



View Device Details

The following topics explain how to get more information about your network devices. You can also generate a variety of device reports that provide hardware and software details, CPU and memory utilization, general device health, and so forth. For information on these reports, see [Device Reports](#). For information on inventory collection, see [How Often Is Inventory Collected?](#).

- [Find Devices](#), page 1
- [Get Basic Device Information: Device 360 View](#), page 2
- [View a Device's Local Topology from the Device 360 View](#), page 5
- [View the Network's Hardware Inventory](#), page 5
- [Get Complete Device Information: Device Details Page](#), page 6
- [View and Manage Devices Using the Chassis View](#), page 8
- [View Device Ports](#), page 24
- [View Device Interfaces](#), page 25
- [View Device Modules](#), page 27
- [View Environment Information \(Power Supplies, Fans\)](#), page 28
- [View Device Neighbors](#), page 28
- [Get More Information About Links](#), page 29
- [View Circuits/VCs](#), page 29
- [View Satellites](#), page 29

Find Devices

The quickest way to find a device is to use the quick search text boxes displayed at the top of the Network Devices table (**Inventory > Device Management > Network Devices**). You can enter partial strings for a device name, IP address, or software version, or choose from the values for reachability, admin status, and Inventory Collection. Devices are also organized into device groups, which you can view by choosing **Inventory > Device Management > Network Devices** and selecting a device type from the **Device Group** list.

Get Basic Device Information: Device 360 View

The Device 360 view is a pop-up window that provides quick information about a device, its inventory, and its status. This includes device alarms, modules, interfaces, neighbors, and chassis.

To launch a Device 360 view:

- Click the "i" icon next to an IP address in almost any device table
- From the network topology, click a device in an expanded group, then click **View**

The Device 360 view provides general device and performance information at the top of the view, and more detailed interface information in tabs in the lower part of the view. The information the Device 360 view displays depends on the device type and configuration. The Device 360 view provides the following information.

Information Provided in Device 360 View	Description
General information and tools	<p>Device type, its OS type and version, its last configuration change, and its last inventory collection. Icons convey the status of the device. Using the menus in the top right of the popup window, you can also perform these tasks:</p> <ul style="list-style-type: none"> • Troubleshoot—Perform a ping or traceroute, launch the Alarm browser, open a Cisco support case, or get information from the Cisco Support Community (Actions menu) • Performance—Check device CPU and memory (Performance Graphs hyperlink) • Topology—View the device and its local topology (up to 3 hops) and check the device's routing table (Actions menu) • Collect the device's inventory and save it to the database using Sync (Actions menu) • Open an SSH or Telnet session with the device (Actions menu) • Launch Cisco Transport Controller for optical devices (Actions menu) • Enable the automatic refresh of the view every 20 seconds (Actions menu) • Open the Device Details page to view details about software image and configuration file management, and use the device's Chassis View (by clicking the device IP address hyperlink or choosing View > Details) • Select a device for a side-by-side comparison with another device on the basis of information such as raised alarms and the current status of circuits, interfaces, and modules (Actions menu)—see Compare Device Information and Status

Performance data	Charts reflecting various aspects of the device performance. If a device has multiple memory pools, the Device 360 view will display the average utilization for all of the memory pools. If you want to see information about individual memory pools, use the memory utilization dashlets in the Network Summary dashboard. See Network Summary Dashboard Overview .
Alarms tab	Current alarms for the device, including their severity, status, and the time they were generated. Depending on the alarm source, you can also launch other 360 views from this tab.
Modules tab	Modules that are configured on the device, including their name, type, state, ports, and location.
Interfaces tab	Interfaces that are configured on the device, including status information. You can also launch an Interface 360 view for a specific interface.
Neighbors tab	NEs that are connected to this device through CDP (Cisco Discovery Protocol). If the selected device does not support CDP, this tab is empty. Displayed information includes device type and name, and the local port and device port. To view the neighbors in a popup topology map, choose Actions > Topology from the top right of the Device 360 view (see View a Device's Local Topology from the Device 360 View , on page 5).
Circuit/VCs tab	Circuit/VC name, type, customer, status, and creation date for each circuit provisioned on the device. You can also launch a Circuit/VC 360 view for specific circuits/VCs.
Satellites tab	For Cisco ASR 9000 devices in a cluster configuration, lists a satellite's name, type, description, status, and IP and MAC addresses. You can also launch a Satellite 360 view for a specific satellite.
Civic Location	Geographical information about device's location.
Recent Changes	The last five changes made on the device, classified as: Inventory, Config (Configuration Archive), or SWIM (Software Images). (These are the same types of changes that are displayed when you choose Inventory > Network Audit .)
SRRGs	Lists the Shared Risk Resource Groups (SRRGs) assigned to the device. Click this tab's ? (help) icon to view its legend. For more information about SRRGs, see View and Manage Shared Risk Resource Groups (SRRG) in the Geo Map .

You can also view a specific device in the topology map by choosing **Actions > Network Topology** (at the top right of the Device 360 view).

Compare Device Information and Status

From the **Comparison View**, you can perform a side-by-side comparison of multiple devices, viewing information such as raised alarms, the status of modules, interfaces, and circuits on those devices, and a summary of recent changes that have been made. To compare devices, do the following:

-
- Step 1** Choose one of the following to open the **Network Devices** page:
- **Monitor > Managed Elements > Network Devices**
 - **Inventory > Device Management > Network Devices**
- Step 2** For each device you want to compare:
- a) Open its **Device 360** view by clicking the *i* (**information**) icon in the **IP Address** column.
 - b) Choose **Actions > Add to Compare**.
The device you selected is displayed at the bottom of the page. You can select a maximum of 4 devices.
- Step 3** Click **Compare**.
The **Comparison View** opens.
- Step 4** From the drop-down list at the top of the view, specify whether the view will show all available information or just the information that is unique to each device.
- Step 5** Click **Custom View**, check the check box for the categories you want the view to display, and then click **Save**.
By default, all of the categories are already selected.
- Step 6** Scroll down the page to view the information provided for each category you selected.
Note the following:
- The **Comparison View** only displays information for two devices at a time. If you selected more than two devices, you will need to toggle to the devices that are not currently displayed.
 - Each device's **View** and **Action** menu is identical to the ones provided in their **Device 360** view. If you select an option, the corresponding page opens. To re-open the **Comparison View** for the devices you selected previously, click **Compare**.
 - You can minimize and maximize the categories displayed, as needed.
 - When you are done comparing devices, click **Back** at the top of the view and then click **Clear All** at bottom of the page.
-

View a Device's Local Topology from the Device 360 View

You can launch a small topology window from the Device 360 view that displays the network topology around a device, up to 3 hops.

