Monitor

This chapter contains the following topics:

Monitoring Switch

The Switch menu includes the following submenus:

Viewing Switch CPU Information

To view the switch CPU information from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > Switch > CPU**.

The **CPU** window is displayed. This window displays the CPU information for the switches in that scope.

Step 2 You can use the drop-down to filter the view by Last 10 Minutes, Last Hour, Last Day, Last Week, Last Month, and Last Year.

Step 3 In the **Switch** column, click the switch name to view the Switch Dashboard.

Step 4 Click the chart icon in the **Switch** column to view the CPU utilization.

You can also change the chart timeline to Last 10 Minutes, Last Hour, Last Day, Last Week, Last Month, and Last Year. You can choose the chart type and chart options to show as well.

Viewing Switch Memory Information

To view the switch memory information from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > Switch > Memory**.

The memory panel is displayed. This panel displays the memory information for the switches in that scope.

Step 2 Use the drop-down to filter the view by Last 10 Minutes, Last Hour, Last Day, Last Week, Last Month, and Last Year.

Step 3 Click the chart icon in the **Switch** column to see a graph of the memory usage of the switch.

Step 4 In the **Switch** column, click the switch name to view the Switch Dashboard.

Step 5 You can use the drop-down to view the chart in different time lines. Use the chart icons to view the memory utilization chart in varied views.

Viewing Switch Traffic and Errors Information

To view the switch traffic and errors information from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > Switch > Traffic**.

The **Switch Traffic** panel is displayed. This panel displays the traffic on that device for the past 24 hours.

Step 2 Use the drop-down to filter the view by 24 hours, Week, Month, and Year.

Step 3 Click the **Export** icon in the upper-right corner to export the data into a spreadsheet.

Step 4 Click **Save**.

Step 5 Click the switch name to view the Switch Dashboard section.

Viewing Switch Temperature

Cisco DCNM includes the module temperature sensor monitoring feature, using which you can view the sensor temperature of a switch. You can choose an interval by which to filter the sensor list. The default interval is **Last Day**. Only sensors that have historical temperature data is shown in the list. You can choose between Last ten Minutes, Last Hour, Last Day, Last Week, and Last Month.

Note It is not necessary to configure the LAN or SAN credentials under the **Configure > Credentials Management > LAN Credentials** screen to fetch the temperature monitoring data from the switches.

To view the switch temperature information from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > Switch > Temperature**.

The **Switch Temperature** window is displayed with the following columns.

- **Scope**: The sensor belongs to a switch, which is part of a fabric. The fabric that it belongs to is shown as its scope. When the scope selector at the top of Cisco DCNM is used, the sensor list is filtered by that scope.
- **Switch**: Name of the switch the sensor belongs to.
- **IP Address**: IP Address of the switch.
- **Temperature Module**: The name of the sensor module.
- **Avg/Range**: The first number is the average temperature over the interval that is specified at the top of the table. The second set of numbers is the range of the temperature over that interval.
- **Peak**: The maximum temperature over the interval

Step 2 From this list, each row has a chart icon, which you can click.
A chart is displayed, which shows historical data for the sensor. The interval for this chart can be changed as well, between 24 hours, 1 week, and 1 month.

Enabling Temperature Monitoring

You can enable the temperature monitoring feature for LAN switches from the LAN Collections screen, and for the SAN switches by setting a few properties under Administration > DCNM Server > Server Properties screens.

Enabling Temperature Monitoring for SAN Switches

1. From the menu bar, select **Administration > DCNM Server > Server Properties**.
2. Navigate to the **# PERFORMANCE MANAGER > COLLECTIONS** area.
3. Set the environment fields **pm.collectSanTemperature** & **pm.sanSensorDiscovery** to **TRUE**.
4. Click **Apply Changes** to save the configuration.
5. Restart Cisco DCNM.

Viewing Other Statistics

To view the statistics in user-defined format from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > Switch > User Defined**.

The **Other** window is displayed.

Step 2 You can use the drop-down to filter the view by 24 hours, Week, Month, and Year.

