

Multitenancy Dashboard

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Cisco SD-WAN Manager dashboard for multitenancy

Cisco SD-WAN Manager multitenant dashboard is a portal where the provider or tenant can view and provision the underlying system.

After enabling SD-WAN Manager for multitenancy, you can view the multitenant dashboard when you log in to SD-WAN Manager, under **Monitor** > **Overview**.

In Cisco vManage Release 20.6.1 and earlier, information related to the **Monitor** > **Devices** page can be viewed under the **Monitor** > **Network** page.

The bar at the top of every SD-WAN Manager multitenant screen includes icons that allow smooth navigation.

View Cisco SD-WAN Validator health dashlet

You can view the state of each Cisco SD-WAN Validator in the **Validator Health** dashlet on the **Monitor Overview** dashboard. This dashlet displays the cumulative state of the Cisco Catalyst SD-WAN Validators within a selected time window, along with the number of Validators in each state.

You can filter the dashlet view based on health status using the drop-down list for **Good Devices**, **Fair Devices**, and **Poor Devices**, as well as for **CPU Load**.

You can use the **View Details** option to access a detailed table view of device health on the **Monitor** > **Devices** page.

View Cisco SD-WAN Manager health dashlet

You can view the state of the SD-WAN Manager in the **Manager Health** dashlet on the **Monitor Overview** dashboard. This dashlet displays the health status of the SD-WAN Manager.

You can filter the dashlet view based on health status using the drop-down list for **Good Devices**, **Fair Devices**, and **Poor Devices**, as well as for **CPU Load**.

You can use the **View Details** option to access a detailed table view of device health on the **Monitor** > **Devices** page.

View Cisco SD-WAN Controller health dashlet

You can view the list of tenants hosted on a particular device by clicking the **Controller bar**.

You can view the state of each SD-WAN Controller in the **Controller Health** dashlet on the **Monitor Overview** dashboard. This dashlet displays the cumulative state of the SD-WAN Controller within a selected time window, along with the number of controllers in each state.

You can filter the dashlet view based on health status using the drop-down list for **Good Devices**, **Fair Devices**, and **Poor Devices**, as well as for **CPU Load**.

You can use the **View Details** option to access a detailed table view of device health on the **Monitor** > **Devices** page.

View multitenant WAN edge health dashlet

You can view the state of each WAN edge device in the **Multi Tenant WAN Edge Health** dashlet on the **Monitor Overview** dashboard. This dashlet displays the cumulative state of the devices within a selected time window, along with the number of WAN edge devices in each state.

You can view the list of tenants hosted on a particular device by clicking the multitenant WAN edge device bar. You can filter the dashlet view based on health status using the drop-down list for **Good Devices**, **Fair Devices**, and **Poor Devices**, as well as for **CPU Load**.

You can use the **View Details** option to access a detailed table view of device health on the **Monitor** > **Devices** page.

View tenant activity, device, and network information

To provide administrators with an overview and detailed insights into tenant, device, and network status in a multitenant Cisco SD-WAN environment.

When you log in to a multitenant SD-WAN Manager as an administrator, the Provider Dashboard displays the following components.

- Device pane: Runs across the top of the multitenant dashboard screen. It displays the number of active SD-WAN Controllers, SD-WAN Validators, and SD-WAN Manager instances, along with the connectivity status of devices and information on certificates that have expired or are about to expire.
- Tenants pane: Displays the total number of tenants and a summary of the control status, site health, router health, and SD-WAN Controller status for all tenants.
- Table of tenants in the overlay network: Lists individual tenants with separate information on control status, site health, WAN edge device health, and SD-WAN Controller status for each tenant.

Use these steps to display tenant specific status summary information:

To return to the provider dashboard from other SD-WAN Manager screens, click **Dashboard**.

Procedure

Step 1 Click a tenant name from the tenant list.

A dialog box opens on the right side of the screen that provides additional information about the status of the tenant.

Step 2 Click **Tenant name** > **Dashboard**, to access the tenant dashboard.

SD-WAN Manager switches to the provider-as-tenant view and displays the tenant dashboard.

Step 3 Click **Provider** at the top of the page, to return to the provider view.

Step 4 Click the tenant name from the tenant list, to close the dialog box.

Step 5 To return to the provider dashboard from other SD-WAN Manager screens, click **Dashboard**.

