Logical Connection form - Configuration (continued)**

Field	Description
Protocol version	Protocol version number.
Endpoint role	Endpoint role that is associated with the service endpoint for this network asset. An endpoint role is the function that is served by the endpoint of the service that you're providing. Select one of the following options: <ul style="list-style-type: none"> <li>• <b>ROOT</b> or <b>LEAF</b> endpoint role, as defined by the Metro Ethernet Forum (MEF).</li> <li>• <b>--None--</b> for no assigned endpoint role.</li> </ul>
Port Z	Network interface that is used in the Port Z connection. Select the search icon (  ) and select a network interface. To learn more, see <a href="#">Define the network interface details</a> .
Bandwidth ZtoA	Total bandwidth capacity from Site Z to Site A for this network connection.
Cost	Cost of this network asset.
Distance	Route length of this connection, expressed in the unit of measure that you select in the <b>Unit</b> field.
Unit	Unit of measure in which you're expressing the route length of the connection in the <b>Distance</b> field. Select one of the following options: <ul style="list-style-type: none"> <li><b>--None--</b> No distance measurement expressed for the connection route length.</li> <li><b>Miles</b> Distance is expressed in miles.</li> <li><b>Kilometers</b> Distance is expressed in kilometers.</li> <li><b>Feet</b> Distance is expressed in feet.</li> <li><b>Meters</b> Distance is expressed in meters.</li> </ul>

**Note:** To learn about the remaining configuration fields that are common to most of the Inventory menu forms, see [Commonly used network asset instance configuration fields](#).

**Related topics**

[Define the logical connection details](#)

**Logical connection modification request form**

The Logical connection modification request form enables you to modify endpoints of a logical connection record in the Telecommunications Network Inventory application.

**Logical connection modification request form**

Fields	Description
A end Site	<p>Starting network (Site A field) site where this selected logical or physical connection is configured.</p> <p><b>Note:</b> This field is auto populated based on the selected site or equipment or interface or connection.</p>
Z end Site	<p>Ending network site (Site Z field) where this selected logical or physical connection is configured.</p> <p><b>Note:</b> This field is auto populated based on the selected site or equipment or interface or connection.</p>
A end Equipment	<p>Starting network (Site A field) equipment where this logical or physical connection is configured.</p> <p><b>Note:</b> This field is auto populated based on the selected site or equipment or interface or connection.</p>
Z end Equipment	<p>Ending network (Site Z field) equipment where this logical or physical connection is configured.</p> <p><b>Note:</b> This field is auto populated based on the selected site or equipment or interface or connection.</p>
A end interface	<p>Starting interface (Site A field) point where this logical or physical connection is configured.</p> <p><b>Note:</b> This field is auto populated based on the selected site or equipment or interface or connection.</p>
Z end interface	<p>Ending interface (Site Z field) point where this logical or physical connection is configured.</p> <p><b>Note:</b> This field is auto populated based on the selected site or equipment or interface or connection.</p>
Logical Connection	<p>Select a logical connection from the list that needs modification.</p>

Logical connection modification request form (continued)

Fields	Description
	<p><b>Note:</b></p> <ul style="list-style-type: none"> <li>The list includes both logical connection and their revisions. On selecting the revision of a logical connection, the <b>Create Revision</b> check box disappears.</li> <li>This field is auto populated based on the selected site or equipment or interface.</li> </ul>
<p>Create Revision</p>	<p>Option to enable or disable revision process.</p> <p><b>Note:</b></p> <ol style="list-style-type: none"> <li>On selecting this check box, the following occurs:             <ol style="list-style-type: none"> <li>The revision process is initiated. To learn more, see <a href="#">Revision, operationalization, and decommission of a Configuration Item</a>.</li> <li>Two change tasks for modification and revision are created with the open and closed status respectively.</li> </ol> </li> <li>Open the Modify Logical or Physical connection change task to start modifying the duplicated logical or physical connection and operationalize further. To learn more, see <a href="#">Operationalize a configuration item</a>.</li> <li>In the process of revision of physical connection modification, the logical connections associated with physical connection ports are updated during the operationalization process.</li> </ol>

**Related topics**

[Modify logical connection endpoints model](#)

**Managed Network form**

The Managed network form enables you to manage a network in the Telecommunications Network Inventory application.

**Managed Network form**

Fields	Description
OT asset details	Asset criticality, Operational Technology (OT) asset type, Purdue level, and OT discovery source name for this OT asset.
PO number	Purchase order number of this network.
Managed by	Engineer who handles this network.
Vendor	Vendor name of this network.
Environment	Environment on which this network is available, such as development, production, or test.
Cost	Total cost of this network.
Monitor	Option to monitor the details of this network.
Discovery source	Discovery source name that updates the configuration item (CI).
Installed	Installation date and time of this network.
Attributes	List of attributes of this network.
Most recent discovery	Most recent discovery (last_discovered). When the most recent discovery is provided, the CI is updated with the provided value only if the entered time value is newer than the time value in the Configuration Management Database (CMDB). If the last_discovered isn't provided, the last_discovered attribute is updated with the current timestamp.
Model ID	Model ID of this network inventory asset.
Checked in	Checked-in date and time of this network.
Order received	Date and time when the order is received.
MAC address	MAC address of the device.
Ordered	Date and time that the order was placed for this network.
Contained by CI	Configuration Item (CI) in which this network resides.
Due in	Duration limit of this network.
Serial number	Serial number of this network.
Assigned to	Name of the engineer to whom this network is assigned to.
Fully qualified domain name	Domain name that specifies its exact location in the tree hierarchy of the Domain Name System (DNS).

**Managed Network form (continued)**

Fields	Description
Supported by	Name of the person who supports this network asset.
Attested by	Name of the person who attests this network inventory asset.
IP Address	IP address of this network
Category	Model category of this network.
Life Cycle Stage Status	Status of the life-cycle stage.
First discovered	Date and time instance was initially discovered.
Attestation score	Attestation score of this managed network asset.
Comments	Comments that you provide for this network.
Managed by group	Name of the group who manages this network.
Cost currency	Currency of the cost of this network.
Warranty expiration	Expiration date of the warranty for this network.
Name	Name of this managed network.
DNS Domain	Unique name or address assigned to the device within the Domain Name System (DNS) infrastructure.
Purchased	Purchase date of this network.
Business unit	Department of the organization that this network belongs to.
Asset tag	Asset tag for the item.  <b>Note:</b> If you enter an asset tag, only the stockrooms that contain the asset are displayed.
Lease contract	Contractor of this network.
Fault count	Number of faults.
Checked out	Date and time when this network is checked out.
Start date	Start date of this network.
Maintenance schedule	Schedule that was assigned to the server for the maintenance of this network.
Attestation status	Status of the attestation.
Install status	Status of the installation.

**Managed Network form (continued)**

Fields	Description
Correlation ID	Correlation ID that identifies the remote record whose data values should be used to update the local record. Provide separate Correlation ID values for the local and remote systems.
Model number	Model number of the device.
Department	Department where this network inventory asset belongs.
Duplicate of	Configuration item (CI) to which this network belongs to.
Owned by	Name of the person who owns this network.
Description	Description of this network.
Change group	Group name that you want to assign this group to.
Support group	Group that supports this network asset.
GL account	Account from the General Ledger Account [itfm_gl_accounts] table.
Attested date	Date when this network was attested.
Justification	Justification for this network.
Domain	Domain name of this network.
Assigned	Date when this network was assigned.
Approval group	Name of the group that you see when you submit an approval request.
Location	Location of this network.
Subcategory	Model subcategory of this network.
Company	Company who owns this network
Manufacturer	Name of the manufacturer of this network
Invoice number	Invoice number of this network.
Cost center	Cost center of this network.
Can print	Option to print the details of this network.
Operational status	Status of this network's operation.
Life cycle stage	Life-cycle stage of the network.
TNI CI attributes	Configuration (CI) that you can select to create the Telecommunications Network Inventory attribute details for this network.

**Related topics**

[Create Managed Network](#)

## Naming convention for associated templates

Learn about the details of the naming convention for the associated templates that are automatically generated when you create an equipment or interface card template.

### Supported variables in the naming pattern

Variable name	Description
position	Unit position of either the interface or slot/holder that it is getting applied to.  <b>Note:</b> The unit position always starts from 0. The slot/interface start number that is configured in the inventory model does not apply to the unit position.
parent_slot_name	Name of the slot that the card is inserted in, if the slot or interface belongs to a card.
parent_slot_position	Unit position of the slot that the card is inserted in, if the slot or interface belongs to a card.
equipment_slot_name	Name of the slot on the equipment where the base card is inserted in, if the slot or interface belongs to a card. The parent_slot_name and equipment_slot_name hold the same value if the current card is a base card.
equipment_slot_position	Unit position of the slot on the equipment where the base card is inserted in, if the slot/interface belongs to a card. The parent_slot_number and equipment_slot_number hold the same value if the current card is a base card.
bandwidth	Bandwidth value of the interface.

## Network inventory change request form

The Change Request form enables you to create and modify the change activities for the Telecom Inventory change models in the Design and Assign function.

### Change Request form

Field	Description
Number	Change request number.
Requested by	User who has requested the change. This field is available in the Change Requests list view so that you can see who requested a particular change.
Service	Business service that you want to make available for the change request.

**Change Request form (continued)**

Field	Description
Service offering	Service option that consists of one or more service commitments that uniquely define the level of service. You can select different levels of performance and features for a service through service offerings. You must select a service to filter the available service offerings.
Configuration item	Configuration item (CI) that the change applies to.
Risk	<p>Risk level for the change.</p> <p>Select one of the following options:</p> <ul style="list-style-type: none"> <li>• <b>High</b></li> <li>• <b>Moderate</b></li> <li>• <b>Low</b></li> </ul>
Impact	Measure of the effect of a change on business processes.
Short description	Summary of the change.
Description	Description of the change in detail.
Model	<p>Change model that is associated with the Telecom Network Inventory change request.</p> <p>After selecting the change model tile, the associated model appears in this field. You can also manually select one of the following options:</p> <p><b>Add Interface Card</b></p> <p>Change model that is used to add an interface card in an equipment slot.</p> <p><b>Create Inventory Equipment</b></p> <p>Change model that is used to add equipment when using an inventory template in a site or equipment holder.</p> <p><b>Create Logical Connection</b></p> <p>Change model that is used to create a logical connection between two network interfaces.</p> <p><b>Create Physical Connection</b></p> <p>Change model that is used to create a physical connection between two network interfaces.</p> <p><b>Emergency</b></p>

**Change Request form (continued)**

Field	Description
	<p>Change model that is used for the Telecom Network Inventory emergency changes.</p> <p><b>GPON Broadband Service</b></p> <p>Change model that is used to fulfill a GPON broadband order request.</p> <p><b>Normal</b></p> <p>Change model that is used for the Telecom Network Inventory normal changes.</p> <p><b>Note:</b> These change models are available in the <b>Change &gt; Create New &gt; Create a change request</b> window.</p>
Assignment group	Group working on the change request.
Assigned to	User that the change is assigned to. If an assignment rule applies, the change is automatically assigned to the appropriate user or group.

**Change Request form- Schedule tab**

Field	Description
Planned start date	Projected start date for the implementation. The planned start date can be the current date or a future date. The default value for this field is the current date. To change the planned start date, click the calendar icon and select a new date.
Planned end date	Projected end date for the implementation. The planned end date must be after the planned start date. The default value for this field is one day after the planned start date. To change the planned end date, click the calendar icon and select a new date.
CAB required	Option that designates if this change request requires a Change Advisory Board (CAB) approval before implementation.
CAB date	CAB approval date for the implementation.
Actual start date	Actual start date for the implementation. The actual start date can be on or before the planned start date.
Actual end date	Actual end date for the implementation. The actual end date can be before the planned start date but not before the actual start date.

**Change Request form- Schedule tab (continued)**

Field	Description
CAB delegate	User who attends the Change Advisory Board (CAB) meeting to describe the change.
CAB recommendation	Notes or recommendations that are related to the CAB meeting.

**Change Request form- Notes tab**

Field	Description
Watch list	User who gets the notifications about the change request. Add the names of the users who receive notifications and can view the watch topic.
Additional comments (Customer visible)	Option that designates if the work notes need to be shared with the user who requested the change.
Work notes	Work notes for the change request.
Work notes list	Users who can get the notification about the work notes.

**Change Request form- Closure Information tab**

Field	Description
Close code	Close code that best describes the reason you are closing this change request. Select one of the following options: <ul style="list-style-type: none"> <li>• <b>Successful</b></li> <li>• <b>Unsuccessful with issues</b></li> <li>• <b>Unsuccessful</b></li> </ul>
Close notes	Any additional notes that describe the outcome of closing this change request.

**Change Request form- Change Task form**

Fields	Description
Number	Change task identification number.
Change request	Change request number under which this change task was created.
Configuration item	Configuration item (CI) to which the change is applied.
Request type	Type of change request, based on the network inventory models.

### Change Request form- Change Task form (continued)

Fields	Description
Short description	Short description for this order task.
Description	Description of this order task.
State	<p>State of this change task. Select one of the following options:</p> <p><b>Pending</b> Task is waiting for an action from the user.</p> <p><b>Open</b> No action is taken on this task yet.</p> <p><b>In Progress</b> Task processing is in progress.</p> <p><b>Closed</b> Change task is complete.</p> <p><b>Canceled</b> Change task has been canceled.</p>
Assignment group	Name of the group name that is responsible for this task. Click the search icon ( 🔍 ) to select a group from the list.
Assigned to	Depending on the selected group, the users who are assigned to the list are shown. Click the search icon ( 🔍 ) to see the list of users.
Work notes	Free-form work order note text.
Update	Option to save changes that you made to the order task.
Close Task	Option to change the state of the order task to <b>Closed</b> .
Delete	Option to delete this order task.

## Network inventory facility classes

The facility classes are used to represent power, HVAC, network, and their connectivity in a data center. You can define facility hardware records for these classes in the Telecommunications Network Inventory application.

### Equipment Holder extended classes

Class Name	Table Name	Extends from	Description
Transformer	cmdb_ci_transformer	Power Equipment	Transformers change the voltage of alternating current (AC) in a power distribution

**Equipment Holder extended classes (continued)**

Class Name	Table Name	Extends from	Description
			system. You will find them in data centers and other power generation, transmission, and distribution networks. They either increase or decrease voltage levels for efficient transmission and safe power distribution.
Switch Gear	cmdb_ci_switch_gear	Power Equipment	Switchgear helps manage and protect your electrical circuits in a telecom data center. It's key for safe, reliable power distribution.
Power Panel	cmdb_ci_power_panel	Power Equipment	A Power Panel, often referred to as a power distribution panel or electrical panel. Power panels efficiently and safely manage and distribute electrical power to circuits and devices.
Rectifier	cmdb_ci_rectifier	Power Equipment	Rectifiers are essential for converting AC power to DC power. Your telecom and networking equipment rely on stable DC electricity.
Maintenance Bypass Panel	cmdb_ci_maintenance_bypass_panel	Bypass Equipment	A maintenance bypass panel (MBP) is an important part of your electrical power system, especially if you work with data centers. It lets you maintain or replace power equipment, like a UPS, without turning off power to other equipment. This is important to keep things running

**Equipment Holder extended classes (continued)**

Class Name	Table Name	Extends from	Description
			smoothly when you make updates.
Remote Power Panel	cmdb_ci_remote_power_panel	Power Equipment	A Remote Power Panel (RPP) distributes power in data centers to devices or other loads from a central source like a UPS or generator. They're useful for managing power in server racks and IT equipment.
Inverter	cmdb_ci_inverter	Power Equipment	An inverter takes the DC power from your telecom data center and changes it to AC power. While most telecom equipment uses DC power, you will need AC power for systems like air conditioning, lights, servers, and some monitoring devices.
Circuit Breaker	cmdb_ci_circuit_breaker	Power Equipment	Circuit breakers protect your telecom data center from overloads, short circuits, and equipment failures. They automatically disconnect the power supply when something goes wrong to prevent damage, fire, or downtime.
Fuse Alarm Panel	cmdb_ci_fuse_alarm_panel	Power Equipment	A Fuse Alarm Panel is a critical component in a telecom data center's DC power distribution system. It serves two main purposes: Distributes DC power to various telecom loads (like routers, switches, and other network equipment). Monitors

Equipment Holder extended classes (continued)

Class Name	Table Name	Extends from	Description
			fuse status and triggers alarms when a fuse blows, enabling quick fault detection and response.
Rack Rail	cmdb_ci_rack_rail	Hardware	A <b>rack rail</b> is a <b>mounting structure</b> inside a telecom or server rack that allows you to <b>securely install, support, and slide</b> equipment such as servers, switches, power supplies, and other hardware into place.
Wire Manager	cmdb_ci_wire_manager	Hardware	A wire manager (also called a cable manager or cable management system) is a device or accessory used to organize, guide, protect, and secure network and power cables within telecom racks and data center infrastructure.
Cage	cmdb_ci_cage	Facility Hardware	A cage in a telecom data center is a secure, enclosed physical space within a larger data hall or colocation facility, built using metal mesh panels and lockable doors. It is used to isolate and protect a customer's or department's servers, telecom gear, and networking equipment from unauthorized access.
Rack PDU	cmdb_ci_rack_pdu	PDU	A Rack PDU (Power Distribution Unit) is a critical component used in data centers and server rooms to distribute electrical


**Equipment Holder extended classes (continued)**

Class Name	Table Name	Extends from	Description
			power to multiple devices housed within a server rack. It serves as a centralized power management solution, ensuring reliable and efficient power delivery to IT equipment such as servers, switches, routers, and storage systems.

