



Get Started With Cisco Prime Infrastructure

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Prime Infrastructure Organization

The Prime Infrastructure web interface is organized into a lifecycle workflow that includes the high-level task areas described in the following table. This document follows the same general organization.



Caution You are strongly advised not to enable third-party browser extensions. In Internet Explorer, you can disable third-party browser extensions by choosing **Tools > Internetoption** and unselecting the **Enable third-party browser extensions check box** in the **Advanced** tab.

Table 1: Prime Infrastructure Task Areas

Task Area	Description	Used By
Dashboard	Dashboard gives you a quick view of devices, performance information, and various incidents.	Network Operators and Network Engineers

Task Area	Description	Used By
Monitor	Monitor your network on a daily basis and perform other day-to-day or ad hoc operations related to network device inventory and configuration management. The Monitor tab includes dashboards and tools that you need for day-to-day monitoring, troubleshooting, maintenance, and operations.	Network Engineers, Designers, and Architects
Configuration	Design feature or device patterns, or <i>templates</i> . You create reusable design patterns, such as configuration templates, in the Design area. You may use predefined templates or create your own. Patterns and templates are used in the deployment phase of the lifecycle. You can also design Plug and Play profiles and mobility services.	Network Engineers, Designers, and Architects
Inventory	Perform all device management operations such as adding devices, running discovery, managing software images, configuring device archives, and auditing configuration changes on devices.	Network Engineers, NOC Operators and Service Operators
Maps	View network topology and wireless maps.	Network Engineers, NOC Operators, and Service Operators
Services	Access mobility services, Application Visibility and Control services, and IWAN features.	Network Engineers, NOC Operators and Service Operators
Report	Create reports, view saved report templates, and run scheduled reports.	Network Engineers, NOC Operators, and Service Operators
Administration	Specify system configuration settings and data collection settings, and manage access control. You can view and approve jobs, specify health rules, and manage licenses. You can also perform software updates and configure high availability.	Network Engineers

Setup Tasks to Complete Before Using Prime Infrastructure

Before you can use the features, these tasks should be completed by an administrator:

Table 2: Setup Tasks and References

Tasks to complete before using Prime Infrastructure	For information, see:
Set up and configure the Prime Infrastructure server.	"Server Setup Tasks" in the Prime Infrastructure Administrator Guide
Add devices to and create device groups to simplify device and network management.	Add and Organize Devices
Enable monitoring for interfaces and technologies used by the network.	Monitor Device and Network Health and Performance


Tasks to complete before using Prime Infrastructure	For information, see:
Customize alarm and event behavior for your deployment (for example, alarm and event refresh rates and e-mail and trap receivers).	Set Alarm and Event Management Preferences

Log In and Out

To log into the GUI, enter the following in your web browser address field, where *server-ip* is the IP address of the server:

https://server-ip


Depending on your network configuration, the first time your browser connects to the web server, you may have to update your client browser to trust the server's security certificate. This ensures the security of the connection between your client and the web server.

To log out, click  at the top right of the window and choose **Log Out**.

For information on users and the actions they can perform, see:

- [How to Transition Between the CLI User Interfaces in Prime Infrastructure](#)—Describes all classes of users supported by , including the various CLI user accounts.
- [Types of User Groups](#)—Describes the user group mechanism which allows you to control the functions that everyday web GUI users can perform. What you can see and do in the user interface is controlled by your user account privileges. This topic also describes the virtual domain mechanism, which manages Role-Based Access Control (RBAC) for devices.

Change Your Password



You can change your password at any time by clicking  at the top right of the Prime Infrastructure window and choosing **Change Password**. Click the ? (**help**) icon to review the password policy.

(Optional) Click the **Generate New Password** button to set a secured system-generated password. On clicking this button, a new password will be displayed in the adjacent text box. The same is also displayed in the **New Password** and **Confirm Password** text boxes. Click the eye icon in the text box to view or hide the password. You can also copy the password to clipboard by clicking the **Copy** button.

Click the **Reset** button to clear the values in the text box.

Use the Main Window Controls

The top left of the title bar provides the following controls.

	Menu button—Toggles the main navigation menu on the left (also called the left sidebar menu)
	Home button—Returns you to the home page (normally the Overview Dashboard)

The right side of the title bar displays your user name and the virtual domain you are working in. A *virtual domain* is a logical grouping of devices. Virtual domains are used to control who has access to devices and areas of the network. To switch between virtual domains that are assigned to you, see [Work In a Different Virtual Domain](#) , on page 24.



Web GUI global settings button—Log out, change password, view your Cisco.com account profile, adjust your GUI preferences, check a Cisco.com support case, launch online help


When you click  on the right side of the title bar, the window settings menu opens.

Figure 1: Window Settings


Finally, the Alarm Summary gives you a visual indicator of number of alarms in your network. The color indicates the highest severity alarm.




Alarm Summary—Provides a visual count of alarms in the categories you specify. Clicking this area opens the **Alarm Summary** popup window.

Change Your Default Home Page

You can specify which page you want to display when you perform either of the following tasks:

- You click  from the left side of the web GUI title bar.
- You log in to the Prime Infrastructure web GUI.

This setting is saved on a per-user basis. You can change it at any time without affecting other users.

-
- Step 1** While you have the page you want displayed, click  at the top right of the Prime Infrastructure web GUI.
- Step 2** Choose **Set Current Page as Home**.
-

Set Up and Use the Dashboards

Dashboards provide at-a-glance views of the most important data in your network. They provide status as well as alerts, monitoring, performance, and reporting information. You can customize these dashboards so they contain only the information that is important to you. It may be helpful to set the **Network Summary** dashboard as your default home page. By doing so, this dashboard is displayed after you log in and you can quickly check overall network health before you do anything else. To set any dashboard as your default home page, see [Change Your Default Home Page, on page 6](#).

Use the following dashboards to monitor and manage your network:

- **Network Summary** dashboard—To check the health of the entire network. See [Check the Health of the Entire Network Using the Network Summary Dashboard, on page 9](#).
- **Wireless** dashboard—Provides wireless information, including details about wireless Security, Mesh, CleanAir, and ContextAware networking.
- **Performance** dashboard—To check the performance of a specific device or interface. See [Check the Performance of a Specific Device or Interface Using the Performance Dashboard, on page 11](#).

Users with administrator privileges can also use the following dashboards:

- **Licensing** dashboard—See the section *View the Licencing Dashboard* in [Cisco Prime Infrastructure Administrator Guide](#).
- **Jobs** dashboard—See [Manage Jobs Using the Jobs Dashboard, on page 25](#).

Note the following:

- For an explanation of the parts of the dashboard window and how to use dashboard filters, see [How to Use the Dashboards, on page 7](#).

How to Use the Dashboards

The following figure illustrates the key parts of a dashboard window and the controls you can use to adjust them.

