Topology Management

The **Topology** tab displays your switches and your interfaces as icons to give an overview of your network topology. The display of your icons can be expanded, collapsed, and filtered using the **Settings** drop-down menu and Actions bar options. The **Topology** tab also enables you to apply common configurations to groups of interfaces and to groups of switches.

This chapter explains how to control the way that the topology icons are displayed and how to apply common configurations to groups of switches and groups of interfaces. It has the following sections:

Viewing the Topology

This section explains how to control the view of your topology.

Before You Begin

At least one switch has been added.

Step 1 From the **Navigation** drop-down list, choose **Home**.

Step 2 Click the **Topology** tab.
Your imported switches are displayed.

Step 3 Explore your topology.
You can select, expand, collapse, zoom in, zoom out, and move your topology components using a set of shortcut controls and menu options. To control the expansion of all switches and other components, click the **Settings** drop-down menu and choose one of the options listed below. For all other options, see the *Shortcut Topology Controls* table.

- **Expand all switches—**Displays the topology for all switches
- **Expand all—**Displays the topology for all devices
- **Collapse all—**Collapses all expanded icons

Table 1: Shortcut Topology Controls

Action	Description
Collapse a topology icon	Right-click the expanded icon you want to collapse.
Expand a topology icon	Double-click the collapsed icon you want to expand.
Select multiple icons	• **Ctrl-Click—**Press and hold the **Ctrl** key and click each icon you want to select or deselect. • **Shift-Click-Drag—**Press and hold the **Shift** key and click and drag the mouse over the icons you want to select.
Zoom in	**Shift-Ctrl-Click-Drag—**Press and hold the **Shift-Ctrl** keys and click and drag the mouse over the area you want to zoom in to.
Return to normal view and center the icons	Double-click the background to center your icons in the Topology window. You will also zoom to normal view.
Open a dialog to edit a component	Double-click an expanded icon to open the edit options for the selected network component.
View the detail summary pane	Click an expanded icon to open the details view.

Step 4 (Optional) The Actions bar contains filter options that change what you see in the topology. Choose one or more of the following options to filter your topology view:

- **Filter expression—**Enter the full or partial text of an object name. All objects containing the entered text will become highlighted.
- **Physical view—**Click the drop-down list to choose a view option. The options that appear will depend on what you have configured on your fabric. For example, a broadcast domain view is only available if you have broadcast domains configured on your fabric.
- **Not in—**Place a check in the check box to filter components that are not in the topology view. This option is only enabled when applicable.
- **Show neighbors—**Place a check in the check box to display icons that represent foreign devices.

Applying Common Configurations to a Group of Switches

The **Topology** tab enables you to apply common configurations to a group of similar devices. This section explains how to apply the same configuration to a group of switches.

Before You Begin

More than one switch exists on your fabric.

Step 1 From the **Navigation** drop-down list, choose **Home**.

Step 2 Click the **Topology** tab.
Your imported switches are displayed.

Step 3 Press and hold the **Ctrl** key and click to highlight a group of switch icons in the topology. Note that highlighted icons are outlined in blue.

Note You can only edit groups of the same components. For example, a group of switches or a group of interfaces. A message is displayed notifying you when components that cannot be configured in a group have been selected.

Step 4 From the **Settings** drop-down list, choose **Edit selected**.
The **SWITCH SETTINGS** dialog box appears with the **GENERAL**, **MORE**, **SYSLOG**, **SNMP**, **CDP**, **LLDP**, and **NTP** tabs. The tabs contain fields with the current values of the selected group of switches. If a value is different between one or more of the selected devices, the dialog field value is set to **Mixed**. Enter the appropriate values in the fields of each tab as listed in the *SWITCH SETTINGS (MULTIPLE) Dialog Box Fields* table below. The values entered are applied to the entire group.

Table 2: SWITCH SETTINGS (MULTIPLE) Dialog Box Fields

Field	Description
GENERAL Tab	
Profile	Apply a profile to the switch.
Description	Enter a description of the switch.
Management state	Choose a state: • **Managed** —The Cisco Nexus Fabric Manager will send configuration changes to the managed switch. • **Monitored** —The Cisco Nexus Fabric Manager will not push configurations to the switch. The changes will be stored in the Cisco Nexus Fabric Manager database and pushed to the device when the state is changed to **Managed**.

Field	Description
Role	Choose a role: • **Auto** • **Leaf** • **Spine** **Note** When set to **Auto**, the Cisco Nexus Fabric Manager will set the role of Cisco Nexus 9500 Series switches as spine switches and Cisco Nexus 9300 Series switches as leaf switches. If that does not match your cabled topology, you will need to manually choose the role as either **Spine** or **Leaf** according to your cabled topology.
Username	Enter a username for the switch.
Password	Enter a password for accessing the switch
MORE Tab	
Message of the day	Enter a message of the day.
Beacon LED	Configure the beacon LED on the switch as **on** or **off** (**enable**/**disable**).
Load-balancing method	Choose the load balancing method to be used by all the port channels configured on the switch. **Note** The default value is SrcDstMac.
Image	Choose an image to run on the switch. Image changes will not be applied until the switch is explicitly upgraded.