**Network Interface Model form - Information tab**

The information section in the model form enables you to create, review, and modify the details of a model.

**Network Interface Model form - Information tab**

Field	Description
Power (watts)	Electrical power of the network asset in watts.
Weight (lbs)	Weight of the network asset in pounds (lbs).
Virtual	Option to verify whether the network interface is physical or virtual.   <b>Note:</b> If you select <b>Virtual</b> , then the <b>Connector Type</b> field doesn't appear.
Connector Type	Type of physical cable connector that is used for the connection of the cable to the network interface. Select one of the following options: <ul style="list-style-type: none"> <li>• BNC (Bayonet Neill-Concelman) - Type of miniature radio frequency connector used for coaxial cables.</li> <li>• SC (Square Connector)- Square, common type of Fiber optic connector used as push-pull latch, to align the optical fibers for efficient light transmission.</li> <li>• LC (Lucent Connector)- Another version of the SC connector designed for high-density applications.</li> <li>• ST (Straight Trip)- a type of fiber optic connector commonly used for connecting optical fibers in telecommunications and data communication applications.</li> <li>• Wire Wrap -A technique for creating electrical connections on circuit boards.</li> <li>• RJ45 - Also known as 8P8C (8 Position 8 Contact) connector, is widely used type of connector for wired Ethernet networks.</li> </ul>
Max physical connection support	Maximum number of physical connections that is supported by this model.

**Network Interface Model form - Information tab (continued)**

Field	Description
Port bandwidth	Measured bandwidth for the ports on this network interface. Select the search icon ( 🔍 ) and select a bandwidth.
Directionality	Type of the connections between the nodes of a network. Select one of the following options: <ul style="list-style-type: none"> <li>• Tx- TX stands for Transmit. It refers to the direction in which data is being sent from a device.</li> <li>• Rx- RX signifies the endpoint that receives data. It's the input side for receiving information transmitted from another source, often labeled as TX (Transmit).</li> <li>• Tx/Rx</li> <li>• Bus- Bus directionality refers to the flow of data on a communication channel.</li> <li>• Broadcast- Broadcast directionality refers to the nature of signal transmission and reception in a broadcast system.</li> </ul>
Interface Type	Type of port on the network interface. Select one of the following options: <ul style="list-style-type: none"> <li>• Ethernet- Physical connection and speed capabilities of a device for connecting to a network. It involves cable type, speed, and standard.</li> <li>• Optical- specific design of a connector used in an optical transceiver. There are various types of optical interfaces, each with different shapes and data speed capabilities.</li> <li>• Serial- A serial interface transmits data one bit at a time, in contrast to a parallel interface that sends multiple bits simultaneously.</li> </ul>
Port position	Position of a physical or logical port on an equipment.

**Related topics**

[Create a network interface model](#)

**Network Model Relationship fields**

The Network Model Relationship form enables you to create a network model relationship.

**Network Model Relationship form**

Field	Description
Name	Manufacturer-assigned name of the network model relationship that is specified by the model manager.
Relationship type	Type of relationship. Select one of the following options: <ul style="list-style-type: none"> <li><b>--None--</b> No network model relationship exists.</li> <li><b>Rack to Rack Slot</b></li> </ul>

**Network Model Relationship form (continued)**

Field	Description
	<p>Relationship between a rack model and a slot model. This relationship indicates that the rack and the slot models are compatible with the equipment model.</p> <p><b>Equipment to Slot</b></p> <p>Relationship between an equipment model and a slot model. This relationship indicates that the number of slots and the slot models are compatible with the equipment model.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Parent product model</b> field shows a list of all the equipment models related to the Telecommunications Network Inventory application.</li> <li>• The <b>Child product model</b> field shows only the slot models.</li> </ul> <p><b>Equipment to Network interface</b></p> <p>Relationship between an equipment model and a network interface model. This relationship indicates the interface model and the number of interfaces that are compatible and supported with the equipment model.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Parent product model</b> field shows a list of all the equipment models related to the Telecommunications Network Inventory application.</li> <li>• The <b>Child product model</b> field shows a list of all the network interface models related to the Telecommunications Network Inventory application.</li> </ul> <p><b>Slot to Card</b></p> <p>Relationship between a slot model and an interface card model. This relationship enforces the <b>Root product model</b> field where an equipment model or a card model should be selected.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Root product model</b> field shows a list of all the equipment models related to the Telecommunications Network Inventory application.</li> <li>• The <b>Parent product model</b> field shows the models of both the slots and subslots.</li> <li>• The <b>Child product model</b> field shows a list of all the interface card models.</li> </ul> <p><b>Card to Slot</b></p> <p>Relationship between an interface card model and a slot model. This relationship indicates that the slot model is compatible with the interface card model.</p>

**Network Model Relationship form (continued)**

Field	Description
	<p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Parent product model</b> field shows a list of all the interface card models.</li> <li>• The <b>Child product model</b> field shows only the models of the subslots.</li> </ul> <p><b>Card to Network interface</b></p> <p>Relationship between an interface card model and a network interface model. This relationship indicates that the number of interfaces in the network interface model are compatible with the interface card model.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Parent product model</b> field shows a list of all the interface card models.</li> <li>• The <b>Child product model</b> field shows a list of all the network interface models.</li> </ul> <p><b>Physical Connection to Logical Connection</b></p> <p>Relationship between the models of a physical connection to a logical connection.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Parent product model</b> field shows a list of all the physical connection models.</li> <li>• The <b>Child product model</b> field shows a list of all the logical connection models.</li> </ul> <p><b>Logical Connection to Logical Connection</b></p> <p>Relationship between one logical connection model to another logical connection model.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Parent product model</b> field shows a list of all the logical connection models.</li> <li>• The <b>Child product model</b> field shows a list of all the logical connection models.</li> </ul> <p><b>Physical Connection to Network Interface</b></p> <p>Relationship between a physical connection to a network interface.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Parent product model</b> field shows a list of all the physical connection models.</li> <li>• The <b>Child product model</b> field shows a list of all the network interface models.</li> </ul>

## Network Model Relationship form (continued)

Field	Description
	<p><b>Logical Connection to Network Interface</b></p> <p>Relationship between a logical connection to a network interface.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Parent product model</b> field shows a list of all the logical connection models.</li> <li>• The <b>Child product model</b> field shows a list of all the network interface models.</li> </ul> <p><b>Rack/Cabinet to Rack/Cabinet Slot</b></p> <p>Relationship between rack/cabinet and rack/cabinet slot.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Parent product model</b> field shows a list of all the racks and cabinets.</li> <li>• The <b>Child product model</b> field shows a list of all the slots and sub-slots.</li> </ul> <p><b>Rack/Cabinet Slot to Equipment</b></p> <p>Relationship between a rack slot and the equipment.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Root product model</b> shows all equipment holder models having <b>Model category</b> as <b>Rack</b>.</li> <li>• The <b>Parent product model</b> shows all equipment holder models having <b>Model category</b> as <b>Slot</b>.</li> <li>• The <b>Child product model</b> shows all equipment models related to the Telecommunications Network Inventory application.</li> </ul> <p><b>Rack/Cabinet Slot to Container Shelf</b></p> <p>Relationship between a rack slot and the shelf.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Root product model</b> shows all equipment holder models having <b>Model category</b> as <b>Rack</b>.</li> <li>• The <b>Parent product model</b> shows all equipment holder models having <b>Model category</b> as <b>Slot</b>.</li> <li>• The <b>Child product model</b> shows all equipment holder models that have <b>Model category</b> as <b>Shelf</b>.</li> </ul> <p><b>Interface to Interface</b></p> <p>Relationship between two interfaces.</p> <p><b>Note:</b> The <b>Parent product model</b> and <b>Child product model</b> field shows list of all the network interface models.</p>

## Network Model Relationship form (continued)

Field	Description
	<p><b>Cabinet to Equipment</b></p> <p>Relationship between a cabinet and the equipment.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Parent product model</b> field shows all equipment holders that have <b>Container type</b> as <b>Cabinet</b>.</li> <li>• The <b>Child product model</b> field shows all equipment models related to the Telecommunications Network Inventory application.</li> </ul> <p><b>Logical Connection to Channel</b></p> <p>Relationship between a logical connection and the channel.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Parent product model</b> field shows a list of all the logical connection models.</li> <li>• The <b>Child product model</b> field shows a list of all the logical connection models that have <b>Behaviour</b> as <b>Channel</b>.</li> </ul> <p><b>Cable to Strand</b></p> <p>Relationship between a cable and the strand.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Parent product model</b> field shows a list of all the cable models.</li> <li>• The <b>Child product model</b> field shows a list of all the strand models.</li> </ul> <p><b>Multi Chassis to Equipment</b></p> <p>Relationship between a logical composite and the equipment.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• The <b>Parent product model</b> field shows a list of all the equipment models which are having model category as logical composite.</li> <li>• The <b>Child product model</b> field shows a list of all the equipment models.</li> </ul> <p><b>Multi Chassis to Rack</b></p> <p>Relationship between a logical composite and the rack.</p>

**Network Model Relationship form (continued)**

Field	Description
	<p><b>Note:</b></p> <ul style="list-style-type: none"> <li>The <b>Parent product model</b> field shows a list of all the equipment models which are having model category as logical composite.</li> <li>The <b>Child product model</b> field shows a list of all the rack models.</li> </ul>
Count	<p>Numbers of child product models that can be created under a parent product model when a template is created.</p> <p><b>Note:</b> This attribute is only for <b>Equipment to Slot, Rack to Slot, Equipment to Network Interface, Interface card to Slot, Interface card to Network Interface, Cable to Strand, and Logical Connection to Channel</b> relationship types.</p>
Root product model	<p>Grandparent model of the interface card for compatibility. Either select the equipment model or the interface card model. Then, select the search icon ( 🔍 ) and select a model.</p> <p><b>Note:</b> This attribute is only visible for the <b>Slot to Interface card</b> relationship type.</p>
Parent product model	<p>Product model that is the parent to the child product model. Select the search icon ( 🔍 ) and select a model.</p> <p><b>Note:</b> In the Rack-to-Slot relationship, the parent product model is the equipment holder model with the model category as Rack.</p>
Child product model	<p>Product model that is the child to the parent product model. Select the search icon ( 🔍 ) and select a model.</p> <p><b>Note:</b> In the Rack to Slot relationship, the child product model is the equipment holder with model category as Slot.</p>
Sequence	<p>Sequence number of the child entities for a model relationship. If you enter a number in the <b>Count</b> field, the <b>Sequence</b> field appears.</p> <p>The default value is 1. If the parent model has multiple relationships, the sequence number for the first relationship is set to 1 and the number following the highest value of the first relationship is set for the consecutive relationships. For example, let's say that your equipment has a model relationship with two slots and two ports. When the relationship is created, the sequence number of the slots and ports are set to 1 and 3.</p> <p><b>Note:</b> This attribute is only for <b>Rack to Slot, Equipment to Slot, Equipment to Network Interface, Interface card to Slot, Interface card to Network Interface, Cable to Strand, and Logical Connection to Channel</b> relationship types.</p>

### Network Model Relationship form (continued)

Field	Description
Parent bandwidth	Bandwidth of the parent product model.  <b>Note:</b> This attribute is only visible for the <b>Logical Connection to Channel</b> relationship type.
Child bandwidth	Bandwidth of the child product model.  <b>Note:</b> This attribute is only visible for the <b>Logical Connection to Channel</b> relationship type.

#### Related topics

[Define a network model relationship](#)

### Network site form

The Network Site form enables you to define a network site where you house network equipment.

#### Network Site form

Field	Description
Name	Name of the network site where the equipment resides. The ServiceNow AI Platform uses this name to identify your network inventory. For example, TROY IXC POP.
NPANXX	Assigned NPA-NXX code for this network site: <ul style="list-style-type: none"> <li>This code is a combination of area codes (NPAs) and local exchanges (NXXs).</li> <li>The combined code can contain the last four digits of up to 10,000 telephone numbers that are within a specific region. This region is associated with the central office for the assigned code.</li> <li>For example, 858-335 is the NPA-NXX for the phone number 858-335-9500.</li> </ul>
Location	Geographic location of the network site. Select the search icon ( 🔍 ) and select a location from the Location hierarchy. To learn more about the Location hierarchy, see <a href="#">product/tmt-telecom-network-inventory/task/define-tni-locations.dita</a> .
County	Name of the county in which the network site is located.
Region	Name of the geographic region in which the network site is located.
POTS number	Plain Old Telephone Service number (POTS) that is associated with this network site.
Subcategory	Subcategory of the site.

**Note:** To learn about the remaining identification fields that are common to most of the Inventory and Inventory number allocation menu forms, see [Commonly used network asset instance identification fields](#).

**Related topics**

[product/tmt-telecom-network-inventory/task/define-tni-sites.dita](#)

## Network topology form

The Network Topology form enables you to create, and review the topology details of a network.

**Network Topology form**

Field	Description
Name	Name of the topology.
Bandwidth	Bandwidth of the topology.
Life cycle stage	Life-cycle stage of the network inventory asset.
Support group	Group that supports this network asset.
Life cycle stage status	Status of the life-cycle stage.
Managed by	Name of the person who manages this network asset.
Model ID	Manufacturer's model identification number for this network asset.
Comments	Comments if any.

**Related topics**

[Manually create a network topology](#)

[Visualization of network topology](#)

## Pack tables

Use pack tables to learn about the tables that help to model your 5G network.

