

Revised: August 12, 2025

Cisco Nexus Hyperfabric — Assertions

Assertions

An assertion is a statement used to test assumptions that Cisco Nexus Hyperfabric makes. Consider assertions as automatic checks to make sure the fabric is behaving the way it is supposed to be. Assertions provide a framework that allows the monitoring of switches and ports, and helps in troubleshoot any issues with them.

Assertion conditions and status

There are four evaluation assertion conditions:

- **True:** This is the expected condition and there are no issues detected.
- **False:** This is an unexpected condition and there are issues detected that can cause operation disruption.
- **Warning:** This is an unexpected condition and there are issues detected, but should not cause operation disruption.
- **Unknown:** There isn't enough information to evaluate the assertion condition.

You can easily visualize assertion conditions with these UI assertion status indicators.

Table 1: UI assertion status indicators

| Assertion condition | Assertion status | Assertion color |
|---------------------|------------------|-----------------|
| true | OK | green |
| unknown | unknown | gray |
| warning | warning | yellow |
| false | critical | red |

These icons are used throughout Assertion information to indicate the total number of assertions with the same status.

Figure 1: Assertion information icons



Examples of scenarios that trigger an assertion error

These are scenarios when an assertion evaluates to false, triggering an error:

- There is a deviation from the configuration of the blueprint.
- Devices or neighborships are not operating as expected.
- Routes or next hops cannot be validated.

Latched and unlatched assertions

Specifying latched and unlatched assertions helps you focus on issues that need attention and could signal a larger problem. All assertions are initially unlatched, and certain types may become latched automatically after 90 seconds.

An unlatched assertion is a suppressed assertion that, although it triggers an error when a condition is evaluated as false, will not send notifications or raise alerts like a latched assertion. If you believe you are missing notifications of critical assertions, verify that the assertions are latched. If they are not, you can [manually force a latch](#). Also, unlatched assertions will not propagate visually at the fabric topology level. Only latched assertions are shown at the topology level.

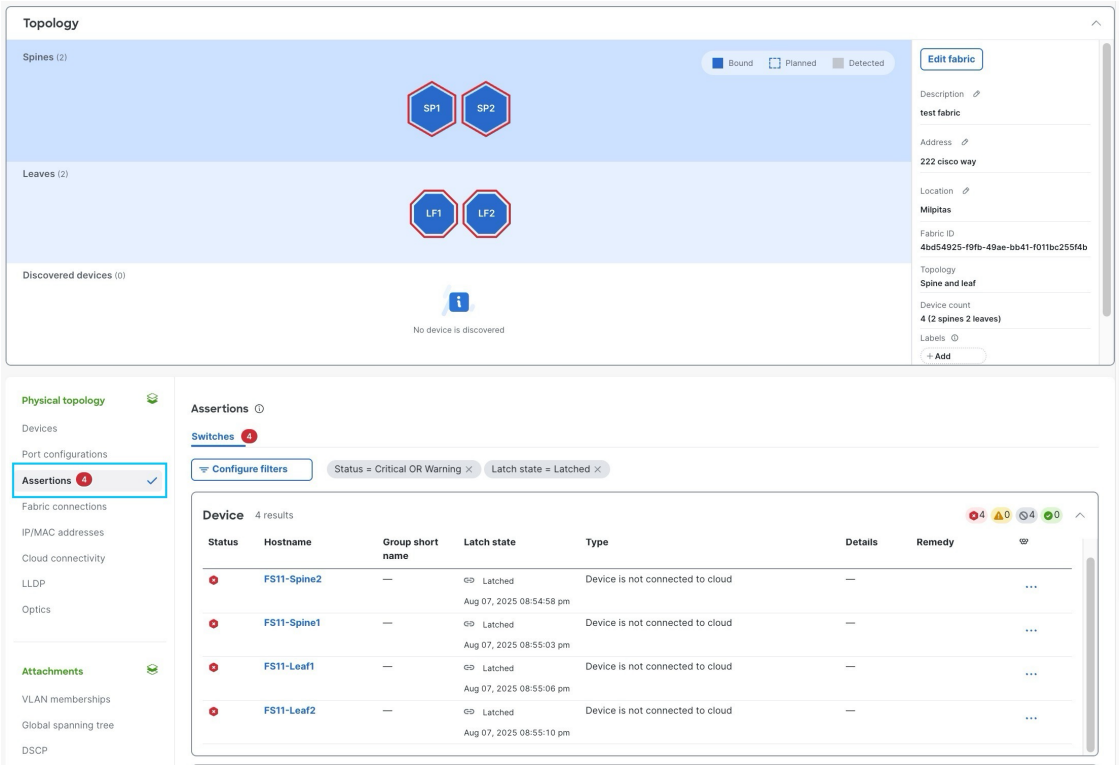
You can choose to view a list of all critical assertions or a subset of assertion types, regardless if they are latched or unlatched, in the **Assertions** page. The **Assertions** page, by default, only shows latched assertions that are either in critical or warning states. If you wish to see other assertion types, you must configure the filter.