There are variations to this procedure. In addition to these basic steps, you can also do the following:

- Select the time range, and click **Filter** to filter the display.
- Click the chart icon in the **Switch** column to see a graph of the performance for this user-defined object. You can change the time range for this graph by selecting it from the drop-down list in the upper right corner.
- Use the chart icons to view the traffic chart in varied views.

Viewing Switch Custom Port Groups Information

To view the custom port group information from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > Switch > Custom Port Groups**.

The Custom Port Groups window shows statistics and performance details for custom port groups.

Step 2 You can use the drop-down to filter the view by 24 hours, Week, Month, and Year.

Step 3 Click the **Export** icon in the upper-right corner to export the data into a spreadsheet.

Step 4 Click **Save**.

Step 5 Click the switch name to view the Switch Dashboard.

Viewing Accounting Information

To view the accounting information from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > Switch > Accounting**.

The fabric name or the group name along with the accounting information is displayed.

Step 2 Select **Advanced Filter** beside the filter icon to search the accounting information by **Source**, **Username**,**Time**, and **Description**. Or select **Quick Filter** to search under each column.

Step 3 You can also select a row and click the **Delete** icon to delete accounting information from the list.

Step 4 You can use the **Print** icon to print the accounting details and use the **Export** icon to export the data to a Microsoft Excel spreadsheet.

Viewing Events Information

To view the events and syslog from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > Switch > Events**.

The fabrics along with the switch name and the events details are displayed.

The **Count** column displays the number of times the same event has occurred during the time period as shown in the **Last Seen** and **First Seen** columns.

Click a switch name in the **Switch** column to view the switch dashboard.

Step 2 Select an event in the table and click the **Add Suppressor** icon to open the shortcut of adding an event suppressor rule.

Step 3 Select one or more events from the table and click the **Acknowledge** icon to acknowledge the event information for the fabric.

- After you acknowledge the event for a fabric, the acknowledge icon is displayed in the **Ack** column next to the fabric.

Step 4 Select the fabric and click the **Unacknowledge** icon to cancel an acknowledgment for a fabric.

Step 5 Select **Advanced Filter** beside the filter icon to search the accounting information by **Source**, **Username**,**Time**, and **Description**. Or select **Quick Filter** to search under each column.

Step 6 Select a fabric and use the **Delete** icon to delete the fabric and event information from the list.

Step 7 Click the **Print** icon to print the event details.

Step 8 Click the **Export to Excel** icon to export the data.

Monitoring SAN

The SAN menu includes the following submenus:

Monitoring ISL Traffic and Errors

To monitor the ISL traffic and errors from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > SAN > ISLs**.

The **ISL Traffic and Errors** window is displayed. This panel displays the ISL information for the end devices in that scope. You can reduce or expand the scope of what is displayed by using the scope menu.

Step 2 You can use the drop-down to filter the view by 24 hours, Week, Month, and Year.

Note **NaN** (Not a Number) in the data grid means that the data is not available.

Note It is empty for non-FCIP ports under the **FCIP Compression Ratio** column.

There are variations to this procedure. In addition to these basic steps, you can perform the following steps to view detailed information for ISLs:

- To change the time range for this graph, select it from the drop-down list in the upper-right corner.
- To view the detailed information for a specific period, drag the slider control to choose the time interval for which you need the information.
- Use the chart icons to view the traffic chart in varied views. You can also use the icons to Append, Predict, and Interpolate Data. To view real-time information, choose **Refresh** icon from in the upper right corner. The real-time data is updated in every 10 seconds.
- To export the data into a spreadsheet, click the **Export** icon in the upper-right corner and click **Save**.
- For the Rx/Tx calculation, see the following Rx/Tx calculation formula.

  Note The conversion for Fabrics is 10 bit = 1 byte and for LAN traffic, the conversion is 8 bit = 1 byte.

  - Average Rx/Tx % = Average Rx/Tx divided by Speed * 100
  - Peak Rx/Tx % = Peak Rx/Tx divided by Speed * 100

If the performance tables do not contain any data, see the Performance Setup Thresholds section to turn on performance.

Viewing Performance Information for NPV Links

To view the performance of NPV links from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > SAN > NPV Links**.

