



Xanadu Telecommunications Network Inventory

Last updated: 05/04/2026

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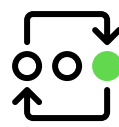
Telecommunications Network Inventory

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.

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Get started

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

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.

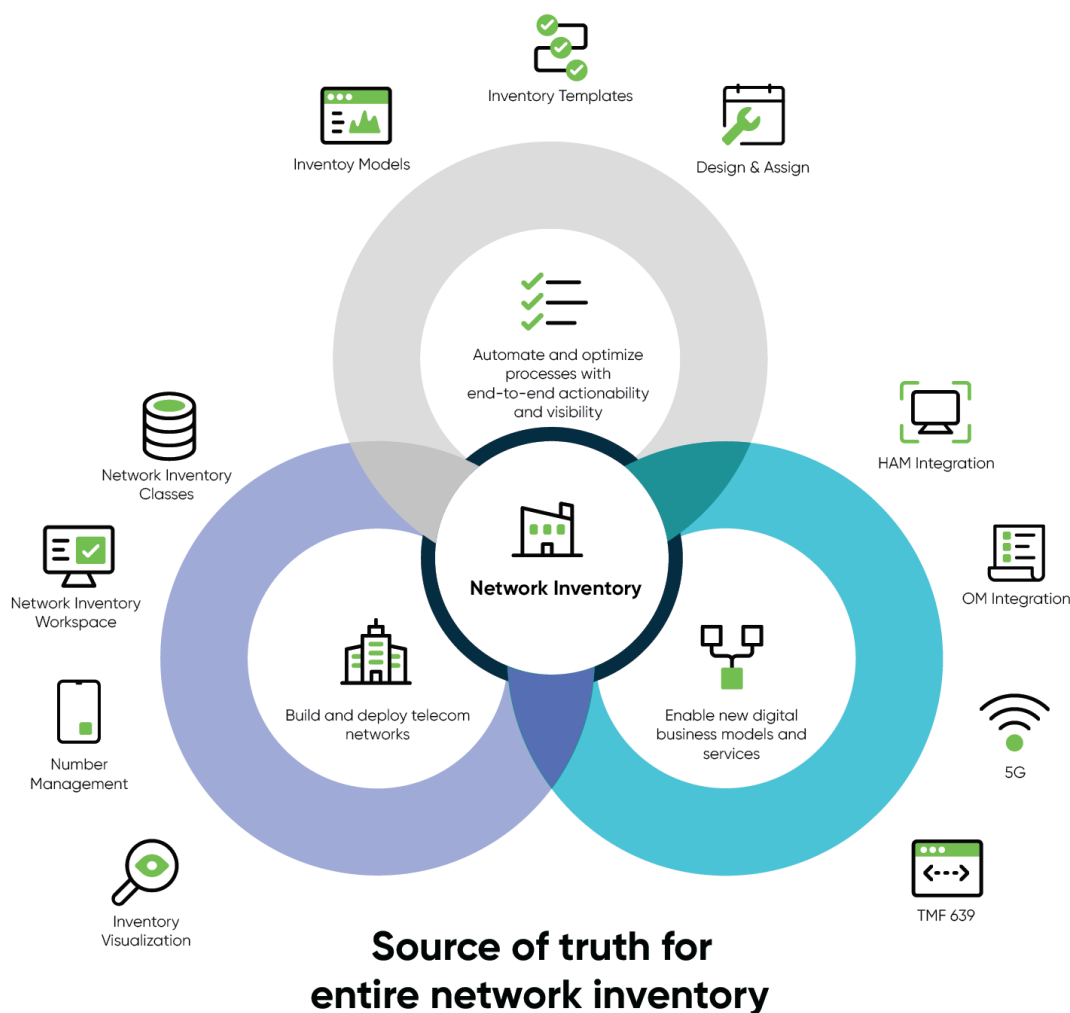
Introduction to Telecommunications Network Inventory

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 xNF 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
Provide a visualization of the topology where the different elements in a network are organized and connected to one another	Visualization of network topology

Benefits of Telecommunications Network Inventory features (continued)

Benefit	Feature
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
Visualise and manage rack and cabinet	Visualization of a rack or cabinet

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.

Introduction to Network Inventory data model

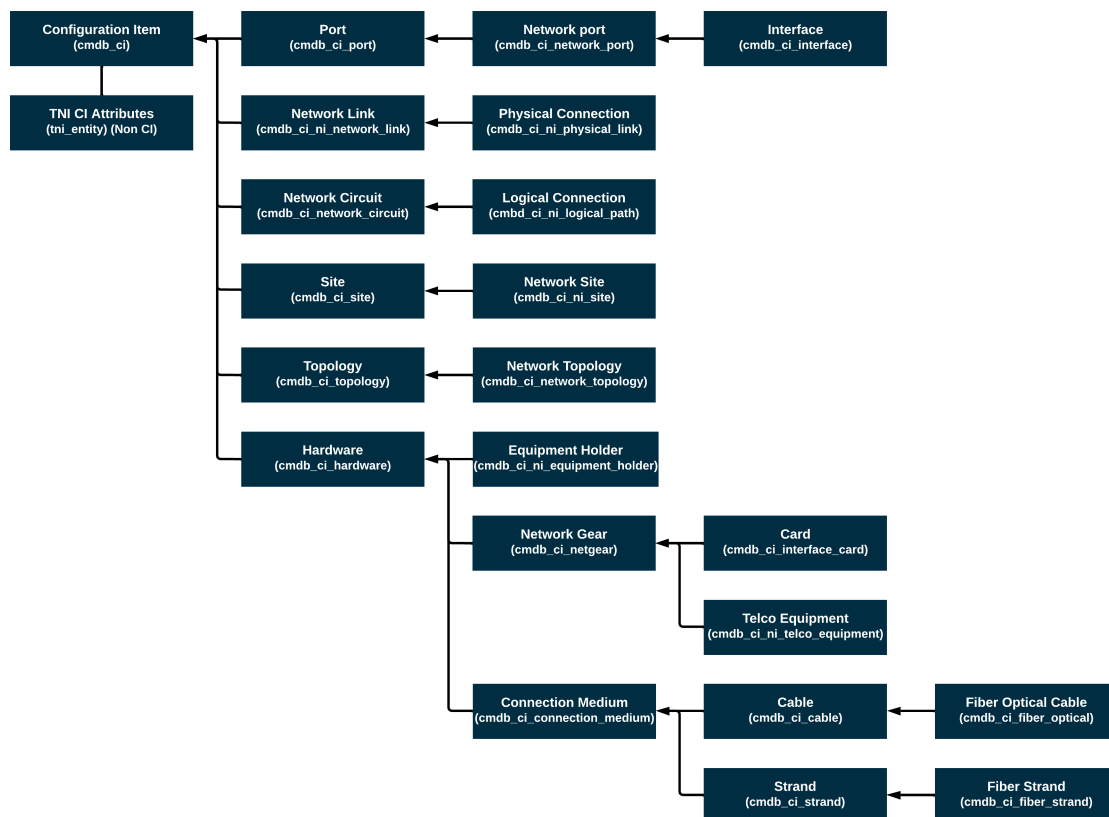
The data model contains the details about your network assets, such as the telco equipment configuration data, port availability of a framework, and bandwidth allocations between your sites and services. This data model enables you to build, manage, maintain, and allocate the network infrastructure and 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	TNI CI Attributes record. 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 TNI CI Attributes form.
Network Site [cmdb_ci_ni_site]	Site [cmdb_ci_site]	Network Site. Captures and maintains the location-specific attributes for each network site, including the network centers, buildings, floors, and rooms where the equipment is located. 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 product/tmt-telecom-network-inventory/task/define-tni-sites.dita.
Equipment Holder [cmdb_ci_equipment_holder]	Hardware [cmdb_ci_hardware]	Equipment Holder 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. Use the equipment holder records to track and manage your network assets. To learn more, see product/tmt-telecom-network-inventory/task/define-tni-equipment-holders.dita.

Network Inventory (NI) extension classes (continued)

Telecommunications Network Inventory class	Extends generic CI class	Description
		To learn more about the extension classes of the equipment holder, see Equipment holder extension classes .
Telco Equipment [cmdb_ci_ni_telco_equipment]	Network gear [cmdb_ci_netgear]	Telco Equipment 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. Use the equipment record to track and manage the details of your telco equipment. To learn more, see Create a telecommunications equipment instance. To learn more about the equipment extension classes, see Equipment extension classes.
Network Interface [cmdb_ci_ni_interface]	Network Port [cmdb_ci_ni_network_port]	Network Interface Captures and maintains the equipment-specific attributes for the network interfaces. To learn more, see Define the network interface details.
Interface Card [cmdb_ci_interface_card]	Network gear [cmdb_ci_netgear]	Network Interface Card 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

Network Inventory (NI) extension classes (continued)

Telecommunications Network Inventory class	Extends generic CI class	Description
		consumed when you use the ports in the network design. To learn more, see Define the card details .
Physical Connection [cmdb_ci_ni_physical_link]	Network Link [cmdb_ci_network_link]	Physical Connection Represents the physical port connections on the interface cards in your network. To learn more, see Define the physical connection details .
Logical Connection [cmdb_ci_ni_logical_path]	Network Circuit [cmdb_ci_network_circuit]	Logical Connection 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 Define the logical connection details .
Topology [cmdb_ci_topology]	Network Topology [cmdb_ci_network_topology]	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 Visualization of network topology .

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.

Network 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:

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. 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.

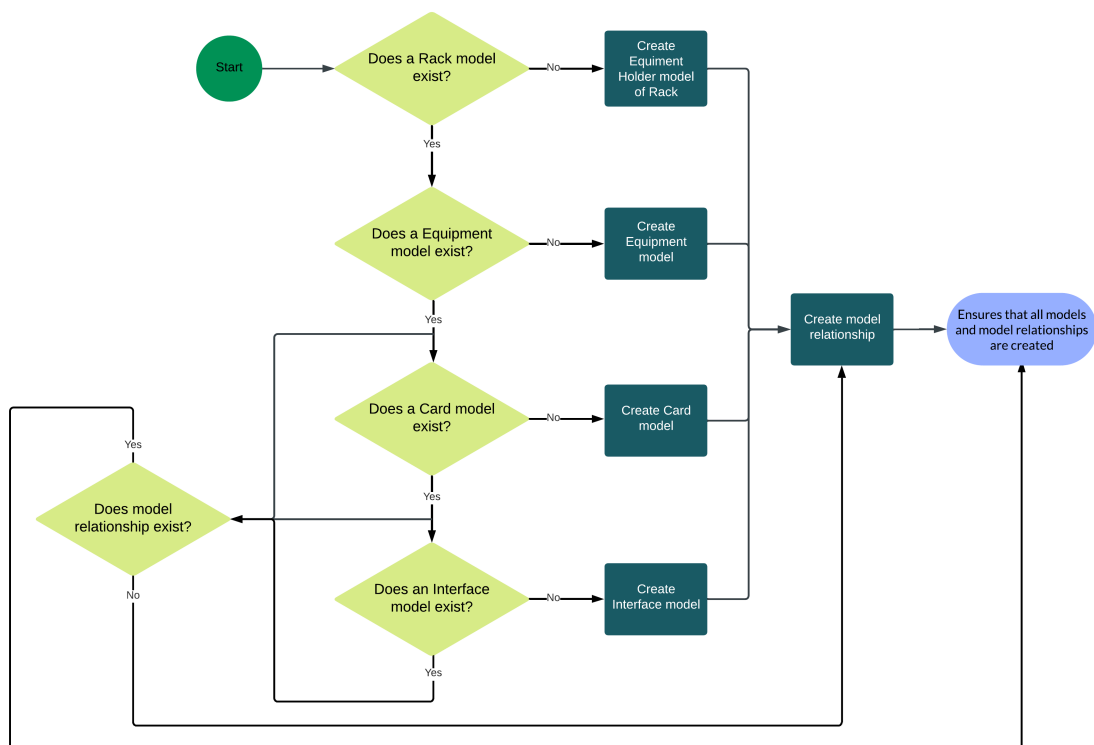
Inventory modeling process

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.

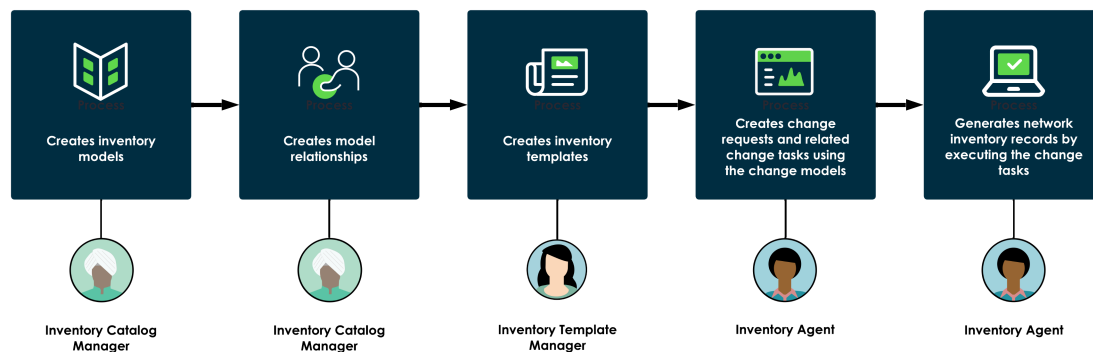
Design and assign overview

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](#)

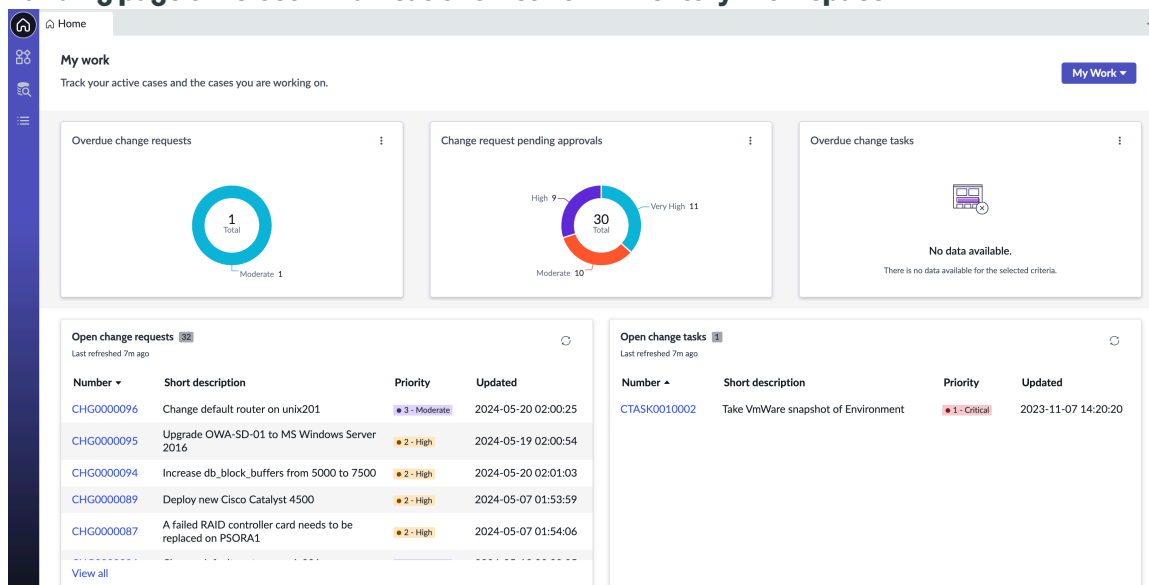
Network Inventory Workspace landing page

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 **My work** to view your assignments.
- Select **My 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.