-
- Step 1** Open the Device 360 View for the device in which you are interested.
- Click the "i" icon next to an IP address in almost any device table.
 - From the network topology, click a device in an expanded group, then click **View**.
- Step 2** Choose **N-Hop Topology** from the Actions drop-down menu (at the top right of the Device 360 view).
- Step 3** Adjust the popup window to show the information you need.
- Click the edit icon
 - Select a hop count (1-3) from the Hop drop-down list.
 - Select a topology map layout from the Layout drop-down list.
- Step 4** Save your changes, and use the pan and zoom tools to view the results.
-

View the Network's Hardware Inventory

Use this procedure to view basic hardware information for all devices in the network—the product name, physical location, serial number, manufacture date, and so forth.

-
- Step 1** To view device-level information:
- 1 Choose **Inventory > Device Management > Network Inventory**.
 - 2 Use the Quick Filters to locate specific devices. For example, to list the hardware information for all ASR devices, enter ***ASR*** in the Product Name field.
- Step 2** To view element-level information, use one of these methods:
- Get the information from the Device Details page. See [Get Complete Device Information: Device Details Page, on page 6](#).
 - Get the information from the Chassis View. See [Open the Chassis View, on page 9](#).
 - Run a hardware report. See [Device Reports](#).
-

Get Complete Device Information: Device Details Page

For the most comprehensive information about a device, use the Device Details page. It provides in-depth inventory information and configuration options.


Note

The Device Details page for Cisco NCS 2000 devices has a different look and feel. For an example and more information, see [Device Details Page for Cisco NCS 2000 and Cisco ONS Devices](#), on page 7.

To do the following:	Click this tab in the Device Details page:
View all available inventory information about a device.	Device Details
Configure interfaces, routing protocols, and other services and technologies. See Ways to Configure Devices Using Cisco Evolved Programmable Network Manager .	Configuration For Cisco NCS 2000 and Cisco ONS devices, this choice is under the Logical View tab that is at the top of the Device Details page.
View details about changes that were made using a configuration template, and manage future changes. See Ways to Create Configuration Templates Using Cisco EPN Manager .	Applied/Scheduled Templates (For Cisco NCS 2000 and Cisco ONS devices, this choice has been deprecated.)
Manage the device configuration file that is running on the device, along with files saved in the configuration archive. View All Archived Files .	Configuration Archive For Cisco NCS 2000 and Cisco ONS devices, this choice is displayed on the right when you click the Chassis View tab.
Manage the software image that is running on the device, along with images saved in the repository. See View the Images That Are Saved in the Image Repository .	Image For Cisco NCS 2000 and Cisco ONS devices, this choice is displayed on the right when you click the Chassis View tab.
View the device chassis and the status of its elements. (If the Chassis View tab is not displayed, the Chassis View is not supported on the device.) See View and Manage Devices Using the Chassis View , on page 8.	Chassis View For Cisco NCS 2000 and Cisco ONS devices, the Chassis View has a different look and feel. For more information, see Overview of the Cisco NCS 2000 and Cisco ONS Chassis View Window , on page 14.

To launch the Device Details Page:

- From a Device 360 view—Click the IP address hyperlink or choose **View > Details**
- From a network devices table—Click the device name hyperlink in a device table.

Device Details Page for Cisco NCS 2000 and Cisco ONS Devices

The Device Details page for Cisco NCS 2000 and Cisco ONS devices has a different look and feel than the Device Details pages for other device types:

The tabs that are displayed here depend on your selection in the Chassis View:

- The **Image** and **Configuration Archive** tabs are only available when a top-level chassis is selected.
- The **Interfaces** and **Performance** tabs are new to this release. The **Performance** tab is only available when a card or port is selected.
- The **Applied/Schedule Templates** tab is deprecated in this view.

The following table describes the tabs that the Device Details page provides:

Tab Name	Description
Chassis View	Provides inventory, service, and alarm information that is contextualized to the element you select. Also serves as launch point for configuration, Image management, and Configuration Archive features. (To configure logical elements, click the Logical View tab.) For information on using the Chassis View features, see Overview of the Cisco NCS 2000 and Cisco ONS Chassis View Window , on page 14.
Logical View	Provides logical inventory information. Also provides configuration options for logical elements.

Tab Name	Description
Device Details	Provides system information (environment, modules ports, interfaces, and other settings).
Alarms	Get information about the alarms that have been raised on a device, a card, or a port. See View an Alarm's Details .
Configuration	Configure a device, card, or port. Elements are grouped by their physical location. (To configure elements that are grouped according to their logical function, click the Logical View tab.) See Ways to Configure Devices Using Cisco Evolved Programmable Network Manager .
Inventory	View detailed hardware information such as serial numbers and manufacture dates for a device or card.
Interfaces	View the status of interfaces configured on a device, card, or port. From here, you can also open the Interface 360 view for a particular interface. For links to topics that describe other ways to view interface information in Cisco EPN Manager, see View Device Interfaces .
Performance	View summary information and high-level performance metrics for the selected interface on a card or port. The dashlets displayed in addition to the Interface Details dashlet will vary, depending on the interface type you chose. After choosing an interface from the Interface drop-down list, make sure to click Apply in order to refresh the information that is displayed.
Circuits	View the circuits a device, card, or port participates in. For links to topics that describe other ways to view circuit information in Cisco EPN Manager, see View Circuits/VCS .
Image	Manage the software image that is running on the device. See View the Images That Are Saved in the Image Repository .
Configuration Archive	Manage the device configuration file that is running on the device. See View All Archived Files .