**Pack Tables**

Table name	Description
*pack_3gpp <sup>TM</sup> _gnb_du_function	GNB distribution unit identifier
pack_3gpp_gnb_du_function	GNB identifier
pack_3gpp_gnb_du_function	GNB identifier length
pack_3gpp_gnb_du_function	GNB distribution unit name
pack_3gpp_gnb_cu_cp_function	GNB identifier
pack_3gpp_gnb_cu_cp_function	GNB identifier length
pack_3gpp_gnb_cu_cp_function	GNB control unit name
pack_3gpp_gnb_cu_cp_function	Mobile country code
pack_3gpp_gnb_cu_cp_function	Mobile network code
pack_3gpp_gnb_cu_cp_function	X2 block list

**Pack Tables (continued)**

Table name	Description
pack_3gpp_gnb_cu_cp_function	X2 allow list
pack_3gpp_gnb_cu_cp_function	XN block list
pack_3gpp_gnb_cu_cp_function	XN allow list
pack_3gpp_gnb_cu_cp_function	XN no block list
pack_3gpp_gnb_cu_cp_function	Dapsho control flag
pack_3gpp_gnb_cu_cp_function	CHO control flag
pack_3gpp_gnb_cu_up_function	GNB control unit user plane identifier
pack_3gpp_gnb_cu_up_function	GNB identifier
pack_3gpp_gnb_cu_up_function	GNB identifier length
pack_3gpp_nrcellcu	Cell local identifier
pack_3gpp_nrcellcu	PLMN info list
pack_3gpp_nrcelldu	Name
pack_3gpp_nrcelldu	PLMN info list
pack_3gpp_nrcelldu	Administrative state
pack_3gpp_nrcelldu	Cell state
pack_3gpp_nrcelldu	Cell local identifier
pack_3gpp_nrcelldu	Physical cell identity
pack_3gpp_nrcelldu	Tracking area codes
pack_3gpp_nrcelldu	Synchronization signal block frequency
pack_3gpp_nrcelldu	Synchronization signal block periodicity
pack_3gpp_nrcelldu	Synchronization signal block subcarrier spacing
pack_3gpp_nrcelldu	Synchronization signal block duration
pack_3gpp_nrcelldu	Operation state
pack_3gpp_nrcelldu	Radio frequency channel number down link
pack_3gpp_nrcelldu	Radio frequency channel number up link
pack_3gpp_nrcelldu	Radio frequency channel number supplementary up link
pack_3gpp_nrcelldu	Base station channel bandwidth downlink
pack_3gpp_nrcelldu	Synchronization signal block offset
pack_3gpp_nrcelldu	Base station channel bandwidth uplink
pack_3gpp_nrcelldu	Base station channel bandwidth supplementary up link
pack_3gpp_managed_element	Network function instance ID
pack_3gpp_managed_element	Network function type

**Pack Tables (continued)**

Table name	Description
pack_3gpp_managed_element	Heartbeat timer
pack_3gpp_managed_element	Authentication information
pack_3gpp_managed_element	Host address
pack_3gpp_managed_element	Enabled network function types
pack_3gpp_managed_element	Enabled network function domains
pack_3gpp_managed_element	Locality
pack_3gpp_managed_element	Capacity
pack_3gpp_managed_element	Network function set identifiers
pack_3gpp_managed_element	Serving scope
pack_3gpp_managed_element	Network function supports load
pack_3gpp_managed_element	Network function supports overload
pack_3gpp_managed_element	Network function recovery times
pack_3gpp_managed_element	SCP domains
pack_3gpp_managed_element	Vendor identifier
pack_3gpp_amf_function	AMF (Access and Mobility Management Function) regional identifier
pack_3gpp_amf_function	SBI fully qualified domain name
pack_3gpp_amf_function	AMF set identifier
pack_3gpp_amf_function	CNSI identifiers
pack_3gpp_amf_function	Backup failure AMF (Access and Mobility Management Function) mobile country code
pack_3gpp_amf_function	Backup failure AMF mobile network code
pack_3gpp_amf_function	Backup failure AMF identifier
pack_3gpp_amf_function	Backup removal AMF mobile country code
pack_3gpp_amf_function	Backup removal AMF mobile network code
pack_3gpp_amf_function	Backup removal AMF identifier
pack_3gpp_smf_function	Tracking area codes
pack_3gpp_smf_function	SBI fully qualified domain name
pack_3gpp_smf_function	PDN gateway FQDN
pack_3gpp_smf_function	Access type
pack_3gpp_smf_function	Priority
pack_3gpp_smf_function	CNSI identifiers
pack_3gpp_smf_function	Visited SMF support indicator
pack_3gpp_upf_function	Network function instance identifier

**Pack Tables (continued)**

Table name	Description
pack_3gpp_upf_function	Tracking area codes
pack_3gpp_upf_function	Cnsi identifiers
pack_3gpp_upf_function	SMF serving area
pack_3gpp_upf_function	Support interworking with EPS
pack_3gpp_upf_function	PDU session types
pack_3gpp_upf_function	Access Traffic Steering, Switching, and Splitting
pack_3gpp_upf_function	Multipath TCP
pack_3gpp_upf_function	Perform RTT without PMT
pack_3gpp_upf_function	UELP address indicator
pack_3gpp_upf_function	Wireline Access Gateway Function IPv4 end point
pack_3gpp_upf_function	Wireline Access Gateway Function IPv6 end point
pack_3gpp_upf_function	Wireline Access Gateway Function FQDN
pack_3gpp_upf_function	Trusted Non-3GPP Access Point IPv4 end point
pack_3gpp_upf_function	Trusted Non-3GPP Access Point IPv6 end point
pack_3gpp_upf_function	Trusted Non-3GPP Access Point FQDN
pack_3gpp_upf_function	Trusted WLAN interworking function IPv4 end point
pack_3gpp_upf_function	Trusted WLAN interworking function IPv6 end point
pack_3gpp_upf_function	Trusted WLAN interworking function FQDN
pack_3gpp_upf_function	Priority
pack_3gpp_upf_function	Redundant GPRS tunneling protocol
pack_3gpp_upf_function	IP upstream
pack_3gpp_upf_function	Data forwarding
pack_3gpp_upf_function	Support packet forwarding control protocol
pack_3gpp_upf_function	Support baremetal orchestrator
pack_3gpp_ep_rp	Local port
pack_3gpp_ep_rp	Local IPv4 address
pack_3gpp_ep_rp	Local IPv6 address
pack_3gpp_ep_rp	Local VLAN
pack_3gpp_ep_rp	Remote IPv4 address

### Pack Tables (continued)

Table name	Description
pack_3gpp_ep_rp	Remote IPv6 address

\* 3GPP is a trademark of ETSI.

#### Related topics

[Modeling a 5G network function in Telecommunications Network Inventory](#)

## Path computation error messages

Path computation error messages enable you to understand the error messages that occur during the path computation.

### Error messages

#### Error message

Error	Resolution
No path found between the sites <site1_name> and <site2_name>.	Create a connection between the sites.

#### Related topics

[Design your GPON Broadband Service](#)

## Physical Connection form

The Physical Connection form enables you to define a physical connection by describing its configuration and connection details.

#### Related topics

[Define the physical connection details](#)

## Physical Connection form

The Physical Connection form enables you to describe the details for a physical connection.

#### Physical Connection form

Field	Description
Name	Name of this physical connection. The ServiceNow AI Platform uses this name to identify it in your network inventory.
Product Model	Name of the product model that is associated with the physical connection. Click the search icon ( 🔍 ) to select the product model.

### Physical Connection form (continued)

Field	Description
	<ul style="list-style-type: none"> <li>If you selected <b>Optical Fiber Cable</b>, the <b>Cable parameters</b> tab appears so that you can enter additional information.</li> <li>If you selected <b>Fiber Link</b>, then you must fill in the information for the <b>Cable</b> and <b>Strand number</b> fields in the Physical connection element form.</li> </ul>
Link Type	Type of link for the physical connection. For example, Fibre or coaxial.
Bandwidth AtoZ	Total bandwidth capacity from Site A to Site Z for this network connection.
Bandwidth ZtoA	Total bandwidth capacity from Site Z to Site A for this network connection.
Site A	Originating network site for this connection. Select the search icon ( 🔍 ) and select a network site. To learn more, see <a href="https://product.tmt-telecom-network-inventory/task/define-tni-sites.dita">product/tmt-telecom-network-inventory/task/define-tni-sites.dita</a> .
Site Z	Destination network site for this connection. Select the search icon ( 🔍 ) and select a network site. To learn more, see <a href="https://product.tmt-telecom-network-inventory/task/define-tni-sites.dita">product/tmt-telecom-network-inventory/task/define-tni-sites.dita</a> .

#### Related topics

[Define the physical connection details](#)

### Physical Connection form - Configuration

The Configuration section in the Physical Connection form enables you to create a physical connection.

#### Physical Connection form - Configuration

Field	Description
Port A	Network interface that is used in the Port A connection. Select the search icon ( 🔍 ) and select a network interface. To learn more, see <a href="#">Define the network interface details</a> .
Management option	Attribute that indicates who or what is responsible for managing this endpoint.
Endpoint role	Endpoint role that is associated with the service endpoint for this network asset. An endpoint role is the function that is served by the endpoint of the service that you're providing. Select one of the following options: <ul style="list-style-type: none"> <li><b>ROOT</b> or <b>LEAF</b> endpoint role, as defined by the Metro Ethernet Forum (MEF).</li> <li><b>--None--</b> for no assigned endpoint role.</li> </ul>

**Physical Connection form - Configuration (continued)**

Field	Description
Port Z	Network interface that is used in the Port Z connection. Select the search icon ( 🔍 ) and select a network interface. To learn more, see <a href="#">Define the network interface details</a> .
Vendor	Name of the network asset's vendor. Select the search icon ( 🔍 ) and select a vendor code. To learn more, see <a href="#">Create manufacturer and vendor codes</a> .
Cost	Cost of this network asset.
Distance	Route length of this connection, expressed in the unit of measure that you select in the <b>Unit</b> field.
Unit	Unit of measure in which you're expressing the route length of the connection in the <b>Distance</b> field. Select one of the following options:  <b>--None--</b> No distance measurement expressed for the connection route length.  <b>Miles</b> Distance is expressed in miles.  <b>Kilometers</b> Distance is expressed in kilometers.  <b>Feet</b> Distance is expressed in feet.  <b>Meters</b> Distance is expressed in meters.

**Note:** To learn about the remaining configuration fields that are common to most of the Inventory menu forms, see [Commonly used network asset instance configuration fields](#).

**Related topics**

[Define the physical connection details](#)

**Cable Parameters form**

The Cable Parameters form enables you to define cable parameters for a physical connection.

**Cable Parameters form**

Field	Description
Cable type	Name of the cable type.
Cable number	Number of the cable that is used in the physical connection.

### Cable Parameters form (continued)

Field	Description
Stand count	Number of fibers that this cable contains.
Cable length	Length of the cable in millimeters (mm).
Parent cable	Option that designates the top-layer physical connection.
Color code	Color of the cable line.
Sparelength A	Length of the cable that connects to site A in millimeters (mm).
Sparelength Z	Length of the cable that connects to site Z in millimeters (mm).
KML Route	Option that designates the fiber route maps in a KML format.

#### Related topics

[Define the physical connection details](#)

## Physical connection modification request form

The Physical connection modification request form enables you to modify endpoints of a physical connection record in the Telecommunications Network Inventory application.

### Logical/Physical connection modification request form

Fields	Description
A end Site	<p>Starting network (Site A field) site where this selected logical or physical connection is configured.</p> <p><b>Note:</b> This field is auto populated based on the selected site or equipment or interface or connection.</p>
Z end Site	<p>Ending network site (Site Z field) where this selected logical or physical connection is configured.</p> <p><b>Note:</b> This field is auto populated based on the selected site or equipment or interface or connection.</p>
A end Equipment	<p>Starting network (Site A field) equipment where this logical or physical connection is configured.</p> <p><b>Note:</b> This field is auto populated based on the selected site or equipment or interface or connection.</p>
Z end Equipment	<p>Ending network (Site Z field) equipment where this logical or physical connection is configured.</p>

**Logical/Physical connection modification request form (continued)**

Fields	Description
	<p><b>i Note:</b> This field is auto populated based on the selected site or equipment or interface or connection.</p>
A end interface	<p>Starting interface (Site A field) point where this logical or physical connection is configured.</p> <p><b>i Note:</b> This field is auto populated based on the selected site or equipment or interface or connection.</p>
Z end interface	<p>Ending interface (Site Z field) point where this logical or physical connection is configured.</p> <p><b>i Note:</b> This field is auto populated based on the selected site or equipment or interface or connection.</p>
Physical Connection	<p>Select a physical connection that needs modification from the list.</p> <p><b>i Note:</b></p> <ul style="list-style-type: none"> <li>• The list includes both physical and their revisions. On selecting the revision of a physical connection, the <b>Create Revision</b> check box disappears.</li> <li>• This field is applicable only for physical connection modification form.</li> <li>• This field is auto populated based on the selected site or equipment or interface.</li> </ul>
Create Revision	Option to enable or disable revision process.

**Logical/Physical connection modification request form (continued)**

Fields	Description
	<p><b>Note:</b></p> <ol style="list-style-type: none"> <li>1. On selecting this check box, the following occurs:               <ol style="list-style-type: none"> <li>a. The revision process is initiated. To learn more, see <a href="#">Revision, operationalization, and decommission of a Configuration Item</a>.</li> <li>b. Two change tasks for modification and revision are created with the open and closed status respectively.</li> </ol> </li> <li>2. Open the Modify Logical or Physical connection change task to start modifying the duplicated logical or physical connection and operationalize further. To learn more, see <a href="#">Operationalize a configuration item</a>.</li> <li>3. In the process of revision of physical connection modification, the logical connections associated with physical connection ports are updated during the operationalization process.</li> </ol>

**Related topics**

[Modify physical connection endpoints](#)

**Power circuit form**

The Power Circuit form enables you to describe the details for an power circuit record.

**Power Circuit form**

Field	Description
Name	Name of this power circuit record. The ServiceNow AI Platform uses this name to identify it in your network inventory.
Support group	Group that supports the network inventory.
Asset	Name of the asset that is associated with this record.
Managed by	Name of the person who manages this network asset. Select the search icon ( 🔍 ) and select a user from the listing.
Life Cycle Stage	Stage of the life cycle that this network asset is in:

**Power Circuit form (continued)**

Field	Description
	<p><b>Deploy</b> Network asset that is deployed in your network.</p> <p><b>Design</b> Network asset that is being used for design purposes.</p> <p><b>End of life</b> Network asset that is at the end of its useful life.</p> <p><b>Inventory</b> Network asset that is an inventory item in use in the network.</p> <p><b>End of life</b> Network asset that is missing and can't be located.</p> <p><b>Operational</b> Network asset that is operational.</p> <p><b>Purchase</b> Network asset that is in the purchase phase of its life.</p>
Life Cycle Stage Status	<p>Status of the network asset as it relates to the life cycle stage that it is in:</p> <p><b>In Maintenance</b> Network asset that is currently in maintenance.</p> <p><b>In Use</b> Network asset that is currently in use.</p> <p><b>Pending Retirement</b> Network asset that is currently in maintenance.</p>
Model ID	Model ID of the asset.

**Related topics**

[Define the power circuit details](#)

**Provision LAG form**

The Provision LAG form enables you to create, review, and modify the network asset details for Link Aggregation Group (LAG) connection in the Telecommunications Network Inventory application.

**Provision LAG form**

Fields	Description
Due date	Planned end date for this request.
Site A	Text field where you can select a source site.
Equipment A	Text field where you can select the source equipment.

**Provision LAG form (continued)**

Fields	Description
	<p><b>i Note:</b> The list is dependent on the site A that you've selected.</p>
Interface A	<p>Text field where you can select a source interface.</p> <p><b>i Note:</b></p> <ul style="list-style-type: none"> <li>• The list is dependent on the equipment that you selected.</li> <li>• The list doesn't display the interfaces that are marked as virtual.</li> </ul>
Bandwidth	Text field where you can select a total bandwidth that transmits between the source and destination interfaces.
Start date	Planned start date for this request.
Site Z	Text field where you can select a destination site.
Equipment Z	Text field where you can select the destination equipment.
Interface Z	<p>Text field where you can select a destination interface.</p> <p><b>i Note:</b> The interface Z list doesn't display the interfaces that are marked as virtual.</p>

**Related topics**

[Create a Link Aggregation Group using design and assign function](#)

**Related tabs in the Network inventory forms**

The related tabs in the Network Inventory forms display the related records that dynamically change based on the connection and relationships with the other network assets. You can selectively view, modify, or update these records.

