



# Interface Management

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Switch interfaces are automatically classified into the following groups based on their end-point connectivity:

- **Perimeter interfaces**
  - **Border**—Interfaces that connect to foreign devices that are networking devices
  - **Host facing**—Interfaces that connect to foreign devices that are not networking devices
  
- **Infrastructure interfaces**
  - **Leaf/spine**—
  - **FEX fabric**—
  - **Breakout**—
  - **vPC peer link**—Interfaces that connect to vPC peer links
  
- **Unknown**—Interfaces for which end-point connectivity cannot be determined automatically

This chapter explains how to apply filter options when viewing your interfaces, how to edit your interface configurations, and how to view interface details. It has the following sections:

- [Filtering Infrastructure and Perimeter Interfaces, page 2](#)
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# Filtering Infrastructure and Perimeter Interfaces

An infrastructure interface can be leaf/spine or a vPC peer-link, and a perimeter interface can be host-facing or a border interface. You can filter your interfaces by type using the filter options in the Actions bar located above your interface tiles. This section explains how to set the filter options for these interface types.

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

**Step 2** Click the **INTERFACES** tab.

The **INTERFACES** tab displays three drop-down filter boxes in the Actions bar located above the interface **Tiles**.

**Step 3** Click the third drop-down filter box from the left.

The filter options appear as listed in the following table:

**Table 1: Filter Options Table**

Option	Description
<b>Perimeter interfaces</b>	Selects/Deselects <b>Border</b> and <b>Host facing</b> interfaces
<b>Border</b>	Displays interfaces connected to switches outside of the switchpool or other networking devices.
<b>Host facing</b>	Displays interfaces connected to a physical host
<b>Infrastructure interfaces</b>	Displays <b>Switch facing</b> and <b>vPC peer link</b> interfaces
<b>Leaf/spine</b>	Displays interfaces that are connected to other switch ports within the fabric, specifically leaf-spine connections only
<b>FEX fabric</b>	Displays interfaces that are connected to fabric extenders (FEXs).
<b>Breakout</b>	Displays interfaces that are connected to breakout cables.
<b>vPC peer link</b>	Displays interfaces that are connected to other switch ports within the fabric, specifically leaf-to-leaf connections for vPC purposes only
<b>Unknown</b>	Displays interfaces for which end-point connectivity cannot be determined automatically or are not connected to any devices. In both cases the interface will be in soft-shutdown mode and not able to communicate with the fabric.
<b>Select all</b>	Selects all options
<b>Deselect all</b>	Deselects all selected options

**Note** Any filter options that are already selected can be deselected either by clicking **Deselect all** or by clicking each individual option.

# Viewing Interface Details

Clicking the interface name on the interface tile enables you to view detailed information about the interface such as the number of Tx and Rx bits and packets sent per second, associated broadcast domains, history, and faults. This section explains where to find this information.

## Before You Begin

A switch has been successfully added to the switchpool.

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

**Step 2** Click the **INTERFACES** tab.  
Your interface tiles appear.

**Step 3** Click to highlight a tile.  
A **summary** pane appears on the right with the profile information below:

- **Profile**—Associated interface profile
- **Class**—Class of the interface
- **Routed mode**—Layer 2 or Layer 3
- **Description**—Description text
- **Management state**—State of the interface (managed or monitored)
- **Role**—Role assigned to the interface
- **MTU**—Operational MTU that is being used (where applicable)
- **Speed**—Interface speed
- **Untagged broadcast domain**—Untagged broadcast domain implemented as a native VLAN on a VLAN trunked interface
- **Broadcast domains**—Number of broadcast domains associated with the interface
- **MAC address**—MAC number (where applicable)
- **Neighbor interface**—Neighbor interface
- **Neighbor device**—Neighbor device
- **Candidate neighbor**—Candidate neighbor

**Step 4** Click the **name** in the interface tile you want to view.  
An interface-specific window appears with the following tabs:

- **OVERVIEW**—Displays the following:
  - **Bits Per Second**—Graphs that display the received and transmitted bits per second statistics in 4 different views: the last hour with markers at 15-minute increments, the last 6 hours with markers at 2-hour increments, the last day with markers at 8-hour increments, and the last week with markers at 2-day increments.