View and Manage Devices Using the Chassis View



Note

The Chassis View for Cisco NCS 2000 and Cisco ONS devices has a new look and feel. For more information, see [Overview of the Cisco NCS 2000 and Cisco ONS Chassis View Window](#), on page 14.

The Chassis View provides an interactive model of a device chassis and its hardware elements. From the Chassis View you can:

- View the contents of a chassis.
- Check the state of chassis elements and quickly locate problems.
- View alarmed elements and launch views that provide alarm details.

- Configure interfaces (using the launch point that opens the Device Details page).

The elements that are displayed in the Chassis View depend on the device type and the elements that are configured on the device.

See these topics for information about how to launch and use the Chassis View:

- [Open the Chassis View, on page 9](#)
- [Overview of the Chassis View Window, on page 11](#)
- [View Network Element State Information in the Chassis View, on page 17](#)
- [View Mixed Chassis, Multi-Chassis, and Multi-Shelf Devices in the Chassis View, on page 19](#)
- [View Alarms in the Chassis View, on page 21](#)
- [Configure Interfaces from the Chassis View, on page 23](#)

Open the Chassis View

The following table describes the various ways you can open the Chassis View. If a device does not provide these launch points, it means the device does not support the Chassis View. For a list of devices that support the Chassis View, see [Device Support for the Chassis View in This Release of Cisco EPN Manager, on page 16](#).

To open a Chassis View from:	Do the following:	The Chassis View is displayed in:
Network Devices table	Click  next to the device IP address.	A pop-up window
	<ul style="list-style-type: none"> • Cisco NCS 2000 and Cisco ONS devices—Click a device name hyperlink. • Other device types—Click a device name hyperlink to open the Device Details page, then click the Chassis View tab. 	A full-page view
Device 360 view	Choose View > Chassis View from the top right of the Device 360 view.	A pop-up window
	<ul style="list-style-type: none"> • Cisco NCS 2000 and Cisco ONS devices—Choose View > Details from the top right of the Device 360 view. • Other device types—Choose View > Details from the top right of the Device 360 view (to open the Device Details page), then click the Chassis View tab. 	A full-page view

To open a Chassis View from:	Do the following:	The Chassis View is displayed in:
Device Details page	Click the Chassis View tab. Note On the Device Details page for devices other than Cisco NCS 2000 and Cisco ONS devices, the Configuration tab also has a Chassis View side tab. Use this Chassis View to configure interfaces (as described in Configure Interfaces from the Chassis View , on page 23).	A full-page view

To open a full-page Chassis View from a Chassis View pop-up window, do one of the following:

- Cisco NCS 2000 and Cisco ONS devices—Click the **Launch Configuration** link in the top right corner of the window.
- Other device types—Click  in the top right corner of the window.

Permissions Required to View and Configure Devices Using the Chassis View

The following table describes the Chassis View permissions that are granted to members of the Cisco EPN Manager user groups. These permissions cannot be edited. For more information on user groups, see [Control the Tasks Users Can Perform \(User Groups\)](#)

- Full access (read and write)—Users in this group can view and configure devices using the Chassis View.
- Read-only access—Users in this group can use the Chassis View to view devices but not to configure them.
- Write-only access—Users in this group can use the Chassis View to configure devices but not view them (only applies to the NBI Write group).
- No access—Users in this group cannot access or use the Chassis View.

Group Type		Read	Write
Web UI	Root	X	X
	Super Users	X	X
	Admin	—	—
	Config Managers	X	X
	System Monitoring	X	—
	User-Defined 1-4	X	—
	Monitor Lite	X	—
NBI	NBI Credential	—	—
	NBI Read	X	—
	NBI Write	—	X
	North Bound API	X	X