**Related tabs in the Network inventory forms**

Tab	Description
Overview	<p>Snapshot of some of the information about the telco equipment. The <b>Overview</b> tab displays the following sections:</p> <p><b>Usage</b></p>

**Related tabs in the Network inventory forms (continued)**

Tab	Description
	<p>Number of slots, interface cards, and interfaces that are open in the telco equipment.</p> <p><b>Images</b></p> <p>Image of the telco equipment. You can select the image to see a preview in a separate page.</p> <p><b>Relations</b></p> <p>Relationship with the associated network inventories. The Relations section shows all the child hierarchies that are associated with the telco equipment. You can only view the relations in the workspace.</p> <p><b>Note:</b> This tab is available only for the Telco Equipment form.</p>
Rack Equipment Placement	<p>Details of the rack slot where this equipment is positioned. You can always update the details by selecting the text link displayed under the <b>Exclusively Used</b> column.</p> <p><b>Note:</b> This field is applicable only for all equipment, IP routers, IP switches, IP firewalls, and cards.</p>
Child Site	<p>List of the child inventory sites that are associated with the parent site.</p> <p><b>Note:</b> This tab is available only for the Network Site form.</p>
Telco equipment	<p>List of the telco equipment that is associated with the network inventory.</p> <p><b>Note:</b> This tab is available only for the Network Site form.</p>
Incidents	<p>List of the incident records that are related to the network inventory.</p> <p><b>Note:</b> This tab is available only for the Network Site form.</p>
Change Requests	<p>List of the Change Request records. To learn more about the change requests, see <a href="#">Create</a></p>

**Related tabs in the Network inventory forms (continued)**

Tab	Description
	<p>a <a href="#">change request from Network Inventory Workspace</a>.</p> <p><b>Note:</b> This tab is available only for the Network Site, Telco Equipment, and Physical Connections forms.</p>
Teams	<p>List of the teams that are associated with the network inventory.</p>
Physical Connections	<p>List of the physical connections that are associated with the network inventory.</p> <p><b>Note:</b> This tab is available only for the Telco Equipment form.</p>
Logical Connections	<p>List of the logical connections that are associated with the network inventory.</p> <p><b>Note:</b> This tab is available only for the Telco Equipment form.</p>
Order information	<p>List of the order information that is related to the network inventory instance.</p> <p><b>Note:</b> This tab is available only for the Network Interface, Physical Connections, and Logical Connections forms.</p>
Number Elements	<p>List of the number elements that are associated with your virtual local area network (VLAN) or link aggregation group (LAG). To learn more about the number elements fields, see <a href="#">Commonly used network asset instance identification fields</a>.</p> <p><b>Note:</b> This tab is available only for the Telco Equipment, Network Interface, Physical Connections, Logical Connections, and Inventory Number forms.</p>
Physical connection elements	<p>List of the connection elements that are added for the physical connections.</p> <p><b>Note:</b> This tab is available only for the Physical Connections form.</p>
Connection elements	<p>List of the connection elements that are added for the logical connections. These elements should be the valid logical connections</p>

**Related tabs in the Network inventory forms (continued)**

Tab	Description
	<p>between the sites when the computation performs the path search.</p> <p>After creating a connection element, a relationship is created between the logical or physical connection and the next element under its default relationship type. To learn more about the connection element fields, see <a href="#">Connection Element form</a>.</p> <p><b>Note:</b></p> <ul style="list-style-type: none"> <li>• This tab is available only for the logical connections.</li> <li>• The relationship gets updated if its connection element is modified or deleted. For example, the relationship gets deleted if you delete its connection element. To change the default relationship type, navigate to <b>System Definition &gt; Decision tables &gt; TNI CI Relationship Definition Policy</b>, and under <b>Decision table</b>, update the <b>CI Relationship Type</b> against the CI class.</li> </ul>
Inventory Numbers	<p>List of the inventory numbers that are associated with your network inventory. To learn more about the number elements, see <a href="#">Define your inventory numbering</a>.</p> <p><b>Note:</b> This tab is available only for the Inventory Number form.</p>
Channels	<p>List of logical connections with the <b>Behaviour</b> field set to <b>Channel</b>.</p>
IP Address	<p>List of the IP addresses that are associated with your network inventory.</p> <p><b>Note:</b> This additional tab is available for the equipment, interface card, network interface, and logical connection.</p>
Inventory Groups	<p>List and details of all the inventory groups.</p> <p><b>Note:</b> This tab is available for the network site, equipment holder, equipment, interface card, network interface, physical connection, and logical connection.</p>

**Related tabs in the Network inventory forms (continued)**

Tab	Description
DNS Name	<p>List of all the DNS names of the IP addresses.</p> <p><b>Note:</b> This listing is available only for IP addresses.</p>
CMDB Group Contains Configuration Items	<p>List of all the configuration items (CIs) that you want to add to this inventory group. You can't duplicate a CI but you can add a CI in different inventory groups. To prioritize a CI, select one of the following values in the <b>Member Role</b> field when you're creating the CI:</p> <ul style="list-style-type: none"> <li>• Main</li> <li>• Primary</li> <li>• Secondary</li> <li>• Tertiary</li> <li>• Load Balancing</li> <li>• Active</li> <li>• Passive</li> </ul> <p><b>Note:</b> Only the inventory agent and the inventory administrator can review, create, update, or delete the CI items.</p>
Parent Inventory Groups	List of all the parent inventory groups.
Child Inventory Groups	List of all the child inventory groups.
IP Pools	List of all the child IP pools of this parent pool.
IP Subnetwork	List of all the child IP subnetworks of this IP pool.
Telephone Numbers	List of all the telephone numbers that you want to assign to this telephone block.
Telephone Number Allocations	<p>List of the telephone number allocations that you want to assign to this telephone block. This list is auto-generated. By default, the availability is true and the status is New.</p>
CMDB 360 Data	<p>List of all discovery sources at the CI attribute level. To learn more, see <a href="#">CMDB 360/Multisource CMDB</a>.</p>
Inventory Revision Histories	<p>List of all revised CIs of the selected connection.</p> <p><b>Note:</b> This tab is available only for physical and logical connection.</p>
Asset	List of all assets of the inventory.

**Related tabs in the Network inventory forms (continued)**

Tab	Description
Model Component	List of the model components of this inventory. You can mark the component as mandatory or optional.
Vendor Catalog Items	List of all vendor catalogs of this inventory. To learn more, see <a href="#">Vendor Catalog Items</a> .
Hardware Model Lifecycles	Hardware model lifecycle details of this inventory
Network Model Relationships	List of all model relationships associated with this inventory
Packs	List of all added packs. To learn more, see <a href="#">Attribute packs</a> .
Capacity Metrics	List of capacity metric records that are associated with the network inventory record. To learn more see, <a href="#">View a capacity metric</a> .  <b>Note:</b> This tab is available only for equipment, rack, slot, cabinet, card and interface records.
Strands	List of strand records that are associated with the cable record.  <b>Note:</b> This tab is available only for card records.
Protection paths	List of protection paths that are associated with logical connection record.  <b>Note:</b> This tab is available only for physical and logical connection records.
Network Topology Root Nodes	List of root node records that are associated with network topology record.  <b>Note:</b> This tab is available only for network topology records.
Media	List of media records that are associated with the network inventory records.
Places	List of place records.

**Related topics**

[Reviewing and updating your network inventory with the Network Inventory Workspace](#)

## Related templates form

The Related templates form enables you to understand all fields of the related templates tab for slots, equipment, and shelves.

### Inventory Template

Fields	Description
Name	Name of the shelf or equipment
Inventory model	<p>List of all child product models based on the selected rack unit of the rack. The child product models are defined in the network model relationships for each inventory model of a rack unit.</p> <p>Select the search icon ( 🔍 ) and select a model. To learn more, see <a href="#">Creating your inventory models</a>.</p> <p><b>Note:</b> A list of all product models is displayed if the inventory model is not defined in the model relationship.</p>
Relationship type	Type of CI relationship. By default, the relationship is set to <b>Contains::Contained By</b> .
Inventory template	<p>Template of the selected inventory model.</p> <p>Select the search icon ( 🔍 ) and select a template.</p>
Parent	Parent of the shelf or equipment. It's populated automatically with the name of the slot under which this shelf or equipment is created.
Available templates	Templates that are available for the shelf or equipment
Default field values	<p>Default template where the default CI attribute values can be defined. The values in the list depend on the selected inventory model.</p> <p>Select the search icon ( 🔍 ) and select a type code. To learn more, see <a href="#">Create a default template</a>.</p> <p><b>Note:</b> This field is applicable only for equipment.</p>
Slot Span	<p>Select slots required for the equipment or shelf to occupy</p> <p><b>Note:</b> This field is applicable only for equipment.</p>

**Inventory Template (continued)**

Fields	Description
Name pattern	Name pattern of the shelf or slot or equipment

**Router, Switch, Firewall, Virtual Machine, Load Balancer, and Server forms**

The equipment form enables you to create, review, and modify the network asset details in the Telecommunications Network Inventory application for the router, switch, firewall, virtual machine, load balancer, or server.

**Common fields**

Field	Description
Name	Name of the network inventory asset.
Location	Location of the network inventory asset.
Description	Description about network inventory asset.
Support group	Group that supports this network asset.
Supported by	Name of the person who supports this network asset.
Managed By Group	Name of the group who manages this network inventory asset.
Environment	Current state of the network asset. Select one of the following options: <ul style="list-style-type: none"> <li>• Development</li> <li>• Production</li> <li>• Test</li> </ul>
Company	Company who owns this network inventory asset.
Model ID	Model ID of this network inventory asset.
Manufacturer	Name of the manufacturer.
Model number	Manufacturer original model number.
Category	Model category of this network inventory asset.
Subcategory	Model subcategory of this network inventory asset.
Discovery source	Name of primary (most trusted) discovery source.
First discovered	Date and time instance was first discovered.
Most recent discovery	Date and time instance was last discovered.
Correlation ID	ID of the instance from another data source.
Department	Department where this network inventory asset belongs to.
Life Cycle Stage	Life-cycle stage of the network inventory asset.

**Common fields (continued)**

Field	Description
Life cycle Stage Status	Status of the life-cycle stage.
Attested By	Name of the person who attests this network inventory asset.
Attested Date	Date of attestation.
Attestation Status	Status of attestation.
Install Status	Status of the network inventory asset installation.
Operational status	Operational status of the network inventory asset.
Fault count	Number of faults.
Maintenance schedule	Type of inspection that is performed on the network inventory asset.
Schedule	Type of maintenance schedule.
Fully qualified domain name	Domain name that specifies its exact location in the tree hierarchy of the Domain Name System (DNS).
IP Address	Unique address that identifies a network inventory asset on the network.
MAC Address	MAC address of the device.
Serial number	Serial number of the network inventory asset.
DNS Domain	Unique name or address assigned to the device within the Domain Name System (DNS) infrastructure.
Attributes	Any additional attributes.
Comments	Free form text that is used to comment on a network asset. For example, Duty tech is Rahul Dev.
Monitor	Option to print the details of this network inventory asset.
Can Print	Option to print the details of this network inventory asset.

**Server fields**

The following fields are available only in the Server form in the Configuration Attributes section.

**Server fields**

Field	Description
OS Domain	Operating system domain of the configuration item (CI).
RAM (MB)	Amount of RAM on the computer, in megabytes (MB).
Operating System	Operating system running on the CI.
CPU manufacturer	Name of the CPU manufacturer.
OS Version	Version of the operating system running on the CI.
CPU type	Type of CPU.

**Server fields (continued)**

Field	Description
OS Service Pack	Service pack that is installed on the operating system.
CPU speed (MHz)	Speed of the CPU, in Megahertz (MHz).
CPU count	Number of CPUs.
Disk space (GB)	Amount of disk space, in gigabytes (GB).
CPU core count	Number of cores per CPU.

To learn about the Asset attribute fields, see [Asset and CI management](#).

To learn about the remaining configuration fields that are common to most of the Inventory menu forms, see [Commonly used network asset instance configuration fields](#).

To learn about the remaining configuration fields that are common to most of the Inventory menu forms, see [Commonly used network asset instance configuration fields](#).

**Related topics**

[Create a telecommunications equipment instance](#)

**Service Instance form**

The Service Instance form enables you to create, review, and modify the details of an application service.

**Service Instance form**

Field	Description
Name	Unique application service name, which isn't in use by any other type of application service. Use self-explanatory names such as <i>mailing service</i> or <i>printing service</i> .
Model ID	A product model such as a software model where end of life data is stored.
Owned by	User who is familiar with the infrastructure and applications making up the service. This user is the application service Subject Matter Expert (SME) who provides information necessary for a successful creation of an application service.
Business criticality	Priority of the business service.
Version	The application service configuration version.
Used for	Type of deployment environment.
Operational status	Operational status of the application service, such as <b>Ready</b> or <b>Retired</b> .
Service classification	Type of service. Select one of the following.


**Service Instance form (continued)**

Field	Description
	<ul style="list-style-type: none"> <li>• Business Service</li> <li>• Technical Service</li> <li>• Application Service</li> </ul>
Approval group	
Support group	Used by Incident Management as the group managing the contract covering the asset.
Change Group	Used by ITSM for routing of change and change-related tasks.
Managed by	Group that approves this service instance request.
SLA	Service Level Agreement.
Location.	Location where you manage the service.
Vendor	Vendor name.
Comments	Any additional comments.

**Strand form**

The Strand form enables you to describe the details for a strand in the cable.

**Strand form**

Field	Description
Name	Name of this strand record. The ServiceNow AI Platform uses this name to identify it in your network inventory.
Support group	Group that supports the network inventory.
Asset	Name of the asset that is associated with this record.
Managed by	Name of the person who manages this network asset. Select the search icon (  ) and select a user from the listing.
Life Cycle Stage	<p>Stage of the life cycle that this network asset is in:</p> <p><b>Deploy</b> Network asset that is deployed in your network.</p> <p><b>Design</b> Network asset that is being used for design purposes.</p> <p><b>End of life</b> Network asset that is at the end of its useful life.</p>

**Strand form (continued)**

Field	Description
	<p><b>Inventory</b> Network asset that is an inventory item in use in the network.</p> <p><b>End of life</b> Network asset that is missing and can't be located.</p> <p><b>Operational</b> Network asset that is operational.</p> <p><b>Purchase</b> Network asset that is in the purchase phase of its life.</p>
Life Cycle Stage Status	<p>Status of the network asset as it relates to the life cycle stage that it is in:</p> <p><b>In Maintenance</b> Network asset that is currently in maintenance.</p> <p><b>In Use</b> Network asset that is currently in use.</p> <p><b>Pending Retirement</b> Network asset that is currently in maintenance.</p>
Model ID	Model ID of the asset.
Domain	A unique name or address assigned to the device within the domain.
A end termination	Starting point such as an interface or slot where this strand is connected with.
Z end termination	Ending point such as an interface or slot where this strand is connected with.
A end connector	<p>Type of physical cable connector that is used for the starting point of the strand. Select one of the following options:</p> <p><b>BNC</b> The Bayonet Neill Concelman (BNC) connector is used for video and RF applications and found in the coaxial cable networks.</p> <p><b>SC</b> A square-shaped snap-in connector.</p> <p><b>LC</b> Small and a push-and-pull design with a latch mechanism.</p> <p><b>ST</b> A bayonet-style twist lock and a long, cylindrical ferrule.</p> <p><b>Wire Wrap</b> Wrapping a thin, stripped wire around a post or pin to establish a connection.</p> <p><b>RJ45</b> Connectors have eight pins and are used on the ends of twisted-pair cables.</p>

**Strand form (continued)**

Field	Description
Z end connector	<p>Type of physical cable connector that is used for the ending point of the strand. Select one of the following options:</p> <p><b>BNC</b></p> <p>The Bayonet Neill Concelman (BNC) connector is used for video and RF applications and found in the coaxial cable networks.</p> <p><b>SC</b></p> <p>A square-shaped snap-in connector.</p> <p><b>LC</b></p> <p>Small and a push-and-pull design with a latch mechanism.</p> <p><b>ST</b></p> <p>A bayonet-style twist lock and a long, cylindrical ferrule.</p> <p><b>Wire Wrap</b></p> <p>Wrapping a thin, stripped wire around a post or pin to establish a connection.</p> <p><b>RJ45</b></p> <p>Connectors have eight pins and are used on the ends of twisted-pair cables.</p>
Length	Total length of the strand.
Length unit	<p>Unit of measure in which you're expressing the route length of the strand. Select one of the following options:</p> <p><b>--None--</b></p> <p>No distance measurement is expressed for the connection route length.</p> <p><b>Inches</b></p> <p>Distance is expressed in inch.</p> <p><b>Feet</b></p> <p>Distance is expressed in feet.</p> <p><b>Miles</b></p> <p>Distance is expressed in miles.</p> <p><b>Meters</b></p> <p>Distance is expressed in meters.</p> <p><b>Centimeters</b></p> <p>Distance is expressed in centimeters.</p> <p><b>Kilometers</b></p> <p>Distance is expressed in kilometers.</p>
Strand number	The number that is assigned to the strand by the manufacturer.
Cable	Cable record that is associated with the strand.