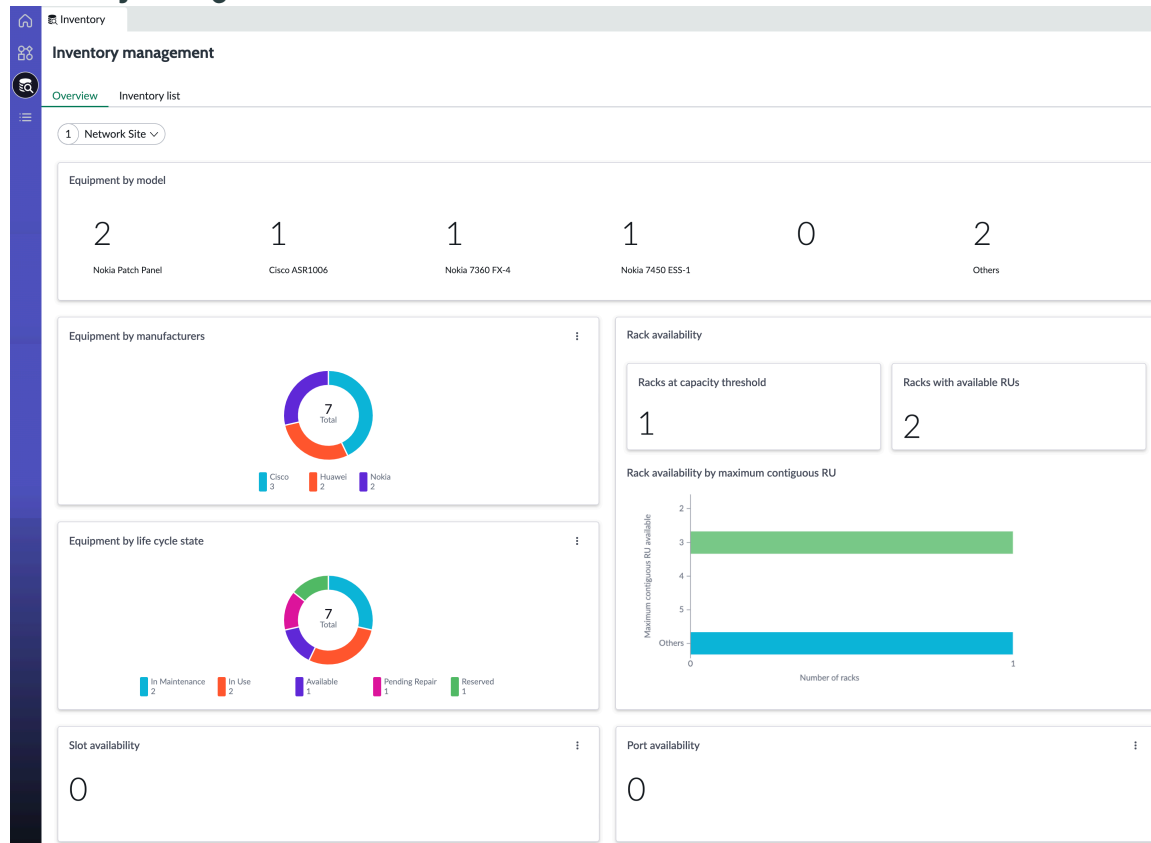
Inventory List

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. - In Use - Empty - Reserved

Inventory management widgets (continued)

Widget or chart	Description
	• Available • In Maintenance • Other
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 ServiceNow Inventory list tab. The sidebar on the left contains a navigation menu with options like 'Inventory', 'Overview', and 'Inventory list'. Below this is a tree view showing a hierarchy of locations: 'Americas' (expanded), 'Apac', 'Australia', 'China', 'India', 'Japan', 'ARIZONA-CO-001' (expanded), 'Connection', 'Logical connection' (selected), 'Equipment', and 'IP Router'. The main content area is titled 'Inventory management' and shows a 'Logical connection' table with 5 rows. The table has columns for 'Name', 'Site A', 'Site Z', 'Life Cycle Stage', and 'Life Cycle Stage'. The data rows show connections between various sites, all with a 'Life Cycle Stage' of 'Operational'.

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 ()

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

You can access the following classes:

Network Inventory classes

Class	Details
Network sites	View listings of network sites. Update or create network site details. To learn more, see product/tmt-telecom-network-inventory/task/define-tni-sites.dita .
Inventory	Manually create the individual instances of your network assets and define their relationships to each other. To learn more, see Manually creating and reviewing your network asset instances .
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 Inventory number allocation .
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

Network Inventory classes (continued)

Class	Details
	other for network asset instantiation. To learn more, see: • Network inventory models • Creating your inventory models
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: • Network inventory templates • Creating inventory template for network asset instantiation
Inventory Capacity	Calculate the capacity of physical entities in your network. To learn more, see Capacity management.
Import	Import your models and templates using Import in the Telecommunications Network Inventory application. To learn more, see Import Models and Templates.
Administration	Configure the Telecommunications Network Inventory application. To learn more, see Configuring Telecommunications Network Inventory. Note: 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.
Changes	Instantiate your network inventory using design and assign. To learn more, see Telecommunications design and assign.
Procurement	Create the bill of materials to procure the network assets. To learn more, see Telecommunications Network Inventory integration with Hardware Asset Management.

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.

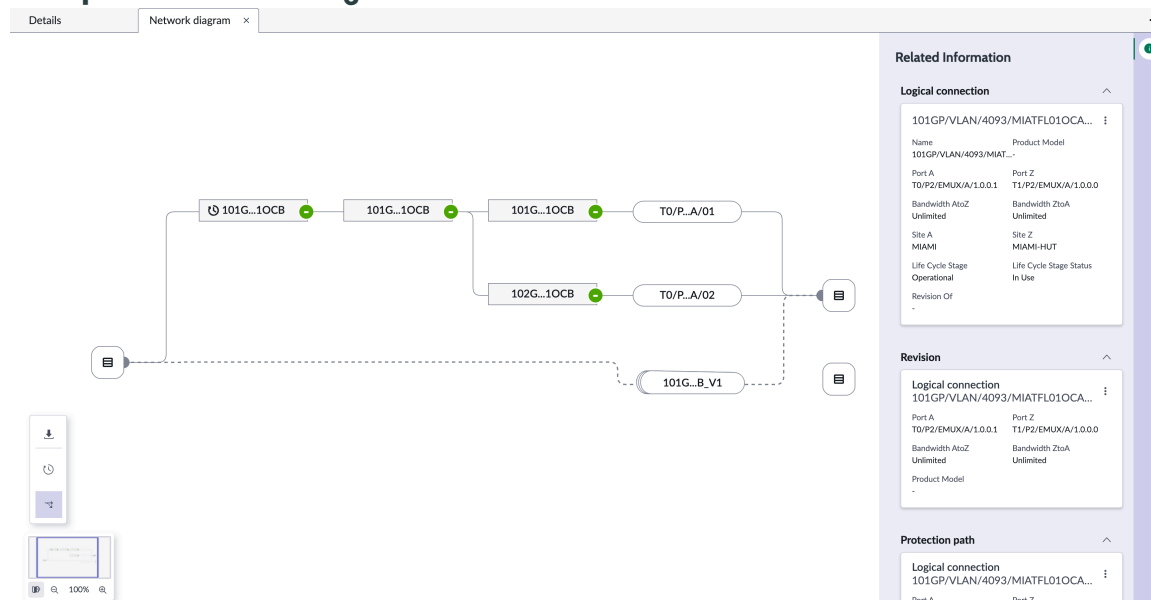
The network diagram graphically displays a circuit of the logical connection elements, and the details of each element. It provides a detailed overview of a logical connection and how the various elements are connected to each other. You can view the following by using the network diagram:

- 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

Follow the following steps to access the network diagram from the Telecommunications Network Inventory Workspace:

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 xNF in Telecommunications Network Inventory

You can model your 5G network and manage all your xNFs (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 show in the following diagram.



- **Business Application:** The business application table stores all xNFs. The business application records the labels of all classes proposed by 3GPP™* as a type of managed network function. To learn more, see [Create an xNF](#).
- **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 [Create or add an xNF instance](#).
- **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

[Create xNF and xNF instances](#)

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.

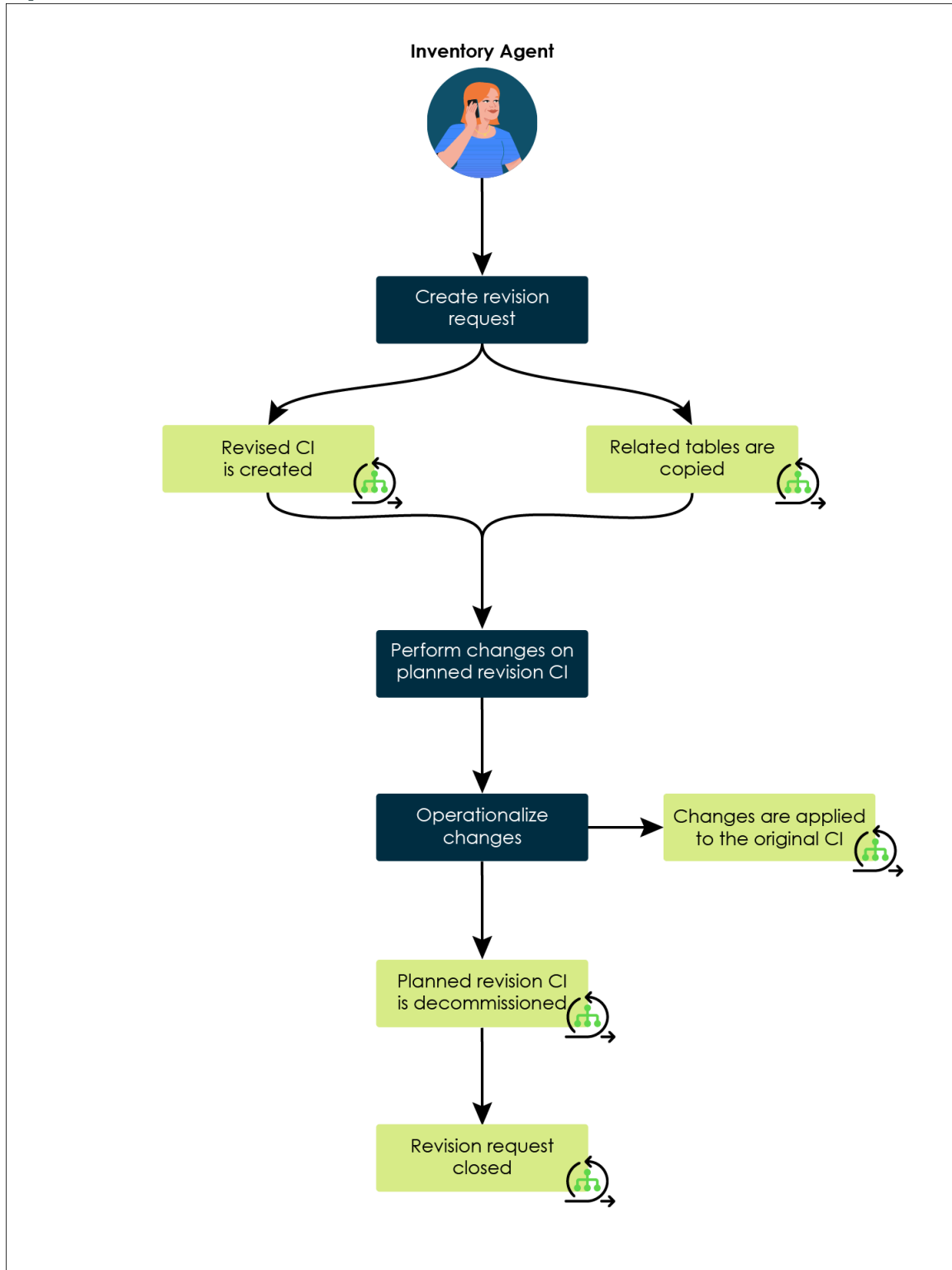
CI revision overview

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_87](#).
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](#).
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](#), [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](#) 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 metrics 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](#).

Visualization of network topology

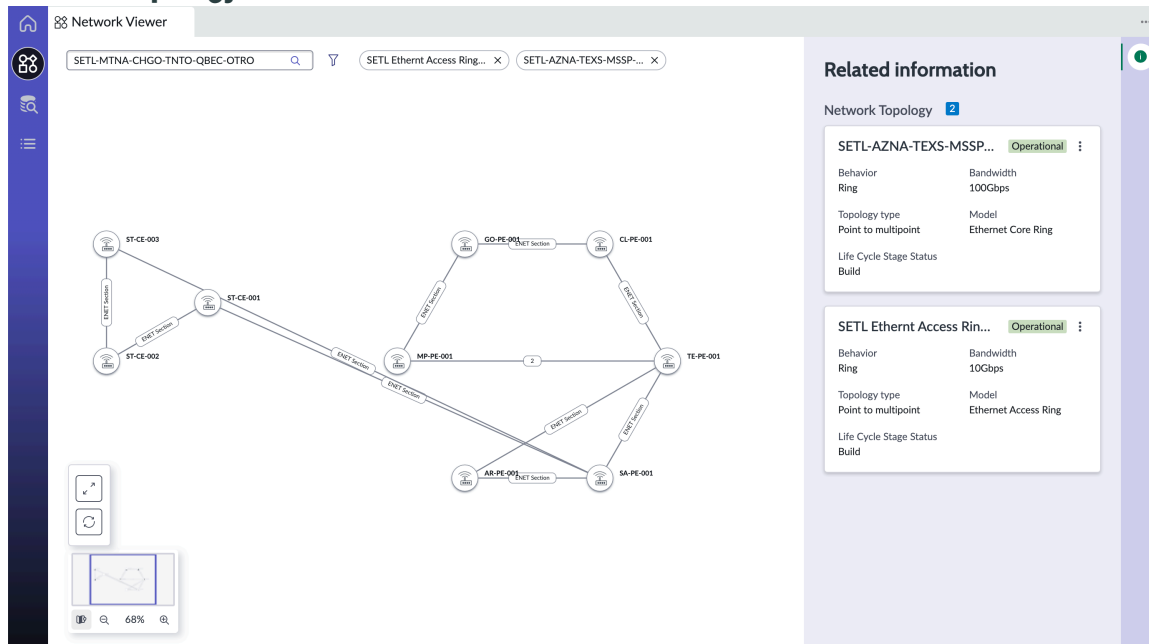
The topology in the Telecommunications Network Inventory application graphically displays how the different elements in a network such as equipment, connections, and interfaces are organized and connected to one another. By using a topology, you get a bird's eye view to the network.

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.

Network topology



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 right 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:

- Point to 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 (i) 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 viewer icon ().

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](#)

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	• TNI Create CI From Template • Create Logical Connection • Create Logical Interface • Create Physical Connection • Path Search

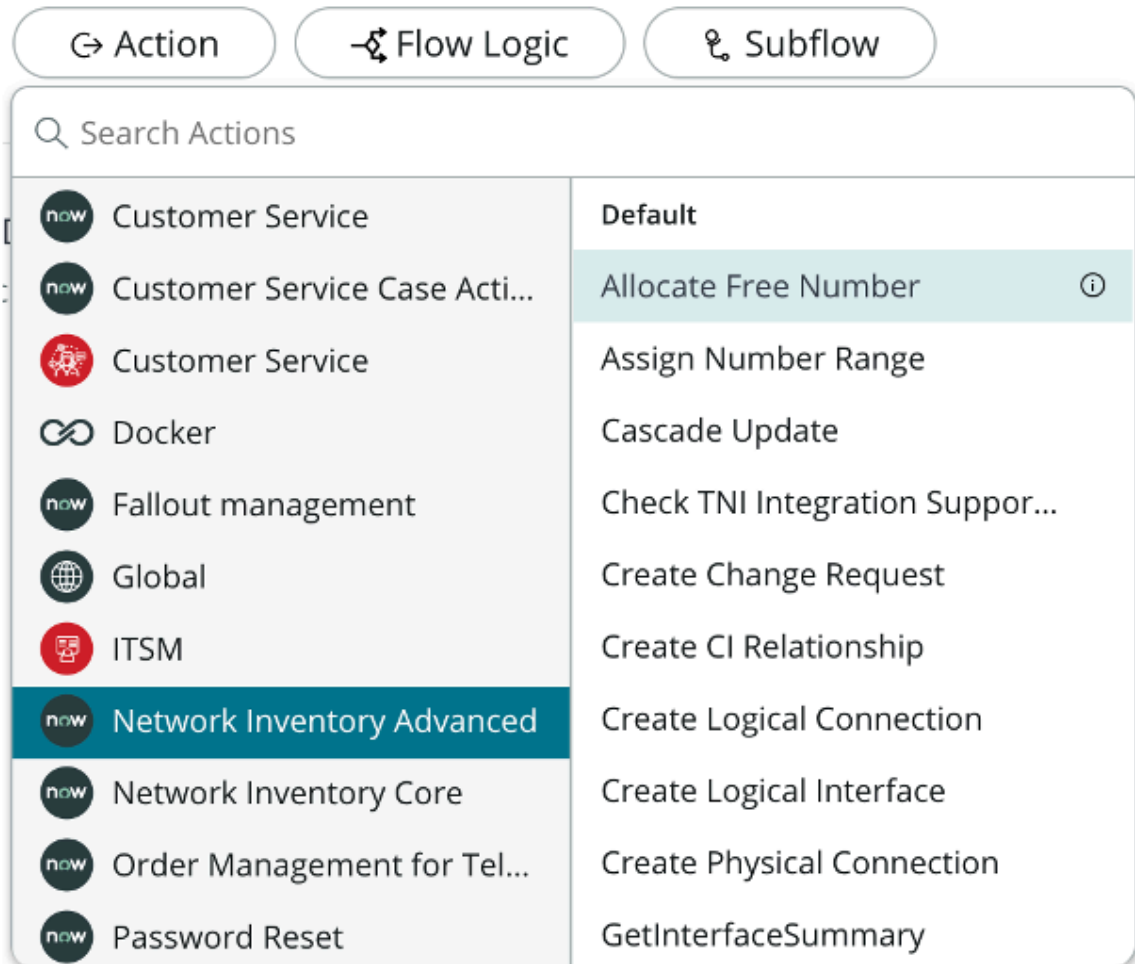
Telecommunications Network Inventory functions (continued)

Function Type	Function Name
Read	• Allocate Free Number • Get Interface Summery • Lookup Next Hub
Update	Cascade Update
Helper function	• Split String • Get Index From Array

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.