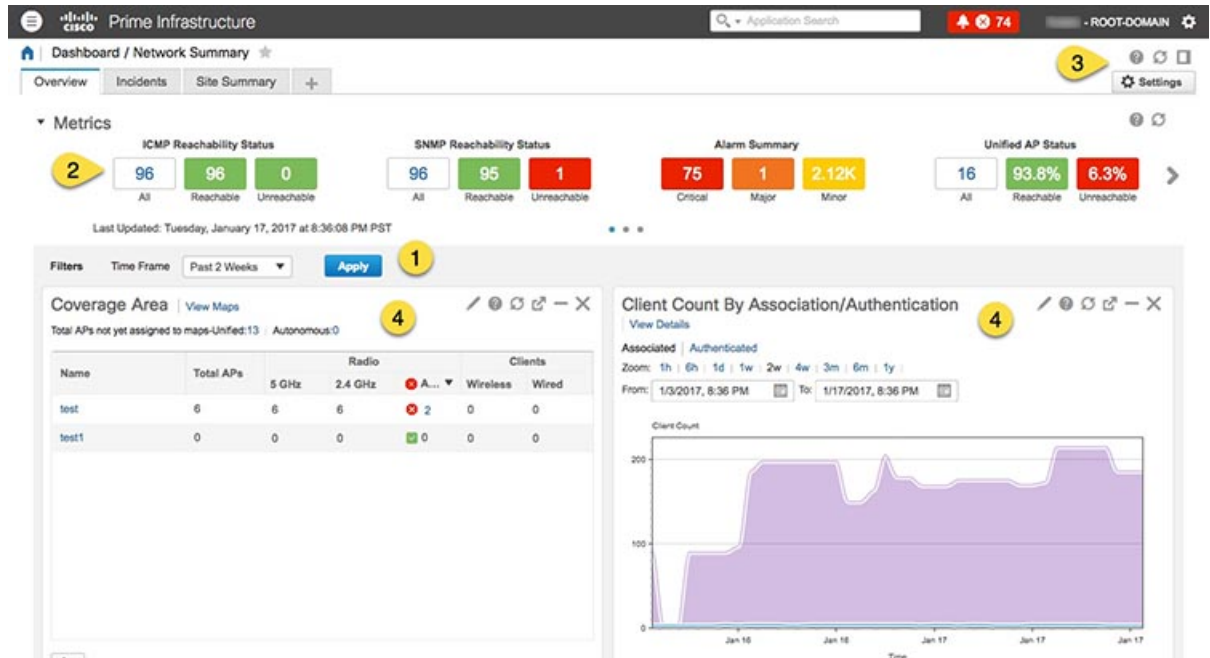
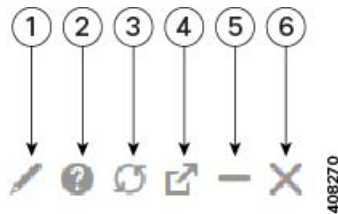


Table 3: Dashboard Elements

1	Dashboard filters—Filters all dashlets in the dashboard according to the selection. In this example, a time-based filter is used. The filters displayed depend on the dashboard type. For example, in the performance dashboards, you must select a specific interface, device, circuit, or VC.
2	Metric dashlets—Provides quick metrics for alarms, available devices, and so forth.
3	<p>Dashboard settings and controls:</p> <ul style="list-style-type: none"> • Dashboard icons—Allows you to launch online help, refresh the entire dashboard, and open the Dock window. • Dashboard Settings menu—Allows you to add or rename a dashboard tab, add new dashlets (both standard and metric), adjust the dashboard's layout, reset all dashboards to their default settings, clone a dashboard (applicable only for Network Summary dashboard), and export data from the selected dashlets. <p>Note The newly added or a renamed dashboard tab can be viewed only in the Tab view. This change is not reflected in the Dashboard menu.</p>
4	Standard dashlets—Provides at-a-glance data that is relevant to the dashboard.

In the top right corner of each dashlet are icons that are activated when you use that dashlet. The dashlet type determines the icons that are available. The most common icons are displayed in the following figure:



1	Edit the dashlet options. This includes editing the dashlet title, refreshing the dashlet, or changing the dashlet refresh interval. (To disable refresh, unselect Refresh Dashlet .) Hover your cursor over this tool icon to display the current filters applied to the dashlet.
2	Dashlet popup help window—Provides a picture and description of the dashlet, the data sources used to populate it, and any filters you can apply to the dashlet's content.
3	Refresh the dashlet.
4	Detach the dashlet and display it in a new browser window. If you edit the dashlet in the separate browser window, the changes are applied in that window only and are not saved.
5	Minimize the dashlet so that only its title appears. A maximize (+) icon appears in place of this tool icon when the dashlet is minimized.
6	Remove the dashlet from dashboard.

See these topics for additional information on dashboards:

- [Types of Dashboards, on page 9](#)
- [Add Dashlets to Dashboards, on page 13](#)
- [Add a New Dashboard, on page 16](#)

Customize the Dock Window

Use the **Dock** window for quick navigation to frequently used web GUI pages and pop-up windows (such as the 360 view for a particular device). From here, you can also access links to the 15 most recently visited pages and Prime Infrastructure training materials. To open this window, click the **Dock** icon (located in the top right area of the page).

Complete the following procedure to update the links provided in the **Dock** window:

-
- Step 1** Add a web GUI page link to the **Favorites** tab (**Dock** icon > **Links Visited** > **Favorites**):
- Open the web GUI page you want to add.
 - Click its star (**Favorite**) icon, which is located in the top left area of the page.
- Step 2** Add a pop-up window link to the **Docked Items** area (**Dock** icon > **Docked Items**):
- Open the pop-up window you want to add, then open its 360 view.

- b) From the top right corner of the pop-up window, click the **Add to Dock** icon.

Types of Dashboards

The following topics describe the dashboards you can use to monitor your network.



Note Prime Infrastructure filters the monitoring data for virtual domains, based on the end points assigned to the sites and not based on the datasource. Hence, the dashboards display information for all virtual domains irrespective of the virtual domain assigned to the user.

Check the Health of the Entire Network Using the Network Summary Dashboard

The Network Summary dashboard alerts you to the most important network issues. It provides alarm, status, and usage information for all devices and interfaces in the network, including wireless devices like controllers and APs. You can also display a small network topology dashlet on this dashboard.

To understand the types of information provided by the Metrics dashlets at the top of the dashboard, hover your mouse cursor over a Metrics dashlet and when the popup help button (?) appears, click it to open the dashlet help. For descriptions of the other dashlets on the page, click the popup help button shown with the dashlet controls in the upper right corner of each dashlet.

To open and customize the Network Summary dashboard:

Step 1 Choose **Dashboard > Network Summary**, then click:

- The **Overview** tab to check all devices.

Note Users will now be able to view the description of ports by hovering over the interface names for the **Top N Interface Utilization** and **Top N WAN Interfaces by Utilization** interface dashlets.

- The **Incidents** tab to focus on alarms and events, including syslog.
- The **Client Summary** tab to check Client Distribution, Client Count, and Client Traffic.