Visual examples of latched and unlatched assertions

These examples highlight the difference in visual indicators between latched and unlatched assertions when the assertion status is critical.

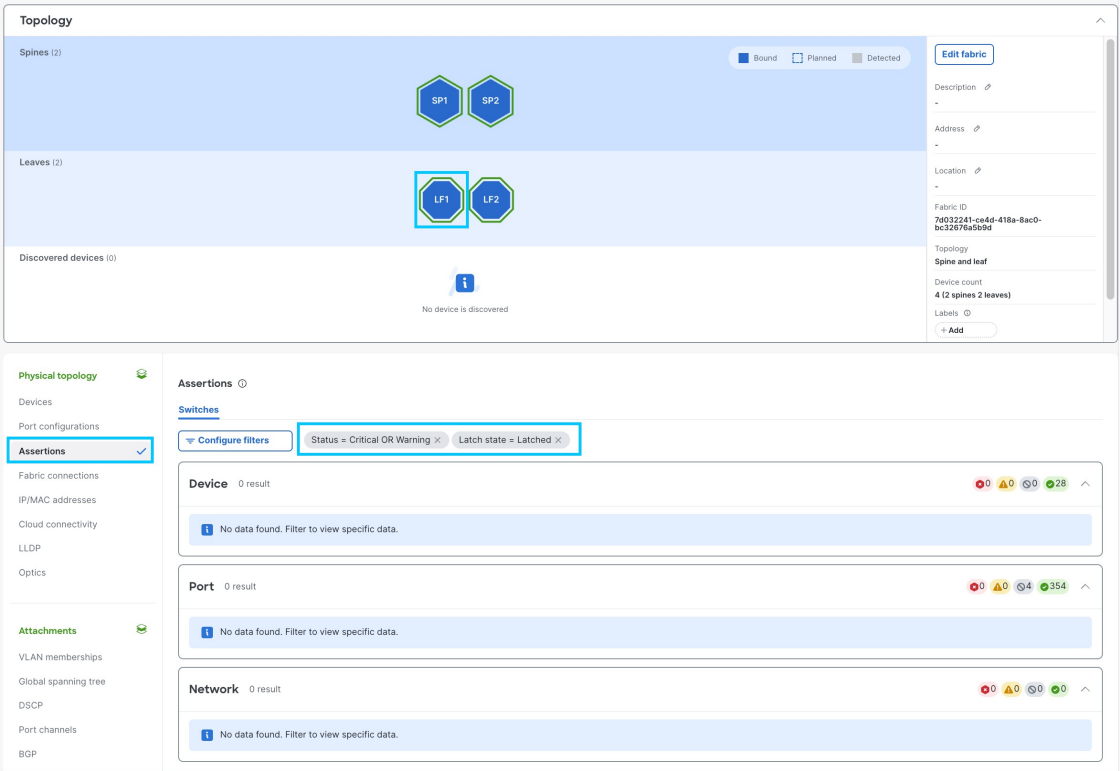
The fabric **Summary** page shows four critical latched assertions in the fabric topology (devices have a red outline) and the red icon next to the **Assertions** menu title.