🔍 Subflow

🔍 Search subflows

🌐 Continuous Integration and ...	DEFAULT
🌐 Docker	Career PON Network Path Templ...
🌐 Global	Design and Assign ONT
🌐 Network Inventory Advanced	ENET Template
🌐 Network Inventory Core	LAG Template
🌐 Password Reset	Logical Connection Creation
🌐 Service Catalog - Service Fulfi...	Physical Connection Creation
	PON Access Path Template

Related topics

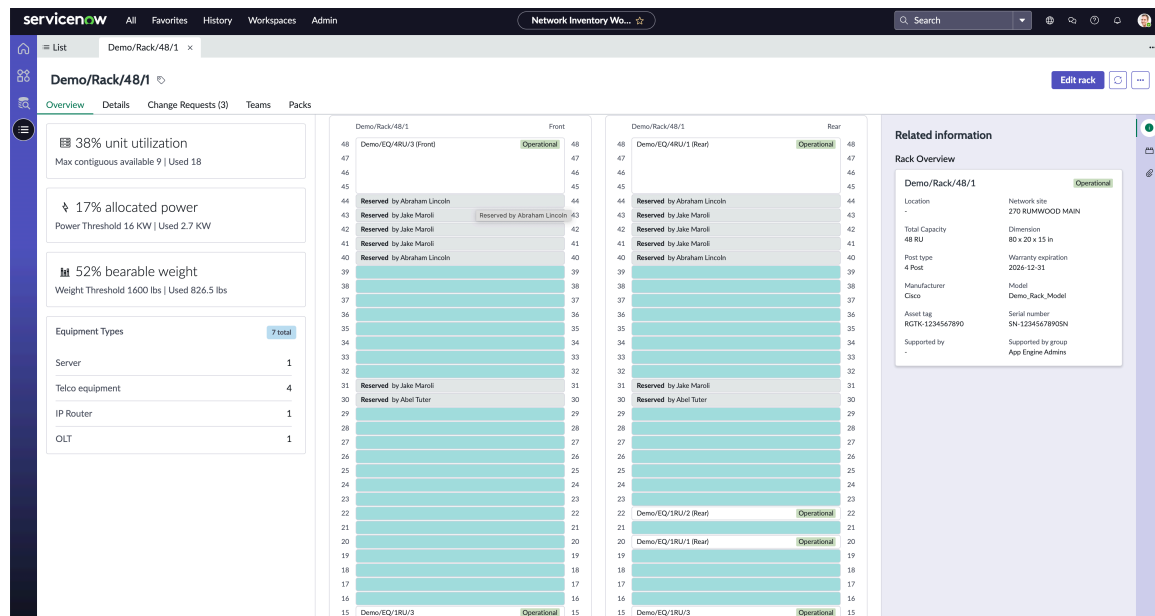
- [Telecommunications Network Inventory function catalog](#)
- [Telecommunications Network Inventory subflows](#)

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 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](#)

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 Network Inventory Advanced 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 comprises the sample records that describe application features for the 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.

Telecom Network Inventory roles (continued)

Role	Description
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: • Read access to all inventory models, capacity metrics, and pack tables. • Write, update, and delete access to the inventory tables. • Read and write access to the template, change request and change task table. Note: 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.
Inventory Number Manager [sn_inv_num_mgmt.inventory_number_manager]	Role that enables a user with the following permissions: • Read access to all telephone number tables. • Write, update, and delete access to the telephone number tables.

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.
- To establish locations hierarchy, ensure to:

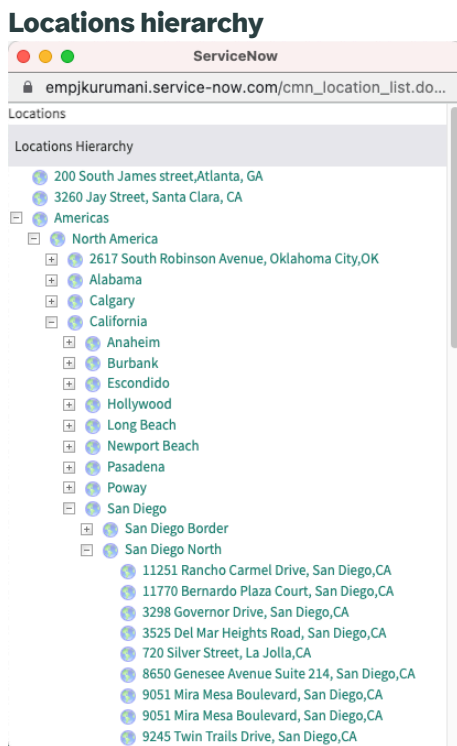
1. Create the top-level locations that contain the subordinate locations. For example, in the locations hierarchy, create **Americas** first. Leave the **Parent** field empty.
2. Create a regional location and in the **Parent** field, select the top-level location as its parent. For example, in the locations 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 **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

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**.
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)
 - App Service (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

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 (sn_attribute_pack_<label name>).
Extends table	Pack (sn_attribute_pack_base)

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 Set conditions and enter the field operator and value for the filter condition.
Pack Table	Pack table that you want to map against the CI.
Has Related Configuration Item	Option to add related CI. When you select this check box, the following fields appear. Related Configuration Item Related CI table that you want to map. Related Filter Filter condition attributes to customize how your pack table is filtered so that you can use them in the related CI form. Select Set conditions and enter the field operator and value for the filter condition. Note: 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.

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](#)

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 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® 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 Quantity field.

5. Select **Submit**.

Result

A service request is created to procure the assets.

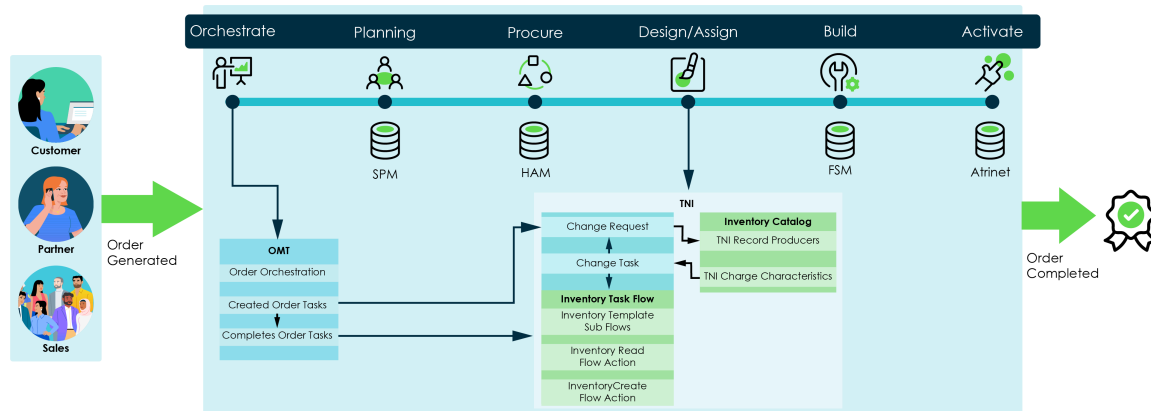
Telecommunications Network Inventory and Order Management for Telecommunications and Media

With the Order Management for Telecommunications and Media 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 form, create the network site records for the individual locations that house your network equipment. To learn more, see [product/tmt-telecom-network-inventory/task/define-tni-sites.dita](#).
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 [cmdb_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 **Network Sites > All Sites**.

You can view the sites that you manage by going to **Network 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 Altitude units 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 Altitude field. Select one of the following options: Feet Altitude of the network site that is measured in feet. This is the default value. Meters 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.

10. 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](#)

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.

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 Create an equipment model .

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	a. Select () > Add to Rack. b. Fill in the fields and select Add. To learn more about the fields, see add equipment to rack table of Change request and change task forms.  Note: 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.
Move	a. Select () > Move. b. Fill in the fields and select Move. To learn more about the fields, see add equipment to rack table of Change request and change task forms.

Actions	Steps
	Note: - You can also drag the equipment from the corner to the desired rack unit. - You can undo or redo the changes
Remove	Select () > Remove. Note: - You can undo or redo the changes - Multiple change tasks are created on multiple removals of equipment. Additionally, both removed equipment and racks are added under Affected CIs.
Reserve a rack unit	Select Options () of the rack unit that you want to reserve and select Reserve. Note: - You can undo or redo the changes - On reserving a rack unit, its life-cycle stage is set to Deployed and its life-cycle stage status is set to Reserved.

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	a. Select () > Add to Cabinet. b. Fill in the fields and select Add. To learn more about the fields, see add equipment to rack/cabinet table of Change request and change task forms. You can also drag the equipment from the corner to the desired rack unit.
Move	a. Select () > Move. b. Fill in the fields and select Move.

Actions	Steps
	To learn more about the fields, see add equipment to rack/cabinet table of Change request and change task forms. You can also drag the equipment from the corner to the desired rack unit.
Remove	Select () > Remove .
Reserve a rack unit	Select Options () of the rack unit that you want to reserve and select Reserve .

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 Edit rack .
Edit cabinet	To learn more, see Edit a cabinet .
Refresh rack equipment	Select refresh () icon to see updated equipment of the rack if any changes are performed.
Create equipment	Select () > Create equipment . In the displayed form, fill in the fields. To learn more, see Create equipment from rack view .

Actions	Steps
Save	Save the rack or cabinet.
Add packs	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 .
Calculate Capacity	Select and redirect to Capacity Metrics tab to see the updated capacity metrics.
Decommission	Select () > Decommission to decommission this rack. To learn more, see Decommission an inventory record .
Delete	Select () > Delete 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.
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.**

i 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 [cndb_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.
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: ○ BNC (Bayonet Neill-Concelman) - Type of miniature radio frequency connector used for coaxial cables. ○ SC (Square Connector)- Square, common type of Fiber optic connector used as push-pull latch, to align the optical fibres for efficient light transmission. ○ LC (Lucent Connector)- Another version of the SC connector designed for high-density applications.

Field	Description
	- ST (Straight Trip)- a type of fiber optic connector commonly used for connecting optical fibers in telecommunications and data communication applications. - Wire Wrap -A technique for creating electrical connections on circuit boards. - RJ45 - Also known as 8P8C (8 Position 8 Contact) connector, is widely used type of connector for wired Ethernet networks.
Port Type	Types of port on the network interface. Select one of the following options: - Ethernet- Physical connection and speed capabilities of a device for connecting to a network. It involves cable type, speed, and standard. - 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. - Serial- A serial interface transmits data one bit at a time, in contrast to a parallel interface that sends multiple bits simultaneously.
Directionality	Type of the connections between the nodes of a network. Select one of the following options: - Tx- TX stands for Transmit. It refers to the direction in which data is being sent from a device. - 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). - Tx/Rx - Bus- Bus directionality refers to the flow of data on a communication channel. - Broadcast- Broadcast directionality refers to the nature of signal transmission and reception in a broadcast system.
Port Bandwidth	Measured bandwidth for the ports on this network interface. Select the search icon (🔍) and select a bandwidth.
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: ROOT or LEAF endpoint role, as defined by the Metro Ethernet Forum (MEF). --None-- for no assigned endpoint role.
Virtual	Option to verify whether the network interface is physical or virtual. Note: If you select Virtual, then the Connector Type field doesn't appear.
Cabled	Option to verify if the interface is pre-cabled or not.

6. 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.

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.

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 Network Interface 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. **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.

11. **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.TNILogicalConnectionOverview`. 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**.

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](#)

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](#).

- 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.

- Select **Save**.
- 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

- Navigate to **Workspaces > Network Inventory Workspace**.
- Click the list icon () , and then click **Inventory > Inventory Groups**
- Click **New**.
- 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

Field	Description
	◦ CMDB Workspace ◦ Default ◦ Health ◦ Network Inventory Group
Description	Describe your inventory group
Category	Select one of the following category ◦ Segment ◦ Section ◦ Route ◦ Others

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: - IPv4 - Fourth version of the Internet Protocol, - IPv6 - Sixth version of the Internet Protocol
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.  Note: a. The created number of allocations and the telephone numbers are shown as available to allocate. b. By default, the status of the created numbers is set as new.
From number	Starting number of the series from where you want to start adding numbers to this block.
To number	Last number of the series where you want to stop adding numbers to this block.

Fields	Description
	Note: 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.

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	Number of telephone numbers that are in the selected telephone number blocks. Note: This field is auto-populated after creating a telephone block. However, you can always update this field as required.
Available quantity	Number of telephone numbers that aren't assigned or available. Note: This field is auto-populated after creating a telephone block. However, you can always update this field as required.

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. Note: 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.
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.

Fields	Description
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	Portion of a telephone number that uniquely identifies an individual telephone line within an area. You can provide a series or

Field name	Description
	individual line numbers in an xxxx-xxxx or xxxx, xxxx-xxxx format. Note: If the provided line number isn't in a series of numbers, multiple number allocations are created.

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.

Create xNF and xNF instances

Create application services, business applications, and network interfaces to manage all xNF. 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 xNF. To learn more, see [Create an xNF](#).
- Create xNF instances. To learn more, see [Create or add an xNF instance](#).
- Create a network interface and create relationship with an application service. To learn more, see [Define the network interface details](#).

Create or add an xNF instance

Create or add an existing xNF (different types of network functions) instance by using the Telecommunications Network Inventory application. You can create xNF instances to model your 5G network.

Before you begin

- Table name: [cmdb_ci_service_auto].
- Role required: sn_ni_core.inventory_admin, sn_ni_core.inventory_agent, sn_ni_core.telco_inventory_catalog_manager.

About this task

Application services support a business or technical service and are mapped to the CMDB Application Service table [cmdb_ci_service_auto] for common reporting. This task enables you to create, review, update, and delete multiple instances.

Procedure

1. Navigate to **All > CSDM > Manage Technical Services > Application Service**.
2. Select **New**.
3. On the Create an Application Service form, in the Basic Details section, fill in the fields.
To get a description of the field values, see [Create an application service](#) .
4. In the set relationships section, select the **Business application** tab.
5. Search and select a business application under the available box.
6. Move the selected business application to the selected box.

The selected business application is assigned to this application service.

7. Select the **Parent Application Service tab and assign the parent application service to this application service, if applicable.**

8. Select **Next.**

9. Select **Choose a method.**

10. On the Choose a Method form, fill in the fields.

Choose a Method form

Field	Description
Service Population Method	Method to populate the application service with configuration items (CIs).
CMDB Table	CMDB Table. Based on the selected method, this field is automatically filled in.
Group name	Group name. Note: This field is applicable only for dynamic CI groups.
Class	Class that you can select the CI to add to this application service. Note: This field applies only for the manual method.
CI	CI that you can add to this application service. Note: This field is application only for the manual method.
Level	Number of interconnected CI levels to apply to this application service. Note: This field is applicable only for the dynamic service method.

11. Select **Save.**

12. Optional: Add another method by selecting **Add method**.

13. Select **Next.**

14. Optional: On the following tabs, select **Edit relationships**:

- **Relationships:** Updates your relationship with the business application and parent application service.
- **Population methods summary:** Updates an existing method or adds another method.

15. Select **Done**.

16. In the network inventory workspace, 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 enable this button in your network inventory workspace. To learn more, see [CMDB Workspace](#).

What to do next

You can review, update the fields, create a related tab record, or delete a record. To learn more, see [Update or delete a service record](#).

Create an xNF

Create business applications to manage all xNFs (different types of network functions) in the Telecommunications Network Inventory application. You can create xNFs to model your 5G network.

Before you begin

- Table name - [cmdb_ci_business_app]
- Role required: sn_ni_core.inventory_admin, sn_ni_core.inventory_agent, sn_ni_core.telco_inventory_catalog_manager

About this task

This task enables you to create, review, and update all xNFs. By default, 19 functions are included and each record is a function.

Procedure

1. Navigate to **All > CSDM > Design > Business Application**.
2. Select **New**
3. On the form, fill in the fields.
To see a description of the fields, see [Design domain of the CSDM framework](#).
4. Select **Submit**.

What to do next

You can review, update the fields, create a related tab record, or delete a record. To learn more, see [Update or delete a service record](#).

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

servicenow All Favorites History Workspaces Admin CMDB Groups ☆		
≡	CMDB Groups	Group Name Search
All		
☐	Group Name	Description
	Search	Search
	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:

1. 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.

2. 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.