Note Client summary dashboard is accessible only to ROOT and SUPERUSERS by default. If Admin and Config Users need access, you need to give NBI READ access while creating the Admin/Config user.

- The **Site Summary** tab to check all devices at particular sites.
- The **Network Health** tab to check network health against a set of health rules.

Step 2 Adjust the dashboard as needed. You can drag dashlets to different locations on the dashboard, or use the **Settings** menu to add new dashlets, change the dashboard style, and so forth. If you want to add dashlets to the dashboard, see [Add a Predefined Dashlet To a Dashboard, on page 13](#).

Step 3 Select the time frame you want to view from the Filters **Time Frame** drop-down list, then click **Apply**. Selected time frame will be updated in all dashlets.

Note You can modify the time frame of a specific dashlet by clicking the required time frame in the Zoom option. To reset it to global time frame, select **Settings > Manage Dashboards > Reset Dashlet Time Filters**. This reset option is applicable for all the tabs available in Network Summary Dashboard page.

Check the Health of All Devices or All Interfaces Using the Overview Dashboard

The Overview dashboard helps you maintain the health of your network by providing summarized and aggregated data on the health of all network devices, interfaces, clients, and application services, including their availability, status, utilization, and the alarms and events affecting them.

To understand the types of information provided by the Metrics dashlets at the top of the dashboard, hover your mouse cursor over a Metrics dashlet and when the popup help button (?) appears, click it to open the dashlet help. For descriptions of the other dashlets on the page, click the popup help button shown with the dashlet controls in the upper right corner of each dashlet.

To open and customize the Overview dashboard:

Step 1 Choose **Dashboard > Overview**, then click:

- The **General** tab to check on the health of all devices and interfaces, including coverage areas, which devices are reachable, and top users of CPU and memory.
- The **Incidents** tab to focus on alarms and events, including sites with the most alarms, device reachability, types of alarms, and syslog details.
- The **Client** tab to focus on the health of network clients. This tab hosts a variety of client-oriented dashlets, including a troubleshooting tool, distribution and speed graphs for wired and wireless clients, and client posture.
- The **Network Devices** tab to check device availability, CPU and memory use, and temperature issues.
- The **Network Interfaces** tab to check interface availability, status, CPU and memory use, and interfaces with the most errors and discards.
- The **Service Assurance** tab to check on identified network services and the applications, servers, and Netflow-monitored resources that support them, as well as the clients consuming them.

Note Users will now be able to view the description of ports by hovering over the interface names for the **Top N Interface Utilization**, **Top N WAN Interfaces by Utilization**, and **Top N Interface Errors and Discards** interface dashlets.

Step 2 Adjust the dashboard as needed. You can drag dashlets to different locations on the dashboard, or use the **Settings** menu to add new dashlets, change the dashboard style, and so forth. If you want to add dashlets, see [Add a Predefined Dashlet To a Dashboard, on page 13](#).

Step 3 Select the time frame you want to view from the Filters **Time Frame** drop-down list, then click **Apply**.

Check the Health of Wireless Networks Using the Wireless Dashboard

The Wireless dashboard helps you maintain the health of your wireless network by providing aggregated data on network security status and attacks, mesh network efficiency, air quality, interferers, and so on.

To understand the types of information provided by the Metrics dashlets at the top of the dashboard, hover your mouse cursor over a Metrics dashlet and when the popup help button (?) appears, click it to open the dashlet help. For descriptions of the other dashlets on the page, click the popup help button shown with the dashlet controls in the upper right corner of each dashlet.

To open and customize the Wireless dashboard:

Step 1 Choose **Dashboard > Wireless**, then click:

- The **Security** tab to check on top security issues, detected rogues of all types, CleanAir security, and rogue containment, and Cisco Adaptive Wireless Intrusion Prevention (wIPS) data.
- The **Mesh** tab to focus on mesh network alarms, and links with the worst SNR, number of node hops and packet errors.
- The **CleanAir** tab to focus on non-802.11 interference sources, including the total count of and worst interferers, CAS interferer notifications, and general air quality.
- The **ContextAware** tab to focus on Cisco Context-Aware Mobility data supported by Mobility Service Engines, including MSE tracking counts, location-assisted client troubleshooting, and detected rogue elements.

Step 2 Adjust the dashboard as needed. You can drag dashlets to different locations on the dashboard, or use the **Settings** menu to add new dashlets, change the dashboard style, and so forth. If you want to add dashlets, see [Add a Predefined Dashlet To a Dashboard, on page 13](#).

Step 3 Select the time frame you want to view from the Filters **Time Frame** drop-down list, then click **Apply**.

Check the Performance of a Specific Device or Interface Using the Performance Dashboard

If the Performance dashboard is not displaying the information you are interested in, you can create your own customized dashlet. See [Add a Customized Dashlet to the Device Trends Dashboard, on page 15](#) for more information.

Table 4: Performance Dashboard

Dashboard Tab	Provides:
Devices	<ul style="list-style-type: none"> • Device availability during the specified timeline • CPU utilization for each device CPU • Memory utilization • Port count, and ports that have been operationally up or down • Device alarms and events • Device temperature

Dashboard Tab	Provides:
Interface	<ul style="list-style-type: none"> • Properties of the interface (IfType, IfIndex, and so forth) • Interface availability during the specified timeline • Interface CPU and memory utilization • Tx and Rx utilization, and packet errors and discards • QoS class map statistics
Site, Access Point, Application, etc.	<ul style="list-style-type: none"> • Client traffic, Device with most alarms, Top N applications and Device reachability status • For the specified access point: <ul style="list-style-type: none"> • Access point details • Top clients and applications • Channel utilization • Client count • For the specified application: <ul style="list-style-type: none"> • Top clients and servers • Application traffic analysis graph • Application server performance • Top interfaces over time <p>Note Users will now be able to view the description of ports by hovering over the interface names for the Top N Interface Utilization, Top N WAN Interfaces by Utilization, and Top N Interface Errors and Discards interface dashlets.</p>

Some of the dashlets (for example Top N Clients, Top N Servers, Top N Applications, Number of Clients Over Time and Client Traffic dashlets) include the link **click here to launch the corresponding report** to go to the respective Report page, if the number of records exceeds 100 million in the relevant tables. This link will appear in the dashlets, only if you select **Enable** from the drop-down list and click **Apply** under the **Dashboard Settings** menu. By default, this setting will remain disabled.

Some of the relevant filters will be prefilled in the Reports page. For example for Top N Clients dashlet, Location Groups, Network Aware and Reporting Period parameters will get prefilled.



Note Even if the number of records exceeds 100 million in the relevant tables, the Report page may not show any data, if there is no data corresponding to the selected filter such as reporting period and Application etc.



Note By default, the refresh interval period is set to 30 mins for the Performance Dashboard Dashlets. Users can change the interval period by clicking the **Edit Dashlet Options**, if needed.