Figure 2: Example: Fabric Summary page with critical latched assertions

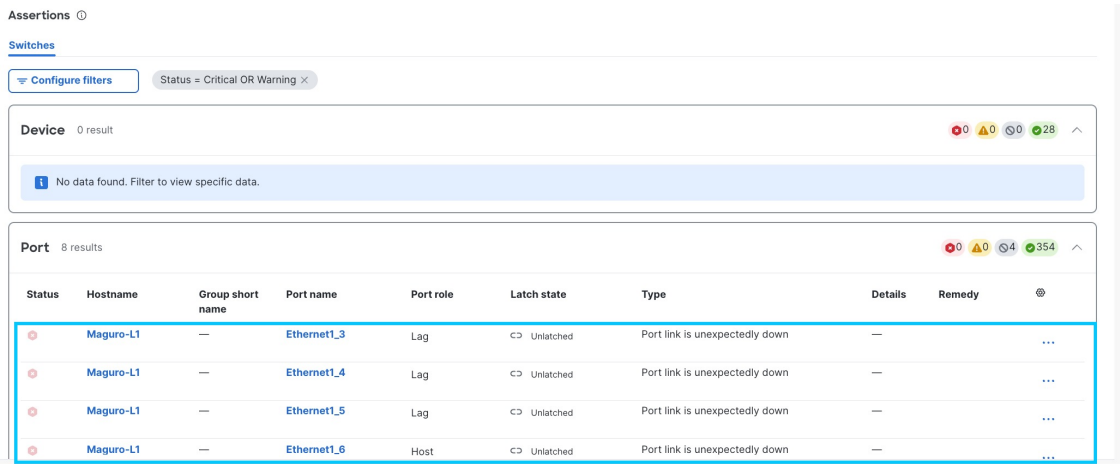


In the next example, there are no visual indicators for critical unlatched assertions. Although there are four critical unlatched port assertions in the LF1 device, the device is still outlined in green and there is no indication in the **Assertions** menu title. Also note that, by default, the filter is set to show only critical or warning latched assertions.

Figure 3: Example: Fabric Summary page does not show critical unlatched assertions



To view critical unlatched assertions, remove the **Latched** criteria from the filter.



View the assertions of a fabric

You can view the assertions across the entire fabric to see all device, port, and network issues within the fabric. Follow these steps to view the assertions of a fabric.

Step 1 Choose **Fabrics**.

The **Fabric** page shows all fabrics within an organization. All devices with latched assertions have an outline with a color indicating the assertion status.



Step 2 Click the fabric you want to view assertions for.

Step 3 In the **Physical topology** area, choose **Assertions**.

Assertions are categorized into Device, Port, and Network with icons indicating the total number of assertions for each assertion status.

The number of critical latched assertions are indicated within the red icon next to the **Assertions** menu and **Switches** tab.

Step 4 To change the list of assertions you see, click **Configure filters** and use the drop-down lists to add or remove filter criteria. By default, only latched assertions with critical or warning states are shown.

Step 5 If available, click the Remedy icon (🔧) to view the remediation needed to clear the assertion.

Physical topology

- Devices
- Port configurations
- Assertions** (3)
- Fabric connections
- IP/MAC addresses
- Cloud connectivity
- LLDP
- Optics

Attachments

- VLAN memberships
- Global spanning tree
- DSCP
- Port channels
- BGP

Logical network

- Logical networks (VNI)
- Route tables (VRF)

Assertions (3)

Switches (3)

Configure filters Status = Critical OR Warning Latch state = Latched

Device 1 result

| Status | Hostname | Group short name | Latch state | Type | Details | Remedy |
|----------|-------------|------------------|-------------------------------------|----------------------------------|---------|--------|
| Critical | FDO28280BGG | — | Latched Jul 10, 2025 10:09:30 am | Device is not connected to cloud | — | ... |

Port 5 results

| Status | Hostname | Group short name | Port name | Port role | Latch state | Type | Details | Remedy |
|----------|-------------------|------------------|--------------|-----------|-------------------------------------|--------------------------------|---------|--------|
| Critical | FLM272702B4 | — | Ethernet1_32 | Fabric | Latched Jul 25, 2025 01:45:07 pm | Port link is unexpectedly down | 5 | 🔧 |
| Critical | FLM274104CG | — | Ethernet1_32 | Fabric | Latched Jul 11, 2025 10:50:54 am | Port link is unexpectedly down | — | 🔧 |
| Warning | FDO28280BA5-Leaf1 | — | Ethernet1_17 | Unused | Latched Aug 01, 2025 02:13:58 pm | Port link is unexpectedly up | — | 🔧 |
| Warning | FDO28280BA5-Leaf1 | — | Ethernet1_62 | Unused | Latched | Port link is unexpectedly up | — | ... |