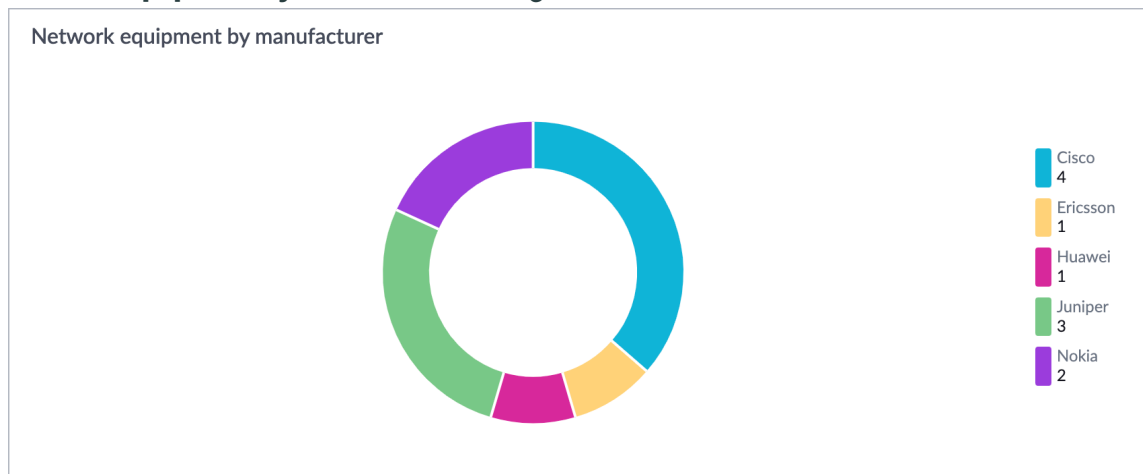
Telecom Nokia Manufacturer Equipment

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

servicenow All Favorites History Workspaces Admin CMDB Groups ☆	
CMDB Groups	Group Name Search
Group Name	Description
*manufact	Search
All Cisco Manufacturer Equipment	Created for TNI Workspace
All Ericsson Manufacturer Equipment	Created for TNI Workspace
All Huawei Manufacturer Equipment	Created for TNI Workspace
All Juniper Manufacturer Equipment	Created for TNI Workspace
All Nokia Manufacturer Equipment	Created for TNI Workspace
Core Cisco Manufacturer Equipment	Created for TNI Workspace
Core Ericsson Manufacturer Equipment	Created for TNI Workspace
Core Huawei Manufacturer Equipment	Created for TNI Workspace
Core Juniper Manufacturer Equipment	Created for TNI Workspace
Core Nokia Manufacturer Equipment	Created for TNI Workspace
Mobility Cisco Manufacturer Equipment	Created for TNI Workspace
Mobility Ericsson Manufacturer Equipment	Created for TNI Workspace
Mobility Huawei Manufacturer Equipment	Created for TNI Workspace
Mobility Juniper Manufacturer Equipment	Created for TNI Workspace
Mobility Nokia Manufacturer Equipment	Created for TNI Workspace
Telco Cisco Manufacturer Equipment	Created for TNI Workspace
Telco Ericsson Manufacturer Equipment	Created for TNI Workspace
Telco Huawei Manufacturer Equipment	Created for TNI Workspace
Telco Juniper Manufacturer Equipment	Created for TNI Workspace
Telco Nokia Manufacturer Equipment	Created for TNI Workspace

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.
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:
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. Note: The Bandwidth Capabilities tab is available only on the physical and logical models.
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 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 <i>glide.cmdb_model.display_name.shorten</i> 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 Create manufacturer and vendor codes .
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 <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 Create manufacturer and vendor codes .
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](#).

11. 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

1. Navigate to **Workspaces > Network Inventory Workspace**.
2. Select the list icon () , and then go to **Inventory Models > Card Models**.
3. Select **New**.
4. 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 Create manufacturer and vendor codes .
Name	Name of the card 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 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 Create manufacturer and vendor codes .
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 <code>glide.cmdb_model.display_name.shorten</code> 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 Create manufacturer and vendor codes .
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	Type of topology structure. Select one from the following options. Ring Each node is linked with its neighbor to form a closed network. Linear Bus All the nodes are connected one after the other in a sequential chain. Mesh The nodes are connected directly, dynamically, and non-hierarchically to as many other nodes as possible and cooperate with one another to route data. Star

Field	Description
	All nodes are connected to a central hub using a communication link. Tree The nodes are arranged in a configuration that resembles a tree's leaves, branches, and trunk.
Number of allowed nodes	Total number of nodes that are allowed in the topology.
Type	Type of topology. Select one from the following: ○ Generic ○ Product

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 Creating your inventory models .
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 Create a default template .
Version	Version of the template
Parent bandwidth	Bandwidth of the parent product model. Note: This attribute is only visible when you select a logical connection model and that has a relationship type as Logical Connection to Channel .
Child bandwidth	Bandwidth of the child product model. Note: This attribute is only visible when you select a logical connection model and that has a relationship type as Logical Connection to Channel .

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 '7450 ESS-1 Template' form in the Network Inventory Workspace Lists view. The form is titled '7450 ESS-1 Template' and has tabs for 'Details' and 'Related Templates (2)'. The 'Details' tab is active. The form fields include:

- 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)

On the right side, there is an 'Attachments' section with a 'Browse' button and the text 'No Attachments Available. Browse for a file to add it as an attachment.'

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 model *
Nokia 7450 ESS-1 MDA CARD MODULE

Inventory template
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

Slot-1 Save ...

Details **Related Templates (1)**

Inventory Template

Name *
Slot-1

Inventory model *
Nokia 7450 ESS-1 Traffic Slot

Relationship type *
Contains::Contained by

Inventory template
7450 ESS-1 Template

Parent
7450 ESS-1 Template

Available templates

Default Field Values
Traffic Slot Default Data

Version

Name Pattern
Slot-1

Attachments

No Attachments Available
Browse for a file to add it as an attachment
Browse

After you create all the associated slots, they all appear in the **Related Templates** tab.

Equipment inventory template with all associated slots

7450 ESS-1 Template Save ...

Details **Related Templates (2)**

Related Templates 2 New

Last refreshed just now.

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

Attachments

No Attachments Available
Browse for a file to add it as an attachment
Browse

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

The screenshot shows the 'Inventory template for equipment model - related templates' interface. At the top, there's a breadcrumb trail: 'List' > '7450 ESS-1 Temp...' > 'Details'. Below this, the title '7450 ESS-1 Template' is displayed with a 'Save' button and a menu icon. The 'Details' tab is active, and the 'Related Templates (2)' tab is highlighted with a red box. The main form area is titled 'Inventory Template' and contains several 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), and 'Name Pattern' (empty). On the right side, there's an 'Attachments' panel with a message 'No Attachments Available' and a 'Browse' button.

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

10 GigabitEthernet Template

Details

Inventory Template

Name *
10 GigabitEthernet Template

Inventory model *
10 GigabitEthernet

Inventory template
Available templates
Default Field Values
High Speed Interface Default Data
Version
Name Pattern
10 GigabitEthernet Template

Attachments

No Attachments Available
Browse for a file to add it as an attachment
Browse

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

7450 ESS-1 Template

Details

Related Templates (2)

Last refreshed just now.

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

Attachments

No Attachments Available
Browse for a file to add it as an attachment
Browse

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

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

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

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

The screenshot shows the 'Interface card template - related templates' page. The main header is 'Nokia 7450 ESS-1 MDA Card Template'. Below it, the 'Related Templates' tab is active, showing a count of 1. A 'New' button is located next to the count. The page also includes a 'Details' tab and an 'Attachments' section on the right.

In the interface card template, in the **Related Templates** tab, click **New** to create a subslot inventory template.

Inventory template for subslot

The screenshot shows the 'Create New Inventory Template' form. The form is titled 'Create New Inventory Template'. It has several fields: 'Name *', 'Inventory model *', 'Relationship type *', and 'Parent'. The 'Parent' field is set to 'Nokia 7450 ESS-1 MDA Card Template'. There is also a 'Contains: Contained by' field. The form is part of a larger interface with a sidebar and a top navigation bar.

After you submit the subslot inventory template, it appears on the **Related Templates** tab for the interface card.

Interface card template with related subslot

The screenshot shows the 'sub slot-1' form. The form is titled 'sub slot-1'. It has several fields: 'Name *', 'Inventory model *', 'Relationship type *', and 'Parent'. The 'Parent' field is set to 'Nokia 7450 ESS-1 MDA Card Template'. There is also a 'Contains: Contained by' field. The form is part of a larger interface with a sidebar and a top navigation bar.

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

The screenshot shows the 'Inventory template for interface card - related templates' form. The 'Details' tab is selected, and the 'Related Templates' section is active. The 'New' button is visible, and the 'Attachments' section is on the right.

In the Inventory Templates form, create an inventory template for the interface card in the Telecommunications Network Inventory application.

Inventory template for network interface

The screenshot shows the 'Inventory template for network interface' form. The 'Details' tab is selected, and the 'Inventory Template' section is active. The form contains the following fields:

- Name *: Port-1
- Inventory model *: GigabitEthernet
- Relationship type *: Contains::Contained by
- Inventory template
- Available templates
- Default Field Values
- Version
- Name Pattern: Port-1

The 'Attachments' section on the right shows 'No Attachments Available' and a 'Browse' button.

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

Nokia ess-m10-1gb-sfp template Save ...

Details Related Templates (2)

Related Templates 2 Last refreshed 7m ago.

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

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 Save ...

Details Related Templates (1)

Related Templates 1 Last refreshed just now.

Name	Inventory model	Available templates	Updated	Name Pattern
Nokia ess-m10-1gb-sfp slot addition	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 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

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

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](#)

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 > Import Models**.
3. Select **New**.
4. 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 Attach File to attach the import model file.  Note: Models import is only for Equipment Model, Equipment Holder Model, Card Model, and Interface Model.

5. Add attachments such as graphics or documents by selecting the attachment icon ().
6. **Optional:** Download the demo data and model template by selecting **Create Excel Template**.

Entity ID
Unique ID for each row and not mapped to any target table fields. This shall be unique for each row

Parent Entity ID
Entity ID reference which must be present in Column A of another row

Root Entity ID
Entity ID reference which must be present in Column A of another row

Columns
Each column matches to a field in the target table. The column heading identifies the purpose of the field

Model Category
Must be a valid model category of model category table

Rows
Each row corresponds to a record in the target table

Relationship Type
Equipment to Slot
Slot to Card
Equipment to Network Interface
Card to Slot
Card to Network Interface
Rack/Cabinet to Rack/Cabinet Slot
Rack/Cabinet Slot to Equipment

Model Class
Network Holder Model
Network Equipment Model
Network Card Model
Network Interface Model

Parts of the spreadsheet
Directions : quick tips on using Excel for inserting the records
Page 1 : Use this page to update existing records
Note : This template only imports records on the page 1 sheet. The import process ignores all other pages

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- 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 > Import Templates**.
3. Select **New**.
4. 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 Attach File to attach the import inventory template file.

5. Add attachments such as graphics or documents by selecting the attachment icon ().
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](#).

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. Select the desired format to export the data.
8. Select **Download**.
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 change request by using the design assign link aggregation](#) and [Create a change request by using the GPON Broadband Service change model](#).

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 change request by using the design assign link aggregation

Create a design assign link aggregation change request by using the Telecommunications Network Inventory application. You can also review, update, or delete a record of the design assign link aggregation group.

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 Record producer form, fill in the fields.
For a description of the field values, see the form in [Change request and change task forms](#).

Note:

By default, the Record producer form is assigned to the design and assign aggregation group. For other change models, see [Assign a record producer form to a change model](#).

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 [Create a change request to Add or remove a member to Link Aggregation](#).

Create a change request to 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_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 Link Aggregation**.
5. Select **Next**.
6. On the form, fill in the fields.

Add/Remove member to Link Aggregation

Fields	Description
LAG	Select a LAG from the list
Bandwidth	Modify or select a bandwidth from the list for the selected LAG
Create revision	Option to create a revision of the selected LAG.  Note: Revision of a LAG is not possible while it is already undergoing an active revision process.
Member interface A	Interface A of the selected LAG. Add or remove to modify the member interface A of the selected LAG.  Note: The list displays only child model interfaces that are set as either Port A or Port Z of a physical connection.

Fields	Description
Member interface Z	Interface Z of the selected LAG. Add or remove to modify the member interface Z of the selected LAG. Note: The list displays only child model interfaces that are set as either Port A or Port Z of a physical connection.

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](#).

Create a change request by using the GPON Broadband Service change model

Create a change request in the Telecommunications Network Inventory application so that you can design a Gigabyte Passive Optical Network (GPON) broadband service. 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**.

Create a change request by using the modify logical connection endpoints model

Create a change request by using the modify logical connection endpoints model to modify a logical connection and its details 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 **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 Task Attributes form, update the logical connection endpoints and details, as required.
For a description of the field values, see [Change request and change task forms](#).
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 change request by using modify physical connection

Create a change request using modify physical connection endpoints model to modify a physical connection and its details using 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 **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 Task Attributes form, update the physical connection endpoints and details, as required.
For a description of the field values, see [Change request and change task forms](#).
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 about Task Attribute fields, see [Change request and change task forms](#).
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](#)

Modify a network topology record using design and assign

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 Attribute** tab, fill in the fields.

Strand form

Field	Description
A end termination	Network site where this cable is starting from.
Z end termination	Network site where the cable is ending.
Inventory template	Name of the inventory template for the card model.

10. Select **Submit**.

Result

The cable and related strand records are created.

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](#).

Note:

For the design assign link aggregation group and GPON broadband service, see [Create a change request by using the design assign link aggregation](#) and [Create a change request by using the GPON Broadband Service change model](#).

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](#).

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.****Revise a configuration item**

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_87](#).
- 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, table1_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_cmdb_admin
 - sn_cmdb_editor
 - sn_cmdb_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
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)	Delete the child or related CI (Configuration Item) to delete the parent CI. 1. Click the related or the child CI under Related Templates. 2. Click Delete. However, an Admin can always customize the deletion action. To learn more, see Customizing deletion action.

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:

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 Redundancy Provided by::Redundancy provided for .
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 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 network viewer icon ()
3. 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 ()
4. Select the node that you want see the details, and view the related information in the details pane.
5. 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.

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	Stage of the life cycle that this network asset is in: Deploy Network asset that is deployed in your network. Design Network asset that is being used for design purposes. End of life Network asset that is at the end of its useful life. Inventory Network asset that is an inventory item in use in the network. End of life

Cable form (continued)

Field	Description
	Network asset that is missing and can't be located. Operational Network asset that is operational. Purchase Network asset that is in the purchase phase of its life.
Life Cycle Stage Status	Status of the network asset as it relates to the life cycle stage that it is in: In Maintenance Network asset that is currently in maintenance. In Use Network asset that is currently in use. Pending Retirement Network asset that is currently in maintenance.
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	Type of physical cable connector that is used for the starting point of the cable. Select one of the following options: BNC The Bayonet Neill Concelman (BNC) connector is used for video and RF applications and found in the coaxial cable networks. SC A square-shaped snap-in connector. LC Small and a push-and-pull design with a latch mechanism. ST A bayonet-style twist lock and a long, cylindrical ferrule. Wire Wrap Wrapping a thin, stripped wire around a post or pin to establish a connection. RJ45 Connectors have eight pins and are used on the ends of twisted-pair cables.
Z end connector	Type of physical cable connector that is used for the ending point of the cable. Select one of the following options: BNC

Cable form (continued)

Field	Description
	The Bayonet Neill Concelman (BNC) connector is used for video and RF applications and found in the coaxial cable networks. SC A square-shaped snap-in connector. LC Small and a push-and-pull design with a latch mechanism. ST A bayonet-style twist lock and a long, cylindrical ferrule. Wire Wrap Wrapping a thin, stripped wire around a post or pin to establish a connection. RJ45 Connectors have eight pins and are used on the ends of twisted-pair cables.
Length	Total length of the cable.
Length unit	Unit of measure in which you're expressing the route length of the cable. Select one of the following options: --None-- No distance measurement is expressed for the connection route length. Inches Distance is expressed in inch. Feet Distance is expressed in feet. Miles Distance is expressed in miles. Meters Distance is expressed in meters. Centimeters Distance is expressed in centimeters. Kilometers Distance is expressed in kilometers.
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 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 Create manufacturer and vendor codes .
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: Buy The model was purchased. Leased The model was leased. Both The model was bought and leased.
Status	Production status of the model: Build The model must be built. In Production The model is in production.

Cable Model form (continued)

Field	Description
	Sold The model was sold. Retired The model has been retired.
Cost	Cost of a single unit of the model.
Expenditure type	Type of expenditure. Select one of the following options: Capex Capital expenditure is a one-time expenditure, where the value is realized over the years. For example, a photocopier. Opex Operational expenditure is an ongoing expenditure. For example, toners for the photocopier.
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	Unit of measure in which you're expressing dimensions. Select one of the following options: --None-- No distance measurement is expressed for the connection route length. Inches Distance is expressed in inch. Feet Distance is expressed in feet. Miles Distance is expressed in miles.
Sound Power (bels)	The rate at which the energy of the network asset is emitted in bels.
Length	Length of the network asset, expressed in the unit of measure that you designate in the Units field. - 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 Units field. - 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.