The **NPV Links** window is displayed. This window displays the NPV links for the selected scope.

Step 2 You can use the drop-down to filter the view by **24 hours, Week, Month**, and **Year**.

Step 3 Click the chart icon in the **Name** column to see a list of the traffic for the past 24 hours.

There are variations to this procedure. In addition to these basic steps, you can also perform the following steps to view detailed information for NPV links:

- You can change the time range for this information by selecting from the drop-down list in the upper-right corner.
- To view the detailed information for a specific period, drag the slider control to choose the time interval for which you need the information.
- Use the chart icons to view the traffic chart in varied views. You can also use the icons to **Append**, **Predict**, and **Interpolate Data**.

- To export the data into a spreadsheet, click the **Export** icon in the upper-right corner and click **Save**.
- To view real-time information, choose **Real Time** from the drop-down list in the **Chart** menu.

Note If the performance tables do not contain any data, see the Performance Setup Thresholds section to turn on performance data collection.

Viewing Inventory Information for VSANs

To view the inventory information for VSANs from the Cisco DCNM Web UI, perform the following steps:

Procedure

Choose **Monitor > SAN > VSANs**.

The **VSAN** window is displayed, showing the VSAN details along with the status and **Activated Zoneset** details.

Monitoring Performance Information for Ethernet Ports

To monitor the performance of Ethernet ports from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > SAN > Ports**.

The **Ethernet Ports** window is displayed.

Step 2 You can use the drop-down to filter the view by **24 hours, Week, Month**, and **Year**.

There are variations to this procedure. In addition to these basic steps, you can also perform the following steps:

- Choose an Ethernet port in the **Name** column to see a graph of the traffic across that Ethernet port for the past 24 hours. You can change the time range for this graph by selecting it from the drop-down list in the upper-right corner.
- To export the data into a spreadsheet, click the **Export** icon in the upper-right corner and then **Save**.
- Use the chart icons to view the traffic chart in varied views. You can also use the icons to **Append**, **Predict**, and **Interpolate Data**.
- For the Rx/Tx calculation, see the following Rx/Tx calculation formula.

Note The conversion for Fabrics is 10 bit = 1 byte and for LAN traffic, the conversion is 8 bit = 1 byte.

- Average Rx/Tx % = Average Rx/Tx divided by Speed * 100
- Peak Rx/Tx % = Peak Rx/Tx divided by Speed * 100

Note If the performance tables do not contain any data, see the Performance Setup Thresholds section to turn on performance data collection.

Viewing Inventory Information for Host Ports on FC End Devices

To view the inventory information for host ports on FC end devices from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > SAN > FC Ports**.

The **Inventory > End Ports** window is displayed with details of the FC End Devices on the host ports.

Step 2 Use the drop-down to view All or Warning information for the FC End devices on host ports.

Step 3 Click the **Show Filter** icon to enable filtering by **Enclosure, Device Name**, or **VSAN**.

Viewing Performance Information on All Ports

To view the performance of devices that are connected to all the ports from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Performance > End Devices**.

The **End Devices Traffic and Errors** window is displayed.

Step 2 You can choose to display **All** ports, **Host** ports, or **Storage** ports from the drop-down list on the upper right corner.

Step 3 You can use the drop-down to filter the view by **24 hours, Week, Month**, and **Year**.

Step 4 To export the data into a spreadsheet, click the **Export** icon in the upper-right corner and click **Save**.

Step 5 Click the chart icon in the **Name** column to see the following:

- A graph of the traffic on that device according to the selected timeline.
- Use the chart icons to view the traffic chart in varied views. To view real-time information, click the refresh icon from the drop-down list in the upper right corner. The real-time data is updated in every 10 seconds. You can also use the icons to **Append, Predict**, and **Interpolate Data**.

Note If the performance tables do not contain any data, see the Performance Setup Thresholds section to turn on performance data collection.

Viewing Performance Information for FC Flows

To view the performance of the **FC Flow** traffic from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > SAN > FC Flows**.

The **FC Flows** window is displayed.

Step 2 You can use the drop-down to filter the view by **24 hours, Week, Month**, and **Year**.