**Strand form (continued)**

Field	Description
Comments	Free form text that is used to comment on a network asset. For example, Duty tech is Rahul Dev.
Operational status	Operational status of the network inventory asset.

**Related topics**

[Define the strand details](#)

**Strand model form**

The Strand Model form enables you to describe the details for a strand model record.

**Strand model form**

Field	Description
Manufacturer	Name of the network asset's manufacturer. Select the search icon ( 🔍 ) and select a manufacturer code. To learn more, see <a href="#">Create manufacturer and vendor codes</a> .
Name	Name of the strand model. The ServiceNow AI Platform uses this name to identify it in your network inventory.
Short description	Description of the strand model that you're defining.
Model categories	List of model categories that maps to a CI class. The model categories are part of the Product Catalog application.
Model number	The model number that is assigned to the model by the manufacturer.
Asset tracking strategy	Number of equipment holder units that are available for use in this network asset.
Barcode	A bar code number that is assigned to the model by the manufacturer.
Useful life (months)	Number of months that the model can be used for.
Asset tracking unit	Number of equipment holder units that are available for use in this network asset.
Owner	The person responsible for the model.
Acquisition method	Acquisition method for the model:  <b>Buy</b>  The model was purchased.

**Strand model form (continued)**

Field	Description
	<p><b>Leased</b> The model was leased.</p> <p><b>Both</b> The model was bought and leased.</p>
Status	<p>Production status of the model:</p> <p><b>Build</b> The model must be built.</p> <p><b>In Production</b> The model is in production.</p> <p><b>Sold</b> The model was sold.</p> <p><b>Retired</b> The model has been retired.</p>
Cost	Cost of a single unit of the model.
Expenditure type	<p>Type of expenditure. Select one of the following options:</p> <p><b>Capex</b> Capital expenditure is a one-time expenditure, where the value is realized over the years. For example, a photocopier.</p> <p><b>Opex</b> Operational expenditure is an ongoing expenditure. For example, toners for the photocopier.</p>
Depreciation	Depreciation schedule of the strand model.
Certified	Option that designates if this network asset is certified.
Salvage value	The estimated value that an asset realizes when sold at the end of its useful life. This value must be less than or equal to the cost of the asset.
Comments	Any additional information on the model that would be useful.
Power (watts)	Electrical power of the network asset in watts.
Dimensions Unit	<p>Unit of measure in which you're expressing dimensions. Select one of the following options:</p> <p><b>--None--</b> No distance measurement is expressed for the connection route length.</p> <p><b>Inches</b> Distance is expressed in inch.</p> <p><b>Feet</b> Distance is expressed in feet.</p> <p><b>Miles</b></p>

**Strand model form (continued)**

Field	Description
	Distance is expressed in miles.
Sound Power (bels)	The rate at which the energy of the network asset is emitted in bels.
Length	<p>Length of the network asset, expressed in the unit of measure that you designate in the <b>Units</b> field.</p> <ul style="list-style-type: none"> <li>• For example, enter 12 if the asset is one foot, or enter 60 if the asset is 60 inches and you've selected <b>Inches</b> as the unit of measure in the <b>Units</b> field.</li> <li>• The ServiceNow AI Platform uses this information to calculate the cubic dimensions of the asset to determine its physical placement within the designated network site.</li> </ul>
Characteristic	<p>Type of the strand. Select one from the following.</p> <p><b>Single Mode</b> A single Mode fiber strand transmits only one signal.</p> <p><b>Multi Mode</b> A multi-mode fiber strand transmits multiple signals.</p> <p><b>POF</b> Plastic Optical Fiber (POF) strand transmits light.</p> <p><b>Twisted Pair</b> Twisted-pair cable consists of pairs of insulated copper wires twisted together.</p>
Width	<p>Length of the network asset, expressed in the unit of measure that you designate in the <b>Units</b> field.</p> <ul style="list-style-type: none"> <li>• For example, enter 12 if the asset is one foot, or enter 60 if the asset is 60 inches and you've selected <b>Inches</b> as the unit of measure in the <b>Units</b> field.</li> <li>• The ServiceNow AI Platform uses this information to calculate the cubic dimensions of the asset to determine its physical placement within the designated network site.</li> </ul>
Height	<p>Height of the network asset, expressed in the unit of measure that you designate in the <b>Units</b> field.</p> <ul style="list-style-type: none"> <li>• For example, enter 60 if the height of the asset is 60 inches and you've selected <b>Inches</b> as the unit of measure in the <b>Units</b> field.</li> <li>• The ServiceNow AI Platform uses this information to calculate the cubic dimensions of the asset to determine its physical placement within its designated network site.</li> </ul>
Depth	<p>Depth of the network asset that is expressed in the unit of measure that you designate in the <b>Units</b> field.</p> <p><b>i Note:</b> This field is applicable for the equipment models and equipment holder models.</p>


**Related topics**

[Create a strand model](#)

**Task attributes in Add Card form**

The Task attributes in Add Card form enables you to add a card to an equipment record in the Telecommunications Network Inventory application.

**Task Attributes form**

Field	Description
Site	Site where you want to install this card.
Stockroom Location	Name of the stockroom location where the asset is located. To learn more, see <a href="#">Telecommunications Network Inventory integration with Hardware Asset Management</a> .
Equipment	Equipment to install this card in.
Asset	Name of the asset that is associated with this record. To learn more, see <a href="#">Telecommunications Network Inventory integration with Hardware Asset Management</a> .
Slot	Slot to insert this card in.
Slot span	Multiple slot selector to select multiple slots if it's required for the selected card. This field is displayed based on the selected template.   <b>Note:</b> The list only shows the list of slots and sub-slots that doesn't have any card in it.


**Related topics**

[Add a card to equipment](#)

**Task attributes in Add Equipment to Rack or Cabinet form**

The Task attributes in Add Equipment to Rack/Cabinet form enables you to add a card to an equipment record in the Telecommunications Network Inventory application.

**Add Equipment to Rack/Cabinet form - Task Attributes tab**

Field	Description
Site	Network site or data center that contains the equipment or shelf that you want to add.   <b>Note:</b> The list only displays the sites that have a rack in it.
Rack/Cabinet	Rack or cabinet name for the equipment that you want to add.
Equipment	Equipment or shelf to add from the selected rack or cabinet.



**Task Attributes tab (continued)**

Field	Description
A end Site	Starting network site where this logical connection is configured.
Z end Site	Ending network site where this logical connection is configured.
A end Equipment	Starting network equipment where this logical connection is configured.
Z end Equipment	Ending network equipment where this logical connection is configured.
Parent Port A	<p>Network interface on which the new logical interface is representing the <b>Port A</b> of the connection.</p> <p><b>Note:</b> A new logical interface is created by default based on the selected logical/physical connection model and is populated in the port A field under <b>Configuration</b> section of the logical or physical connection. The logical interface indicates the port name and number of child ports plus one of the selected port.</p>
Parent Port Z	<p>Network interface on which new logical interface is representing the <b>Port Z</b> of the connection.</p> <p><b>Note:</b> A new logical interface is created by default based on the selected logical/physical connection model and is populated in the port Z field under <b>Configuration</b> section logical or physical connection. The logical interface indicates the port name and number of child ports plus one of the selected ports.</p>

**Related topics**

[Create logical connection record using design and assign](#)

**Task attributes in Create physical connection form**

The Task attributes in Create physical connection form enables you to create a logical connection between network interfaces in the Telecommunications Network Inventory application.

**Task Attributes tab**

Field	Description
A end Site	Starting network site where this physical connection is configured.
Z end Site	Ending network site where this physical connection is configured.
A end Equipment	Starting network equipment where this physical connection is configured.
Z end Equipment	Ending network equipment where this physical connection is configured.
A end Interface	Starting network interface where this physical connection is configured.

**Task Attributes tab (continued)**

Field	Description
Z end Interface	Ending network interface where this physical connection is configured.
Physical Connection Model	Physical connection model where this physical connection is configured.
Bandwidth	Total bandwidth capacity between starting and ending sites for this network connection.

**Task attributes in Topology form**

The Task attributes in Topology form enables you to design and assign a topology record in the Telecommunications Network Inventory application.

**Design & Assign Topology form - Task Attributes tab**

Field	Description
Name	Name of the topology.
Topology model	Inventory model associated with the topology.
Bandwidth	Bandwidth of the topology.
Topology sites	Site associated with the topology. You can select multiple sites.
Topology nodes	Equipment (node) associated with the topology. You can select multiple nodes.
Root nodes	Root node among the topology nodes.
Topology connection type	Type of connection. Select one from the following: <ul style="list-style-type: none"> <li>• <b>Logical Connection</b></li> <li>• <b>Physical connection</b></li> </ul>
Topology connections	Connections that are associated with the topology. You can select multiple connection records.

**Related topics**

[Create a network topology record by using design and assign](#)

**Telco Equipment form**

The Telco Equipment form enables you to create, review, and modify the network asset details for a piece of equipment.

**Configuration**

Field	Description
Part number	Assigned part number for this network asset.

**Configuration (continued)**

Field	Description
Date of manufacture	Date that this network asset was manufactured.
Date of last service	Date that this network asset was last serviced.
Rack units occupied	Number of equipment holder units that are in use in this network asset.
Firmware manufacturer	Manufacturer of the firmware.
Firmware version	Version of the firmware that is used in this network asset.
Memory size (MB)	Size of the memory device that is used in this network asset, in megabytes. For example, 2500 MB for a 2.5-GB memory chip.
Storage size (GB)	Storage size of the device, in gigabytes. For example, 2.5 GB.

**Note:** To learn about the remaining configuration fields that are common to most of the Inventory menu forms, see [Commonly used network asset instance configuration fields](#).

**Related topics**

[product/tmt-telecom-network-inventory/task/define-tni-equipment.dita](#)

**Telecommunications Network Inventory function catalog**

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.

**Related topics**

[Telecommunication Network Inventory workflows in Flow Designer](#)

**Allocate Free Number function**

The Allocate Free Number function enables you to assign free numbers from the Telecommunications Network Inventory number record. You use this function to allocate a quantity of numbers from a specified range to add against the configuration item (CI) in a number element.

You use the Allocate Free Number function to do the following actions:

- Assign the free number from a number range that is in the inventory record.
- Get the free number from the number range and create the inventory number record as a child number.
- Add the free numbers against the CI in a number element.

You can use this function as a Workflow Studio action in the Telecommunications Network Inventory workflow.

## Roles and availability

An admin role can add an action to a flow and define the configuration details of the flow. This function is available as a Workflow Studio action in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

The following table lists the input fields in the Allocate Free Number action and their descriptions.

### Input fields of Allocate Free Number function

Field Name	Description	Type
Number Range	Inventory number record where you need the free number for.	Reference.Inventory Number record
Count	Total count of the free numbers.	Integer
Number Type	Type of network connection that you need the free numbers for. Select one of the following:  <b>VLAN</b>  Single VLAN number record.  <b>LAG</b>  Single LAG number record.	Choice
Owned by configuration item	Configuration item (CI) that is related to the Inventory number record.	Reference.Configuration Item
Consecutive	Option to return the consecutive free numbers.	True/False

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

## Output

The following table lists the information about the function output.

### Output of function

Name	Description	Type
FinalRecordList	Returns the list of inventory number records for the number range.	Array.Integer

## Example

Consider that a VLAN has 1–4096 as the number range and 1–1000, 1001–2500, and 2510–4096 are the subranges. If you give the count as 4, the function returns the list of inventory number records for 2501, 2502, 2503, and 2504. These numbers are free in the VLAN number range.

## Create CI From Template function

The TNI Create CI From Template function enables you to create the inventory instance in the designated site or equipment holder in the Telecommunications Network Inventory application when you instantiate an inventory with the inventory template. You can automatically create the inventory when you instantiate the network inventory design and assign process.

The TNI Create CI From Template function creates configuration items (CIs), such as the interface card, equipment, network site, and network interface, depending on the inventory template requirement.

You can use this function as a Workflow Studio action in the Telecommunications Network Inventory workflow.

## Roles and availability

Users with the admin role can add an action to a flow and define the configuration details of the flow. This function is available as a Workflow Studio action in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

The following table lists the input fields in the Create CI From Template function and their description.

### Input fields of Create CI From Template function

Field Name	Description	Data Type
Network Site	sys_id of the network site record that is associated with the new CI.	String
Equipment Holder	sys_id equipment holder record that is associated with the new CI.	String
Inventory Template	sys_id of the Inventory Template that is associated with the new CI.	String
Change Task	Change task that instantiates a new instance for the network asset.	String
Template Overrides	Override value if any.	String
Stockroom Location	Name of the stockroom location where the asset is located.	String
Asset	Name of the asset that is associated with this record.	String

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

## Output

The following table lists the information about the function output.

### Output of function

Name	Description	Data Type
Record ID	Returns the sys_id of the new inventory instance.	String

## Example

This flow action creates a telco equipment record when you use an inventory template to instantiate equipment.

## Cascade Update function

The Cascade Update function enables you to update a configuration item (CI) attribute in the Telecommunications Network Inventory application and cascade the change in all related CIs. You can use this function to automatically cascade the field values in related CIs when you use Workflow Studio.

You can use the Cascade Update function to update any field in the inventory record and cascade the changes all the way down to the hierarchy mentioned in the inventory record.

If there's a conflict, such as any discrepancies found in the related CIs, this function returns an error. For example, let's say that you pass the change request and CI but the CI isn't added to the affected CI list of the change request. Instead, it returns a sort error with the conflict information in execution.

**Note:** This function doesn't work on **Life Cycle Stage** and **Life Cycle Status** fields.

You can use this function as a Workflow Studio action in the Telecommunications Network Inventory workflow.

## Roles and availability

Users with the admin role can add an action to a flow and define the configuration details of the flow. This function is available as a Workflow Studio action in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

The following table lists the input fields in the Cascade Update function and their descriptions.

### Input fields of Cascade Update function

Field Name	Description	Data Type	Mandatory?
Change Request	Change request that is related to the affected CI list.	Reference.Change Request	No
CI	CI where you want to update the field.	Reference.ConfigurationItem	No

### Input fields of Cascade Update function (continued)

Field Name	Description	Data Type	Mandatory?
Field	Attribute in the CI that you want to cascade.	String	No

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

### Output

Use this function to update the CI attribute in all related CIs.

### Cascade rule for all common attributes of CI

The following table lists the information about the cascade rules for the different types of CIs.