Cable Model form (continued)

Field	Description
Characteristic	Type of the cable. Select one from the following. Optical Transmits signals using light pulses. Electrical Transmits signals using electrical currents.
Width	Length of the network asset, expressed in the unit of measure that you designate in the Units field. - 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 Units field. - 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.
Height	Height of the network asset, expressed in the unit of measure that you designate in the Units field. - 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 Units field. - 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.
Depth	Depth of the network asset that is expressed in the unit of measure that you designate in the Units field. i Note: This field is applicable for the equipment models and equipment holder models.

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.

Capacity Definition form (continued)

Field	Value
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 - Additional fields (continued)

Field	Description
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. Max Maximum number of network assets. Occupied Total number of network assets that are occupied. Available Total number of network assets that are available. It's the difference between maximum and occupied assets. Max Contiguous Maximum contiguous network assets that are available.
Strategy	Methods for capacity calculation. Select one from the following. Static Value 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. Aggregate query count 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. Value field

Capacity Function form (continued)

Field	Value
	Use this strategy to check a particular value in a query table, which is present in the database. Script An advanced strategy approach, where a script is used for querying. Depending on the strategy that you're selected, additional fields appear in the form. To learn more about the additional fields, see Capacity function additional fields.
Measurement type	Unit of measurement depends on the type of capacity being calculated. Select one from the following. • Unit • Power • Weight • Slot Unit • Port Unit
Order	Order field value.

Related topics[Create capacity function](#)[Capacity management](#)**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	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.

Change Request related tabs (continued)

Tab	Description
	Note: • The Affected CIs 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. • 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. • 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.
Impacted Services/CIs	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.
Approvers	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.
Change Tasks	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 Planned start date and Planned end date in the task must fall within the planned start and end dates that are specified in the change request.
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.

Change Request related tabs (continued)

Tab	Description
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: • Available • Used • Reserved • Shared
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.
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	Stage of the life cycle that this network asset is in: Deploy

Common identification fields (continued)

Field	Description
	Network asset that is deployed in your network. Design Network asset that is being used for design purposes. End of life Network asset that is at the end of its useful life. Inventory Network asset that is an inventory item in use in the network. End of life Network asset that is missing and can't be located. Operational Network asset that is operational. Purchase Network asset that is in the purchase phase of its life.
Life Cycle Stage Status	Status of the network asset as it relates to the life cycle stage that it is in: In Maintenance Network asset that is currently in maintenance. In Use Network asset that is currently in use. Pending Retirement Network asset that is currently in maintenance.
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 product/tmt-telecom-network-inventory/task/define-tni-locations.dita.
Managed by	Name of the person who manages this network asset. Select the search icon () and select a user from the listing.
Network domain	Domain of ownership and responsibility for this network asset or connection. Select one of the following options: Mobility Network asset that is associated with the mobility equipment domain. Telco Network asset that is associated with the telco equipment domain. Core Network asset that is associated with the core equipment domain.

Common identification fields (continued)

Field	Description
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.
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, <code>Duty tech is Rahul Dev.</code>
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.
Manufacturer	Name of the network asset's manufacturer. Select the search icon () and select a manufacturer code. To learn more, see Create manufacturer and vendor codes .
Model number	Manufacturer's model number for this network asset.
Orientation	Physical orientation of the slots in this network asset: --None-- No specific physical slot orientation. Horizontal Horizontal slot orientation. Vertical Vertical slot orientation.

Field	Description
Network domain	Domain of ownership and responsibility for this network asset or connection. Select one of the following options: Mobility Represents wireless devices and connections. Telco Represent the edge or access networks. Core Represents the core network infrastructure.
Operation notes	Free-form operation note text for this network asset. For example, Check diesel fuel for generator.
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.
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: • Network Interface • Physical connection • Logical connection • Managed network function • Equipment • Topology
Element	Element of the element type.
Sequence	Number of sequences.
Route	Number of routes.
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	Stage of the life cycle that this network asset is in: Deploy

Create new equipment (continued)

Fields	Description
	The network asset is deployed in your network. Design The network asset is being used for design purposes. End of life The network asset is at the end of its useful life. Inventory The network asset is an inventory item in use in the network. End of life The network asset is missing and can't be located. Operational The network asset is operational. Purchase The network asset is in the purchase phase of its life.
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.
Network domain	Domain of ownership and responsibility for this network asset or connection. Select one of the following options: Mobility The network asset is associated with the mobility equipment domain. Telco The network asset is associated with the telco equipment domain. Core The network asset is associated with the core equipment domain.
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	Status of the network asset as it relates to the life cycle stage that it is in:

Create new equipment (continued)

Fields	Description
	In Maintenance The network asset is currently in maintenance. In Use The network asset is currently in use. Pending Retirement The network asset is currently in maintenance.
Support group	Group that supports the network inventory.
Network site	Site of this equipment
Configuration	Under optional templates section, select a template for the multi slots. Note: This field is displayed only for multi slots template.

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. Note: 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.

Create Logical Connection form (continued)

Fields	Description
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.
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](#)

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 Change request and change task forms .

Change task form of change models (continued)

Change model	Description
Add Card	Change model to create a change request for adding an interface card. To learn more, see the add card form in Change request and change task forms .
Create inventory equipment	Change model to create a change request for creating inventory equipment. To learn more, see the create equipment form in Change request and change task forms. Note: To see the compute and create logical connection form, see Compute and Create Logical Connection form.
Create logical connection	Change model to create a change request for creating a logical connection. To learn more, see the Change request and change task forms. Note: • To update or revise a logical connection CI, see Revise a configuration item. • To modify logical connection endpoints, see Create a change request by using the modify logical connection endpoints model.
Create physical connection	Change model to create a change request for creating a physical connection. To learn more, see Change request and change task forms. Note: • To update or revise a physical connection CI, see Revise a configuration item. • To modify physical connection endpoints, see Create a change request by using modify physical connection.
Create Rack/Cabinet	Change model to create a change request for creating and visualizing a rack or cabinet. To learn more, see Change request and change task forms .

Change task form of change models (continued)

Change model	Description
	Note: - For creating a rack or cabinet, ensure that the following exist: - A model in equipment holder model with Model categories as Equipment Rack. - A relationship in network model relationships with the Relationship type as Rack to Slot. - A template in the inventory template where the inventory model has a rack model. A rack is created based on the selected rack model in the template, and the rack slots are created based on the rack template. - To add equipment to a rack, see Create a change request from Network Inventory Workspace.
Add equipment to Rack/cabinet	Change model to add a new or existing equipment to a rack. To learn more, see Change request and change task forms .
Remove Equipment or Shelf from Rack/Cabinet	Change model to remove an equipment or a shelf from a rack or cabinet slot. To learn more, see Change request and change task forms. Note: Shelf cannot be removed if it is related to any equipment.
IP address allocation	Change model to create a change request for IP address allocation. To learn more, see the IP address allocation form in Change request and change task forms .
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 Change request and change task forms .

GPON Broadband - Record Producer form

Fields	Description
Customer Site	Network site.
ONT equipment template	Equipment template.

GPON Broadband - Record Producer form (continued)

Fields	Description
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.

Record Producer form - Design Assign Link Aggregation Group

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. Note: The list is dependent on the site A that you've selected.
Interface A	Text field where you can select a source interface. Note: - The list is dependent on the equipment that you selected. - The list doesn't display the interfaces that are marked as virtual.
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	Text field where you can select a destination interface.

Record Producer form - Design Assign Link Aggregation Group (continued)

Fields	Description
	Note: The interface Z list doesn't display the interfaces that are marked as virtual.

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 Other 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: • High • Moderate • Low
Impact	Measure of the effect of a change on the business processes.
Short description	Summary of the change.
Description	Description of the change in detail.
Model	Change model that is associated with the Telecommunications Network Inventory change request. After selecting the change model tile, the associated model appears in this field. You

Change Request form (continued)

Field	Description
	can also manually select one of the following options: Add Interface Card Change model that is used to add an interface card in an equipment slot. Create Inventory Equipment Change model that is used to add equipment when using an inventory template in a site or equipment holder. Create Logical Connection Change model that is used to create a logical connection between two network interfaces. Create Physical Connection Change model that is used to create a physical connection between two network interfaces. Emergency Change model that is used for the Telecom Network Inventory emergency changes. GPON Broadband Service Change model that is used to fulfill a Gigabyte Passive Optical Network (GPON) broadband order request. Normal Change model that is used for the Telecommunications Network Inventory normal changes. Note: These change models are available in the Changes > All > New window.
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.

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: • Successful • Unsuccessful with issues • Unsuccessful
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: Revise CI 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 Configuration item field is automatically updated with the cloned CI name having suffix as revised. All the changes made to the CI are now applied to the cloned CI. Also, both original and duplicated CIs can be found under Affected CIs tab. To customize the cloning process, see #unique_87. Add cable This type of request definition enables you to create a cable record. Add Card

Change Task form (continued)

Fields	Description
	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 Telecommunications design and assign. Create equipment 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. Create Physical Connection and Create Logical Connection 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. 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 create between the two sites. For a logical connection, this internal code creates a CI record, and additional path elements. Logical connection - Path compute This type of request definition has a set of site and equipment fields for start and end locations. For initiation of the path compute of the logical connection, you must select logical connection model. To learn more, see Compute and Create Logical Connection form. Modify members of a topology

Change Task form (continued)

Fields	Description
	This type of request definition enables you to create a cable record. To learn more about modifying a network topology record, see Modify a network topology record using design and assign. IP Address Allocation 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 Change request and change task forms. Phone Number Allocation 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 Change request and change task forms.
Short description	Short description for this order task.
Description	Description of this order task.
State	State of this change task. Select one of the following options: Pending Task is waiting for an action from the user. Open No action is taken on this task yet. In Progress Task processing is in progress. Closed Change task is complete. Canceled Change task has been canceled.
Assignment group	Name of the group that is responsible for this task. Select the search icon () to select a group from the list.

Change Task form (continued)

Fields	Description
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 Closed .
Delete	Option to delete this order task.

Create inventory equipment or Create Rack/Cabinet - Task Attributes

Fields	Description
Inventory template	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. Note: - Depending on the selected inventory template, a list of the optional templates appears at the bottom of the form. - When you select an optional template, the current template values are overwritten. - This field is applicable only for Create inventory equipment.
Equipment holder	Name of the telco equipment holder. Select a rack or a cabinet where the equipment can be installed. Note: - The Telco equipment holder field lists all racks and cabinets. - This field is applicable only for Create inventory equipment.
Network site	Name of the network site in which the process is instantiating the equipment.
Rack/Cabinet template	Template name of the rack template where you want to add all the slots to.

Create inventory equipment or Create Rack/Cabinet - Task Attributes (continued)

Fields	Description
	Note: - Based on the selected Rack template, Stockroom location, and Asset the slots, network sites, and related network sites are added. - This field is applicable only for Create rack.
Stockroom Location	Name of the stockroom location where the asset is located. To learn more, see Telecommunications Network Inventory integration with Hardware Asset Management.
Asset	Name of the asset that is associated with this record. To learn more, see Telecommunications Network Inventory integration with Hardware Asset Management.

Add card form - Task Attributes

Field	Description
Site	Site where you want to install this card.
Equipment	Equipment to install this card in.
Slot	Slot to insert this card in.
Template	Select a template for this card.
Stockroom location	Name of the stockroom location where the asset is located. To learn more, see Telecommunications Network Inventory integration with Hardware Asset Management.
Asset	Name of the asset that is associated with this record. To learn more, see Telecommunications Network Inventory integration with Hardware Asset Management.
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.

Add card form - Task Attributes (continued)

Field	Description
	Note: The list only shows the list of slots and sub-slots that doesn't have any card in it.

IP Address Allocation form - Task Attributes

Field	Description
Operation Type	Type of operation. Select one of the following options: • Create IP network subnet: Creates a network subnet with a CIDR value. Note: For the IP network subnet creation, the Create IP Subnetwork flow action is initiated. To learn more, see Create IP subnetwork function. • Convert CIDR to IP addresses: Converts a single or multiple CIDRs to IP addresses and stores them in an IP address allocation. Note: For the CIDR-to-IP address conversion, the CIDR-to-IP range flow action is initiated. To learn more, see CIDR to IP range function.
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	Network subnet that you searched for and selected to convert its CIDR-to-IP addresses. Note: This field is used only for converting the CIDR-to-IP address.

Manage Phone Number - Task Attributes

Fields	Description
Action	Action that you can select: • Allocate: Allocates the numbers from a block • De-allocate: De-allocates the numbers. The status of the numbers is changed to Quarantine. Note: 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. • Ported-in: Includes the numbers that are moved from another operator. The numbers are stored in a telephone number allocation of telephone numbers only. Note: 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. • Create: 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.
Service	Service for these numbers. The selected service gets assigned to the numbers. Note: Ensure that you've created a service for this phone number. To learn more, see Create xNF and xNF instances.
Quantity	Total number of required phone numbers. Note: This field disappears for a deallocated action.
Phone number allocation	Available number allocations that are based on the provided information that you enter. You can select a phone number allocation for your line number.

Manage Phone Number - Task Attributes (continued)

Fields	Description
Line number	Enter your required line number in xxxx-xxxx or xxx-xxx or xxx, xxx-xxx format. Note: 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.

Design & Assign Topology form - Task Attributes

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: • Logical Connection • Physical connection
Topology connections	Connections that are associated with the topology. You can select multiple connection records.

Logical/Physical Connection form - Task Attributes/ Modify physical/logical connection - Task attributes

Fields	Description
Logical Connection Model	Logical connection model where this logical connection is configured. Note: The topology connection models are not listed if you are creating a logical connection in a change request.

Logical/Physical Connection form - Task Attributes/ Modify physical/logical connection - Task attributes (continued)

Fields	Description
Physical Connection Model	Physical connection model where this physical connection is configured.
Logical Connection Template	List of all templates based on the selected logical connection model.
Bandwidth AtoZ	Total bandwidth capacity from Site A to Site Z for this network connection.
Bandwidth ZtoA	Total bandwidth capacity from Site A to Site Z for this network connection.
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	Network interface on which the new logical interface is representing the Port A of the connection. Note: 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 Configuration 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.
Parent Port Z	Network interface on which new logical interface is representing the Port Z of the connection. Note: 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 Configuration section logical or physical connection. The logical interface indicates the port name and number of child ports plus one of the selected ports.

Logical/Physical Connection form - Task Attributes/ Modify physical/logical connection - Task attributes (continued)

Fields	Description
Move Overlying Connections	Option to move all dependant connections of modified connection from the current Interface to the new interface. You can also update the logical connections manually by deselecting this check box. Note: This field is applicable only for the Modify physical connection endpoints model.

Logical/ Physical connection modification request form

Fields	Description
A end Site	Starting network (Site A field) site where this selected logical or physical connection is configured. Note: This field is auto populated based on the selected site or equipment or interface or connection.
Z end Site	Ending network site (Site Z field) where this selected logical or physical connection is configured. Note: This field is auto populated based on the selected site or equipment or interface or connection.
A end Equipment	Starting network (Site A field) equipment where this logical or physical connection is configured. Note: This field is auto populated based on the selected site or equipment or interface or connection.
Z end Equipment	Ending network (Site Z field) equipment where this logical or physical connection is configured.

Logical/ Physical connection modification request form (continued)

Fields	Description
	Note: This field is auto populated based on the selected site or equipment or interface or connection.
A end interface	Starting interface (Site A field) point where this logical or physical connection is configured. Note: This field is auto populated based on the selected site or equipment or interface or connection.
Z end interface	Ending interface (Site Z field) point where this logical or physical connection is configured. Note: This field is auto populated based on the selected site or equipment or interface or connection.
Logical Connection	Select a logical connection from the list that needs modification. Note: - The list includes both logical connection and their revisions. On selecting the revision of a logical connection, the Create Revision check box disappears. - This field is auto populated based on the selected site or equipment or interface.
Physical Connection	Select a physical connection that needs modification from the list.

Logical/ Physical connection modification request form (continued)

Fields	Description
	Note: - The list includes both physical and their revisions. On selecting the revision of a physical connection, the Create Revision check box disappears. - This field is applicable only for physical connection modification form. - This field is auto populated based on the selected site or equipment or interface.
Create Revision	Option to enable or disable revision process. Note: - On selecting this check box, the following occurs: - The revision process is initiated. To learn more, see Revision, operationalization, and decommission of a Configuration Item. - Two change tasks for modification and revision are created with the open and closed status respectively. - 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 Operationalize a configuration item. - In the process of revision of physical connection modification, the logical connections associated with physical connection ports are updated during the operationalization process.