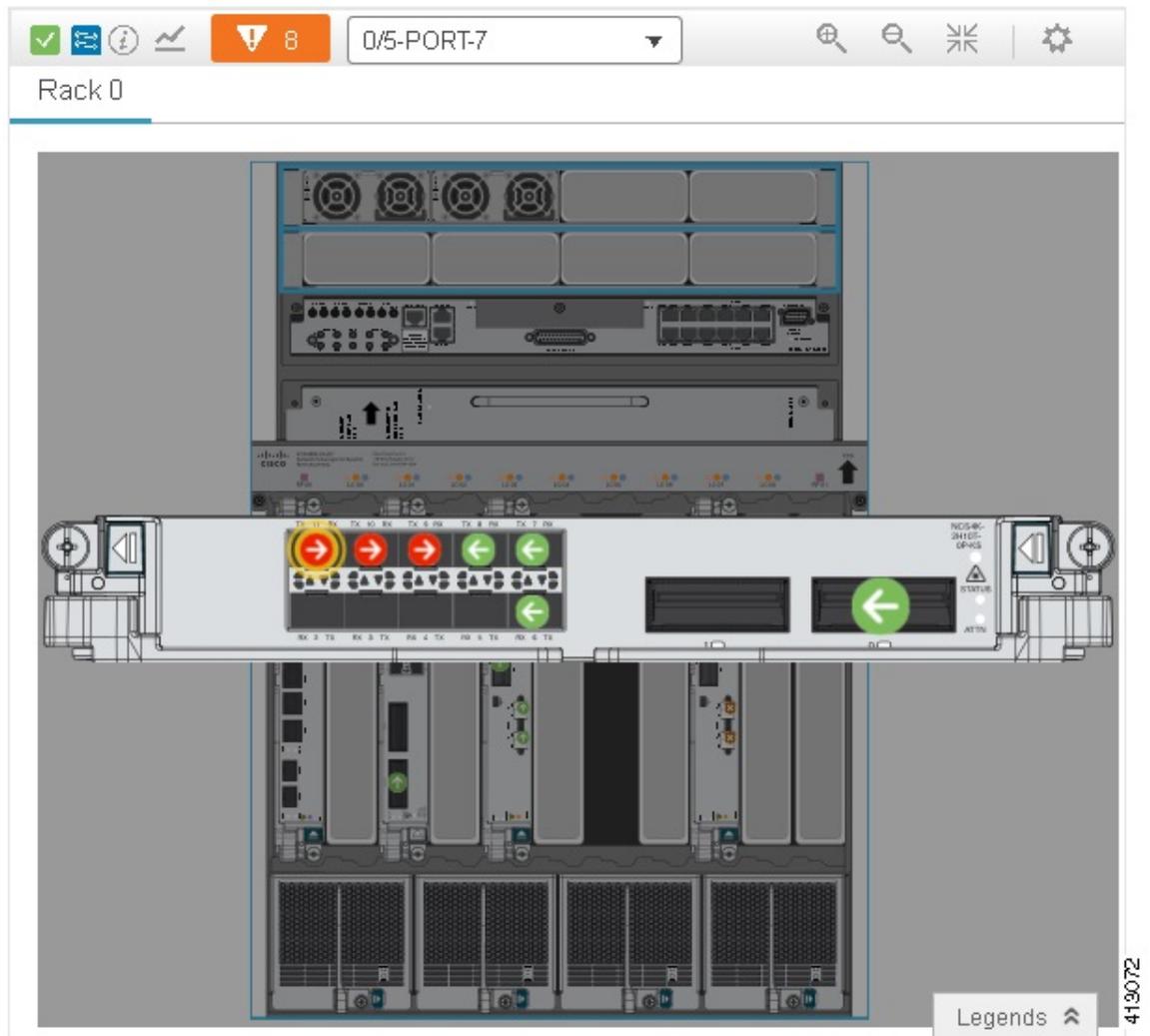
Overview of the Chassis View Window



Note

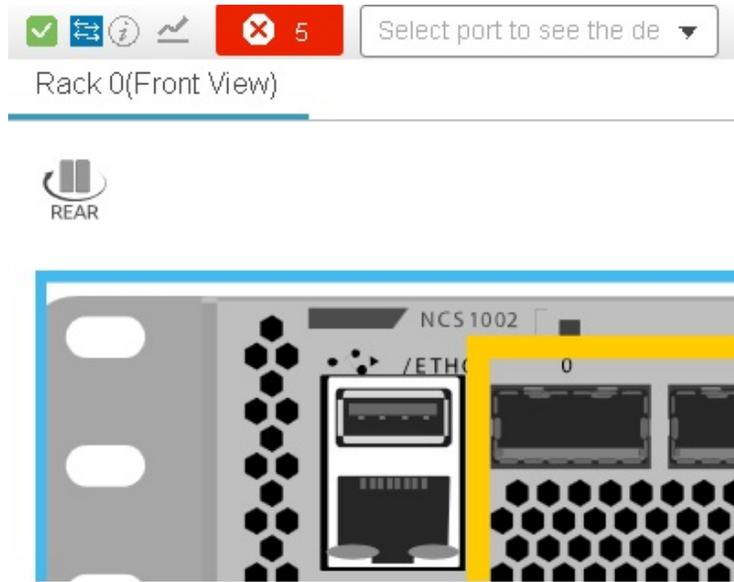
The Chassis View for Cisco NCS 2000 and Cisco ONS devices has a different look and feel. See [Overview of the Cisco NCS 2000 and Cisco ONS Chassis View Window, on page 14](#) for an example.

The following illustration shows a Chassis View for a Cisco NCS 4009. In this example, the user selected **0/5-PORT-7** from the port search drop-down list above the Chassis View graphic. The port pulsates in the Chassis View to help the user locate it (note the concentric yellow circles around the port). When the user double-clicked the containing line card module, the Chassis View brought the module to the forefront (and rotated it) for easy viewing. The badges displayed on the ports indicate the primary status of the port (see [Port and Interface States, on page 18](#)). Some elements may be surrounded by colored lines to indicate their state (out of service, pre-provisioned, and so forth). To open a key that explains the meaning of the badges and these other indicators, click **Legends** at the bottom right of the Chassis View.



If a device has multiple chasses or shelves, each chassis or shelf is displayed in a separate tab (for an example, see [View Mixed Chassis, Multi-Chassis, and Multi-Shelf Devices in the Chassis View, on page 19](#)). If a card image cannot be retrieved, the Chassis View displays a question mark alongside the card name.

Some devices support front and rear views, as shown in the following example (note the "rear" icon above the Chassis View graphic). Clicking the "rear" icon toggles the image to the front view, and vice versa.



The icons at the top left of the Chassis View provide basic device health information and launch points for tools that can provide more details.

Device Information Icon	Description
	Device reachability state (see Device Reachability and Admin States). The green check means the device is reachable.
	Device administrative status (see Device Reachability and Admin States). The blue icon means the device is managed.
	Launch point for Device 360 view.
	Launch point for device performance graphs. The graphs provide CPU and memory utilization data (performance graphs are not supported on Cisco NCS 2000 and Cisco ONS devices).
	Summary of device alarms (click to open Alarm Summary popup window).
	Device ports search field. Choose a port from the drop-down list or enter a partial string to locate a port (it will blink in the Chassis View).
	Front and rear view toggle (currently supported on Cisco NCS 1002, Cisco ASR 901S, and Cisco cBR-8 devices only).

You can also:

- Enable and disable alarm pulsating—Click  at the top right of the Chassis View.
- Zoom in, zoom out, and open a full-page Chassis View—Use the tools at the top right of the Chassis View. Clicking  opens a full-page Chassis View.
- Open a key that explains the significance of badges and colored lines—Click  at the bottom right of the Chassis View.



Note

The colors rendered in the Chassis View may not match your physical device because the Chassis View displays a generic image that is packaged with Cisco EPN Manager .

Overview of the Cisco NCS 2000 and Cisco ONS Chassis View Window

The Chassis View window for Cisco NCS 2000 and Cisco ONS devices has a different look and feel than the Chassis View for other devices. To open this view, use one of the launch points documented in [Open the Chassis View, on page 9](#).



Note

The colors rendered in the Chassis View may not match your physical device because the Chassis View displays a generic image that is packaged with Cisco EPN Manager.