Use this procedure to open and customize the **Performance** dashboard:

-
- Step 1** Choose **Dashboards > Performance**, then do one of the following:
- To check a specific device, click the **Device** tab, then select a device from the Filters **Device** drop-down list.
 - To check a specific interface, click the **Interfaces** tab, then click the Filters **Interface** drop-down list and navigate to the interface you want to check.
- Step 2** Adjust the dashboard as needed. You can drag dashlets to different locations on the dashboard, or use the **Settings** menu to add new dashlets, change the dashboard style, and so forth. If you want to add dashlets, see [Add Dashlets to Dashboards, on page 13](#).
- Step 3** Select the time frame you want to view from the Filters **Time Frame** drop-down list, then click **Go**.
-

Add Dashlets to Dashboards

- Prepackaged dashlets that are provided with Prime Infrastructure—Some of the dashlets are displayed on dashboards by default; others are listed in the **Settings** menu, and you can add them as needed. These dashlets provide information you will likely monitor (for example, device CPU utilization, interface errors and discards, and traffic statistics). See [Add a Predefined Dashlet To a Dashboard, on page 13](#).
- Customized dashlets that you create to monitor device performance—These dashlet types can only be added to the **Device Trends** dashboard. See [Add a Customized Dashlet to the Device Trends Dashboard](#).

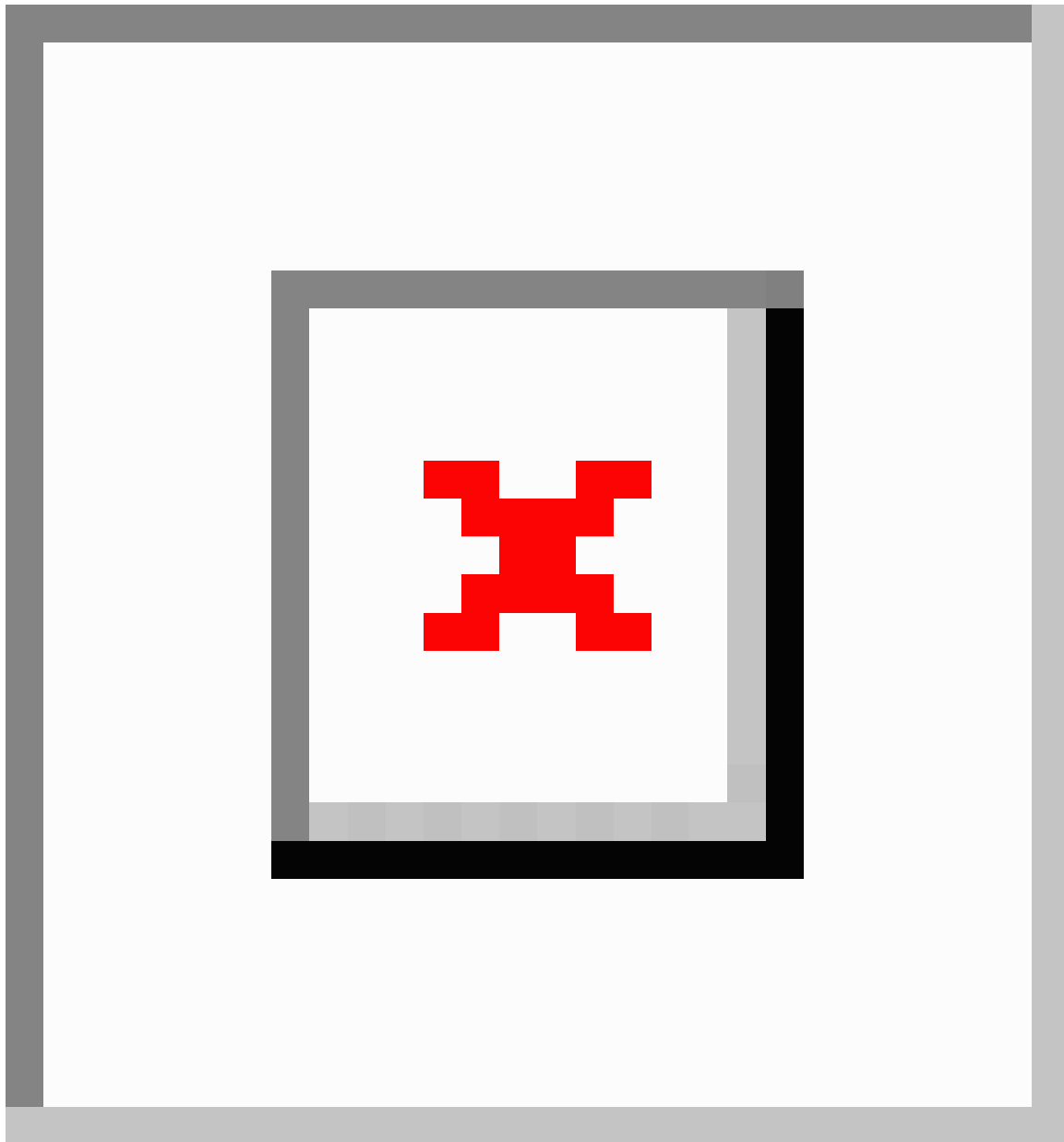
Add a Predefined Dashlet To a Dashboard

Prime Infrastructure provides a predefined set of dashlets that will provide you with commonly-sought network data. By default, a subset of these dashlets is already included in the dashboards, to help you get started. Complete the following procedure to add another of these predefined dashlets to your dashboards.



Note To edit or remove a dashlet, click the appropriate icon from the top right corner of that dashlet. (See [How to Use the Dashboards](#).)

-
- Step 1** From the sidebar menu, choose **Dashboard**, then select the dashboard you want to add a dashlet to. For example, to add a **Device Memory Utilization** dashlet to the **Device Trends** dashboard, choose **Dashboard > Device Trends > Device**.
- Step 2** Identify the dashlet you want to add, then add it:
- a) From the top right corner of the dashboard, click **Settings** and then click **Add Dashlet(s)**. Prime Infrastructure lists the dashlets that can be added to that dashboard.
 - b) To open a pop-up window that provides an overview of a particular dashlet, hover your cursor over dashlet's name. The pop-up window also lists the sources for the data the dashlet provides and the filters you can apply to the dashlet, as shown in the following illustration.



c) Click **Add** to add the selected dashlet to the dashboard.

Step 3

Verify that the dashlet is populated with data.

If it is not, check whether the required monitoring policy is enabled. (Only the Device Health monitoring policy is enabled by default. It checks device availability, CPU and memory pool utilization, and environmental temperature.)

- a) From the top right corner of the dashlet, click its ? (**Help**) icon to open the dashlet's pop-up window.
- b) Check the information provided in the **Data Sources** area. If it lists a monitoring policy, check whether the policy is activated. See [Check What Prime Infrastructure Is Monitoring](#).

Add a Customized Dashlet to the Device Trends Dashboard

If none of the dashlets in the **Device Trends** dashboard provide the device performance information you need, you can add a dashlet that uses a customized template to poll devices for their SNMP MIB attributes. Complete the following procedure to add this dashlet to the dashboard.