Add Equipment to Rack/Cabinet or Remove Equipment/Shelf from Rack/Cabinet- Task Attributes

Fields	Description
Network Site	Network site that contains the equipment or shelf that you want to add or remove.

Add Equipment to Rack/Cabinet or Remove Equipment/Shelf from Rack/Cabinet- Task Attributes (continued)

Fields	Description
	Note: - This field is applicable only for add equipment to a rack and remove equipment or shelf from a rack. - The list only displays the sites that have a rack in it.
Rack/Cabinet	Rack name for the equipment or shelf you want to add or remove. Note: This field is applicable only for adding equipment to a rack or a cabinet and removing equipment from a rack or cabinet.
Equipment / Shelf	Equipment or shelf to add or remove from the selected rack or cabinet. Note: This field is applicable only for adding equipment to a rack or cabinet and removing equipment or shelf from a rack or cabinet.
Available RUs	List of available rack units to place the selected equipment. Note: - The list is also based on the selected equipment's RUs. - This field is displayed while editing and adding equipment to a rack.
Front View	Front view for the selected rack or cabinet. By default, this is selected as Yes. Note: - Selecting No the equipment is placed in rear view. - Equipment can be mounted in a rack unit, taking up either the entire front unit or half of it.

Add Equipment to Rack/Cabinet or Remove Equipment/Shelf from Rack/Cabinet- Task Attributes (continued)

Fields	Description
Exclusively Used	By default, it is selected as Yes. Select No if you want to use the rack unit for multiple pieces of equipment. Also, on not selecting this field, you can place equipments in both the front and rear sides of the rack. Note: • On selecting yes, the selected equipment occupies both front and rear of rack units. • You can place multiple pieces of equipment only on a Shelf equipment holder type. To learn more, see product/tmt-telecom-network-inventory/task/define-tni-equipment-holders.dita.
Rack Slot	List of rack units that are available for the selected equipment to be mounted.

Add Equipment to Rack/Cabinet or Remove Equipment/Shelf from Rack/Cabinet- Task Attributes (continued)

Fields	Description
	Note: - The rack units for the selected equipment are automatically populated based on the Height (U) field of the model. For instance, if the field indicates that the selected equipment requires two rack units, then even though only one rack unit, RU-10, is explicitly selected, the system will automatically reserve both RU-10 and RU-11 to accommodate the equipment. - Make sure to select continuous rack units for an equipment. - If the Height(U) field is left empty, the rack slots specified here are used instead. - If a rack is linked to multiple network model relationships, the total number of rack slots allocated to the rack is determined by adding up the Count values provided for each model relationship. - To modify the number of rack slots, adjust the associated Count value and manage the excess slots accordingly. Rack slot creation and removal are unrestricted when the rack slot count is undefined.

Related topics

[Instantiating your network inventory by using design and assign](#)

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 Table 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.

Scheduled Entity Generation form (continued)

Field	Description
Run	Time interval to use for running the scheduled job. To learn more, see Automatically generate something from a template  .
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 Time 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 Condition .
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 [Create a change request by using the GPON Broadband Service change model](#).

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

[Create a change request by using the GPON Broadband Service change model](#)

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 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: --None-- No specific physical slot orientation. Horizontal Horizontal slot orientation. Vertical Vertical slot orientation.
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	Stage of the life cycle that this network asset is in: Deploy Network asset that is deployed in your network. Design Network asset that is being used for design purposes. End of life Network asset that is at the end of its useful life. Inventory Network asset that is an inventory item in use in the network. End of life Network asset that is missing and can't be located.

Equipment Holder form - General (continued)

Field	Description
	Operational Network asset that is operational. Purchase Network asset that is in the purchase phase of its life.
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	Status of the network asset as it relates to the life cycle stage that it is in: In Maintenance Network asset that is currently in maintenance. In Use Network asset that is currently in use. Pending Retirement Network asset that is currently in maintenance.
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 Create manufacturer and vendor codes .
Model number	Manufacturer's model number for this network asset.
Orientation	Physical orientation of the slots in this network asset: --None-- No specific physical slot orientation. Horizontal Horizontal slot orientation. Vertical Vertical slot orientation.
Unit position	Unit position of this network asset.

Equipment Holder form - Configuration (continued)

Field	Description
Network Domain	Domain of ownership and responsibility for this network asset or connection. Select one of the following options: Mobility Network asset that is associated with the mobility equipment domain. Telco Network asset that is associated with the Telco equipment domain. Core Network asset that is associated with the core equipment domain.
Units occupied	Total number of equipment holder units, both occupied and available, in this network asset.
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	Maximum power allotted to the asset. Note: - To maintain the power capacity of the rack/cabinet, it's essential to incorporate a minimum value of 10 Watts. - By default, the value is converted to Kilowatts (KW), in the capacity metric and following is the conversion formula - Watts (W) - $\text{<power-in-watts> / 1000}$ - Megawatts (MW) - $1000 * \text{<power-in-mega-watts>}$ - Horsepower (HP) - $0.746 * \text{<power-in-horsepower>}$
Allotted Electric Power unit	Units in which the allotted electric power of the asset is measured. Select any one of the following units. - Watts (W) - Kilowatts (KW) - Megawatts (MW) - Horsepower (HP)
Unit of Measure System	Measurement type based on which the Max weight capacity unit is fetched. Select any one of the following measurement types.

Equipment Holder form - Configuration (continued)

Field	Description
	• Metric • US Imperial
Max weight capacity	Maximum capacity of assets. Note: By default, the value is converted to Pounds (lbs), in the capacity metric and following is the conversion formula • Ounces: <weight-in-ounces> / 16 • Grams: <weight-in-grams> / 453.59 • Kilograms: 2.204 * <weight-in-kilograms>
Max weight capacity unit	Unit in which weight of the asset is measured. Select any one of the following. • Grams (g) Note: This field is only accessible when the Metric system is used for unit of measurement. • Kilograms (kg) Note: This field is only accessible when the Metric system is used for unit of measurement. • Ounces (oz) Note: This field is only accessible when the US Imperial system is used for unit of measurement. • Pounds (lbs) Note: This field is only accessible when the US Imperial system is used for unit of measurement.

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 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

Equipment Holder extended classes (continued)

Class Name	Table Name	Extends from	Description
			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 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

Equipment Holder extended classes (continued)

Class Name	Table Name	Extends from	Description
			for inserting and connecting the component to the main system or device.
Subslot	cmdb_ci_container_subslot	cmdb_ci_equipment_holder	In our context, a slot that is present on a Card and can accommodate child cards is considered a sub-slot.

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
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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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	A residential gateway is a device that combines the functionality of a modem, router, and often other networking 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	network_router	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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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 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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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 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	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.

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
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 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_system_remote	cmdb_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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			distributing wireless signals to remote areas or buildings, ensuring reliable wireless connectivity in those locations.
Distributed Antenna System Controller	cmdb_ci_distributed_antenna_system_controller	cmdb_ci_radio_control	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 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	A baseband unit (BBU) is a key component in a wireless communication system that processes and manages the digital baseband signals

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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 TM) 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, 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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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 transmitting radio signals in a wireless communication system.
Small Cell Radio Node	cmdb_ci_small_cell_radio_node	cmdb_ci_radio_transmission_hardware	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.

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
Remote Radio Unit	cmdb_ci_remote_radio	cmdb_ci_radio_transmission	A remote radio unit, 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 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	An antenna controller 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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			coverage, typically in applications such as satellite communications, radar systems, or wireless networks.
Antenna	cmdb_ci_antenna	cmdb_ci_radio_transmission_antenna	An antenna 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_ni_telco_equipment	An ONT, or Optical Network Terminal, 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.
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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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 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_equipment	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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			functionalities within a telephony network or VoIP (Voice over Internet Protocol) system.
Channel Bank	cmdb_ci_channel_bank	cmdb_ci_ni_telco_equipment	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_equipment	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 between disparate network technologies and extending the reach of network connections.
Digital Cross Connect System	cmdb_ci_digital_cross_connect_system	cmdb_ci_ni_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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			complex network environments.
Echo Cancellation System	cmdb_ci_echo_cancellation_system	cmdb_ci_ni_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_ni_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. 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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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.
Mobility Management Entity	cmdb_ci_mobility_management_entity	cmdb_ci_ni_telco_equipment	A mobility management entity (MME) is a key component in LTE TM (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_ni_telco_equipment	A mobile switching center (MSC) is a core component in

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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	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 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	NID (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.

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			and monitoring the connection.
Network Interface Unit	cmdb_ci_network_interface	cmdb_ci_ni_telco_equipment	NIU (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	PBX (Private Branch Exchange) is a telephony system used within an organization that allows for internal communication between different extensions and 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	STP (Signal Transfer Point) is a telecommunications network element that facilitates the routing and transfer of signaling messages between different networks, enabling

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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	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 coordination of network activities.
Voicemail Equipment	cmdb_ci_voicemail_equipment	cmdb_ci_ni_telco_equipment	Voice mail 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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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 maintenance, and flexibility in routing and patching fiber optic connections.
Fiber Serving Terminal	cmdb_ci_fiber_serving_terminal	cmdb_ci_communication_distribution_panel	A fiber serving 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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			to the customer's location.
PFP	cmdb_ci_primary_flexibility_point	cmdb_ci_communication_distribution_point	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_communication_distribution_area	A serving area panel interface (SAI) is the boundary or demarcation point where the telecommunications service provider's network connects to the customer's 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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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_distribution_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_distribution_panel	An RJ45 patch panel is a hardware component used to 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_communication_distribution_panel	A V35 patch panel is a hardware component used in telecommunications and networking to facilitate the termination and management of V.35 cables. It

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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_telco_equipment	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.
Multiplexer	cmdb_ci_multiplexer	cmdb_ci_ni_telco_equipment	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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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 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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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 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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			efficient distribution of optical signals in a network.
Optical Carrier Transport Node	cmdb_ci_optical_carrier_transport_node	cmdb_ci_optical_carrier_transport_node	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 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_shelf	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

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
			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	cmdb_ci_telco_equipment	A network node in a GSM (Global System for Mobile 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.

Equipment extended classes (continued)

Class Name	Table Name	Extends generic CI class	Description
Logical Composite	cmdb_ci_logical_composite	A 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](#)

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. Note: 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. Note: 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. Note: 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. Note: The list of available logical connection model changes when the Logical connection model is selected from the Model relationship field.
Allowed physical connection model	Filter that captures all the supported models for the physical connection. Note: The list of available physical connection model changes when the Logical connection model is selected from the Model relationship field.

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.

Interface Card form (continued)

Field	Description
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](#)

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	List of model categories that maps to a CI class. The model categories are part of the Product Catalog application. Note: - The instance is created in the mapped CI class of the selected model category. - To achieve the Telecommunications Network Inventory functionalities, choose one of the following options: - Equipment rack - Cabinet - Slot - Subslot - On selecting the Equipment rack as the category, the RU naming pattern and Post Type fields appear under the information section.
Asset tracking strategy	Process to track the model. Select one of the following options:

General section - Inventory Model form (continued)

Field	Description
	• Leave to Category: The model is transparent and the category defines the asset class. • Create Consumable Asset: The model forces the asset class to be consumable, regardless of what the category defines as the asset class. • Don't create assets: The model blocks the asset instantiation, regardless of what the category defines as the asset class.
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	Acquisition method for the model: Buy The model was purchased. Leased The model was leased. Both The model was bought and leased.
Cost	Cost of a single unit of the model.
Depreciation	Depreciation schedule of the equipment model.
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	Production status of the model: Build The model must be built. In Production The model is in production. Sold The model was sold. Retired The model has been retired.

General section - Inventory Model form (continued)

Field	Description
Expenditure type	Type of expenditure. Select one of the following options: Capex Capital expenditure is a one-time expenditure, where the value is realized over the years. For example, a photocopier. Opex Operational expenditure is an ongoing expenditure. For example, toners for the photocopier.
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)	Number of rack units required for the model. Note: This field is only applicable to the equipment models.
Power	Electrical power, in watts.
Sound power	Noise measurement, in bels (1 bel=10 decibels).
Connection type	Type of connection: Cable Multi-colored cable connection. Connection Standard connection that you establish with a piece of equipment. For example, the connection between a monitor and a computer. Strand Multi-strand fiber connection. Wireless 3G, 4G, or 5G wireless connection.

Information section - Inventory Model form (continued)

Field	Description
Power unit	Units in which the power of the asset is measured. Select any one of the following unit. • Watts (W) • Kilowatts (KW) • Megawatts (MW) • Horsepower (HP)
Rated Power	Maximum power allotted to the asset.
Unit of Measurement System	Measurement type based on which the Max weight capacity unit is fetched. Select any one of the following measurement type. • Metric • US Imperial
Weight unit	Unit in which weight of the asset is measured. Select any one of the following. • Grams (g) Note: This field is only accessible when the Metric system is used for unit of measurement. • Kilograms (kg) Note: This field is only accessible when the Metric system is used for unit of measurement. • Ounces (oz) Note: This field is only accessible when the US Imperial system is used for unit of measurement. • Pounds (lbs) Note: This field is only accessible when the US Imperial system is used for unit of measurement.
Weight	Maximum weight of the rack or cabinet or slot or subslot.
Slot naming pattern	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 Naming convention for associated templates.

Information section - Inventory Model form (continued)

Field	Description
	Although the names are generated automatically, you can manually edit the names of the templates. Note: 1. This field is applicable for the equipment models and the interface card models. 2. The generated name remains empty if the following occurs: ○ The variable names are misspelled. ○ You use the parent_slot or equipment_slot information for the interfaces or slots that are in the equipment. 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. This field is applicable for the equipment models and the interface card models.
Interface naming pattern	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 Naming convention for associated templates. Although the names are generated automatically, you can manually edit the names of the templates. Note: • This field is available only for Equipment models and Interface card models. • The generated name remains empty if the following occurs: ○ The variable names are misspelled. ○ You use the parent_slot or equipment_slot information for the interfaces or slots that are in the equipment. • 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. This field is available only for the equipment models and interface card models.
Dimensions unit	Unit in which the physical dimensions of the asset are measured. Select one from the following: • Inches (in) • Feet (ft) • Miles (mi)

Information section - Inventory Model form (continued)

Field	Description
	Note: This field is applicable for the equipment models, the equipment holder models, and the physical connection models.
Height	Height of the network asset, expressed in the unit of measure that you designate in the Units field. - 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 Units field. - 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. Note: This field is applicable for the equipment models and the equipment holder models.
Width	Length of the network asset, expressed in the unit of measure that you designate in the Units field. - 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 Units field. - 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. Note: This field is applicable for the equipment models and the equipment holder models.
Depth	Depth of the network asset that is expressed in the unit of measure that you designate in the Units field. Note: This field is applicable for the equipment models and equipment holder models.
Slot start number	The first number to assign to the slots in this model. The slot names are generated automatically depending on the starting number. Note: - The entered value doesn't affect the unit position. The unit position always starts from 1 and is used in the slot naming pattern. - This field is applicable for the equipment models and the interface card models.

Information section - Inventory Model form (continued)

Field	Description
Interface start number	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. Note: - 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. - This field is applicable for Equipment models and Interface card models.
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. Note: This field is applicable for all types of models except the physical connection models, the logical connection models, and the network interface models.
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: - BNC (Bayonet Neill-Concelman) - Type of miniature radio frequency connector used for coaxial cables. - SC (Square Connector)- Square, common type of Fiber optic connector used as push-pull latch, to align the optical fibres for efficient light transmission. - LC (Lucent Connector)- Another version of the SC connector designed for high-density applications. - ST (Straight Trip)- a type of fiber optic connector commonly used for connecting optical fibers in telecommunications and data communication applications. - Wire Wrap -A technique for creating electrical connections on circuit boards. - RJ45 - Also known as 8P8C (8 Position 8 Contact) connector, is widely used type of connector for wired Ethernet networks. Note: This field is only applicable to Network interface models.
Slots occupied	Number of slots that are occupied in the card. Note: This field is only applicable to the interface card models.

Information section - Inventory Model form (continued)

Field	Description
Length	Length of the network asset, expressed in the unit of measure that you designate in the Units field. - 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 Units field. - 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.
Enable Interconnect	Option that you can select so that all the interfaces on the equipment are interconnected to each other. Note: - The default algorithm for the interconnection is $(N/2) + 1$, 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. - This field is only applicable to the equipment models. All the created interconnections are listed as a configuration item (CI) relationship.
Orientation	Physical orientation of the slots in this network asset: --None-- No specific physical slot orientation. Horizontal Horizontal slot orientation. Vertical Vertical slot orientation. Note: This field is only applicable to the equipment holder models.
Virtual	Option to verify whether the network interface is physical or virtual. Note: If you select Virtual, then the Connector Type field doesn't appear. This field is applicable only for Network interface models.
Max physical connection support	Maximum connections that can be connected to this interface model. By default, it's considered as 1.