View detailed information of a tenant setup

Cisco SD-WAN Manager displays the tenant dashboard, which provides information about a tenant deployment in the following scenarios:

- When a **provider admin** user selects a specific tenant from the **Select Tenant** drop-down list in the provider dashboard. This view is referred to as the provider-as-tenant view.
- When a **tenantadmin** user logs in to SD-WAN Manager. This view is referred to as the tenant view.

View all network connections in the tenant overlay network

The Device pane runs across the top of the tenant dashboard and displays the number of control connections from SD-WAN Manager to the SD-WAN Controllers and routers in a tenant's overlay network.

For each WAN edge device, the device pane shows:

- Total number of control connections between SD-WAN Controllers and WAN edge devices
- Number of valid control connections between SD-WAN Controllers and WAN edge devices
- Number of invalid control connections between SD-WAN Controllers and WAN edge devices

You can use a connection number or the Up/Down arrow to view a table with detailed information about each connection, and use the **More Actions** icon at the right of each table row to access additional options.

You can also use the **More Actions** icon at the right of each table row to access the **Device Dashboard** or **Real Time view** from the **Monitor** > **Devices** screen, or the **Tools** > **SSH Terminal** screen.

View information about device reboots

The **Reboot pane** displays the total number of device reboots in the last 24 hours for all devices in the network. It includes soft and cold reboots, as well as reboots caused by power-cycling a device.

For each reboot, the following information is listed:

- System IP and hostname of the device that rebooted.
- Time of the device reboot.
- Reason for the device reboot.

If the same device reboots multiple times, each reboot is reported separately.

You can use the **Reboot pane** opens the **Reboot** dialog box. In the dialog box, the **Crashes** tab lists information for all device crashes, including:

- System IP and hostname of the device on which the crash occurred.
- Crash index of the device.
- Core time when the device crashed.
- File name of the device crash log.

View state of data connections for a site

The **Site Health** pane displays the state of data connections for a site. For sites with multiple WAN edge devices, the pane shows the state for the entire site rather than individual devices.

The Site Health pane includes three connectivity states:

- Full WAN Connectivity: Total number of sites where all BFD sessions on all routers are in the up state.

- Partial WAN Connectivity: Total number of sites where some tunnels or BFD sessions on routers are down, but limited data plane connectivity remains.
- No WAN Connectivity: Total number of sites where all BFD sessions on all routers are down, resulting in no data plane connectivity.

You can view a table with detailed information about each site, node, or tunnel in the **Site Health** dialog box.

The **More Actions** icon at the right of each table row provides access to the **Device Dashboard**, or **Real Time view** from the **Monitor** > **Devices** screen, or the **Tools** > **SSH Terminal** screen.

View interface usage for WAN edge interfaces

The **Transport Interface Distribution** pane displays interface usage for the last 24 hours for all WAN edge interfaces in VPN 0, including all TLOC interfaces.

You can view detailed interface usage information in the **Transport Interface Distribution** dialog box.

View WAN edge device counts

The **WAN Edge Inventory** pane provides four WAN edge device counts:

- Total: Total number of authorized serial numbers for WAN edge devices uploaded on SD-WAN Manager. The serial number is uploaded on the **Configuration** > **Devices** screen.
- Authorized: Total number of authorized WAN edge devices in the overlay network. These devices are marked as 'Valid' in the **Configuration** > **Certificates** > **WAN Edge List** screen.
- Deployed: Total number of deployed WAN edge devices. These devices are marked as 'Valid' and are operational in the network.
- Staging: Total number of WAN edge devices configured at a staging site before they become part of the overlay network. These devices do not participate in routing decisions and do not affect network monitoring through SD-WAN Manager.

You can view hostname, system IP, site ID, and other details of each router in the **WAN Edge Inventory** dialog box.

View aggregated state of WAN edge devices

The **WAN Edge Health** pane provides an aggregated view of the state of WAN edge devices by showing the number of devices in each state, reflecting the overall health of the hardware nodes.

The three WAN edge device states are:

- Normal: Number of WAN edge devices with memory, hardware, and CPU in a normal state. Using less than 70% of total memory or CPU is classified as 'Normal'.
- Warning: Number of WAN edge devices with memory, hardware, or CPU in a warning state. Using between 70% and 90% of total memory or CPU is classified as 'Warning'.

- Error: Number of WAN edge devices with memory, hardware, or CPU in an error state. Using more than 90% of total memory or CPU is classified as 'Error'.

You can view a table displaying the last 12 or 24 hours of memory usage, CPU utilization, and hardware-related alarms (such as temperature, power supply, and PIM modules) by selecting a number or device state in the pane.