Before you begin

Check the available monitoring policies to determine which policy collects the information you need. You will have to specify a policy during the dashlet creation process. If none of the policies meet your needs, you can create a policy that polls new parameters. See [Create a Monitoring Policy for Unsupported Parameters and Third-Party Devices](#).

- Step 1** Choose **Dashboard > Device Trends > Device**.
- Step 2** From the top right corner of the dashboard, click **Settings** and then click **Add Dashlet(s)**.
- Step 3** Expand the **Device Dashlets** list.
- Step 4** Locate **Generic Dashlet**, then click **Add**.
Prime Infrastructure adds a blank generic dashlet to the **Device Trends** dashboard.

- Step 5** Configure the new dashlet as needed.
At a minimum, you should:
- Enter a meaningful title in the **Dashlet Title** field.
 - Check the **Override Dashboard Time Filter** check box if you do not want to apply the time filters to all of the dashlets in the dashboard.
 - In the **Type** drop-down list, choose whether the dashlet will display its data as a table or line chart. (Regardless of your choice, Prime Infrastructure will display a toggle at the bottom of the dashlet that allows you to change the format.)
 - In the **Policy Name** drop-down list, choose the monitoring policy that will collect the data for this dashlet.

Step 6 Click **Save And Close**.

Add a New Dashboard

Use this procedure to create a new dashboard. Your new dashboard will appear as a new tab under one of the dashboards listed in [Types of Dashboards, on page 9](#).

Step 1 Open the relevant existing dashboard.

For example, if you want to create a new tab under the **Performance** dashboard, click any tab under **Dashboard > Performance**.

Step 2 Click the + (**Add New Dashboard**) tab.

The **Settings** menu opens.

Step 3 Enter a name for the new dashboard, then click **Apply**.

Step 4 Click the new dashboard tab, then add dashlets as described in [Add a Predefined Dashlet To a Dashboard, on page 13](#).

Add a Customized Dashlet to the Performance Dashboard

If device performance information is not available on any of the dashlets in the Performance screen, you can add a new dashlet. These dashlets use a customized template to poll devices for their SNMP MIB attributes.

Complete the following procedure to add a new dashlet to the dashboard.

Before you begin

Check the available monitoring policies to determine which policy collects the information you need. You will have to specify a policy during the dashlet creation process. If none of the policies meet your needs, you can create a policy that polls new parameters. See [Create a Monitoring Policy for Unsupported Parameters and Third-Party Devices](#).

SUMMARY STEPS

1. Choose **Dashboard > Performance > Device**.
2. From the top right corner of the dashboard, click **Settings** and then click **Add Dashlet(s)**.
3. Expand the **Device Dashlets** list.
4. Locate **Generic Dashlet**, then click **Add**.
5. Configure the new dashlet as needed.
6. Click **Save And Close**.

DETAILED STEPS

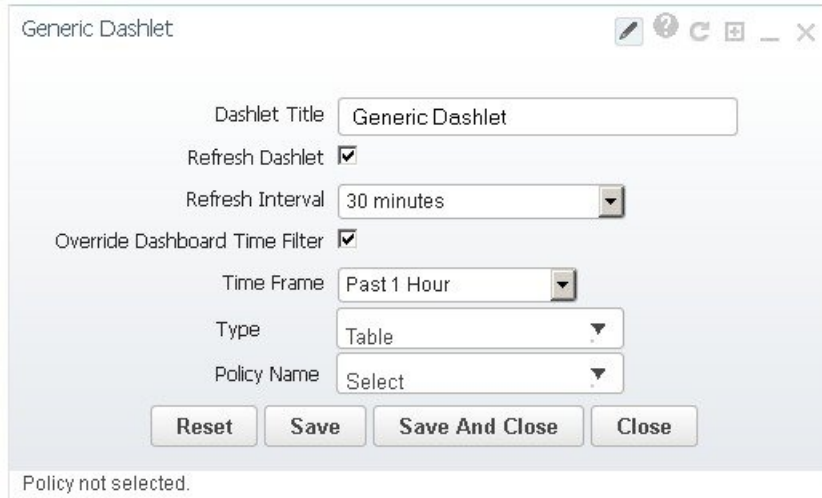
Step 1 Choose **Dashboard > Performance > Device**.

Step 2 From the top right corner of the dashboard, click **Settings** and then click **Add Dashlet(s)**.

Step 3 Expand the **Device Dashlets** list.

Step 4 Locate **Generic Dashlet**, then click **Add**.

Prime Infrastructure adds a blank generic dashlet to the **Performance** dashboard.



Step 5 Configure the new dashlet as needed.

At a minimum, you should:

- Enter a meaningful title in the **Dashlet Title** field.
- Check the **Override Dashboard Time Filter** check box if you do not want to apply the time filters to all of the dashlets in the dashboard.
- In the **Policy Name** drop-down list, choose the monitoring policy that will collect the data for this dashlet.
- In the **Type** drop-down list, check if the dashlet will display its data as a table or line chart.

In the line chart view, Prime Infrastructure will display a toggle at the bottom of the dashlet that allows you to change the format.

- a) Select Type as **Table**. This provides a consolidated view of all devices for the selected policy. At least 500 latest polled entries will be displayed in the dashlet.
- b) Select Type as **Line Chart**. It helps user to choose specific inputs per device level and get latest of 1000 entries displayed in the dashlet.

Step 6 Click **Save And Close**.

Export Dashlets Data to a CSV or PDF File

You can export the dashlets data of various components under Performance Dashboard to a CSV or PDF File. To export dashlet data perform the following steps:

Step 1 Choose **Dashboards > Performance**.

Step 2 Select any of the dashboards under the performance dashboard to view the available dashlets.

Step 3 To export the dashlets data, click **Export All** at the top right corner. The **Export Dialog** box appears with the file format and dashlets.

Note If the dashlet is empty, **No exportable Content** popup message is shown.

Step 4 Select the file format (CSV or PDF) to export.

Note If you choose PDF format, you can choose table or chart or both.

Step 5 Select all the dashlets or required dashlets and click **Export**.

Note Export All functionality is not supported for the following dashlets:

- Device Reachability Status
- Top N Alarms Types
- Top N Devices with Most Alarms
- Top N Events
- Top N Syslog Sender
- Device Port Summary
- Interface Details

Troubleshoot Network Health Using Dashboards

Prime Infrastructure provides a quick way to view the health of your network and sites by choosing **Dashboard > Network Summary > Nework Health**. You must create location groups and then add devices to the locations. Prime Infrastructure displays a map indicating the overall health of all the sites. The **Network Health** page allows you to toggle the view between wired and wireless devices. By default, all locations and a maximum of 500 APs per location group are displayed. If you choose Wired view, the **Network Health** page shows the **WAN Interface Utilizatoin** details and a map indicating the overall health status of the wired devices of all the locations. If you choose Wireless view, the **Network Health** page shows the **Wireless Client Count** details and a map indicating the overall health status of the wireless devices of all the sites. In the Wireless view, click the **Executive View** expand icon to choose any one of the client, access points, environment (clean air), and application dashboards. The **Network Health** page displays the dashlets corresponding to the selected dashboard. You can click the settings icon to add more dashlets. Click **more** to cross launch the Dashboard.