Step 3 To export the data into a spreadsheet, click the **Export** icon in the upper-right corner and then click **Save**.

Step 4 Click the chart icon in the **Name** column to see:

- A graph of the traffic on that device according to the selected timeline.
- Use the chart icons to view the traffic chart in varied views. To view real-time information, click the **Refresh** icon from the drop-down list in the upper right corner.
- You can also use the icons to **Append, Predict**, and **Interpolate Data**.

Note If the performance tables do not contain any data, see the Performance Setup Thresholds section to turn on performance data collection.

Viewing Performance Information on Enclosures

To view the performance of devices that are connected to the host enclosure from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > SAN > Enclosures**.

The **Enclosures Traffic and Errors** window is displayed.

Step 2 You can select to view **Host Enclosures** or **Storage Enclosures** from the drop-down list on the upper right corner.

Step 3 You can use the drop-down to filter the view by **24 hours, Week, Month**, and **Year**.

Step 4 To export the data into a spreadsheet, click the **Export** icon in the upper-right corner and then click **Save**.

Step 5 Click the chart icon in the **Name** column to see:

- A graph of the traffic on that device according to the selected timeline.

- Use the chart icons to view the traffic chart in varied views.
- You can also use the icons to **Append, Predict**, and **Interpolate Data**.

Note If the performance tables do not contain any data, see the Performance Setup Thresholds section to turn on performance data collection.

Viewing Performance Information on Port Groups

To view the performance of devices that connected to the port groups from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > SAN > Port Groups**.

The **Port Group Traffic and Errors** window is displayed.

Step 2 You can use the drop-down to filter the view by **24 hours, Week, Month**, and **Year**.

Step 3 Click the name port group to see the members of that port group.

There are variations to this procedure. In addition to these basic steps, you can also perform the following steps to view detailed information for the port groups:

- To change the time range for this graph, select it from the drop-down list in the upper right corner.
- To view the detailed information for a specific period, drag the slider control to choose the time interval for which you need the information.
- Use the chart icons to view the traffic chart in varied views.
- You can also use the icons to **Append, Predict**, and **Interpolate Data**.
- To export the data into a spreadsheet, click the **Export** icon in the upper-right corner and click **Save**.

Note If the performance tables do not contain any data, see the Performance Setup Thresholds section to turn on performance data collection.

SAN Host Redundancy

The **SAN Host Path Redundancy** check enables you to view the non-redundant host storage paths. It helps you identify the host enclosure errors along with the resolution to fix the errors.

Note All fabrics that are discovered must be licensed or this feature will be disabled in the Cisco DCNM Web Client. When the feature is disabled, a notification is displayed stating unlicensed fabrics are discovered.

From the menu bar, choose **Monitor > SAN > Host Path Redundancy**.

You can see two parts in this window:

- Tests to Run
- Results

Tests to Run

Procedure

Step 1 Choose **Monitor > SAN > Host Path Redundancy**.

Step 2 Under the upper **Tests to Run** area, use the check boxes to select the host redundancy optional checks.

Step 3 Check the **Automatically Run Check Every 24 hours** check box to enable periodic running of the checker. The checker will run every 24 hours starting 10 minutes after the server starts.

Step 4 Check **Limit by VSANs** check box, and select **Inclusion** or **Exclusion**. Enter VSAN or VSAN range in the text field to include or skip the host enclosures that belong to VSANs from the redundancy check.

Step 5 Check other optional checks to do the relevant check.

Step 6 Click **Clear Results** to clear all the errors displayed.

Step 7 Click **Run Tests Now** to run the check at anytime.

Step 8 The results are displayed in the below Results area.

Results

Procedure

Step 1 Choose **Monitor > SAN > Host Path Redundancy** tab.

Step 2 The bottom **Results** area has four tabs that are **Host Path Errors**, **Ignored Hosts**, **Ignored Storage**, and **Ignored Host Storage Pairs**.