#### Cascade rules

CI	Cascade Rule	Example
Telco Equipment	Attributes that are updated for the related equipment holder (slot), interface card, telco equipment holder (subslot), and network interface records.	The Type field that is updated in the equipment record cascades all the way down to the hierarchy mentioned in the inventory record.
Telco Equipment Holder	Attributes that are updated for the related interface card, telco equipment holder (subslot), and network interface records.	The Type field that is updated in the equipment record cascades all the way down to the hierarchy mentioned.
Interface Card	Attributes that are updated for the related telco equipment holder (subslot) and network interface records.	The Type field that is updated in the equipment record cascades all the way down to the hierarchy mentioned.
Network Interface	Attributes that are updated for the related network interface record.	The Port Bandwidth field that is updated in the equipment record cascades all the way down to the hierarchy mentioned in the inventory record.
Physical Connection	Attributes are updated for the related physical connection record.	The Bandwidth field that is updated in the equipment record cascades all the way down to the hierarchy mentioned in the inventory record.
Logical Connection	Attributes that are updated for all the next element CI records, which are defined in the connection element that reference the logical connection record.	The Bandwidth field that is updated in the equipment record cascades all the way down to the hierarchy mentioned in the inventory record.

## Create and Assign Range/Single Number function

The Create and Assign Range/Single Number function enables you to create the inventory number records for a number range when you process the network inventory workflow.

You use the Create and Assign Range/Single Number function to create the inventory number records between the input start and end numbers. This function also creates the corresponding number elements.

You can use this function as a Workflow Studio action in the Telecommunications Network Inventory workflow.

### Roles and availability

An admin role can add an action to a flow and define the configuration details of the flow. This function is available as a Workflow Studio action in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

### Input fields

The following table lists the input fields in the Allocate Free Number action and their descriptions.

**Input fields of Create and Assign Range/Single Number function**

Field Name	Description	Type	Required?
Owned By Configuration Item	Inventory number record that you need the free number for.	Reference.Configuration Item	Yes
Start	Start number of the inventory number record.	Integer	Yes
End	End number of the inventory number record. You must provide the value when it's a range.	Integer	No
Name	Name of the inventory number record that you want to create.	String	Yes
Number Type	Type of network connection that you need the free numbers for. Select one of the following:  <b>VLAN Range</b> Range of VLAN numbers.  <b>VLAN Subrange</b> Subset or a range of VLAN	Choice	Yes

**Input fields of Create and Assign Range/Single Number function (continued)**

Field Name	Description	Type	Required?
	<p>numbers within the overall VLAN range.</p> <p><b>VLAN</b></p> <p>Single VLAN number record</p> <p><b>LAG Range</b></p> <p>Range of LAG numbers.</p> <p><b>LAG</b></p> <p>Single LAG number record</p>		
Parent Number	<p>Parent number record. If you don't select the parent number record, the function returns only an inventory number record for the start number.</p>	Reference.Inventory Number record	No

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

**Output**

The following table lists the information about the function output.

**Output of function**

Name	Description	Type
Inventory Number	Returns the inventory number record.	Record

**Example**

Consider, a VLAN has 1–4096 as range and 1–1000, 1001–2500, and 2510–4096 are the subranges. If you give the start number as 2501 and the end number as 2502, the function creates a number range of 2501-2502 and returns the inventory number record.

## Create Logical Interface function

The Create Logical Interface function enables you to create logical interfaces in the Telecommunications Network Inventory application.

You can use the Create Logical Interface function to create the logical interfaces that are created either as a termination point for logical connections or as a child of a physical or logical interface. A physical or logical Interface can have multiple child logical interfaces. The bandwidth of the logical Interface isn't fixed and you can configure it as applicable. Also, this function sets the virtual flag of the logical network interface.

You can use this function as a Workflow Studio action in the Telecommunications Network Inventory workflow.


### Roles and availability

Users with the admin role can add an action to a flow and define the configuration details of the flow. This function is available as a Workflow Studio action in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

### Input fields

The following table lists the input fields in the Create Logical Interface function and their descriptions.

#### Input fields of logical interface action

Field Name	Description	Data Type
Parent Interface	Parent network interface record to create the relationship with a logical interface. Click the add icon (  ) to add an interface.	Array.String
Name	Name of the new logical interface.  <b>Note:</b> If you don't enter the logical interface name, this flow action generates the model name with the number after the maximum number of unit positions.	String
Type	Optional user-defined type code that you use to categorize the types of various network entities or assets.	Reference.TRF Value
Role	Optional user-defined role code that you use to categorize the roles or purposes of the various network entities or assets.	Reference.TRF Value

**Input fields of logical interface action (continued)**

Field Name	Description	Data Type
Function	Optional user-defined function code that you use to categorize the functions of the various network entities or assets.	Reference.TRF Value
Telco Equipment	Equipment that is associated with the logical interface. If you do not enter the name of the equipment, this function selects the associated equipment from the parent interface.	Reference.Telco equipment
Port Bandwidth	Bandwidth of this logical connection.	Reference.Bandwidth
Product Model	Network interface model that is associated with the logical interface.	Reference.Network Interface Model
CI Relationship	Type of CI relationship. By default, the Create Logical Interface flow action sets the CI relationship to <b>Contains : Contained By</b> . The parent interface can support multiple interface record references as an input. If you enter the same parent CI more than once, the system ensures that it associates to a unique set of parent-child relationship.	Reference.CI Relationship
Aggregation Interface	Option to ensure that each parent interface must only have one child interface.	True/False

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

**Output**

The following table lists the information about the function output.

**Output of function**

Name	Description	Data Type
Result Id	Returns a glide record of the logical interface.	Record

## Create Logical Connection function

The Create Logical Connection function enables you to create a logical connection record in the Telecommunications Network Inventory application based on the input (interfaces) that you receive when you instantiate an inventory.

You can use the Create Logical Connection function to create a logical connection on your network interface cards.

When you enter the Interface A, this function automatically retrieves the data for Site A, Equipment A, and Port A. Similarly, after passing input Interface Z, the function retrieves the data for the associated Site Z, Equipment Z, and Port Z. This function also retrieves the data for Bandwidth AtoZ and Bandwidth ZtoA from the Bandwidth field.

This function also creates the connection elements and associates them to the logical connection.

If you configure a network interface, equipment, physical connection, logical connection, or managed function as a connection element, the Logical Connection Creation function creates the corresponding connection element and associates it to a logical connection.

You can use this function as a Workflow Studio action in the Telecommunications Network Inventory workflow.

## Roles and availability

Users with the admin role can add an action to a flow and define the configuration details of the flow. This function is available as a Workflow Studio action in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.


## Input fields

The following table lists the input fields in the Create Logical Connection function and their descriptions.

### Input fields of Create Logical Connection function

Field Name	Description	Data Type
Interface A	Starting network interface where this logical connection is configured.	Reference.Network Interface
Interface Z	Ending network interface where this logical connection is configured.	Reference.Network Interface
Bandwidth	Bandwidth of the logical connection.	Reference.Bandwidth
Connection Type	Type of connection. This field information updates the product model that is associated with the physical connection.	Reference.Logical Connection Model
Connection elements	Connection elements that are added for the logical connections. Click the add	Array.String

### Input fields of Create Logical Connection function (continued)

Field Name	Description	Data Type
	icon (  ) to add a connection element.	

To learn more about the variable data types, see [Flow Designer input and output data variables](#) .

## Output

The following table lists the information about the function output.

### Output of function

Name	Description	Data Type
Logical Connection	Returns a glide record of the logical connection.	Record

## Create Physical Connection function

The Create Physical Connection function enables you to create a physical connection record in the Telecommunications Network Inventory application based on the input that you receive when you instantiate an inventory.

You can use the Create Physical Connection function to create a physical port connection on the interface cards in your networks.

When you enter the Interface A, this function automatically retrieves the data for related Site A, Equipment A, and Port A. Similarly, after passing input Interface Z, the function retrieves the data for associated Site Z, Equipment Z, and Port Z. This function also retrieves the data for Bandwidth AtoZ and Bandwidth ZtoA from the Bandwidth field.

This function also creates the connection elements and associates them to the physical connection.

If you pass a physical connection element, this subflow creates the corresponding connection element and associates it to the physical connection.

You can use this function as a Workflow Studio action in the Telecommunications Network Inventory workflow.

## Roles and availability

Users with the admin role can add an action to a flow and define the configuration details of the flow. This function is available as a Workflow Studio action in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

The following table lists the input fields in the Create Physical Connection function and their description.

### Input fields of physical connection action

Field Name	Description	Data Type
Interface A	Starting network interface where this logical connection is configured.	Reference.Network Interface
Interface Z	Ending network interface where this logical connection is configured.	Reference.Network Interface
Bandwidth	Bandwidth of the logical connection.	Reference.Bandwidth
Connection Type	Type of connection. This field information updates the Product Model that is associated with the physical connection.	Reference.Physical Connection Model
Physical Connection Elements	sys_id of the connection elements that are added for the physical connections. If the physical connection has the Connection Type attribute as Cable, you can add the connection element. Click the add icon (⊕) to add a connection element.	Array.String

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

### Output

The following table lists the information about the function output.

#### Output of function

Name	Description	Data Type
Physical Connection	Returns a glide record of the physical connection.	Record

### Create IP subnetwork function

The Create IP Subnetwork function enables you to create an IP subnetwork record in the Telecommunications Network Inventory application based on the input that you receive when you instantiate an inventory.

You can use this action as a flow designer action in the Telecommunications Network Inventory workflow. Here, either CIDR or, first IP and last IP, or first IP and total host are required inputs to create a subnetwork. If the parent IP pool is provided in input, then the function validates and ensures that the subnetwork that is being created is under the provided IP pool.

## Roles and availability

Users with the admin role can add an action to a flow and define the configuration details of the flow. This function is available as a Flow Designer action in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

### Input fields of Create IP subnetwork function

Field name	Description	Data type
Parent IP pool	Provide the name of the parent IP pool to which you want to assign this subnetwork to.	String
CIDR	CIDR	String
First IP	First IP address in the series	IP Address (Validated IPv4, IPv6)
Last IP	Last IP address in the series	IP Address (Validated IPv4, IPv6)
Total Host	Number of hosts in the IP subnet	Integer
Managed Network	managed network of private IPs	Reference

## Output

The following table lists the information about the function output.

### Output of function

Name	Description	Data type
IP subnetwork	Returns a glide a record	Record

## CIDR to IP range function

Classless Inter-Domain Range (CIDR) to IP range flow action enables you to create a set of IP addresses using the Classless Inter-Domain Range (CIDR) using Telecommunications Network Inventory application based on the input that you receive when you instantiate an inventory.

Upon calling this flow action, a CIDR is fetched using the given IP subnetwork. Further, using the CIDR a set of IP addresses are created. These IP addresses are further stored in the allocated IP addresses table.

This function also ensures that there is no other allocated IP address created for this particular IP subnetwork.

## Roles and availability

Users with the admin role can add an action to a flow and define the configuration details of the flow. This function is available as a Flow Designer action in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

### Input fields of CIDR to IP range function

Field name	Description	Data type
Change Task	Provide change task number for this task	Reference
IP Subnetwork	Provide name of the subnetwork from where the CIDR must be fetched	String

## Output

The following table lists the information about the function output.

### Output of function

Name	Description	Data type
Allocated IP address	Returns a glide a record	Record

## Get Interface Summary function

The Get Interface Summary function enables you to retrieve all the network interface records that are associated with the input. You can use this function to automatically get the details of the available interface, connected interface, and the physical connection of the equipment in the Telecommunications Network Inventory application when you use Workflow Studio.

The Get Interface Summary function enables you to retrieve the network interface records that are associated with the input such as Site, Rack, or Equipment. You must enter the site, equipment, or rack value to return the output.

If multiple inputs don't match, the action reports an error. For example, let's say that you can see the equipment and site details but because the equipment doesn't belong to the site, the system reports an error with the conflict information.

You can use this function as a Workflow Studio action in the Telecommunications Network Inventory workflow.

## Roles and availability

Users with the admin role can add an action to a flow and define the configuration details of the flow. This function is available as a Workflow Studio action in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

The following table lists the input fields in the Get Interface Summary function and their descriptions.

**Input fields of Get Interface Summary function**

Field Name	Description	Data Type
Site	Network site that is associated with the network interface.	Reference.Network Site
Rack	Rack that is associated with the network interface.	Reference.Telco equipment
Equipment	Equipment that is associated with the network interface.	Reference.Telco equipment
Availability	Status of the network asset. You can select one from the following options: <ul style="list-style-type: none"> <li>• Available</li> <li>• Used</li> <li>• Reserved</li> <li>• Shared</li> </ul>	Choice
Model	Physical connection model that is associated with the network interface.	Reference.Physical Connection Model
Type	Optional user-defined type code that you use to categorize the types of the various network entities or assets.	Reference.TRF Value
Role	Optional user-defined role code that you use to categorize the roles or purposes of the various network entities or assets.	Reference.TRF Value
Function	Optional user-defined function code that you use to categorize the functions of the various network entities or assets.	Reference.TRF Value
If multiple records are found action	Option to return the type of output when multiple records are found. You can select <b>Return only the first record</b> from the list to return the first interface network record.	Choice

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

**Output**

The following table lists the information about the function output.

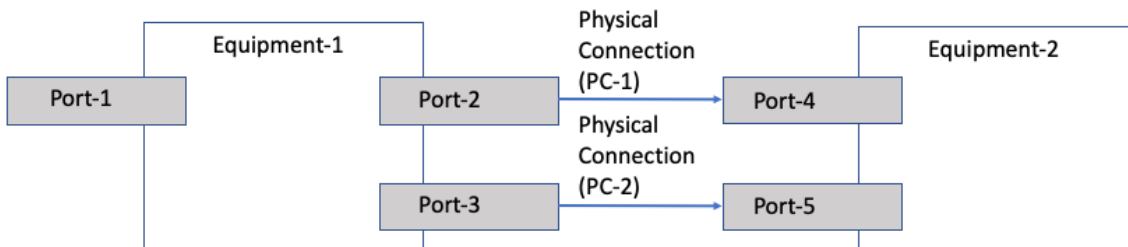
### Output of function

Name	Description	Data Type
Available Interfaces	Returns the sys_id list of the available network interfaces.	Array.String
Connected Interfaces	Returns the sys_id list of the network interfaces that are connected to the other network assets.	Array.String
Physical Connections	Returns the sys_id list of the physical connections.	Array.String

### Example

If the input is passed as Equipment-1 as shown in the following example where Port-1, Port-2, and Port-3 are connected to Equipment-1, Port-4 and Port-5 are connected to Equipment-2, physical connection-1 between Port-2 and Port-4, and physical connection-2 between Port-3 and Port-5. Then the output is as follows:

- Available Interface - Port-1
- Connected Interfaces - Port-2 and Port-3
- physical Connections - PC-1 and PC-2



If you select **If multiple records are found action** as **Return only the first record**, it returns Port-1, Port-2, and PC-1, respectively.

### Lookup Next Hub function

The Lookup Next Hub function enables you to take the network interface record as input and return the details of the related physical connection record. You can automatically get the details of the physical connection and interconnected ports of the equipment in the Telecommunications Network Inventory application when you use the Workflow Studio application.

You can use the Lookup Next Hub function to return the following:

- Physical connection that is related to the port.
- Empty response if no physical connection is related to the port.
- sys\_id of the front and back ports, and the port name, if there’s a configuration item (CI) relationship between the front and back ports.
- NextHub interface and the interfaces that are connected to the other end of the physical connection.
- NextHub interconnected interface and the interconnected interfaces that are connected to the other end of the physical connection.

You can use this function as a Workflow Studio action in the Telecommunications Network Inventory workflow.

### Roles and availability

Users with the admin role can add an action to a flow and define the configuration details of the flow. This function is available as a Workflow Studio action in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

### Input fields

The following table lists the input fields in the Lookup Next Hub action and their descriptions.

#### Input fields of next hub action

Field Name	Description	Data Type
Network Interface	Network interface record.	Reference.Network Interface
If multiple records are found action	Option to select the action when multiple records are found. You can select <b>Return only the first record</b> from the list to return the details of the first physical connection record.	Choice

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

### Output

The following table lists the information about the function output.