Related Topics

- [Define Health Rules](#), on page 19
- [Network Health Map Features](#), on page 20
- [Network Health Summary](#), on page 21
- [Define QoS and Interface Settings](#), on page 19
- [QoS Metrics](#), on page 22
- [Traffic Conversation](#), on page 23
- [Creating Location Groups](#)

Define Health Rules

You can specify rules and threshold values for your sites. The rules you specify determine the notifications that appear in **Dashboard > Network Summary > Network Health**.

Step 1 Choose **Services > Application Visibility & Control > Health Rule**. There are 3 tabs where you can specify health rules:

- **Service Health**—Define health rules for services such as Jitter, MOS score, Network Time, Packet Loss, Traffic Rate, etc.
- **Infrastructure Health**—Define health rules for wired devices such as CPU utilization, Memory Loss Utilization, Environment Temperature, etc.
- **Wireless Health**—Define health rules for wireless devices such as Client Coverage, Client Onboarding, Client Count, CPU Utilization, Memory Utilization, etc.

Note The default critical and warning threshold set for client count is 40 and 36 respectively. The maximum critical threshold for client count can be set as 1000.

Step 2 To add a new health rule, click the plus icon, then specify the location, metric, and threshold. You can add new Infrastructure Health and Wireless Health rules only.

Step 3 To edit an existing health rule, select the health rule you want to modify, then click **Edit**.

Step 4 Enter the details for the health rule, then click **Save**.

The values you enter apply to all devices and interfaces in the location group for which the health rule applies.

Related Topics

[Network Health Map Features](#), on page 20

[Network Health Summary](#), on page 21

[Create Location Groups](#)

Define QoS and Interface Settings

The health page allows you to exclude the QoS, Admin Down Interface, CPU and Memory instance from health score calculation in Network Health Page.

Step 1 Choose **Services > Application Visibility & Control > Health Rule**.

Alternately, click the **Launch Health Rules** link in the **Network Health** page.

Step 2 Click the **Infrastructure Health** tab.

Step 3 Click the **Advanced Settings** button. Check the check boxes in **QoS/Settings** and **CPU/Memory Instance** tabs that you want to exclude from health score calculation. By default, **Exclude Scavenger** and **Exclude Admin Down Interface** check boxes will be checked and not considered for health score calculation. Uncheck them if you want it to be included.

Step 4 Click **Save and Close**. The changes will get applied in next job execution.

Network Health Map Features

When you choose **Dashboard > Network Summary > Network Health**, the map displays all the location groups with geographic attributes that you previously added. By default, a maximum of 500 APs per location group are displayed.

The location groups are colored according to the overall health of the location:

- Red—indicates there are critical issues in the specified location.
- Yellow—indicates there are warnings in the specified location.
- Green—indicates there are no errors or warnings.
- Gray—indicates there are no devices or data in the specified location.

In addition to the color indicating the health, the icon can be:

- Solid—indicates a parent site, meaning there are children locations associated with the site.
- Outlined—indicates there are no children associated with this location.

Hover your mouse over any location on the map to view a popup window that lists the sites in that location and the corresponding errors or warnings, by device type, in each location.

Click on a site name to view in a zoomed-in map of the site.

Related Topics

[Define Health Rules](#), on page 19

[Network Health Display Options](#), on page 20

[Network Health Summary](#), on page 21

[Creating Location Groups](#)

Network Health Display Options

When you choose **Dashboard > Network Summary > Network Health**, display options appear on the right side of the page as show in the below figure.

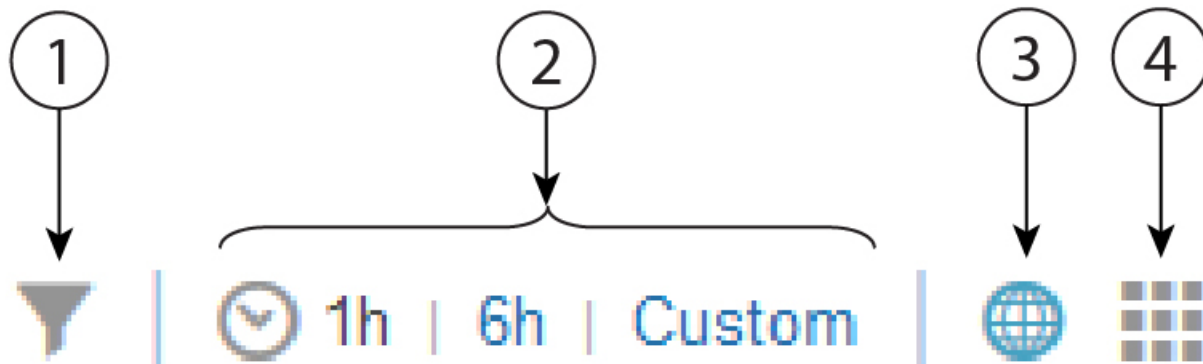


Table 5: Network Health Display

1	Filter options. The options you select affect what is displayed in the map and the Health Summary pane. Click Clear > Selection to remove all filters.
---	--

2	Time frame. By default, information from the last 6 hours is displayed in the Site Visibility map and Health Summary pane.
3	Displays the map in the left pane.
4	Displays the Network Health summary details in the Health Index view.
5	Displays the Network Health summary details in a table format.
6	Shows or hides the Health Summary pane on the right.

Related Topics

- [Define Health Rules](#), on page 19
- [Network Health Map Features](#), on page 20
- [Network Health Summary](#), on page 21
- [Creating Location Groups](#)

Network Health Summary

The Health Summary pane displays errors and threshold violations for all devices across all locations. Prime Infrastructure aggregates health data from the devices and services to the site summary every 15 minutes. Click the Wired tab to view the health summary of Router, Switch, and Service Health details. Click on any of the sites or devices listed in the Health Summary pane of Wired to view more information.

Router: Displays site/device wise router status for CPU, Memory, Temperature, etc.

Switch: Displays site/device wise switch status for CPU, Memory, Temperature, etc.

Service Health: Displays the areas in which service health related errors or warnings are occurring.

Executive View

- **Network Devices:** Displays network devices related dashlets such as Top N CPU Utilization, Top N Memory Utilization, etc.
- **Network Interfaces:** Displays network interfaces related dashlets such as TOP N Interface Utilization-Tx, TOP N Interface Utilization-Rx, etc.
- **Applications:** Displays applications related dashlets filtered with wired device data.

Click the Wireless tab to view the Access Point, Controller, Client %, and Service Health details. Click on any of the sites or devices listed in the Health Summary pane of Wireless to view more information.

Access Point: Displays the Access Point health metrics such as Client Count, Availability, Coverage Issues, and On Boarding Issues. Other metrics which do not have any impact in Site Status are grouped under Generic health metrics.

Controller: Displays the CPU and Memory related issues.

Client (%): Displays the clients that have coverage, onboarding issues, etc.