- **PACKETS PER SECOND**—Graphs that display the received and transmitted packets per second statistics in 4 different views: the last hour with markers at 15-minute increments, the last 6 hours with markers at 2-hour increments, the last day with markers at 8-hour increments, and the last week with markers at 2-day increments.
  - **Last modified**—A field that displays when the interface was last modified.
  - **LLDP Tx**—A field that displays the LLDP protocol Tx status. When on, LLDP is transmitting for auto discovery.
  - **LLDP Rx**—A field that displays the LLDP protocol Rx status. When on, LLDP is receiving for auto discovery.
  - **CDP**—A field that displays the CDP protocol status. When on, the CDP protocol for auto-discovery is transmitting and receiving.
  - **Beacon LED**—A field that displays the status of the beacon LED on the interface, which can be on or off (enabled/disabled).
  - **Transceiver info**—A field that displays the transceiver information.
  - **Comment**—Icon that enables you to add a comment.
- **BROADCAST DOMAINS**—Displays the broadcast domain to which the interface belongs and allows broadcast domain membership editing.
  - **HISTORY**—Lists the history of actions taken on the interface.
  - **FAULTS**—Lists the faults on the interface.
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## Resetting an Interface

Resetting an interface performs the equivalent of a **shut/no shut** CLI command on the interface. This section explains how to reset an interface.

### Before You Begin

A switch has been successfully added to the switchpool.

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- Step 1** From the **Navigation** drop-down list, choose **Home**.
  - Step 2** Click the **INTERFACES** tab.  
Your interface tiles appear.
  - Step 3** Click the **name** inside the interface tile you want to reset.  
An interface-specific window appears with a summary pane on the right that contains the **RESET** option.
  - Step 4** Click **RESET**.  
The **RESET INTERFACES** dialog box appears.
  - Step 5** Click **RESET**.
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# Editing an Interface Configuration

You can edit the configuration of an interface after it has been added to the switchpool. This section explains how to edit the configuration parameters.

## Before You Begin

A switch has been successfully added to the switchpool.

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- Step 1** From the **Navigation** drop-down list, choose **Home**.
- Step 2** Click the **INTERFACES** tab.  
Your interface tiles appear.
- Step 3** Click the **white space** inside the interface tile you want to edit.  
An interface-specific window appears with a summary pane on the right that contains the **EDIT** option.
- Step 4** Click **EDIT**.  
The **INTERFACE SETTINGS** dialog box appears with tabs for **GENERAL**, **MORE**, and **ROUTING**.
- Step 5** Enter the appropriate values in the fields of each tab as listed in the *INTERFACE SETTINGS Dialog Box Fields* table below then continue to step 7.

**Table 2: INTERFACE SETTINGS Dialog Box Fields**

Field	Description
<b>GENERAL</b> Tab	
<b>Name</b>	The name of the interface.
<b>Profile</b>	Apply an interface profile to the interface.
<b>Description</b>	Enter a description of the interface.

Field	Description
Role	<p>Choose a role:</p> <ul style="list-style-type: none"> <li>• <b>Auto</b></li> <li>• <b>Border</b></li> <li>• <b>Host facing</b></li> <li>• <b>Leaf/spine</b></li> <li>• <b>vPC peer link</b></li> </ul> <p><b>Note</b> Choosing <b>Border</b> or <b>Host facing</b> prevents the Cisco Nexus Fabric Manager from automatically importing supported Nexus 9000 switches that may be connected to the interface when auto-import is enabled in the switchpool settings. For more information about switchpool settings, see <a href="#">Editing the Switchpool Settings</a></p>
State	Specify the state of the interface. The state can be <b>Enabled</b> or <b>Disabled</b> .
MORE Tab	
Management state	<p>Choose a state:</p> <ul style="list-style-type: none"> <li>• <b>Managed</b> —The Cisco Nexus Fabric Manager will send configuration changes to the managed interface.</li> <li>• <b>Monitored</b> —The Cisco Nexus Fabric Manager will not push configurations to this interface. The changes will be stored in the Cisco Nexus Fabric Manager database and pushed to the device when the state is changed to <b>Managed</b>.</li> </ul>
Desired neighbor device	<p>Choose the neighbor device you want to connect with the interface. By setting a desired neighbor device, Cisco Nexus Fabric Manager will only allow the specified device to connect to the switch interface. Any other discovered device will raise a fault and connectivity will not be granted until the user explicitly allows it</p> <p><b>Note</b> CDP must be enabled on the remote device interface.</p>
Untagged broadcast domain	Choose an untagged broadcast domain.