The following table describes the Chassis View's components and their function:

Chassis View Component	Description
	Opens a field you can use to search for a particular rack, shelf, module, or interface on a device.
	Opens the Chassis Explorer . See Chassis Explorer Overview .
	Indicates the device's reachability state (see Device Reachability and Admin States). This example indicates the device is reachable.
	Indicates the device's administrative status (see Device Reachability and Admin States). This example indicates the device is managed.

Chassis View Component	Description
	Opens the device's Device 360 view. See Get Basic Device Information: Device 360 View .
Launch Configuration link	Opens the device's Device Details page. The tabs displayed on this page will vary, depending on whether a device, module, or port is currently selected in the Chassis View. See Device Details Page for Cisco NCS 2000 and Cisco ONS Devices .
	Adds a shortcut to the device's Chassis View in the Dock window. See Customize the Dock Window .
	Closes the Chassis View .
	Zooms in on an image.
	Zooms out from an image.
	Resizes an image so it can be viewed in its entirety within the Chassis View .
	Toggles between the front and rear Chassis View for a device. This feature is supported by the following Cisco devices: <ul style="list-style-type: none"> • ASR 901S • cBR-8 • NCS 1001, 1002, 5001, 5002, and 5008
	Rotates the image of the module that is currently displayed. This icon is not available when an entire device is displayed.
	Click to access the Enable Alarm Blinking check box. When checked, any alarm badges displayed for a module or port will blink in order to draw attention to them and make them easier to locate.

Chassis View Component	Description
	Opens a key that explains the significance of badges and colored lines displayed in the Chassis View .

Chassis Explorer Overview

The **Chassis Explorer** enhances the functionality of the Chassis View for Cisco NCS 2000 and Cisco ONS devices in a number of ways. To quickly locate a particular module, place your cursor over its listing in the **Chassis Explorer** and the Chassis View highlights it. Say you want to focus your troubleshooting efforts on a particular shelf. Click its **Chassis Explorer** listing and the Chassis View updates, displaying only that shelf. When a device's Device Details page is open, click a module's *i* (**information**) icon to open a pop-up window that displays summary information for that module and provides links that allow you to reset or delete that card. And if you open the same pop-up window for an empty card slot, it gives you the option to add a new card.



Note

For more information about adding, resetting, and deleting cards, see the following topics:

- [Configure Cards from the Chassis View](#)
- [Reset a Card](#)
- [Delete a Card](#)

By default, the **Chassis Explorer** opens whenever you open the Chassis View for a Cisco NCS 2000 and Cisco ONS device. If it obscures a Chassis View area you need to look at, click the **Chassis Explorer** and hold down your mouse while you move it to another location.

Device Support for the Chassis View in This Release of Cisco EPN Manager

The following table lists the Chassis View features and the devices on which they are supported. This means the feature has been tested and verified on that device. While you can launch the Chassis View from other devices, it has only been verified on the devices below.



Note

The Chassis View for Cisco NCS 2000 and Cisco ONS devices has a different look and feel from the Chassis View for all other devices. An example of the Cisco NCS 2000 Chassis View is provided in [Overview of the Cisco NCS 2000 and Cisco ONS Chassis View Window](#), on page 14.

Feature	Supported on:

General features	<p>Cisco NCS 1002 device</p> <p>Cisco NCS 2000 devices</p> <p>Cisco NCS 4000 and 4200 devices</p> <p>Cisco ONS devices</p> <p>Cisco ASR 900 devices</p> <p>Cisco ASR 9000 devices</p> <p>Cisco cBR-8 device</p>
Multi-chassis information	<p>Cisco NCS 2000 devices</p> <p>Cisco ONS devices</p> <p>Cisco ASR 9000 devices</p>
Operational States	<p>Cisco NCS 1002 device</p> <p>Cisco NCS 2000 devices</p> <p>Cisco NCS 4000 and 4200 devices</p> <p>Cisco ONS devices</p> <p>Cisco ASR 900 devices</p> <p>Cisco ASR 9000 devices</p> <p>Cisco cBR-8 device</p>
Alarms	<p>Cisco NCS 1002 device—Port, card, module, equipment alarms</p> <p>Cisco NCS 2000 devices—Port, card, module, equipment alarms</p> <p>Cisco NCS 4000 and 4200 devices—Port alarms</p> <p>Cisco ONS devices</p> <p>Cisco ASR 900 devices—Port, card, module, equipment alarms</p> <p>Cisco ASR 9000 devices—Port, card, module, equipment alarms</p> <p>Cisco cBR-8 device</p>

View Network Element State Information in the Chassis View

Badges, lines, and colors provide state information about elements and components in a device. To display a key that lists what the badges, lines, and colors mean, click the Legends icon at the bottom right of the Chassis View.

See these topics for more information:

- [Equipment Operational States \(Chassis View\)](#), on page 18
- [Port and Interface States](#), on page 18

**Note**

Port state information is not shown for the CFP ports on an A9K-400G-DWDM-TR line card as these ports are not yet supported.

Equipment Operational States (Chassis View)

Equipment Operational State—The equipment operational state represents the running state of the network element.

Equipment Operational State	Icon	Description
In Service	(none)	Equipment is operating properly.
Pre-provisioned		(Cisco NCS 2000 and Cisco ONS devices only) Equipment has been configured but is not physical present in the chassis.
Failed/Disabled/Down/Out of Service/Out of Service Maintenance		Equipment is not operating properly.
Unknown		Equipment operational state is unknown. No response (or insufficient response) from the device.

Port and Interface States

Port/Interface Primary States—A port/interface's primary state conveys the most important state information for a port/interface by combining the admin and operational states. The Multilayer Trace displays either a port primary state or alarm status. For the Chassis View, if an element in the Chassis View does not support changing color to indicate a state change, you can still get the state change information from the alarm that is generated for the state change.

Port/Interface Primary State	Icon	Admin Status	Operational State
Unknown		Unknown	Unknown
Down		Up	Down
Test		Test	—
Admin Down		Admin Down	—
Up		Up	Up
Auto Up		Up	Auto Up

Port/Interface Admin Status—The port/interface admin status represents the configured state of the port or interface (for example, if an administrator has manually shut down a port).