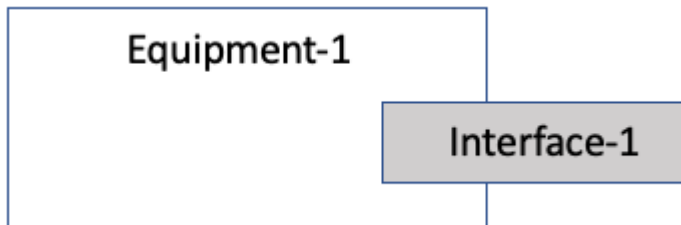
#### Output of function

Name	Description	Data Type
Physical Connections	Returns the list of sys_ids of the physical connection records that are related to the network interface.	Array.String
Interconnected Port	Returns the list of sys_ids of the ports that are interconnected to the network interface.	Array.String
NextHub Interface	Returns the list of sys_ids of the interfaces that are connected to the other end of the physical connection.	Array.String
NextHub Interconnected Interface	Returns the list of sys_ids of the interconnected interfaces that are connected to the other end of the physical connection.	Array.String

## Example

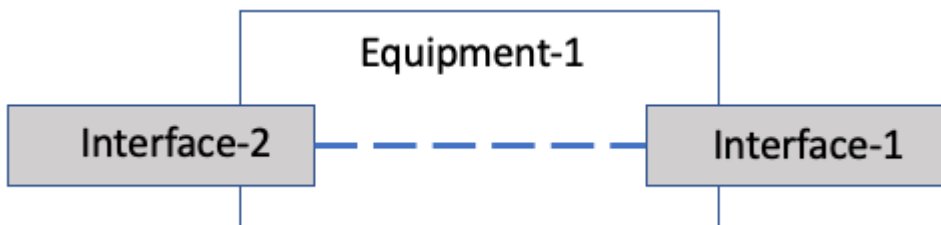
### Use Case 1

If the input is passed as Interface-1 of Equipment-1 as shown in the following example, the function returns empty records, because the network inventory has no physical or internal connections in the network inventory.



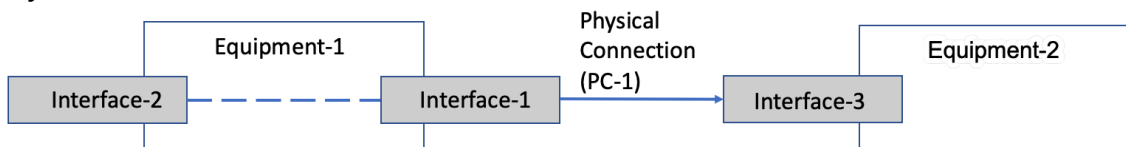
### Use Case 2

If the input is passed as Interface-1 of Equipment-1 as shown in the following example, the function returns the network interface record of Interface-2.



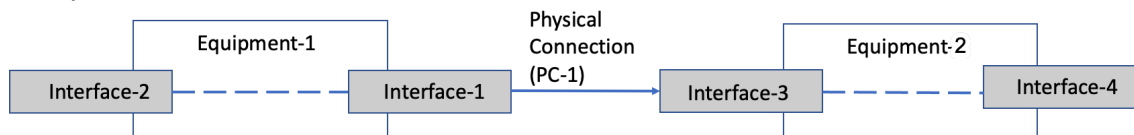
### Use Case 3

If the input is passed as Interface-1 of Equipment-1 as shown in the following example, the function returns the network interface record of Interface-2 and the physical connection record of PC-1.



### Use Case 4

If the input is passed as Interface-1 of Equipment-1 as shown in the following example, the NextHub Interface is 3 and the NextHub Interconnected Interface is 4.



## Path Search function

The Path Search function enables you to execute the path computation function between the starting and ending sites in the Telecommunications Network Inventory application. You can use this function for the path computation when you process the network inventory design and assign.

You can use the Path Search function to identify the possible paths between your network sites.

If no path is found, the Path Search function uses the available input to create a logical connection without adding any connection elements. If you don't enter the end equipment, it selects any equipment that matches the Type attribute that belongs to the end site. The function uses the start and end interfaces in the input to set the Port A and Port Z of the logical connections. Otherwise, it selects any interface in the Availability field, which is marked as Available.

You can use this function as a Workflow Studio action in the Telecommunications Network Inventory workflow.

### Roles and availability

Users with the admin role can add an action to a flow and define the configuration details of the flow. This function is available as a Workflow Studio action in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

### Input fields

The following table lists the input fields in the Path Search function and their description.

#### Input fields of Path Search function

Name	Description	Data Type
Start Site	sys_id of the starting network site where this connection is configured.	String
End Site	sys_id of the ending network site where this connection is configured.	String
Start Equipment	sys_id of the starting network equipment where this connection is configured.	String
End Equipment	sys_id of the ending network equipment where this connection is configured.	String
Start Interface	<p>sys_id of the starting network interface where this connection is configured.</p> <p><b>i Note:</b> If this field is left empty, it automatically selects the interface by using the path computation to create a logical connection.</p>	String
End Interface	sys_id of the ending network interface where this connection is configured.	String

### Input fields of Path Search function (continued)

Name	Description	Data Type
	<p><b>i Note:</b> If this field is left empty, it automatically selects the interface by using the path computation to create a logical connection.</p>	
End Equipment Type	sys_id of the ending network equipment type where this connection is configured.	String
Logical Connection Model	sys_id of the logical connection model where this connection is configured.	String
Bandwidth	sys_id of the bandwidth of the connection.	String
Allowed Logical Connection Model	sys_id of the supported models for the logical connection. Click the add icon (⊕) to add a logical connection model.	Array.String
Allowed Physical Connection Model	sys_id of the supported models for the physical connection. Click the add icon (⊕) to add a physical connection model.	Array.String
Fail Action	Option to select the action when the function fails. You can select an action from the list. By default, the <b>Create logical connection without path elements</b> is selected.	Choice

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

### Output

The following table lists the information about the function's output.

#### Output of function

Name	Description	Data Type
Connection id	Returns the sys_id of the logical connection record.	String

## Telecommunications Network Inventory subflows

You can use Workflow Studio subflows in the Telecommunications Network Inventory application to automate the network inventory's Design and Assign process.

### Related topics

[Telecommunication Network Inventory workflows in Flow Designer](#)

### Create Logical Connection with template subflow

The Create Logical Connection with template subflow enables you to create a logical connection record from an inventory template in the Telecommunications Network Inventory application. The logical connection record is created based on the input that you receive when you instantiate an inventory using an inventory template.

You can use the Create Logical Connection with template subflow to create a logical connection from an inventory template on your network interface cards.

This subflow also creates the connection elements and associates them to the logical connection.

If you enter a network interface, equipment, physical connection, logical connection, or managed function as a connection element, the Logical Connection Creation subflow creates the corresponding connection element.

### Roles and availability

Users with the admin role can add a subflow to a flow and define the configuration details of the flow. This Workflow Studio subflow is available in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

### Input fields

The following table lists the input fields in the Create Logical Connection with template subflow and their descriptions.

#### Input fields of Create Logical Connection with template subflow

Field Name	Description	Data Type
Interface A	Starting network interface where this logical connection is configured.	Reference.Network Interface
Interface Z	Ending network interface where this logical connection is configured.	Reference.Network Interface
Change Task	Change task to instantiate a logical connection using a template.	Reference.Change Task
Interface A	Starting network interface where this logical connection is configured.	Reference.Network interface
Interface Z	Ending network interface where this logical connection is configured.	Reference.Network interface

**Input fields of Create Logical Connection with template subflow (continued)**

Field Name	Description	Data Type
Bandwidth A	Bandwidth at the starting logical connection.	Reference.Bandwidth
Bandwidth Z	Bandwidth at the ending logical connection.	Reference.Bandwidth
Connection Type	Type of connection. This field information updates the product model that is associated with the physical connection.	Reference.Logical Connection Model
Logical Connection Template	Template associated with logical connection.	Reference.Inventory Template
Connection elements	Connection elements that are added for the logical connections. Select the add icon (⊕) to add a connection element.	Array.String
Position	Unit position of this logical connection.	Integer
A End Interface Name	Starting interface name.	String
Z End Interface Name	Ending interface name.	String

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

**Output**

The following table lists the information about the subflow's output.

**Output of subflow**

Name	Description	Data Type
Logical Connection	Returns a glide record of the logical connection.	Reference.Logical connection
CI Relationship with Interface A	Returns the CI relationship with a starting network interface.	Reference.CI Relationship
CI Relationship with Interface Z	Returns the CI relationship with an ending network interface.	Reference.CI Relationship

**Logical Connection Creation subflow**

The Logical Connection Creation subflow enables you to create a logical connection record in the Telecommunications Network Inventory application based on the input that you receive when you instantiate an inventory.

You can use the Logical Connection subflow to create a logical connection on your network interface cards.

This subflow also creates the connection elements and associates them to the logical connection.

If you enter a network interface, equipment, physical connection, logical connection, or managed function as a connection element, the Logical Connection Creation subflow creates the corresponding connection element.

### Roles and availability

Users with the admin role can add a subflow to a flow and define the configuration details of the flow. This Workflow Studio subflow is available in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

### Input fields

The following table lists the input fields in the Logical Connection Creation subflow and their descriptions.

#### Input fields of Logical Connection Creation subflow

Field Name	Description	Data Type
Interface A	Starting network interface where this logical connection is configured.	Reference.Network Interface
Interface Z	Ending network interface where this logical connection is configured.	Reference.Network Interface
Bandwidth	Bandwidth of the logical connection.	Reference.Bandwidth
Connection Type	Type of connection. This field information updates the product model that is associated with the physical connection.	Reference.Logical Connection Model
Connection elements	Connection elements that are added for the logical connections. Select the add icon (⊕) to add a connection element.	Array.String

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

### Output

The following table lists the information about the subflow's output.

### Output of subflow

Name	Description	Data Type
Logical Connection	Returns a glide record of the logical connection.	Reference.Logical connection
CI Relationship with Interface A	Returns the CI relationship with a starting network interface.	Reference.CI Relationship
CI Relationship with Interface Z	Returns the CI relationship with an ending network interface.	Reference.CI Relationship

### Related topics

[Telecommunication Network Inventory workflows in Flow Designer](#)

## Physical Connection Creation subflow

The Physical Connection Creation subflow enables you to create a physical connection record in the Telecommunications Network Inventory application based on the input that you receive when you instantiate an inventory.

You can use the Physical Connection Creation subflow to create a physical port connection on the interface cards in your networks.

This subflow also creates the connection elements and associates them to the physical connection.

If you enter a physical connection element, this subflow creates the corresponding connection element and associates it to the physical connection.

### Roles and availability

Users with the admin role can add a subflow to a flow and define the configuration details of the flow. This Workflow Studio subflow is available in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

### Input fields

The following table lists the input fields in the Physical Connection Creation subflow and their description.

#### Input fields of subflow

Field Name	Description	Data Type
Interface A	Starting network interface where this logical connection is configured.	Reference.Network Interface
Interface Z	Ending network interface where this logical connection is configured.	Reference.Network Interface
Bandwidth	Bandwidth of the logical connection.	Reference.Bandwidth

### Input fields of subflow (continued)

Field Name	Description	Data Type
Connection Type	Type of connection. This field information updates the product model that is associated with the physical connection.	Reference.Physical Connection Model
CI Relationship	Type of configuration item (CI) relationship. By default, the Logical Creation subflow sets a CI relationship to <b>Terminated::Terminated by</b> .	Reference.CI Relationship Type
Physical connection elements	sys_id of the connection elements that are added for the physical connections. If the physical connection has the Connection Type attribute as Cable, you can add the connection element. Click the add icon (⊕) to add a connection element.	Array.String

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

## Output

The following table lists the information about the subflow's output.

### Output of subflow

Name	Description	Data Type
Physical Connection	Returns a glide record of the physical connection.	Record
CI Relationship with Interface Z	Returns the CI relationship with an ending network interface.	Reference.CI Relationship
CI Relationship with Interface A	Returns the CI relationship with a starting network interface.	Reference.CI Relationship

### Related topics

[Telecommunication Network Inventory workflows in Flow Designer](#)

## TNI Design Assign Connection Element Creation subflow

The TNI Design Assign Connection Element Creation subflow enables you to create the connection element records in the Telecommunications Network Inventory application. You can use this flow action to configure the activities in a Design and Assign playbook for logical connection.

The TNI Design Assign Connection Element Creation subflow creates the connection elements that are associated with a logical connection and updates them in a change task. This subflow functions are as follows.

- Get the details from the Define end points and Setup logical connection activities.
- Create connection elements.
- Check whether the start/end equipment matches with the start/end port.
- Create CI relationships if the equipment matches with the port.
- Update change task that is associated with the Assign connection element activity.

### Roles and availability

An admin can add a subflow to a flow and define the configuration details of the flow. This Workflow Studio subflow is available in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

### Input fields

The following table lists the input fields in the TNI Design Assign Connection Element Creation subflow and their descriptions.

#### Input fields of TNI Design Assign Connection Element Creation subflow

Field Name	Description	Data Type
Change Task	The change task that is associated with Assign connection element activity.	Reference.Change Task
Ignore Validation Error	Ignores any validation errors.	True/False

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

### Output

The TNI Design Assign Connection Element Creation subflow output are as follows.

- Create the connection elements.
- Create the CI relationship between equipment and port.
- Update the change task that is associated with the Assign connection element activity.

### TNI Design Assign Protected Path Assignment subflow

The TNI Design Assign Connection Element Creation subflow enables you to update the protection path in the Telecommunications Network Inventory application. You can use this flow action to configure the activities in a Design and Assign playbook for logical connection.

The TNI Design Assign Protected Path Assignment subflow gets the protection paths that are associated with a logical connection and updates them in a change task. This subflow functions are as follows.

- Get the details from the Assign protection element activity.
- Update the protection path in the logical connection record.
- Create CI relationship between logical connection and protected path.
- Update change task that is associated with the Assign protection element activity.

## Roles and availability

An admin can add a subflow to a flow and define the configuration details of the flow. This Workflow Studio subflow is available in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

The following table lists the input fields in the TNI Design Assign Protected Path Assignment subflow and their descriptions.

### Input fields of TNI Design Assign Protected Path Assignment subflow

Field Name	Description	Data Type
Change Task	The change task that is associated with Assign protection element activity.	Reference.Change Task
Ignore Validation Error	Ignores any validation errors.	True/False

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

## Output

The TNI Design Assign Protected Path Assignment subflow output are as follows.

- Update the protection path in the logical connection.
- Create the CI relationship between logical connection and protection path.
- Update change task that is associated with the Assign protection element activity.

## TNI Design Assign IP Address Creation subflow

The TNI Design Assign IP Address Creation subflow enables you to create the IP address records in the Telecommunications Network Inventory application. You can use this flow action to configure the activities in a Design and Assign playbook for logical connection.

The TNI Design Assign IP Address Creation subflow creates the IP addresses that are associated with a logical connection and updates them in a change task. This subflow functions are as follows.

- Get the details from the Define IP address activity.
- Create IP address records.
- Create CI relationships between allocated IP address and IP address.
- Create CI relationships between logical connection and IP network subnet.
- Update change task that is associated with the Define IP address activity.

## Roles and availability

An admin can add a subflow to a flow and define the configuration details of the flow. This Workflow Studio subflow is available in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

The following table lists the input fields in the TNI Design Assign IP Address Creation subflow and their descriptions.

### Input fields of TNI Design Assign IP Address Creation subflow

Field Name	Description	Data Type
Change Task	The change task that is associated with Define IP address activity.	Reference.Change Task
Ignore Validation Error	Ignores any validation errors.	True/False

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

## Output

The TNI Design Assign IP Address Creation subflow output are as follows.

- Create IP address records.
- Create CI relationships between allocated IP address and IP address.
- Create CI relationships between logical connection and IP network subnet..
- Update change task that is associated with the Define IP address activity.