Network 0 result

View the assertions of a device

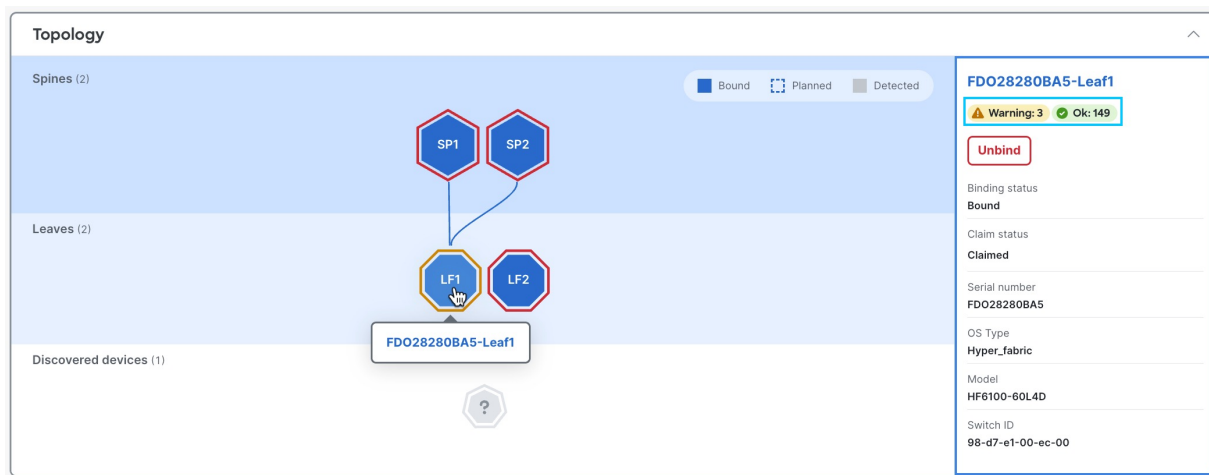
You can view the assertions of a specific device to see the issues for only that device.

Follow these steps to view the assertions of a device.

Step 1 Choose **Fabrics**, then click the fabric that has the device assertions.

Step 2 In the **Topology** area, click the device position for which you want to view its assertions.

A device detail pane appears. It displays the number of assertions for each assertion status on that device.



Step 3 In the **Physical topology** area, choose **Assertions**. The **Assertions** page shows assertions for that device. By default, latched assertions with critical or warning states are shown.

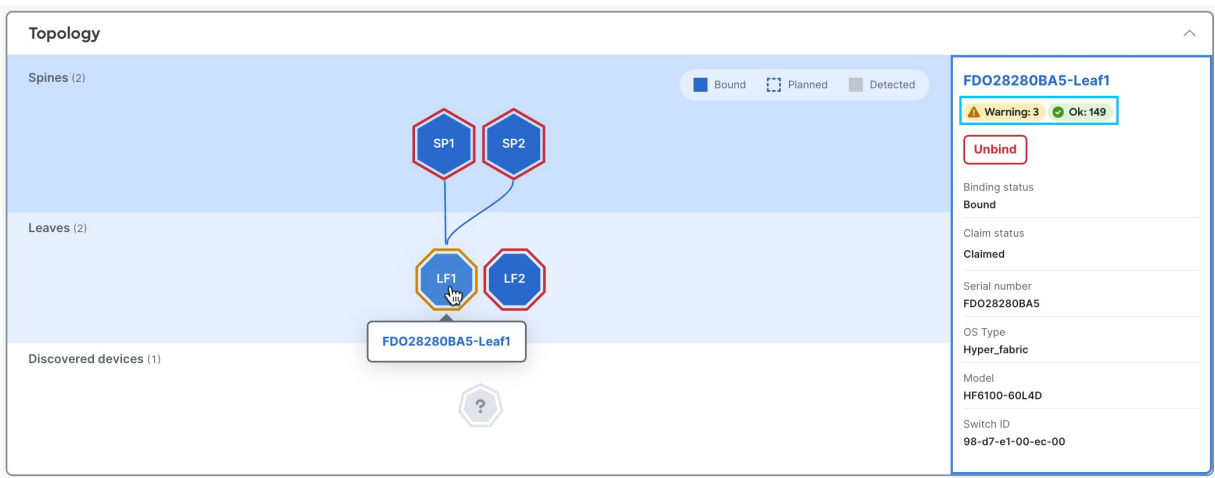
Step 4 To change the list of assertions you see, click **Configure filters** and use the drop-down lists to add or remove filter criteria.