Port/Interface Admin Status	Icon	Description
Unknown		Port/interface admin status is unknown. There is no response (or insufficient response) from the device.
Admin Down		Port/interface was manually shut down by the administrator.
Up		Port/interface is enabled by administrator.
Test		Port/interface is being tested by the administrator.

Port/Interface Operational State—A port/interface's operational state conveys the port or interface's running state and whether it is working properly.

Port/Interface Operational State	Icon	Description
Unknown		Port/interface operational state is unknown. There is no response (or insufficient response) from the device.
Down		Port/interface is not working properly.
Up		Port/interface is receiving and transmitting data.
Auto Up		Port/interface is receiving and transmitting data (only certain devices support this state; other devices use "Up").

View Mixed Chassis, Multi-Chassis, and Multi-Shelf Devices in the Chassis View

If a device has multiple shelves or chassis, the Chassis View displays each shelf or chassis on a separate tab. When you select a tab, you can view the details of that specific shelf or chassis. For mixed-chassis, multi-chassis, and multi-shelf devices, Cisco EPN Manager aggregates alarms to a chassis or shelf as explained in [View Alarms in the Chassis View, on page 21](#).

The following figure shows the Chassis View for a Cisco ASR 9001 device with a Cisco ASR 9000v dedicated satellite device. You can toggle between the Chassis View for the two devices by clicking the tabs at the top of the window. (The Chassis View window for Cisco NCS 2000 and Cisco ONS devices has a different look and feel; see [Overview of the Cisco NCS 2000 and Cisco ONS Chassis View Window, on page 14](#).)

Chassis View-ASR9K-CN-ABR4.test



✓ 🔄 ⓘ 📈 ✖ 0

Select port to see the de ▾

🔍 🔍 ✖ ⚙️

chassis ASR-9001 Satellite Chassis ASR-9000v-AC ID 102

Legends ⬆

414871

For multi-chassis devices in a cluster, the Device 360 view's **Chassis** tab identifies which chassis is the primary and which is the backup.

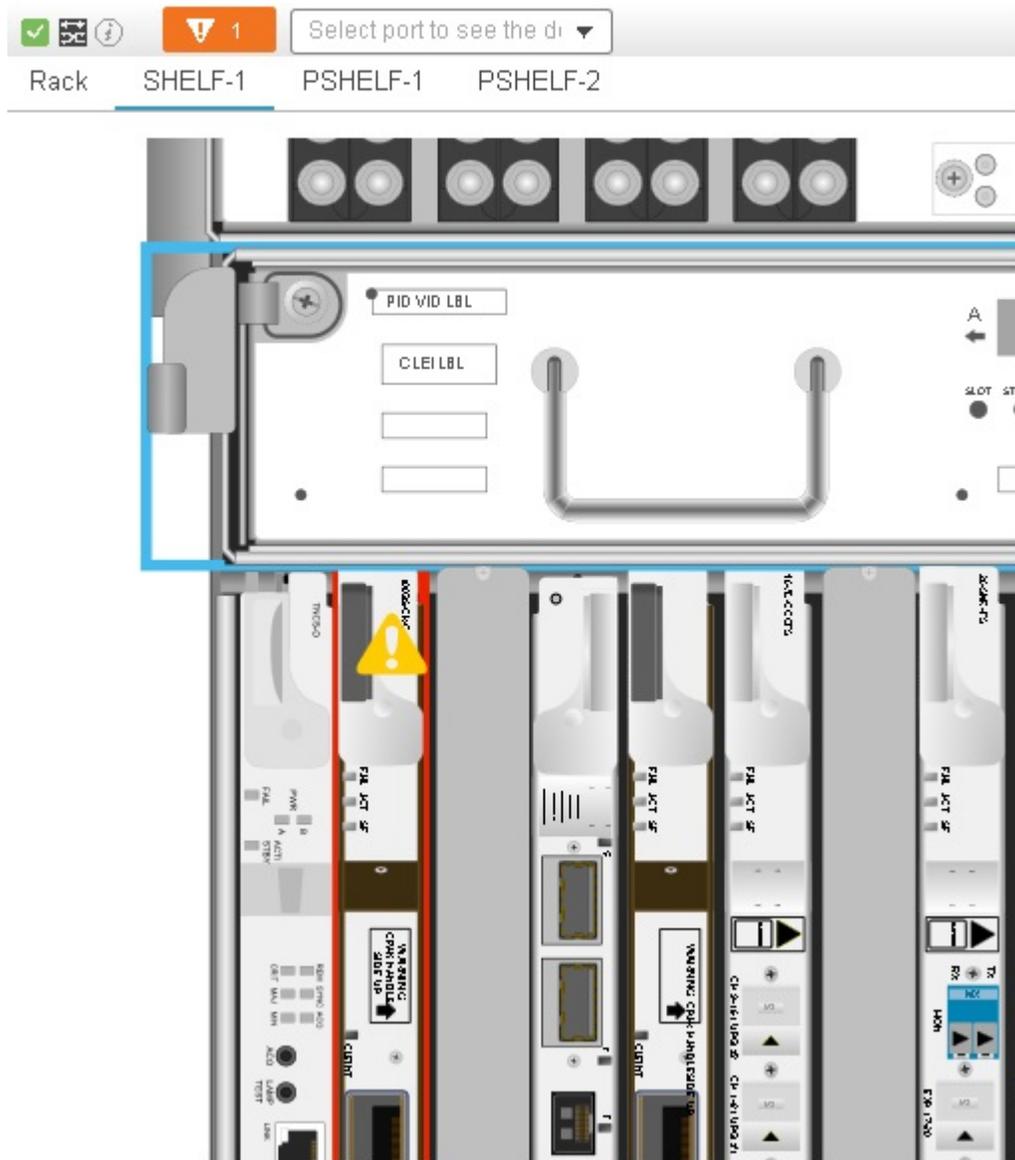
This example shows a mixed Chassis View that has both Cisco NCS 2000 and Cisco ONS 15454 chassis. Shelf numbers are not consecutive because of the different types of chassis.