## TNI Design assign Logical Connection Creation subflow

The TNI Design assign Logical Connection Creation subflow enables you to create the logical connection record in the Telecommunications Network Inventory application. You can use this flow action to configure the activities in a Design and Assign playbook for logical connection.

The TNI Design assign Logical Connection Creation subflow creates the logical connection record and updates the details in a change task. This subflow functions are as follows.

- Get the details from the Define end points and Setup logical connection activities.
- Create the logical connection record with the use of inventory template.
- Update TNI CI attribute record.
- Update Configuration Item (CI) on the change request.
- Update change tasks that are associated with the Define end points and Setup logical connection activities.

## Roles and availability

An admin can add a subflow to a flow and define the configuration details of the flow. This Workflow Studio subflow is available in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

The following table lists the input fields in the TNI Design assign Logical Connection Creation subflow and their descriptions.

### Input fields of TNI Design assign Logical Connection Creation subflow

Field Name	Description	Data Type
Change Task	The change tasks that are associated with Setup logical connection activity.	Reference.Change Task
Ignore Validation Error	Ignores any validation errors.	True/False

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

### Output

The TNI Design assign Logical Connection Creation subflow output are as follows.

- Create the logical connection record.
- Update TNI CI attribute record.
- Update Configuration Item (CI) on the change request.
- Update change tasks that are associated with the Define end points and Setup logical connection activities.

### TNI Design Assign Number Element Creation subflow

The TNI Design Assign Number Element Creation subflow enables you to create the number element records in the Telecommunications Network Inventory application. You can use this flow action to configure the activities in a Design and Assign playbook for logical connection.

The TNI Design Assign Number Element Creation subflow creates the number elements that are associated with a logical connection and updates them in a change task. This subflow functions are as follows.

- Get the details from the Define number element activity.
- Create connection element records.
- Update change task that is associated with the Define number element activity.

### Roles and availability

An admin can add a subflow to a flow and define the configuration details of the flow. This Workflow Studio subflow is available in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

### Input fields

The following table lists the input fields in the TNI Design Assign Number Element Creation subflow and their descriptions.

#### Input fields of TNI Design Assign Number Element Creation subflow

Field Name	Description	Data Type
Change Task	The change task that is associated with Define number element activity.	Reference.Change Task
Ignore Validation Error	Ignores any validation errors.	True/False

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

## Output

The TNI Design Assign Number Element Creation subflow output are as follows.

- Create connection element records.
- Update change task that is associated with the Define number element activity.

## TNI Design Assign Set Attributes subflow

The TNI Design Assign Set Attributes subflow enables you to update the TNI CI attribute record in the Telecommunications Network Inventory application. You can use this flow action to configure the activities in a Design and Assign playbook for logical connection.

The TNI Design Assign Set Attributes subflow updates the TNI CI attributes that are associated with a logical connection and updates them in a change task. This subflow functions are as follows.

- Get the details from the Set attributes activity.
- Update attributes in TNI CI record.
- Update change task that is associated with the Set attributes activity.

## Roles and availability

An admin can add a subflow to a flow and define the configuration details of the flow. This Workflow Studio subflow is available in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

The following table lists the input fields in the TNI Design Assign Set Attributes subflow and their descriptions.

**Input fields of TNI Design Assign Set Attributes subflow**

Field Name	Description	Data Type
Change Task	The change task that is associated with Set attributes activity.	Reference.Change Task
Ignore Validation Error	Ignores any validation errors.	True/False

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

## Output

The TNI Design Assign Set Attributes subflow output are as follows.

- Update attributes in TNI CI record.
- Update change task that is associated with the Set attributes activity.

## TNI Design Assign Request Details Update subflow

The TNI Design Assign Set Attributes subflow enables you to validate the design request in the Telecommunications Network Inventory application. You can use this flow action to configure the activities in a Design and Assign playbook for logical connection.

The TNI Design Assign Request Details Update subflow validates the design request of a logical connection and updates details in a change task and change record. This subflow functions are as follows.

- Get the details from the Review and submit activity.
- Update work notes in the change request.
- Update the Configuration Item (CI) in the change task.

### Roles and availability

An admin can add a subflow to a flow and define the configuration details of the flow. This Workflow Studio subflow is available in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

### Input fields

The following table lists the input fields in the TNI Design Assign Request Details Update subflow and their descriptions.

#### Input fields of TNI Design Assign Request Details Update subflow

Field Name	Description	Data Type
Change Task	The change task that is associated with Review and submit activity.	Reference.Change Task
Ignore Validation Error	Ignores any validation errors.	True/False

To learn more about the variable data types, see [Flow Designer input and output data variables](#) .

### Output

The TNI Design Assign Request Details Update subflow output are as follows.

- Update work notes in the change request.
- Update the Configuration Item (CI) in the change task.
- Validate the design request.

## TNI Design Assign Connection Element Validation subflow

The TNI Design Assign Connection Element Validation subflow enables you to validate the connection element records in the Telecommunications Network Inventory application. You can use this flow action to configure the activities in a Design and Assign playbook for logical connection.

The TNI Design Assign Connection Element Validation subflow validates whether the connection element records required for the Assign connection element activity have already been used or not. If the connection elements are already used, the subflow passes the information.

## Roles and availability

An admin can add a subflow to a flow and define the configuration details of the flow. This Workflow Studio subflow is available in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

The following table lists the input fields in the TNI Design Assign Connection Element Validation subflow and their descriptions.

### Input fields of TNI Design Assign Connection Element Validation subflow

Field Name	Description	Data Type
Change Task	The change task that is associated with Assign connection element activity.	Reference.Change Task
Ignore Validation Error	Ignores any validation errors.	True/False

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

## Output

If the connection element is already used, then the subflow passes the following message "The connection element has already been fully used. Please try creating another one."

## TNI Design Assign IP Address Validation subflow

The TNI Design Assign IP Address Validation subflow enables you to validate the IP address records in the Telecommunications Network Inventory application. You can use this flow action to configure the activities in a Design and Assign playbook for logical connection.

The TNI Design Assign IP Address Validation subflow validates whether the IP address records required for the Define IP address activity have already been used or not. If the IP addresses are already used, the subflow passes the information.

## Roles and availability

An admin can add a subflow to a flow and define the configuration details of the flow. This Workflow Studio subflow is available in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

The following table lists the input fields in the TNI Design Assign IP Address Validation subflow and their descriptions.

### Input fields of TNI Design Assign IP Address Validation subflow

Field Name	Description	Data Type
Change Task	The change task that is associated with Define IP address activity.	Reference.Change Task
Ignore Validation Error	Ignores any validation errors.	True/False

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

## Output

If the IP address is already used, then the subflow passes the following message "IP address has already been created. Please try creating another one."

## TNI Design Assign Number Element Validation subflow

The TNI Design Assign Number Element Validation subflow enables you to validate the number element records in the Telecommunications Network Inventory application. You can use this flow action to configure the activities in a Design and Assign playbook for logical connection.

The TNI Design Assign Number Element Validation subflow validates whether the number element records required for the Define number element activity have already been used or not. If the number elements are already used, the subflow passes the information.

## Roles and availability

An admin can add a subflow to a flow and define the configuration details of the flow. This Workflow Studio subflow is available in the Telecommunications Network Inventory application so that you can perform inventory-related data operations.

## Input fields

The following table lists the input fields in the TNI Design Assign Number Element Validation subflow and their descriptions.

### Input fields of TNI Design Assign Number Element Validation subflow

Field Name	Description	Data Type
Change Task	The change task that is associated with Define number element activity.	Reference.Change Task
Ignore Validation Error	Ignores any validation errors.	True/False

To learn more about the variable data types, see [Flow Designer input and output data variables](#).

## Output

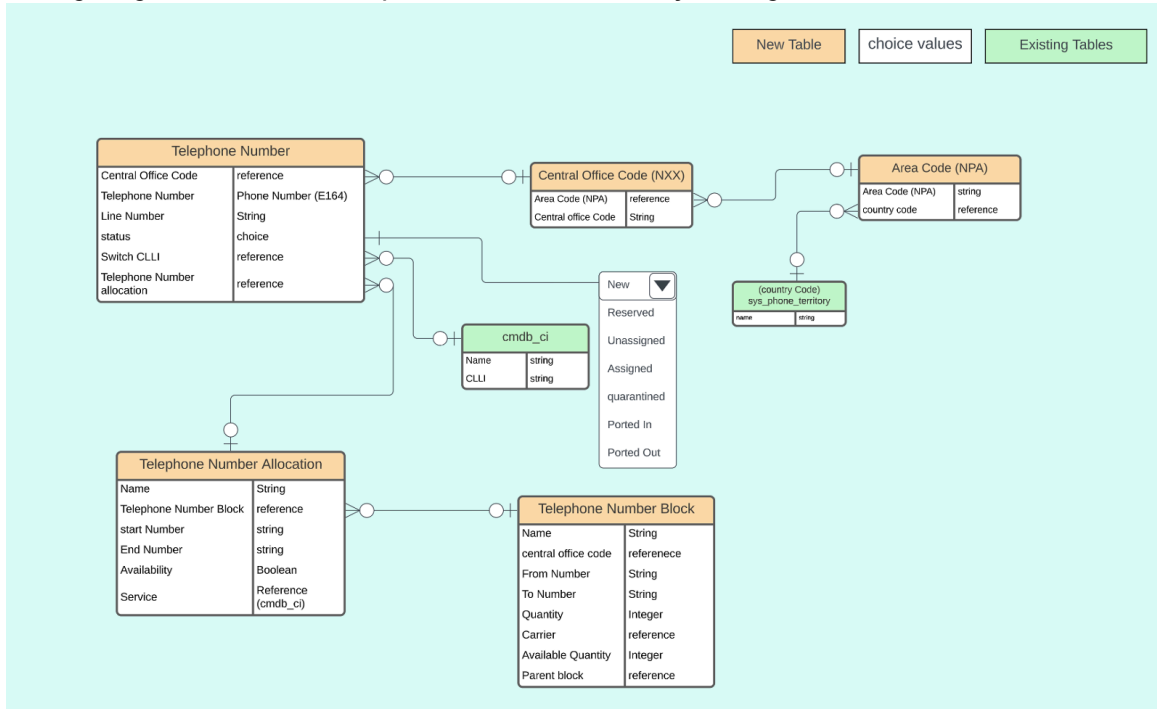
If the number element is already used, then the subflow passes the following message "Number element has already been created. Please try creating another one."

## Telephone number inventory management data model

By using the telephone number inventory management data model, you can understand how the tables of a telephone block, telephone number allocation, and telephone number relate to each other.

## Data model

The following diagram shows the telephone number inventory management data



model.

The data model provides an overview of telephone number usage and availability. With this data model, you can store the telephone block, allocation, and telephone number.

**Note:** You can also allocate or deallocate a telephone number for a customer service. You must create a telephone block for the telephone number block table.

A telephone number is assigned this way:

1. A telephone number inventory manager creates a telephone number block to store all the different types of telephone numbers. The numbers can be categorized based on the area, country, port-in type, or port-out type. Each record of the block is stored in the table of the telephone number block.
2. A telephone number inventory manager then creates a telephone allocation to assign a service to a series or to a set of numbers. A telephone block can have a group as its child. These allocations are created in the telephone number allocation table.
3. The telephone number allocation table relates the telephone numbers that are ready to use to a record in the telephone number table.

### Related topics

[Create a telephone infrastructure](#)

## Time series metrics for datacenter

Use time series metrics to calculate the operational details of network assets in the Telecommunications Network Inventory application.

### Time series metrics

Name	Metric field name	Table name
Humidity (%)	u_humidity	cmdb_ci_cage

**Time series metrics (continued)**

Name	Metric field name	Table name
Sold Current (A)	u_sold_current	cmdb_ci_cage
Temperature (C)	u_temperature	cmdb_ci_cage
Cabinet Rating (kVA)	u_cabinet_rating	cmdb_ci_cage
Peak Last Seven Days Ratio (%)	u_peak_last_seven_days_ratio	cmdb_ci_cage
Peak Last Seven Days (kVA)	u_peak_last_seven_days	cmdb_ci_cage
Apparent Power (kVA)	u_apparent_power	cmdb_ci_cage
Contractual Power (kVA)	u_contractual_power	cmdb_ci_cage
Power Factor (pf)	u_power_factor	cmdb_ci_cage
Kilowatt Hour (kWh)	u_kilowatt_hour	cmdb_ci_cage
Real Power (kW)	u_real_power	cmdb_ci_circuit
Kilowatt Hour (kWh)	u_kilowatt_hour	cmdb_ci_datacenter
Power Consumption To Contractual (%)	u_power_consumption_to_contractual	cmdb_ci_datacenter
Rack Units Available (U)	u_rack_unit_available	cmdb_ci_datacenter
Rack Unit Usage (%)	u_rack_unit_usage	cmdb_ci_datacenter
Rack Units Used (U)	u_rack_unit_occupied	cmdb_ci_datacenter
Units Available (U)	u_unit_available	cmdb_ci_equipment_holder
Unit Usage (%)	u_unit_usage	cmdb_ci_equipment_holder
Units Used (U)	u_unit_occupied	cmdb_ci_equipment_holder
Weight Available (lb)	u_weight_available	cmdb_ci_equipment_holder
Weight Usage (%)	u_weight_usage	cmdb_ci_equipment_holder
Weight Used (lb)	u_weight_occupied	cmdb_ci_equipment_holder
Power Available (kW)	u_power_available	cmdb_ci_equipment_holder
Power Usage (%)	u_power_usage	cmdb_ci_equipment_holder
Power Used (kW)	u_power_occupied	cmdb_ci_equipment_holder

**TNI CI Attributes form**

The TNI CI Attributes form enables you to create the Telecommunications Network Inventory attribute details for a network inventory in the Telecommunications Network Inventory application.

**TNI CI Attributes form**

Field	Description
Configuration item	Configuration item (CI) of the network inventory asset.

**TNI CI Attributes form (continued)**

Field	Description
Network domain	<p>Domain of ownership and responsibility for this network asset or connection. Select one of the following options:</p> <p><b>Mobility</b> Represents wireless devices and connections.</p> <p><b>Telco</b> Represent the edge or access networks.</p> <p><b>Core</b> Represents the core network infrastructure.</p>
Inventory category	Type of inventory.
Inventory template	Inventory template if any.
Equipment CLLI	Assigned equipment Common Location Identifier Code (CLLI) for this network asset. The North American telecommunications industry uses the CLLI code to specify the location and function of telecommunications equipment.
Site	Network site or data center in which the network inventory asset is installed. Click the search icon ( 🔍 ) and select a network site. To learn more, see <a href="https://product/tmt-telecom-network-inventory/task/define-tni-sites.dita">product/tmt-telecom-network-inventory/task/define-tni-sites.dita</a> .
Distinguished name	Alternate name reference for the network asset that is based on the concatenated names and IDs from the other related network assets.
Type	Optional user-defined type code that you use to categorize the types of the various network entities or assets. Select the search icon ( 🔍 ) and select a type code.
Role	Optional user-defined role code that you use to categorize the roles or purposes of the various network entities or assets. Select the search icon ( 🔍 ) and select a role code.

**TNI CI Attributes form (continued)**

Field	Description
Function	Optional user-defined function code that you use to categorize the functions of the various network entities or assets. Select the search icon ( 🔍 ) and select a function code.
Unit position	Unit position of this network asset.
Access identifier	Not applicable.
Date of last maintenance	Date that this network asset was last serviced.
Is Alarmable	Option that designates if an alarm system can be assigned to this network asset.
Replaceable	Option that designates if this network asset can be replaced if it malfunctions or is affected by a network outage.
Spare	Option that designates if this network asset is a spare.
Operation notes	Free-form operation note text for this network asset. For example, <code>Check diesel fuel for generator.</code>

**Related topics**

[Create a telecommunications equipment instance](#)