Step 3 Click **Host Path Errors** tab to display the host path redundancy errors table. On the top of the table, the colored **Good, Skipped**, and **Errored** host enclosure counts, along with the last update time are displayed.

a) The **Host Enclosure** column displays the hosts that contain the errors. These are counts of each path in the host enclosures seeing an error. The **Storage Enclosure/Storage Port** column displays the connected storage that is involved the errors. In the **Fix?** column, hover the mouse cursor on the **?** icon to view a solution to fix the error.

b) Select a row and click **Ignore Hosts** to add the selected rows host enclosure to an exclusion list. The errors from that host will no longer be reported and the current errors will be purged from the database.

c) Select a row and click **Ignore Storage** to add the selected rows storage enclosure to an exclusion list.

d) Select a row and click **Ignore Host Storage Pair** to add the selected rows host-storage pair enclosure to an exclusion list.

e) In the drop-down list next to **Show** on the upper right corner of the table, select **Quick Filter**. Enter the keywords in the column headers of the table to filter the items. Select **All** to display all the items.

f) Click the circulation icon on the upper right corner of the table to refresh the table.

g) Click the **Print** icon on the upper right corner of the table to print the errors as tables.

h) Click the **Export** icon on the upper right corner of the table to export the table to a Microsoft excel spreadsheet.

Step 4 Click the **Ignored Hosts** tab to display the list of host enclosures that have been skipped or ignored by the redundancy check along with the reason the reason for skipping. The following reasons may be displayed:

- **Skipped: Enclosure has only one HBA.**
- **Host was ignored by the user.**
- **Host ports managed by more than one federated servers. Check can't be run.**
- Skipped: No path to storage found.

Select a host enclosure and click **Delete** to remove the host from the ignored list and begin receiving errors about a host you had chosen to ignore. However, you can delete entries with message **Host was ignored by user**.

Step 5 Click the **Ignored Storage** tab to display the list of storage enclosures that have been selected to be ignored during the redundancy check. Select a storage enclosure and click **Delete** to remove the storage from the ignored list and begin receiving errors about the storage you had chosen to ignore.

Step 6 Click the **Ignored Host Storage Pair** tab to display the list of host-storage pairs that have been selected to be ignored during the redundancy check. Select a row and click **Delete** to delete the storage pair from the ignored list.

Slow Drain Analysis

The **Slow Drain Analysis** enables you to view slow drain statistics at the switch level and the port level. You can monitor the slow drain issue within any duration. You can display the data in a chart format and export the data for analysis. You can also view the topology that provides a high-level view of txwait, drops, credit loss recovery, over utilization, and port monitor events.

The slow drain statistics are stored in the cache memory. Therefore, the statistics are lost when the server is restarted or a new diagnostic request is placed.

Note The jobs run in the background, even after you log off.

Procedure

Step 1 Choose **Monitor > SAN > Slow Drain Analysis**.

Step 2 In the **Scope** field, select the fabric from the drop-down list.

Step 3 In the **Duration** drop-down list, select **Once** or **Daily** for the scheduled daily job. **Once** includes intervals, such as 10 min, 30 min, 1 hour, and other hours and run the job immediately. **Daily** allows you to select a start time, and run the job for the selected interval. Use the radio button to select the desired interval to collect data.

Only **Daily** slow drain job sends out report, which can be viewed from **Monitor > Report > View**.

Step 4 Click **Start Collection** to begin polling.

The server collects the slow drain statistics based on the scope defined by you. The **Time Remaining** is displayed in the right-side of the page.

Step 5 Click **Stop Collection** to stop polling.

The server maintains the counters in the cache, until a new diagnostic request is placed. You can stop the polling before the time is up.

Step 6 Click the arrow next to **Current jobs** to display the slow drain details for the jobs running on the fabric. The **Fabric Name**, the **Status** of polling, **Start**, **End**, and **Duration** icon for each fabric is displayed.

Step 7 Select the fabric and click **Result**, **Delete** or **Stop** to view, delete or stop a job.

A topology of the selected fabric will appear if you select a fabric and click **Result**, along with the slow drain details. See *Slow Drain Visualization* for more information.

Step 8 Click **Detail** to view the saved information.

Step 9 Click **Interface chart** to display the slow drain value for the switch port in the chart format.