The screenshot displays the Chassis View for a Cisco NCS2KE device. The left pane shows a physical representation of the chassis with two racks, RACK1 and RACK2, containing various modules. The right pane shows a hierarchical tree view of the chassis components, including RACK, SHELF, and various modules like M6-SA, M6-DC, M6-FTA, and M6-LCD. The interface includes navigation tabs (Alarms, Configuration, Circuits, Inventory, Image, Configuration Archive) and a search/filter bar.

Location	Product ID	Oper...	Product N...	Type	Seri...	CLEL...
0				RACK		
RACK-1[38-1]		Enabled		Module		
RACK-1[39-1]		Enabled		Module		
RACK-1[37-1]		Enabled		Module		
RACK-1[07]	15454-M6-SA	Enabled	NC	Chassis		
SHELF-1	15454-M-TNC+9	Enabled	TNC	Module	CAT16...	WOCU...
SHELF-1		Disabled		Module		
SHELF-1	15454-M6-DC	Unknown	M6-DC	Module	SAL16...	WOPU...
SHELF-1	15454-M6-SA	Unknown	M6-SA	Module	SAL16...	WOM...
SHELF-1	15454-M6-ECU	Unknown	M6-ECU	Module	SAL16...	WOM...
SHELF-1	15454-M6-FTA	Unknown	M6-FTA	Module	SAL16...	WOCU...
SHELF-1	15454-M6-LCD	Unknown	M6-LCD	Module	SAL16...	WOP...
SHELF-1		Disabled		Module		
SHELF-1		Disabled		Module		
SHELF-1		Disabled		Module		
SHELF-1		Disabled		Module		
SHELF-1		Disabled		Module		

View Alarms in the Chassis View

An alarm badge in the Chassis View represents one or more alarms that have been localized to a piece of equipment. For an element with multiple alarms, the badge icon will convey the most severe alarm. (The Chassis View window for Cisco NCS 2000 and Cisco ONS devices has a different look and feel; see [Overview of the Cisco NCS 2000 and Cisco ONS Chassis View Window](#), on page 14.)



You can customize the Chassis View so that alarm icons will blink. Choose  at the top right of the window, then select **Enable Alarm Blinking**.

The information displayed in a Chassis View Alarm Summary depends on from where you launch the Alarm Summary:

Launching the Chassis View from here:	Displays:
Top left of Chassis View window (device information area)	Alarms on the device. An example Alarm Summary for a multi-shelf device is provided after this table.
Hovering over an alarm badge within the Chassis View	Alarms aggregated to that piece of equipment.

When you launch the device Alarm Summary for a multi-chassis, mixed-chassis, or multi-shelf devices, the Alarm Summary shows the total device alarms and the total alarm count for each shelf or chassis.



Note Launching the Alarm Summary is not supported on Cisco NCS 2000 and Cisco ONS devices.

Name	Critical	Major	Minor
Device	0	1	2
SHELF-1[S...	0	0	2

Configure Interfaces from the Chassis View

To configure a device interface from the Chassis View, complete one of the following procedures. The procedure you need to complete depends on whether you are using the Chassis View for a Cisco NCS 2000 or Cisco ONS device.

Cisco NCS 2000 and Cisco ONS Devices

-
- Step 1** With a device's Chassis View open, click the **Launch Configuration** link. The Device Details page opens.
- Step 2** Click the **Logical View** tab.
- Step 3** From the **Features** pane, choose **Interfaces** > the interface type you want to configure.
- Step 4** Complete the instructions specific to the interface type you chose to add or edit an interface. For example, if you are adding a new loopback interface, you would complete the instructions described in [Configure Loopback Interfaces](#).
-

Non-Cisco NCS 2000 and Cisco ONS Devices

-
- Step 1** With a device's Chassis View open, click the **Go to Full Page** icon from the top right corner. The Device Details page opens.
- Step 2** Click the **Configuration** tab.
Note the two side tabs: **Logical View** and **Chassis View**.
- Step 3** Click the **Chassis View** side tab.
The right side of the page updates, displaying the **Ethernet** table.
- Note** Ensure that the **Configuration** tab is still selected before you proceed.
- Step 4** Do one of the following:
- If you want to configure an Ethernet interface, skip ahead to Step 5.
 - If you want to configure a different interface type, click the down arrow to the right of **Ethernet** and choose it from the drop-down list. The right side of the page updates, displaying the table for the interface type you chose.
- Step 5** Click the zoom tool in the top right corner of the Chassis View to enlarge the image, then locate the module that the interface you want to configure resides on/will reside on.
- Step 6** Click the port associated with the interface you want to configure.
The attributes for the interfaces already configured on that port are displayed.
- Step 7** Complete the instructions specific to the interface type you chose to add or edit an interface.
For example, if you are adding an Ethernet interface, follow the instructions in [Configure Ethernet Interfaces and Subinterfaces](#).
-

View Device Ports

You can get in-depth information about a device's physical ports from the Device Details page. You can also get basic port information from various 360 views.

To view a device chassis with its modules and ports, use the Chassis View. See [Open the Chassis View, on page 9](#).

To view this port information:	Do the following:
All Physical ports on a device (including port alias and residing module)	<ol style="list-style-type: none"> 1 Open the Device Details page. <ul style="list-style-type: none"> • Choose View > Details from the top right of the Device 360 view. • Click the device name hyperlink in a device table. 2 Under the Device Details tab, choose System > Physical Ports.

An interface's ports	Check the Interface tab on a 360 view
Ports connected to a module	Check the Modules tab on a Device 360 view
Ports connected to a neighbor	Check the Neighbors tab on a Device 360 view

For a matrix of ports states and icons, see [Port and Interface States](#), on page 18.

View Device Interfaces

Cisco EPN Manager provides the following ways to view device interfaces:

Ways to View Interfaces	For more information, see:
View details about a specific interface	Get a Quick Look at a Device Interface: Interface 360 View , on page 25
View a specific device's interfaces	View a Specific Device's Interfaces: Device 360 View , on page 25 Get Comprehensive Information About a Device's Interfaces Using the Device Details Page , on page 27

View a Specific Device's Interfaces: Device 360 View

Use the Device 360 view to quickly check the status of a device's interfaces.