View the assertions of a port

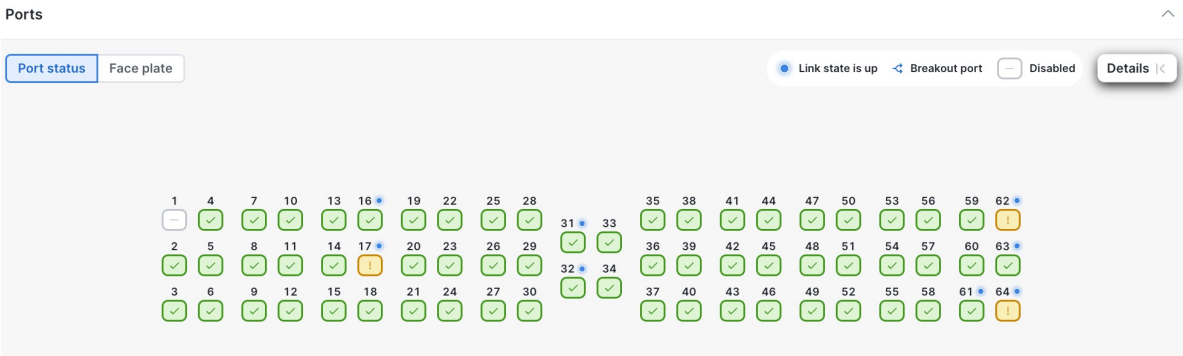
You can view assertions only for a specific port.

Step 1 Choose **Fabrics**, then click the fabric that has the port you want to view assertions for.

Step 2 In the **Topology** area, click the device, then click the device name.

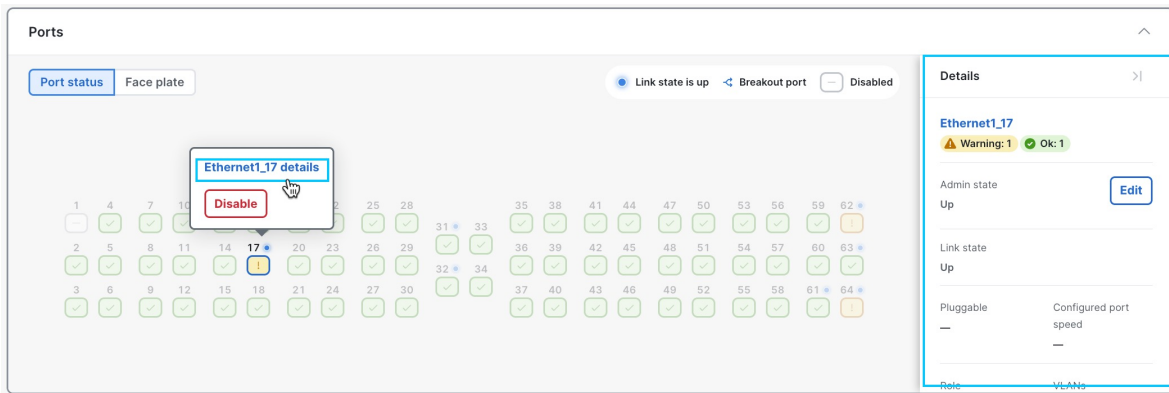


After you click the device name, device port status information appears. Ports with assertions will have the same color as the assertion status.