Information section - Inventory Model form (continued)

Field	Description
	Note: This field is only applicable to the network interface models.
Port bandwidth	Measured bandwidth for the ports on this network interface. Select the search icon () and select a bandwidth. Note: This field is only applicable to the network interface models.
Directionality	Type of the connections between the nodes of a network. Select one of the following options: • Tx- TX stands for Transmit. It refers to the direction in which data is being sent from a device. • 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). • Tx/Rx • Bus- Bus directionality refers to the flow of data on a communication channel. • Broadcast- Broadcast directionality refers to the nature of signal transmission and reception in a broadcast system. Note: This field is only applicable to the network interface models.
Interface type	Type of port on the network interface. Select one of the following options: • Ethernet- Physical connection and speed capabilities of a device for connecting to a network. It involves cable type, speed, and standard. • 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. • Serial- A serial interface transmits data one bit at a time, in contrast to a parallel interface that sends multiple bits simultaneously. Note: This field is only applicable to the network interface models.
Behavior	Option to choose the mode of connection, multiplexing, or data. However, in the multiplexing mode, channels are automatically created. Select one of the following options: • Multiplexing trail • Multiplexing path

Information section - Inventory Model form (continued)

Field	Description
	• Data trail • Data path Note: This field is only applicable to the logical connection models.
Routing behavior	Routing behavior attribute that controls routing enforcement. • Select No route if no route is required for this connection type, or • Select Parallel sequential to enable multi-route connection resources that are used to route a connection. Here, path elements are required for the routed connections. Note: This field is only applicable to the logical connection models.
Logical Interface Model	List of all the logical interface models for the selected logical connection model. Note: 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.
RU naming pattern	Naming pattern for the rack templates. Note: • By default the naming pattern is "RU-"+position. • This field is visible only for Equipment rack model category.
Post type	Select any one of the following type • 2 Post: Select if your rack has two vertical supports. • 4 Post: Select if your rack has four vertical supports. Note: This field is applicable only if the selected Model categories is Equipment rack.

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. Note: 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. Note: This field is applicable only to Equipment models.
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. Note: 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 E.164 phone number field configuration .
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	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.
Status	Status of the telephone number: • New: Indicates that this number is new. • Reserved: Indicates that the number is reserved for a service but isn't assigned yet. • Unassigned: Indicates that the number isn't assigned to anyone yet or the number has been in a quarantined status for a few days. • Assigned: Indicates that the number is assigned. • Quarantined: Indicates that the number hasn't been in use for a long time. Depending on the network operator, this number changes to a quarantined status after a few days. After a while, the status changes to unassigned.

Inventory Number Allocation fields (continued)

Fields	Description
	• Ported in: Indicates that the number used to belong to some other network and has now moved to this network. • Ported out: Indicates that the number has moved out to some other network.
Number category	Categories: • Owned: Indicates that these numbers are owned by your organization. • Third party: Indicates that these numbers are provided by a third-party organization. • Ported in: Indicates that these numbers are moved from another network.
Carrier	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.
Parent Block	Parent block if there's any.
Model ID	Model ID of the asset.
Number	Name of the parent inventory that you're associating the child inventory with. The ServiceNow AI Platform automatically assigns this name. Note: This field is available only for the number elements of the inventory numbers.
Element type	Type of network inventory that you want to associate your VLAN or LAG number with. Select one of the following options: • Network Interface • Physical Connection • Logical Connection Note: This field is available only for the number elements of the inventory numbers.
Element	Network asset under an element type that you want to configure with.

Inventory Number Allocation fields (continued)

Fields	Description
	Note: This field is available only for the number elements of the inventory numbers.
Sequence	Sequence number of the network connection. Note: 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 Type field to select one from the list.
Number	Lowest value of the network inventory as specified by the technology standards.

Inventory Numbers form (continued)

Field	Description
End Number	Highest value of the network inventory.
Type	Type of inventory that this network asset belongs to. Select one of the following options: VLAN Range Range of VLAN numbers in which the network asset belongs. VLAN Subrange Subrange of VLAN numbers in which the network asset belongs. VLAN VLAN number for the network asset. LAG Range Range of LAG numbers in which the network asset belongs. LAG LAG number for the network asset.
Parent	Parent inventory number for the network asset: • If it's a parent item, leave the field blank. • If it's a child inventory number, the ServiceNow AI Platform automatically assigns the value.
Short description	Short description for the network inventory number.

Related topics

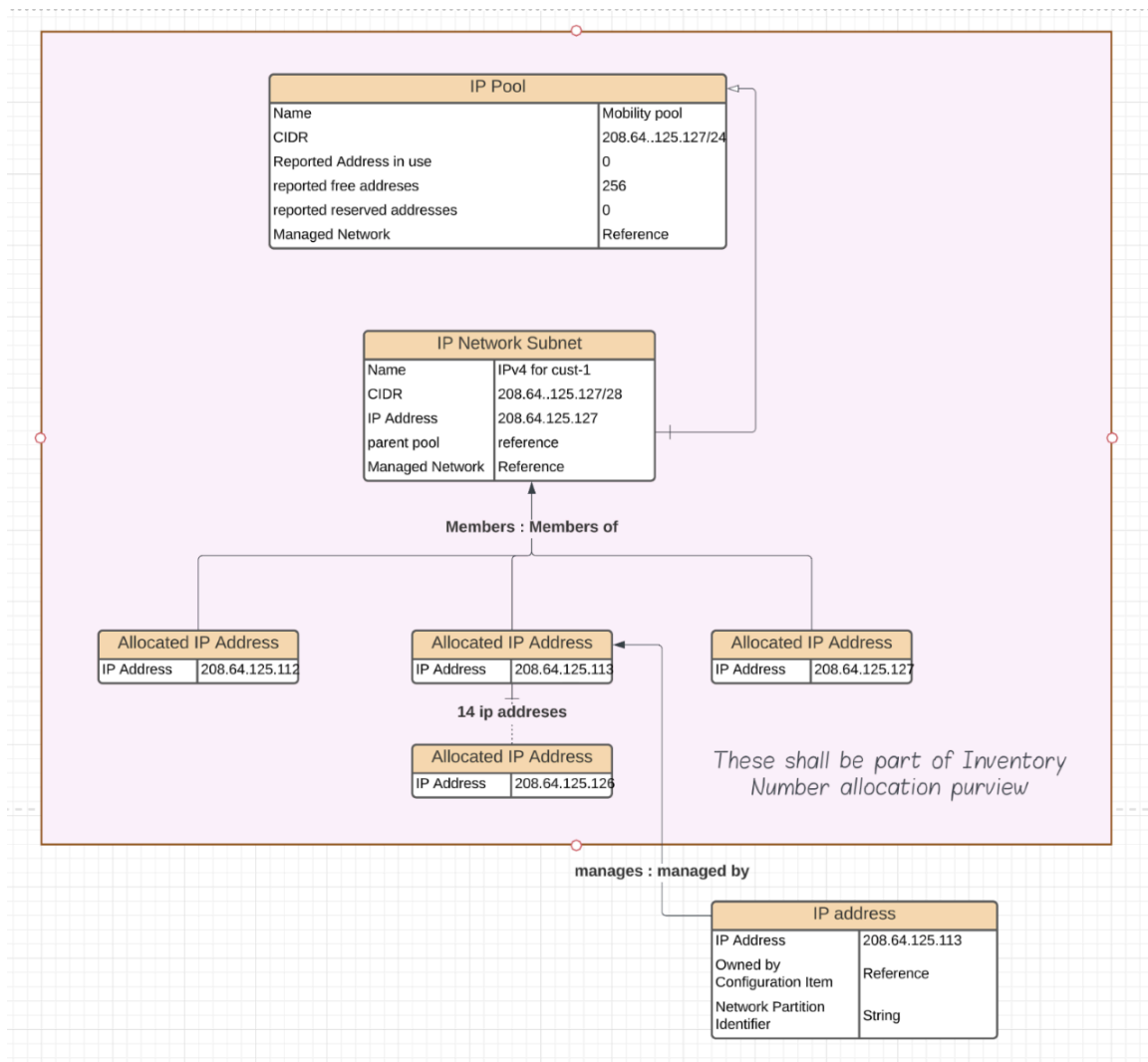
[Define your inventory numbering](#)

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](#)

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: • Country • State/ Region / Province • City • Building / Campus • Site • Ocean • Orbit
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 product/tmt-telecom-network-inventory/task/define-tni-sites.dita .
Site Z	Destination network site for this connection. Select the search icon () and select a network site. To learn more, see product/tmt-telecom-network-inventory/task/define-tni-sites.dita .

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 Define the network interface details .
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: • None • 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. • 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. • 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.

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: • ROOT or LEAF endpoint role, as defined by the Metro Ethernet Forum (MEF). • --None-- for no assigned endpoint role.
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 Define the network interface details.
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 Unit field.
Unit	Unit of measure in which you're expressing the route length of the connection in the Distance field. Select one of the following options: --None-- No distance measurement expressed for the connection route length. Miles Distance is expressed in miles. Kilometers Distance is expressed in kilometers. Feet Distance is expressed in feet. Meters 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 logical connection details](#)

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.

Managed Network form (continued)

Fields	Description
Fully qualified domain name	Domain name that specifies its exact location in the tree hierarchy of the Domain Name System (DNS).
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. Note: 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.

Managed Network form (continued)

Fields	Description
Attestation status	Status of the attestation.
Install status	Status of the installation.
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. Note: 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

Change Request form (continued)

Field	Description
	so that you can see who requested a particular change.
Service	Business service that you want to make available for the change request.
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	Risk level for the change. Select one of the following options: • High • Moderate • Low
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	Change model that is associated with the Telecom Network Inventory change request. After selecting the change model tile, the associated model appears in this field. You can also manually select one of the following options: Add Interface Card Change model that is used to add an interface card in an equipment slot. Create Inventory Equipment Change model that is used to add equipment when using an inventory template in a site or equipment holder. Create Logical Connection Change model that is used to create a logical connection between two network interfaces. Create Physical Connection

Change Request form (continued)

Field	Description
	Change model that is used to create a physical connection between two network interfaces. Emergency Change model that is used for the Telecom Network Inventory emergency changes. GPON Broadband Service Change model that is used to fulfill a GPON broadband order request. Normal Change model that is used for the Telecom Network Inventory normal changes. Note: These change models are available in the Change > Create New > Create a change request window.
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.

Change Request form- Schedule tab (continued)

Field	Description
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 are closing this change request. Select one of the following options: • Successful • Unsuccessful with issues • Unsuccessful
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 form- Change Task form (continued)

Fields	Description
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.
Short description	Short description for this order task.
Description	Description of this order task.
State	State of this change task. Select one of the following options: Pending Task is waiting for an action from the user. Open No action is taken on this task yet. In Progress Task processing is in progress. Closed Change task is complete. Canceled Change task has been canceled.
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 Closed .
Delete	Option to delete this order task.

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. Note: If you select Virtual, then the Connector Type 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: • BNC (Bayonet Neill-Concelman) - Type of miniature radio frequency connector used for coaxial cables. • SC (Square Connector)- Square, common type of Fiber optic connector used as push-pull latch, to align the optical fibres for efficient light transmission. • LC (Lucent Connector)- Another version of the SC connector designed for high-density applications. • ST (Straight Trip)- a type of fiber optic connector commonly used for connecting optical fibers in telecommunications and data communication applications. • Wire Wrap -A technique for creating electrical connections on circuit boards. • RJ45 - Also known as 8P8C (8 Position 8 Contact) connector, is widely used type of connector for wired Ethernet networks.
Max physical connection support	Maximum number of physical connections that is supported by this model.
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: • Tx- TX stands for Transmit. It refers to the direction in which data is being sent from a device. • 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). • Tx/Rx • Bus- Bus directionality refers to the flow of data on a communication channel. • Broadcast- Broadcast directionality refers to the nature of signal transmission and reception in a broadcast system.
Interface Type	Type of port on the network interface. Select one of the following options:

Network Interface Model form - Information tab (continued)

Field	Description
	• Ethernet- Physical connection and speed capabilities of a device for connecting to a network. It involves cable type, speed, and standard. • 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. • Serial- A serial interface transmits data one bit at a time, in contrast to a parallel interface that sends multiple bits simultaneously.

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: --None-- No network model relationship exists. Rack to Rack 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.

Network Model Relationship form (continued)

Field	Description
	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 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. 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. 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

Network Model Relationship form (continued)

Field	Description
	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/Cabinet to Rack/Cabinet Slot Relationship between rack/cabinet and rack/cabinet slot. Note: - The Parent product model field shows a list of all the racks and cabinets. - The Child product model field shows a list of all the slots and sub-slots.

Network Model Relationship form (continued)

Field	Description
	Rack/Cabinet Slot to Equipment Relationship between a rack slot and the equipment. Note: - The Root product model shows all equipment holder models having Model category as Rack. - The Parent product model shows all equipment holder models having Model category as Slot. - The Child product model shows all equipment models related to the Telecommunications Network Inventory application. Rack/Cabinet Slot to Container Shelf Relationship between a rack slot and the shelf. Note: - The Root product model shows all equipment holder models having Model category as Rack. - The Parent product model shows all equipment holder models having Model category as Slot. - The Child product model shows all equipment holder models that have Model category as Shelf. Interface to Interface Relationship between two interfaces. Note: The Parent product model and Child product model field shows list of all the network interface models. Cabinet to Equipment Relationship between a cabinet and the equipment. Note: 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 logical connection models that have Behaviour as Channel.

Network Model Relationship form (continued)

Field	Description
	Cable to Strand Relationship between a cable and the strand. Note: - The Parent product model field shows a list of all the cable models. - The Child product model field shows a list of all the strand models.
Count	Numbers of child product models that can be created under a parent product model when a template is created. Note: This attribute is only for 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 relationship types.
Root product model	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. Note: This attribute is only visible for the Slot to Interface card relationship type.
Parent product model	Product model that is the parent to the child product model. Select the search icon (🔍) and select a model. Note: In the Rack-to-Slot relationship, the parent product model is the equipment holder model with the model category as Rack.
Child product model	Product model that is the child to the parent product model. Select the search icon (🔍) and select a model. Note: In the Rack to Slot relationship, the child product model is the equipment holder with model category as Slot.
Sequence	Sequence number of the child entities for a model relationship. If you enter a number in the Count field, the Sequence field appears. 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.

Network Model Relationship form (continued)

Field	Description
	Note: This attribute is only for 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 relationship types.
Parent bandwidth	Bandwidth of the parent product model. Note: This attribute is only visible for the Logical Connection to Channel relationship type.
Child bandwidth	Bandwidth of the child product model. Note: This attribute is only visible for the Logical Connection to Channel 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: - This code is a combination of area codes (NPAs) and local exchanges (NXXs). - 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. - For example, 858-335 is the NPA-NXX for the phone number 858-335-9500.
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 product/tmt-telecom-network-inventory/task/define-tni-locations.dita .
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.

Network Site form (continued)

Field	Description
POTS number	Plain Old Telephone Service number (POTS) that is associated with this network 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 TM _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 Tables (continued)

Table name	Description
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_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 Tables (continued)

Table name	Description
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_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 Tables (continued)

Table name	Description
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_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 Tables (continued)

Table name	Description
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_3gpp_ep_rp	Remote IPv6 address

* 3GPP is a trademark of ETSI.

Related topics

[Modeling a 5G xNF 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

[Create a change request by using the GPON Broadband Service change model](#)

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. • If you selected Optical Fiber Cable, the Cable parameters tab appears so that you can enter additional information. • If you selected Fiber Link, then you must fill in the information for the Cable and Strand number fields in the Physical connection element form.
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 product/tmt-telecom-network-inventory/task/define-tni-sites.dita .
Site Z	Destination network site for this connection. Select the search icon (🔍) and select a network site. To learn more, see product/tmt-telecom-network-inventory/task/define-tni-sites.dita .

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 Define the network interface details .
Management option	Attribute that indicates who or what is responsible for managing this endpoint.

Physical Connection form - Configuration (continued)

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: • ROOT or LEAF endpoint role, as defined by the Metro Ethernet Forum (MEF). • --None-- for no assigned endpoint role.
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 Define the network interface details.
Vendor	Name of the network asset's vendor. Select the search icon () and select a vendor code. To learn more, see Create manufacturer and vendor codes.
Cost	Cost of this network asset.
Distance	Route length of this connection, expressed in the unit of measure that you select in the Unit field.
Unit	Unit of measure in which you're expressing the route length of the connection in the Distance field. Select one of the following options: --None-- No distance measurement expressed for the connection route length. Miles Distance is expressed in miles. Kilometers Distance is expressed in kilometers. Feet Distance is expressed in feet. Meters 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.
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](#)

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	Snapshot of some of the information about the telco equipment. The Overview tab displays the following sections: Usage Number of slots, interface cards, and interfaces that are open in the telco equipment. Images Image of the telco equipment. You can select the image to see a preview in a separate page. Relations 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.