-
- Step 1** Open the Device 360 view.
- Click the "i" icon next to an IP address in almost any device table
 - From the network topology, click a device in an expanded group, then click **View**
- Step 2** Click the **Interfaces** tab.
-

Get a Quick Look at a Device Interface: Interface 360 View

The Interface 360 view gives you a quick details about a specified interface. In addition to status, performance, and general interface information, you can enable and disable the interface from the Interface 360 view. The Interfaces 360 view also provides ways to open 360 views for circuits/VCS (depending on the interface configuration).

You can launch the Interface 360 view wherever you see an "i" icon next to an interface name—for example, in an alarms table, or in the various 360 views under the Interfaces or Endpoints tabs.

You can also view a specific interface in the topology map by choosing **Actions > Network Topology** (at the top right of the Interface 360 view).

The Interface 360 view provides general interface and performance information at the top of the view, and more detailed interface information in tabs in the lower part of the view. The information the Interface 360 view displays depends on the interface configuration.

Information Provided in Interface 360 View	Description
General information	<p>The interface name, status, description, type, device name; IP address, MAC address, and so forth. Using the menus in the top right of the popup window, you can also perform these tasks:</p> <ul style="list-style-type: none"> • View performance information for optical devices by launching the DWDM/OTN Performance dashboard from the View menu. See DWDM/OTN Performance Dashboard Overview. • Enable and disable the interface from the Actions menu. • Enable and disable the lockout of an MPLS interface from the Actions menu. You would lock out an MPLS interface before doing maintenance work on the TE Tunnel link that the interface belongs to. After you lock out an MPLS interface, be sure to manually sync the device. Otherwise, you will not have the option to disable the lockout later.
Performance data	Graphs or charts reflecting various aspects of interface performance.
Alarms	Current alarms for the interface, including their severity, status, and the time they were generated. Also provides a launch point to the Alarm Browser.
Interfaces	Name, operational and admin status for each associated interface. Also provide a launch point for the Interface 360 view.
Circuit/VCS	(For interfaces that participate in provisioned circuits) Circuit/VC name, type, customer, status, and creation date. Also provides a launch point for the Circuit/VC 360 view.

Get Comprehensive Information About a Device's Interfaces Using the Device Details Page

Use the Device Details page to get extensive information about all of the interfaces that are configured on a device. For easier navigation, interfaces are grouped together by type.

-
- Step 1** Open the Device Details page.
- Click the device name hyperlink which appears in many of the device tables
 - Choose **View > Details** at the top right of the Device 360 view
- Step 2** Under the Device Details tab, click **Interfaces** to display a list of all interfaces (of all types) that are configured on the device.
- Step 3** To display all interfaces of the same type, click the type (such as **Ethernet Interfaces**).
- Step 4** To get details about a specific interface, click the interface name hyperlink.
-

View Device Modules

To view device module information, choose **Inventory > Device Management > Network Devices**, then launch a Device 360 or Device Details page, depending on how much information you want.

To get this information:	Use this navigation:
Basic module information: Status, type, ports	From the Device 360 view, click the Modules tab. To open the Device 360 view: <ul style="list-style-type: none"> • Click the “i” icon next to the device name in almost any device table • From the Network Topology, click a device (in an expanded view), then click View
Module equipment type and power information	From the Device Details page, choose System > Modules under the Device Details tab. To open the Device Details page: <ul style="list-style-type: none"> • Click the device name hyperlink which appears in many device tables • Choose View > Details from the top right of the Device 360 view

View Environment Information (Power Supplies, Fans)

Environment-related information, such as details about power supplies and fans, is displayed in a device's **Device Details** page. To access this information:

-
- Step 1** Do one of the following:
- Click the device name hyperlink that appears in many Cisco EPN Manager device tables and then click the **Device Details** tab (if it is not already selected).
 - Choose **View > Details** from the top right of a **Device 360** view and then click the **Device Details** tab (if it is not already selected).
- Step 2** From the **Features** pane, choose **System > Power Options & Fans**.
-

View Device Neighbors

Device neighbor information, such as the neighbor name, port number, index, and duplex setting, is displayed in a device's Device 360 view.

-
- Step 1** Open the Device 360 view.
- Click the “i” icon next to the device name in almost any device table
 - From the network topology, click a device in an expanded group and click **View**
- Step 2** Click the **Neighbors** tab.
-

For example:

Name	Index	Port	Duplex
ASR9K	7	TenGigE0/0/2/0	fullduplex
CPE-ISRG2	67	GigabitEthernet0/0/3	fullduplex
Asr_903	36	GigabitEthernet0/0/0	fullduplex

Get More Information About Links

Cisco EPN Manager provides a variety of ways that you can view links and get more details about them:

To view link information for:	See the procedures in:
A specific link	Get a Quick Look at a Specific Link: Link 360 View
A specific link in a topology map	View a Specific Link in the Topology Map
A group in a topology map	View a Device Group's Links in a Network Topology Map
All of Cisco EPN Manager	View All Links in Cisco EPN Manager

View Circuits/VCs

Cisco EPN Manager provides a variety of ways that you can view circuits/VCs:

To view circuit/VC information for:	See the procedures in:
A specific circuit/VC in a topology map, in a Circuit/VC 360 view, or in a Circuit/VC Details page	Get Quick Information About a Circuit/VC: Circuit/VC 360 View Get Comprehensive Information About a Circuit/VC: Circuit/VC Details Window
A device	View a Specific Device's Circuits/VCs
A device group in a topology map or in an expanded table	View a Device Group's Circuits/VCs
All of Cisco EPN Manager	View All Circuits/VCs in Cisco EPN Manager

View Satellites

Cisco EPN Manager provides the following ways to view satellite information for host-satellite configurations:

Ways to View Satellites	For more information, see:
View all satellites in a location group using a topology map	View Cisco ASR 9000 Host-Satellite Topologies in the Topology Map

View a specific device's satellites from a Device 360 view	Identify the Satellites Connected to a Cisco ASR 9000 Host Get Basic Device Information: Device 360 View, on page 2
View details about a specific satellite, including the hosts it is connected to, using the Satellite 360 view	Identify the Hosts Connected to a Satellite