Field	Description
Speed	Specify the speed for the interface. The options include <b>Auto</b> and various speed values that depend on the interface capabilities.  <b>Note</b> The speed for 100 Mbps is displayed in the interface tiles as FE (Fast Ethernet), and the speed for 100 Gbps is displayed as 100.
Beacon LED	Configure the beacon LED on the interface as <b>on</b> or <b>off</b> ( <b>enable/disable</b> ).
Link discovery protocols	Enable one or both of the following link discovery protocols on the interface to allow the interface to advertise out:  <ul style="list-style-type: none"> <li>• LLDP</li> <li>• CDP</li> </ul>
<b>ROUTING</b> Tab	
Routed mode	<b>Enabled</b> The interface is configured for Layer 3 mode and the properties below are enabled.  <b>Disabled</b> The interface is configured for Layer 2 mode and the properties below are disabled.
IP address	Enter the IP address.
VRF	Choose a VRF.
MAC address	Enter a MAC address.
MTU	Specify the maximum transmission unit size.

**Step 6** Click **SAVE CHANGES**.

## Configuring Breakout Interfaces

Breakout interfaces, although not fully automated, can be configured manually through the Extra-config field of the interface (For more information about the Extra-config field, see [Editing an Interface Configuration](#), on page 5).

New breakout interfaces are then discovered, which enables other configurations, such as broadcast domains, native VLANs, port channels, and vPCs, to be allowed on the breakout interfaces.

**Note**

50G breakout interfaces are not supported but will work if the **Speed** field of the interface is set to auto.

## Editing the Broadcast Domain Membership of an Interface

This section explains how to add and remove one or more broadcast domains from an interface and how to set or unset an untagged broadcast domain.

**Note**

The Cisco Nexus Fabric Manager does not currently support the deployment and management of "border spines."

### Before You Begin

- For adding broadcast domains to an interface:
  - A broadcast domain has been created.
  - At least one host-facing or border interface on a leaf switch that exists and is configured in Layer 2 mode.
- For removing broadcast domains from an interface:
  - At least one broadcast domain has been added to an interface.

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- Step 1** From the **Navigation** drop-down list, choose **Home**.
- Step 2** Click the **INTERFACES** tab.  
The **INTERFACES** tab displays your interface tiles.
- Step 3** (Optional) Follow these steps to filter for specific interfaces:
- 1 Enter an expression in the **Filter expression** field of the Actions bar.
  - 2 Click **Apply filter**.
- Step 4** Click on the **name** inside an interface tile.  
An interface-specific window appears.
- Step 5** Click the **BROADCAST DOMAINS** tab.  
Any broadcast domain tiles associated with this interface are displayed.
- Step 6** From the **Settings** drop-down list, choose **Manage membership**.  
Your broadcast tiles appear.
- Step 7** (Optional) Follow these steps to filter for specific broadcast domains:
- 1 Enter an expression in the **Filter expression** field of the Actions bar.
  - 2 Click **Apply filter**.

**Step 8** Choose one of the following:

- Adding broadcast domains:
  - To add all the broadcast domains displayed in the **BROADCAST DOMAINS** tab, click the + (plus) symbol on the right side of the Actions bar.
  - To add a specific broadcast domain, click the + (plus) symbol in the bottom right-hand corner of a broadcast domain tile.

- Note**
- You can enable more than one tile at a time. This configuration effectively creates a VLAN trunk on the interface.
  - After a broadcast domain has been added, it can be set as an untagged broadcast domain by clicking **Set untagged** in the panel on the right. A small tag icon appears in the tile.