Use the **More Actions** icon at the right of each row in the table to access the following:

- Hardware Environment
- Real Time view from the **Monitor** > **Network** screen.

  Tools > **SSH Terminal** screen.

View WAN edge device loss, latency, and jitter

The **Transport Health** pane displays the aggregated average loss, latency, and jitter for all links and all combinations of colors (for example, LTE-to-LTE links or LTE-to-3G links).

You can use the **Type** drop-down arrow to select **loss**, **latency**, or **jitter**, and adjust the time period to display the relevant transport health data.

The **Transport Health** dialog box provides a more detailed view, with the **Details** tab displaying the information in a tabular format. You can also change the displayed health type and time period from this dialog box.

View SAIE flow information of WAN edge devices

The **Top Applications** pane displays SD-WAN Application Intelligence Engine (SAIE) flow information for traffic transiting routers in the overlay network.

SAIE flow information is available for the last 24 hours. To view data beyond this period, you must check the information for the specific device.

You can select a time period and a VPN from the respective drop-down lists to display SAIE flow information for all flows in that VPN. The **Top Applications** dialog box provides a more detailed view of the same information, allowing changes to the VPN and time period.



Note In Cisco vManage Release 20.7.x and earlier, SAIE flow information is referred to as deep packet inspection (DPI).

View tunnels data

The **Application-Aware Routing** pane allows selection of tunnel criteria from the **Type** drop-down arrow:

- Loss
- Latency

- Jitter

Based on the selected criteria, the pane displays the 10 worst tunnels. For example, selecting **Loss** shows the 10 tunnels with the highest average loss over the last 24 hours.

A graphical representation of the data can be viewed for each tunnel, with the option to select a time period or specify a custom time period.

The **Application-Aware Routing** dialog box provides a more detailed view, displaying the 25 worst tunnels based on the chosen criteria: **Loss**, **Latency**, or **Jitter**.

View tenant alarms in provider dashboard

Minimum supported releases: Cisco IOS XE Catalyst SD-WAN Release 17.16.1a and Cisco Catalyst SD-WAN Manager Release 20.16.1

Procedure

Step 1 Log in to Cisco SD-WAN Manager as the provider admin user.

Step 2 From the SD-WAN Manager menu, choose **Operated as Provider** > **Provider** > **Logs**.

Step 3 In the **Alarms** tab, toggle **View tenant alarms**.

Step 4 Optional: Filter alarms using **Advanced Filter** based on Tenant, Object Type, Object List, Severity, and Type.

Step 5 Optional: Click the bell icon on top to view all the notifications for tenant's alarms.

View tenant events in provider dashboard

Minimum supported releases: Cisco IOS XE Catalyst SD-WAN Release 17.16.1a and Cisco Catalyst SD-WAN Manager Release 20.16.1

Procedure

Step 1 Log in to Cisco SD-WAN Manager as the provider admin user.

Step 2 From the Cisco SD-WAN Manager menu, choose **Operated as Provider** > **Provider** > **Logs**.

Step 3 In the **Events** tab, toggle **View tenant** events.

Step 4 Optional: Filter events using **Advanced Filter** based on Tenant, Object Type, Object List, Severity, and Type.

View OMP statistics per tenant on a Cisco SD-WAN Controller

To view OMP statistics for a specific tenant on a selected SD-WAN Controller.

Procedure

Step 1 Log in to Cisco SD-WAN Manager as the provider admin user.

Step 2 From the Cisco SD-WAN Manager menu, choose **Monitor** > **Devices**.

Step 3 In the table of devices, click on the hostname of a SD-WAN Controller.

Step 4 In the left pane, click **Real Time**.

Step 5 In the **Device Options** field, enter `OMP` and select the OMP statistics you wish to view.

Step 6 In the **Select Filters** dialog box, click **Show Filters**.

Step 7 Enter the Tenant Name and click **Search**.

Cisco SD-WAN Manager displays the selected OMP statistics for the particular tenant.

View tenants associated with a SD-WAN Controller

Use these steps to view detailed connection information and the list of tenants associated with a SD-WAN Controller.

Procedure

Step 1 Log in to Cisco SD-WAN Manager as the provider admin user.

Step 2 Click a **Controller** connection number to display a table with detailed information about each connection.

Cisco SD-WAN Manager displays a table that provides a summary of the SD-WAN Controller and its connections.

Step 3 For a SD-WAN Controller, click **...** and click **Tenant List**.

Cisco SD-WAN Manager displays a summary of tenants associated with the SD-WAN Controller.