Note Client data (coverage and onboarding) in Network Health Dashboard is supported for WLC 8.6 version and above.

You can edit the health rule settings of a site by clicking the settings icon next to the site name. The modified health rule settings will get automatically updated in the Health Rules page. If a site does not have assigned health rules, then the health rules displayed for that site represent the health rules of its parent site.

Executive View

- **Client:** Displays the dashlets that have client coverage, client onboarding issues, etc.
- **Access Point:** Displays dashlets related to TOP N APs with Onboarding issues, Coverage issues, etc.
- **Air Quality:** Displays air quality related dashlets such as Avg Air quality, Worst Interferers, Interferer count, etc.
- **Applications:** Displays applications related dashlets filtered with wired device data.



Note Click More to cross-launch to the specific dashboard.

Map view: Click on a site name to have the map zoom in on that particular site and display additional information specific to that site. You can change the map view preferences by clicking the settings icon on the top right, next to Launch Health Rules.



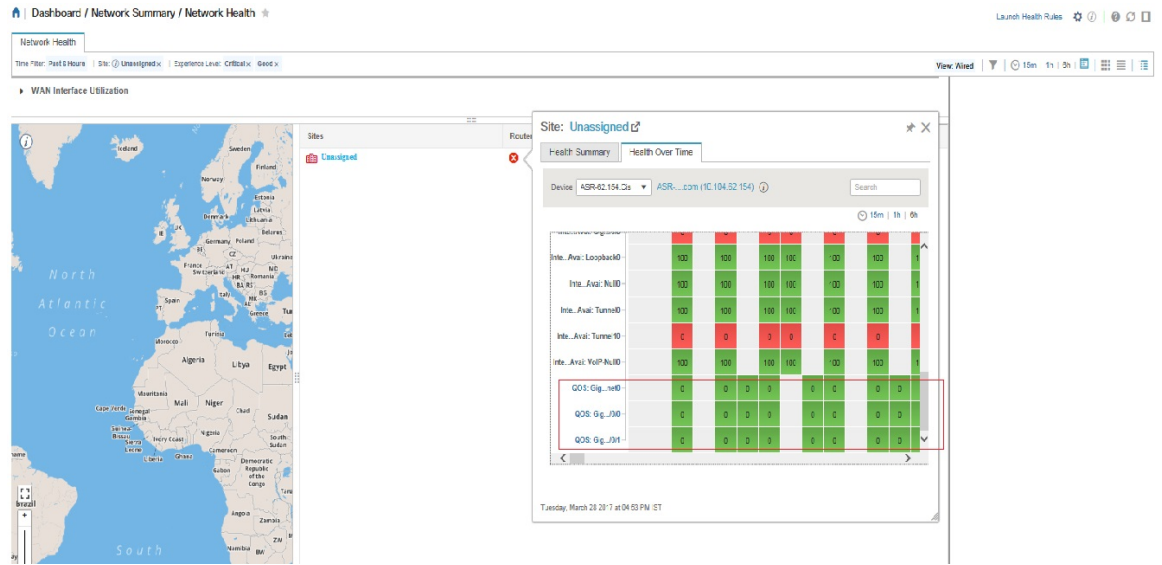
Note By default, the map view is hidden in the Executive View.

Related Topics

- [Define Health Rules](#), on page 19
- [Network Health Map Features](#), on page 20
- [Creating Location Groups](#)

QoS Metrics

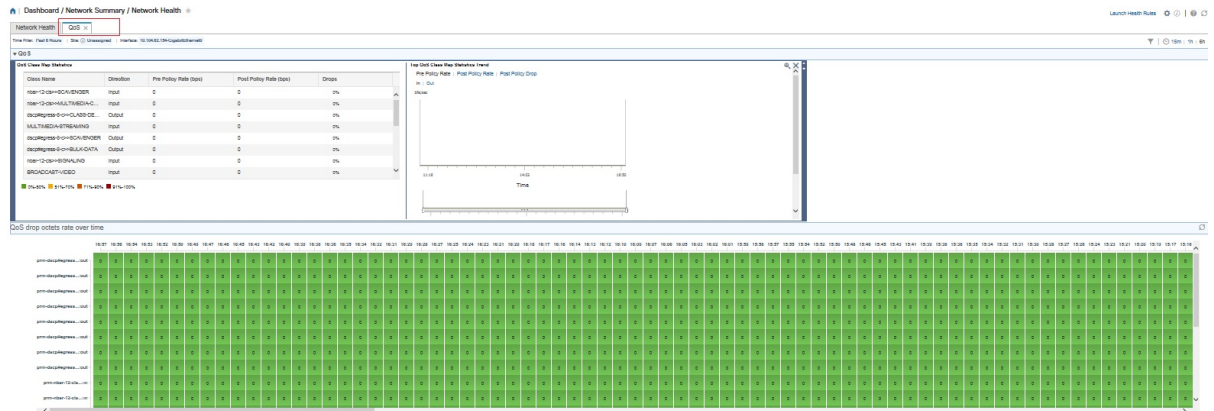
The **Network Health** page shows the QoS metrics for routers and switches. You can launch the QoS tab for routers, switches and interfaces in the Network Health page by clicking the QoS hyperlink in the heatmap, the Health summary view, Health index view, and Table view. The heatmap for routers and switches, shows the aggregated QoS data per interface level and the average of dropOctetsRate across all QoS classes and all directions for each interface.



Click the QoS tab in the Network Health page to view more granular data per class map for the chosen interface. The QoS tab shows the following details:

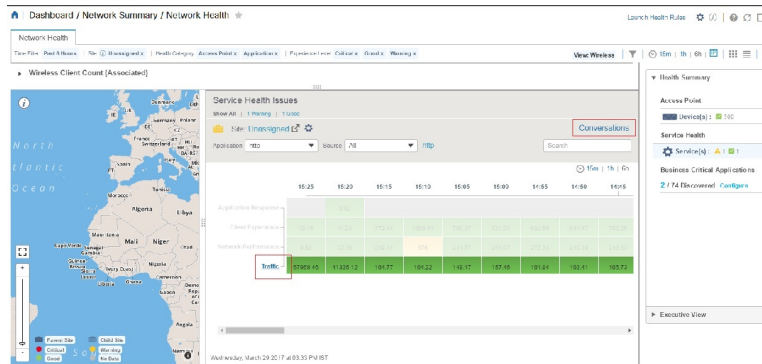
- QoS class Map Statistics
- Top QoS class Map statistics Trend
- QoS drop Octets rate over time

The QoS tab shows more granular and is shown per class map for a given interface.