- Removing broadcast domains:
  - To remove all the broadcast domains displayed in the **BROADCAST DOMAINS** tab, click the - (minus) symbol on the right side of the Actions bar.
  - To remove a specific broadcast domain, click the - (minus) symbol in the bottom right-hand corner of a broadcast domain tile.

- Note**
- You can disable more than one tile at a time.
  - If the removed broadcast domain was untagged, removing it will also unset it as untagged broadcast domain.

**Step 9** When finished, click **EXIT MEMBERSHIP MODE**.  
The changes you made are saved.

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## Purging Device References

The Cisco Nexus Fabric Manager tracks all discovered neighbors via CDP and LLDP and the switch interfaces they are discovered on. When a discovered device is removed from an interface, Cisco Nexus Fabric Manager maintains the linkage to the device so that the device can be added back to the port. When a discovered device is removed from a port, and not added back to the port, and no other discoverable devices would be added to the port, the **Purge** feature removes all references to the removed device. This feature applies to any discovered devices including hosts, unmanaged switches, or managed switches.

The **Purge** button only appears when an expired neighbour exists on the interface because the device has been removed or the interface is down. This section explains how to purge device references.

**Before You Begin**

A discovered device has been removed from an interface or the interface is down.

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- Step 1** From the **Navigation** drop-down list, choose **Home**.
- Step 2** Click the **Interfaces** tab.  
The interface tiles appear.
- Step 3** From the interface tile of the removed device, click in the white space. An interface-specific window appears with a summary pane on the right that contains the PURGE option.
- Step 4** Click **PURGE**. The **PURGE EXPIRED NEIGHBOR** dialog box appears.
- Step 5** Click **PURGE**.
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## Deleting an Interface

Line cards can be added or removed for modular switches. When a line card is removed, Cisco NX-OS hides all its interfaces and makes them unavailable for stats or configuration. The Cisco Nexus Fabric Manager tracks historical stats, event history, and faults of all interfaces. Hiding interfaces on absent line cards reduces visibility. Instead, the Cisco Nexus Fabric Manager keeps the interfaces in absent state and are marked as "Role undetermined." Users can still query for stats, history, and faults on absent interfaces, as well as edit their configuration.

Interfaces move to the absent state when a line card is explicitly taken out of the slot of the chassis, when a line card is powered off from the switch CLI, or when a line card fails and reboots. Interfaces move out of the absent state when a line card goes back online in the same slot of the chassis.

If you plan to leave a slot empty, you can choose to delete absent interfaces corresponding to the line card that used to be in that slot. Physical interfaces can only be deleted while in absent state. If an interface is deleted, its configuration (including port channel and broadcast domain membership), statistics, and history are discarded while its faults are automatically resolved. If a line card is later inserted again in the slot, a new interface object is created by the Cisco Nexus Fabric Manager in default state.

**Before You Begin**

A switch has been successfully added to the switchpool.

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- Step 1** From the **Navigation** drop-down list, choose **Home**.
- Step 2** Click the **INTERFACES** tab.  
The **INTERFACES** tab displays three drop-down filter boxes in the Actions bar located above the switch tiles.
- Step 3** Click the third drop-down **filter box** from the left.  
A list of filter options appears.  
**Note** Any filter options that are already selected can be deselected either by clicking **Deselect all** or by clicking each individual option.
- Step 4** Choose **Unknown**.

The interfaces without cables, or other problems, are displayed.

**Step 5** Click the **check box** in the bottom right corner of the tile you want to delete. You can select more than one tile.

**Step 6** From the **Settings** drop-down list, choose **Delete selected**.  
The **DELETE SELECTED INTERFACES** dialog box appears.

**Step 7** Click **DELETE**.

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## Purging Selected Interfaces

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

**Step 2** Click the **Interfaces** tab.  
The interface tiles appear.

**Step 3** Check the **check box** in the bottom right hand corner of the tiles that you want to purge. You can choose more than one tile.

**Step 4** From the **Settings** drop-down list, choose **Purge selected interfaces**.

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