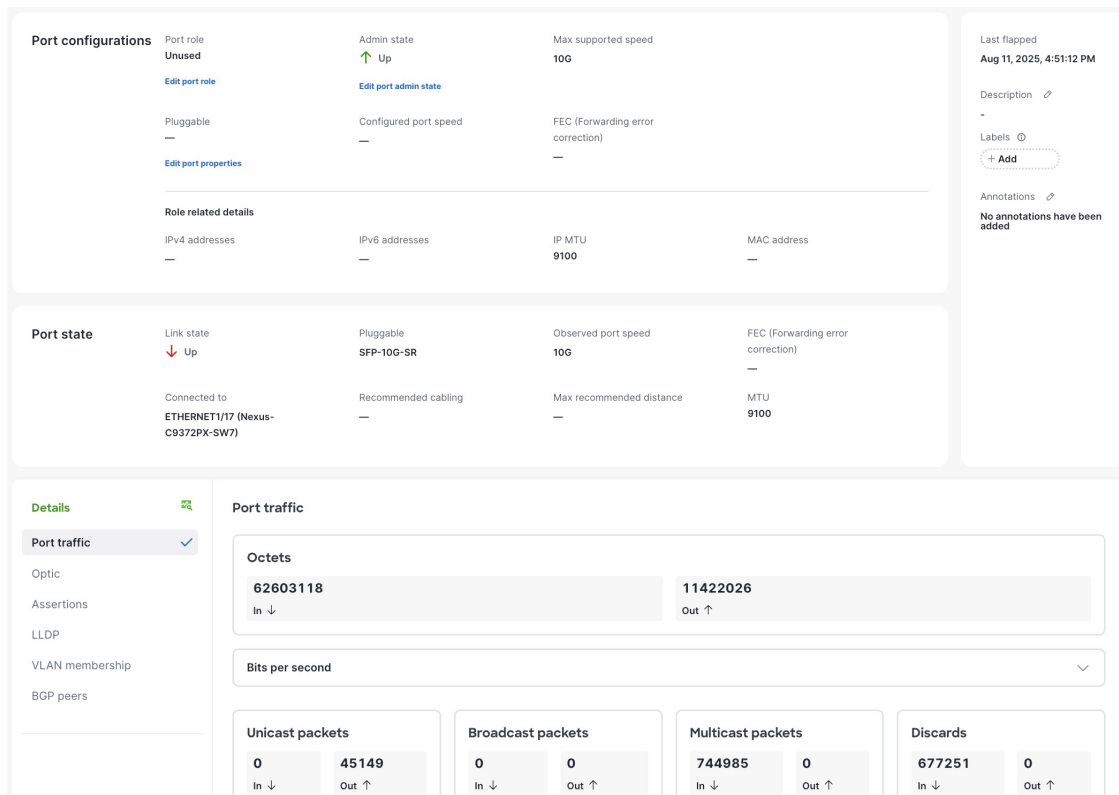


Step 3

To investigate an assertion further and review port details, click the port, then click the port name.



A page showing the port configurations, state, and traffic information appears.



Manually latch or unlatch an assertion

Follow these steps to manually latch or unlatch an assertion.

Step 1 Choose **Fabrics**, then click the fabric that has the assertion you want to modify.

Step 2 In the **Physical topology** area, choose **Assertions**.

By default, only latched assertions with critical or warning states are listed in the **Assertions** page for devices, ports, and in the network.

Step 3 To change the list of assertions you see, click **Configure filters** and use the drop-down lists to add or remove filter criteria.

Step 4 From the ellipsis drop-down list of an assertion, select **Unlatch** or **Force Latch**, depending on the modification you want to do.

Physical topology

Devices

Port configurations

Assertions

Fabric connections

IP/MAC addresses

Cloud connectivity

LLDP

Optics

Attachments

VLAN memberships

Global spanning tree

DSCP

Port channels

BGP

Logical network

Logical networks (VNI)

Assertions

Switches

Configure filters

Status = Critical OR Warning

Latch state = Latched

Device

1 result

1

0

6

21

| Status | Hostname | Group short name | Latch state | Type | Details | Remedy | |
|--------|-------------|------------------|-------------------------------------|----------------------------------|---------|--------|-----|
| | FDO28280BBG | — | Latched Jul 10, 2025 10:09:30 am | Device is not connected to cloud | — | | ... |

Unlatch

Port

5 results

2

3

158

276

| Status | Hostname | Group short name | Port name | Port role | Latch state | Type | Details | Remedy | |
|--------|-------------------|------------------|--------------|-----------|-------------------------------------|--------------------------------|---------|--------|-----|
| | FLM272702B4 | — | Ethernet1_32 | Fabric | Latched Jul 25, 2025 01:45:07 pm | Port link is unexpectedly down | — | ⓘ | ... |
| | FLM274104CG | — | Ethernet1_32 | Fabric | Latched Jul 11, 2025 10:50:54 am | Port link is unexpectedly down | — | ⓘ | ... |
| | FDO28280BA5-Leaf1 | — | Ethernet1_17 | Unused | Latched Aug 01, 2025 02:13:58 pm | Port link is unexpectedly up | — | ⓘ | ... |
| | FDO28280BA5- | — | Ethernet1_62 | Unused | Latched | Port link is unexpectedly up | — | | |

The **Latch state** column will reflect the update.