Traffic Conversation

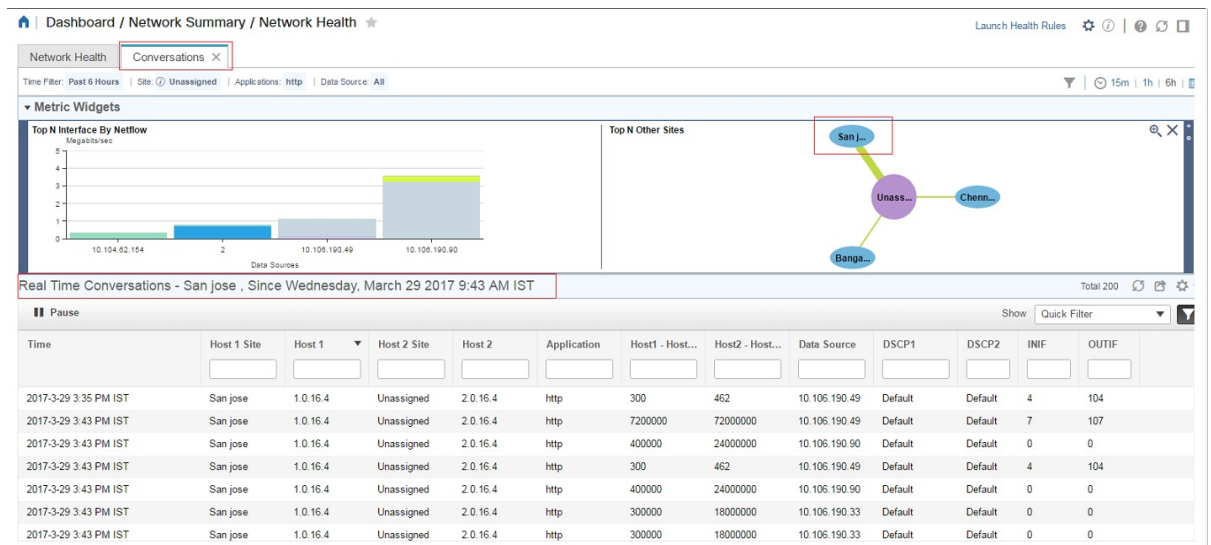
You can launch the **Conversation** tab in the **Network Health** page by clicking the traffic hyperlink in the heatmap or the **Conversations** hyperlink as shows in the below image.



The conversation tab shows the following details:

- Top N Interface By Netflow chart
- Top N Other Sites graph
- Real Time Conversation table

The **Real Time Conversation** table shows the conversations based on the global filters (Site, Application Data Source, and Time filter). If you want to view the real time conversations of a particular site or an interface, click the site in the **Top N Other Sites** graph or the interface in the **Top N Interface By Netflow** chart. You can view up to 4000 records in the **Real Time Conversation** table and the records get automatically refreshed every minute.




Work In a Different Virtual Domain

Virtual domains are logical groupings of devices and are used to control your access to specific sites and devices. Virtual domains can be based on physical sites, device types, user communities, or any other designation the administrator chooses. All devices belong to ROOT-DOMAIN, which is the parent domain for

all new virtual domains. For more information about virtual domains, see "Create Virtual Domains to Control User Access" in the *Cisco Prime Infrastructure Administrator Guide*.

If you are allowed access to more than one virtual domain, you can switch to a different domain by completing the following procedure:

-
- Step 1** Click  from the right side of the title bar.
- Step 2** Choose **Virtual Domain:** *current-domain*.
- Step 3** From the **Virtual Domain** drop-down list, choose a different domain.
Prime Infrastructure immediately changes your working domain.
-

Manage Jobs Using the Jobs Dashboard

If you have the appropriate user account privileges, you can manage Prime Infrastructure jobs using the Jobs dashboard. To view the **Jobs** dashboard, choose **Administration > Dashboards > Job Dashboard**. From here, you can quickly see if a job was successful, partially successful, or failed.

If too many jobs are already running, Prime Infrastructure will hold other jobs in the queue until resources are available. If this delays a scheduled job past its normal starting time, the job will not run. You will have to run it manually.

Some jobs may require approval. If this is the case, Prime Infrastructure sends an email to users with Administrator privileges notifying them that a job was scheduled and needs approval. The job will only run after it is approved.

The following table describes the buttons displayed in the **Jobs** dashboard.

Table 6: Jobs Dashboard Buttons

Button	Description
Delete Job	Removes a job from the Jobs dashboard.
Edit Job	Edit the settings configured for the selected job.
Edit Schedule	Displays the series schedule and lets you edit it (start time, interval, and end time). Note Editing the schedule of an already-scheduled job will change the status of that job to Pending for Approval since each edit requires an approval from the user who created the job.
Run	Runs a new instance of the selected job. Use this to rerun partially successful or failed jobs; the job will only run for the failed or partially successful components.
Abort	Stops a currently-running job, but allows you to rerun it later. Not all jobs can be aborted; Prime Infrastructure will indicate when this is the case.
Cancel Series	Stops a currently-running job and does not allow anyone to rerun it. If the job is part of a series, future runs are not affected.

Button	Description
Pause Series	Pauses a scheduled job series. When a series is paused, you cannot run any instances of that series (using Run).
Resume Series	Resumes a scheduled job series that has been paused.



Note The **Delete Job**, **Abort**, and **Cancel Series** buttons are not available for system and poller jobs.

To view the details of a job, follow these steps:

-
- Step 1** Choose **Administration > Dashboards > Job Dashboard**.
- Step 2** From the **Jobs** pane, choose a job series to get basic information (such as job type, status, job duration, and next start time).
- Step 3** To view the job interval, click a job instance hyperlink.
- At the top of the job page, the **Recurrence** field indicates how often the job recurs. Job interval details will be added for every jobs that triggers.
- Step 4** To get details about a failed or partially successful job, click the job instance hyperlink and expand the entries provided on the resulting page.
- This is especially helpful for inventory-related jobs. For example, if a user imported devices using a CSV file (a bulk import), the job will be listed in the **Jobs** sidebar menu under **User Jobs > Device Bulk Import**. The job details will list the devices that were successfully added and the devices that were not.
-


Example

To troubleshoot a failed software image import job:

1. Choose **User Jobs > Software Image Import** from the **Jobs** sidebar menu.
2. Locate the failed job in the table and then click its hyperlink.
3. Expand the job's details (if not already expanded) to view the list of devices associated with the job and the status of the image import for each device.
4. To view the import details for a specific device, click that device's **i (information)** icon in the **Status** column. This opens an **Image Management Job Results** pop-up window.
5. Examine each step and its status. For example, the **Collecting image with Protocol: SFTP** column might report that SFTP is not supported on the device.

Extend Cisco Prime Infrastructure Functions

Advanced users can extend Cisco Prime Infrastructure functions and manage administrative options using the Cisco Prime Infrastructure REST API.

To get information about this tool, click  at the top right of the Prime Infrastructure web GUI, and then choose **Help** > **REST APIs**. You can also download the [Cisco Prime Infrastructure API Reference Guide](#) directly from Cisco.com.

Check Cisco.com for the Latest Documentation

Refer to [Cisco Prime Infrastructure Documentation Overview](#) for information about and links to all of the documentation that is provided with Prime Infrastructure.



Note We sometimes update the documentation after original publication. Therefore, you should also review the documentation on Cisco.com for any updates.