Related tabs in the Network inventory forms (continued)

Tab	Description
	Note: This tab is available only for the Telco Equipment form.
Rack Equipment Placement	Details of the rack slot where this equipment is positioned. You can always update the details by selecting the text link displayed under the Exclusively Used column. Note: This field is applicable only for all equipment, IP routers, IP switches, IP firewalls, and cards.
Child Site	List of the child inventory sites that are associated with the parent site. Note: This tab is available only for the Network Site form.
Telco equipments	List of the telco equipment that is associated with the network inventory. Note: This tab is available only for the Network Site form.
Incidents	List of the incident records that are related to the network inventory. Note: This tab is available only for the Network Site form.
Change Requests	List of the Change Request records. To learn more about the change requests, see Create a change request from Network Inventory Workspace. Note: This tab is available only for the Network Site, Telco Equipment, and Physical Connections forms.
Teams	List of the teams that are associated with the network inventory.
Physical Connections	List of the physical connections that are associated with the network inventory.

Related tabs in the Network inventory forms (continued)

Tab	Description
	Note: This tab is available only for the Telco Equipment form.
Logical Connections	List of the logical connections that are associated with the network inventory. Note: This tab is available only for the Telco Equipment form.
Order information	List of the order information that is related to the network inventory instance. Note: This tab is available only for the Network Interface, Physical Connections, and Logical Connections forms.
Number Elements	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 Commonly used network asset instance identification fields. Note: This tab is available only for the Telco Equipment, Network Interface, Physical Connections, Logical Connections, and Inventory Number forms.
Physical connection elements	List of the connection elements that are added for the physical connections. Note: This tab is available only for the Physical Connections form.
Connection elements	List of the connection elements that are added for the logical connections. These elements should be the valid logical connections between the sites when the computation performs the path search. 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

Related tabs in the Network inventory forms (continued)

Tab	Description
	more about the connection element fields, see Connection Element form. Note: • This tab is available only for the logical connections. • 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 System Definition > Decision tables > TNI CI Relationship Definition Policy, and under Decision table, update the CI Relationship Type against the CI class.
Inventory Numbers	List of the inventory numbers that are associated with your network inventory. To learn more about the number elements, see Define your inventory numbering. Note: This tab is available only for the Inventory Number form.
IP Address	List of the IP addresses that are associated with your network inventory. Note: This additional tab is available for the equipment, interface card, network interface, and logical connection.
Inventory Groups	List and details of all the inventory groups. Note: This tab is available for the network site, equipment holder, equipment, interface card, network interface, physical connection, and logical connection.
DNS Name	List of all the DNS names of the IP addresses. Note: This listing is available only for IP addresses.

Related tabs in the Network inventory forms (continued)

Tab	Description
CMDB Group Contains Configuration Items	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 Member Role field when you're creating the CI: • Main • Primary • Secondary • Tertiary • Load Balancing • Active • Passive Note: Only the inventory agent and the inventory administrator can review, create, update, or delete the CI items.
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	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.
CMDB 360 Data	List of all discovery sources at the CI attribute level. To learn more, see CMDB 360/Multisource CMDB .
Inventory Revision Histories	List of all revised CIs of the selected connection. Note: This tab is available only for physical and logical connection.
Asset	List of all assets of the inventory.
Model Component	List of the model components of this inventory. You can mark the component as mandatory or optional.

Related tabs in the Network inventory forms (continued)

Tab	Description
Vendor Catalog Items	List of all vendor catalogs of this inventory. To learn more, see Vendor Catalog Items .
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 Attribute packs .
Capacity Metrics	List of capacity metric records that are associated with the network inventory record. To learn more see, View a capacity metric. Note: 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. Note: This tab is available only for card records.
Protection paths	List of protection paths that are associated with logical connection record. Note: 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. Note: This tab is available only for network topology 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, equipments, and shelves.

Inventory Template

Fields	Description
Name	Name of the shelf or equipment
Inventory model	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. Select the search icon (🔍) and select a model. To learn more, see Creating your inventory models. Note: A list of all product models is displayed if the inventory model is not defined in the model relationship.
Relationship type	Type of CI relationship. By default, the relationship is set to Contains::Contained By .
Inventory template	Template of the selected inventory model. Select the search icon (🔍) and select a template.
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	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 Create a default template. Note: This field is applicable only for equipment.
Slot Span	Select slots required for the equipment or shelf to occupy Note: This field is applicable only for equipment.
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: • Development • Production • Test
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.
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.

Common fields (continued)

Field	Description
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.
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 [Working in the Next Experience UI](#) .

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](#)

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	Stage of the life cycle that this network asset is in: Deploy Network asset that is deployed in your network. Design Network asset that is being used for design purposes. End of life Network asset that is at the end of its useful life. Inventory Network asset that is an inventory item in use in the network. End of life Network asset that is missing and can't be located. Operational Network asset that is operational. Purchase Network asset that is in the purchase phase of its life.
Life Cycle Stage Status	Status of the network asset as it relates to the life cycle stage that it is in: In Maintenance

Strand form (continued)

Field	Description
	Network asset that is currently in maintenance. In Use Network asset that is currently in use. Pending Retirement Network asset that is currently in maintenance.
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	Type of physical cable connector that is used for the starting point of the strand. Select one of the following options: BNC The Bayonet Neill Concelman (BNC) connector is used for video and RF applications and found in the coaxial cable networks. SC A square-shaped snap-in connector. LC Small and a push-and-pull design with a latch mechanism. ST A bayonet-style twist lock and a long, cylindrical ferrule. Wire Wrap Wrapping a thin, stripped wire around a post or pin to establish a connection. RJ45 Connectors have eight pins and are used on the ends of twisted-pair cables.
Z end connector	Type of physical cable connector that is used for the ending point of the strand. Select one of the following options: BNC The Bayonet Neill Concelman (BNC) connector is used for video and RF applications and found in the coaxial cable networks. SC A square-shaped snap-in connector. LC Small and a push-and-pull design with a latch mechanism. ST A bayonet-style twist lock and a long, cylindrical ferrule.

Strand form (continued)

Field	Description
	Wire Wrap Wrapping a thin, stripped wire around a post or pin to establish a connection. RJ45 Connectors have eight pins and are used on the ends of twisted-pair cables.
Length	Total length of the strand.
Length unit	Unit of measure in which you're expressing the route length of the strand. Select one of the following options: --None-- No distance measurement is expressed for the connection route length. Inches Distance is expressed in inch. Feet Distance is expressed in feet. Miles Distance is expressed in miles. Meters Distance is expressed in meters. Centimeters Distance is expressed in centimeters. Kilometers Distance is expressed in kilometers.
Strand number	The number that is assigned to the strand by the manufacturer.
Cable	Cable record that is associated with the strand.
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 Create manufacturer and vendor codes .
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: Buy The model was purchased. Leased The model was leased. Both The model was bought and leased.
Status	Production status of the model: Build The model must be built. In Production The model is in production. Sold The model was sold. Retired The model has been retired.

Strand model form (continued)

Field	Description
Cost	Cost of a single unit of the model.
Expenditure type	Type of expenditure. Select one of the following options: Capex Capital expenditure is a one-time expenditure, where the value is realized over the years. For example, a photocopier. Opex Operational expenditure is an ongoing expenditure. For example, toners for the photocopier.
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	Unit of measure in which you're expressing dimensions. Select one of the following options: --None-- No distance measurement is expressed for the connection route length. Inches Distance is expressed in inch. Feet Distance is expressed in feet. Miles Distance is expressed in miles.
Sound Power (bels)	The rate at which the energy of the network asset is emitted in bels.
Length	Length of the network asset, expressed in the unit of measure that you designate in the Units field. • 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 Units field. • 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.
Characteristic	Type of the strand. Select one from the following. Single Mode A single Mode fiber strand transmits only one signal. Multi Mode

Strand model form (continued)

Field	Description
	A multi-mode fiber strand transmits multiple signals. POF Plastic Optical Fiber (POF) strand transmits light. Twisted Pair Twisted-pair cable consists of pairs of insulated copper wires twisted together.
Width	Length of the network asset, expressed in the unit of measure that you designate in the Units field. - 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 Units field. - 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.
Height	Height of the network asset, expressed in the unit of measure that you designate in the Units field. - 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 Units field. - 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.
Depth	Depth of the network asset that is expressed in the unit of measure that you designate in the Units field. i Note: This field is applicable for the equipment models and equipment holder models.

Related topics

[Create a strand model](#)

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.
Date of manufacture	Date that this network asset was manufactured.

Configuration (continued)

Field	Description
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: VLAN Single VLAN number record. LAG 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.

i 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

Input fields of Cascade Update function (continued)

Field Name	Description	Data Type	Mandatory?
CI	CI where you want to update the field.	Reference.ConfigurationItem	No
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	The Bandwidth field that is updated in the equipment record cascades all the way down to the hierarchy

Cascade rules (continued)

CI	Cascade Rule	Example
	that reference the logical connection record.	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: VLAN Range	Choice	Yes

Input fields of Create and Assign Range/Single Number function (continued)

Field Name	Description	Type	Required?
	Range of VLAN numbers. VLAN Subrange Subset or a range of VLAN numbers within the overall VLAN range. VLAN Single VLAN number record LAG Range Range of LAG numbers. LAG Single LAG number record		
Parent Number	Parent number record. If you don't select the parent number record, the function returns only an inventory number record for the start number.	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. Note: 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

Input fields of logical interface action (continued)

Field Name	Description	Data Type
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
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 Contains : Contained By . 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	Reference.Logical Connection Model

Input fields of Create Logical Connection function (continued)

Field Name	Description	Data Type
	the product model that is associated with the physical connection.	
Connection elements	Connection elements that are added for the logical connections. 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
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: • Available • Used • Reserved • Shared	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 Return only the first record 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.

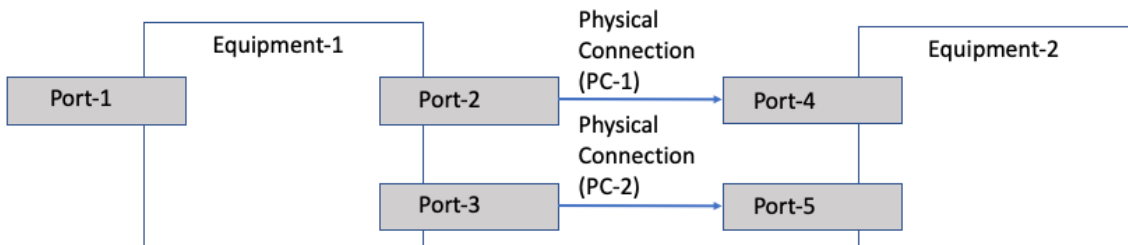
Output of function

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 Return only the first record 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.

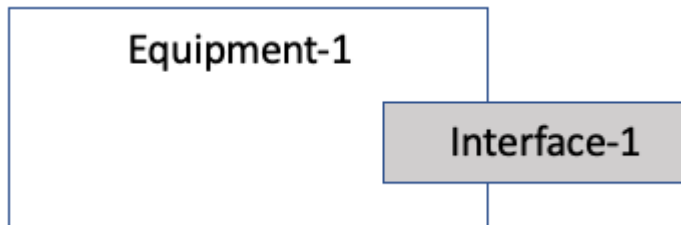
Output of function

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

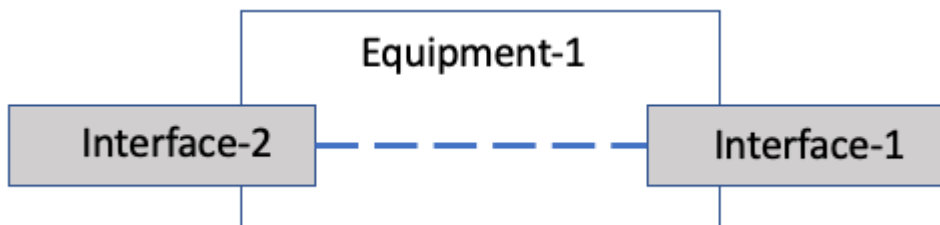
Use Case 1

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.



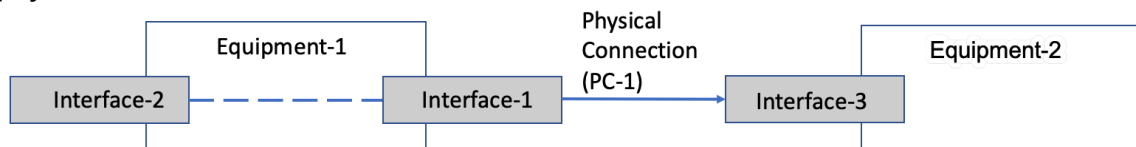
Use Case 2

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.



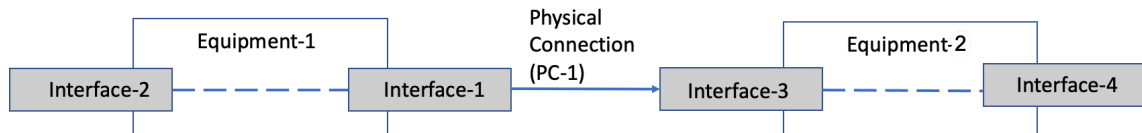
Use Case 3

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	sys_id of the starting network interface where this connection is configured. Note: If this field is left empty, it automatically selects the interface by using the path computation to create a logical connection.	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
	Note: If this field is left empty, it automatically selects the interface by using the path computation to create a logical connection.	
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 Create logical connection without path elements 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](#)

Logical Connection Creation subflow

The Logical Connection 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	Array.String

Input fields of Logical Connection Creation subflow (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 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
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 Terminated::Terminated by .	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

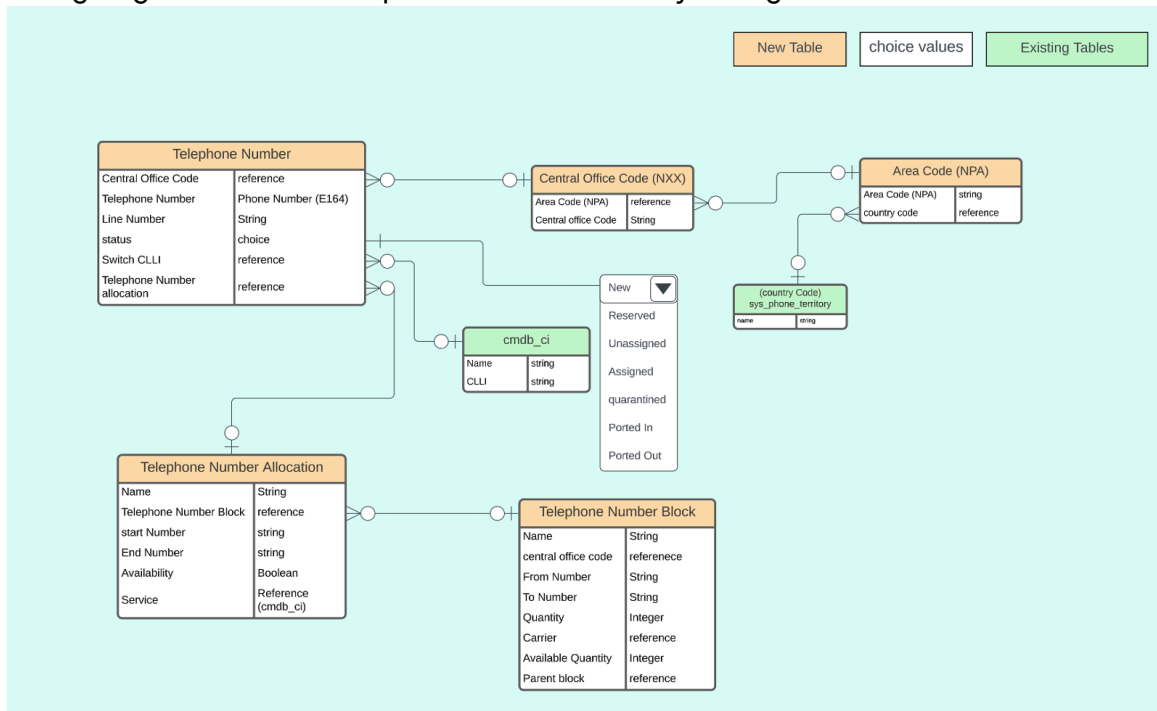
[Telecommunication Network Inventory workflows in Flow Designer](#)

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](#)

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.
Network domain	Domain of ownership and responsibility for this network asset or connection. Select one of the following options: Mobility Represents wireless devices and connections. Telco Represent the edge or access networks. Core Represents the core network infrastructure.
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.
Network site	Network site in which the network inventory asset is installed. Click the search icon (🔍) and select a network site. To learn more, see product/tmt-telecom-network-inventory/task/define-tni-sites.dita .
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.

TNI CI Attributes form (continued)

Field	Description
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.
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, Check diesel fuel for generator.

Related topics

[Create a telecommunications equipment instance](#)