Field	Description
Extra CLI commands	Enter CLI commands for switch features that are not managed by Cisco Nexus Fabric Manager. **Note** • CLI commands containing semicolons must be on the last line. Otherwise, an error occurs and all CLI configurations coming after a semicolon will fail. • The **Extra CLI configuration** is applied after saving the switch. To determine that the configuration was applied successfully, see the **CLI commands** field when viewing the switch details. For more information, see Viewing Switch Details. • The Cisco Nexus Fabric Manager does not perform validation checking on the commands entered in the **Extra CLI commands** field. Any errors that occur will appear in the **Faults** window. For more information about viewing faults, see Viewing Fault Details. • A reboot must be performed manually for commands that required a reboot. • See the logs to determine the user who triggered the commands entered in the **Extra CLI commands** field. The logs show the user defined in the Cisco Nexus Fabric Manager switch object as the owner of the **Extra CLI command** changes.
SYSLOG Tab	
Remote server	Specify the IP address of the remote syslog server.
Facility	Specify the outgoing facility for all the messages sent to the remote server.
Severity	Send only messages with the specified severity level or higher.
SNMP Tab > **Server**	
Community	Specify the SNMP community.
Read-write	Controls read/write to the SNMP server.
SNMP Tab > **Traps destination**	
Community	Specify the SNMP community.

Field	Description
Host	Specify the IP address of the SNMP traps receiver.
Version	Choose the SNMP protocol version.
CDP Tab	
Hold time	Set CDP hold time advertised (in seconds).
Timer	Set CDP refresh time interval (in seconds).
LLDP Tab	
Hold time	Set LLDP hold time advertised (in seconds).
Timer	Set the LLDP refresh time interval (in seconds).
Reinit	Set delay for LLDP initialization on any interface (in seconds).
TLV DCBXP	**Enable**/**disable** Data Center Bridging Exchange Protocol (DCBXP) TLV.
TLV port description	**Enable**/**disable** port description TLV.
TLV port VLAN	**Enable**/**disable** VLAN ID TLV.
TLV system capabilities	**Enable**/**disable** system capabilities TLV.
TLV system description	**Enable**/**disable** system description TLV.
NTP Tab	
Server IP Address	Enter the NTP server IP.
ADVANCED Tab	
Telnet service	**Enable**/**disable** switch Telnet feature.

Step 5 Click **SAVE CHANGES**.

Applying Common Configurations to a Group of Interfaces

The **Topology** tab enables you to apply common configurations to a group of similar devices. This section explains how to apply the same configuration to a group of interfaces.

Before You Begin

More than one interface exists on your fabric.

Step 1 From the **Navigation** drop-down list, choose **Home**.

Step 2 Click the **Topology** tab.
Your imported switches are displayed.

Step 3 Press and hold the **Ctrl** key and click to highlight a group of interface icons in the topology. Note that highlighted icons are outlined in blue.

Note You can only edit groups of the same components. For example, a group of switches or a group of interfaces. A message is displayed notifying you when components that cannot be configured in a group have been selected.

Step 4 From the **Settings** drop-down list, choose **Edit selected**.
A dialog appears with the current values of the selected group of interfaces. If a value is different between one or more of the selected devices, the dialog field value is set to **Mixed**. Enter the appropriate values in the fields listed tab as listed in the *INTERFACE SETTINGS (MULTIPLE) Dialog Box Fields* table below. The values entered are applied to the entire group.

Table 3: INTERFACE SETTINGS (MULTIPLE) Dialog Box Fields

Field	Description
GENERAL Tab	
Profile	Apply an interface profile to the interface.
Description	Enter a description of the interface.
Role	Choose a role: • **Auto** • **Border** • **Host facing** • **Switch facing** • **vPC peer link**
State	Specify the state of the interface. The state can be **Enabled** or **Disabled**.
MORE Tab	

Field	Description
Management state	Choose a state: • **Managed** —The Cisco Nexus Fabric Manager will send configuration changes to the managed switch. • **Monitored** —The Cisco Nexus Fabric Manager will not push configurations to the switch. The changes will be stored in the Cisco Nexus Fabric Manager database and pushed to the device when the state is changed to **Managed**.
Untagged broadcast domain	Set the untagged broadcast domain for this interface.
Speed	Specify the speed for the interface. The options include **Auto** and a list of various supported interface speeds.
Beacon LED	Configure the beacon LED on the interface as **on** or **off** (**enable**/**disable**).
Link discovery protocols	Enable one or both of the following link discovery protocols on the interface to allow the interface to advertise out: • **LLDP** • **CDP**

Step 5 Click **SAVE CHANGES**.