Step 10 Click **Filter** to display the details based on the defined value for each column.

Step 11 Select the **Data Rows Only** check box to filter and display the nonzero entries in the statistics.

Step 12 Click **Print** to print the slow drain details.

Step 13 Click **Export** to export the slow drain statistics to a Microsoft Excel spreadsheet.

Slow Drain Visualization

A topology of the selected fabric appears if you select a fabric and click **Result**, along with the slow drain details. The topology window shows color-encoded nodes and links that correspond to various network elements. For each of the elements, you can hover over to fetch some more information. The links and switches are color-coded. Enable performance collections and SNMP traps to view the slow drain information on the topology. Choose **Administration > Performance Setup > SAN Collections** and enable the performance collections. See Performance Manager SAN Collections for more information on enabling the performance collections. Choose **Administration > Event Setup > Registration** and enable SNMP traps. See #unique_9 for more information on enabling SNMP traps.

The following table lists the color description that is associated with the links and switches.

Table 1: Color Description

Color	Name	Description
Blue (light)	Level 5	High utilization tx-datarate >= 80%
Green	Level 4	No slow drain found
Red	Level 3	Credit loss recovery
Orange	Level 2	Drops
Yellow (dark)	Level 1.5	txwait >= 30%
Yellow (light)	Level 1	txwait < 30%
Gray (light)	No Data	No Data

A switch color represents the highest level slow drain that is found on any link to switch. The maximum value is 3 and the minimum value is 1. A switch has two colors if overutilized. The right half of the switch is colored in light blue to represent the overutilization. A number on the switch represents the number of F ports with the slow drain. The color around the number represents the highest level slow drain that is found on F ports of the switch. Click the switch to see more slow drain details. Double click the switch to filter the slow drain table to view the slow drain data of that switch alone.

Two parallel lines are used to represent the slow drain on links. Links are bidirectional, hence each direction has a color to represent the highest level of slow drain. Hover over a link to view the switch and interface name of the source and destination. Double click a link to filter the slow drain table to view the slow drain data that is related to that link alone.

Note The highest slow drain level a link can have is **Level 4**. Valid colors for a link are Green, Red, Orange, Yellow (dark), Yellow (light), and Gray (light).

Viewing Inventory Information for Regular Zones

To view the inventory information for regular zones from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > SAN > Regular Zones**.

The **Regular Zones** window is displayed.

Step 2 Click the **Settings** icon to choose the displaying columns.

Viewing Inventory Information for IVR Zones

To view the inventory information for IVR zones from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > SAN > IVR Zones**.

The **IVR Zones** window is displayed with inventory details of the fabrics for the IVR zone.

Step 2 Click the **Settings** icon to choose the displaying columns.

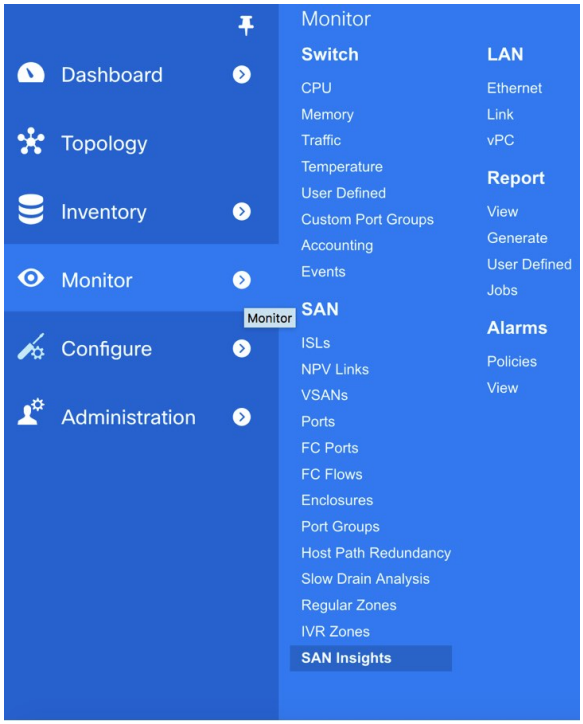
Monitoring Insights Flows

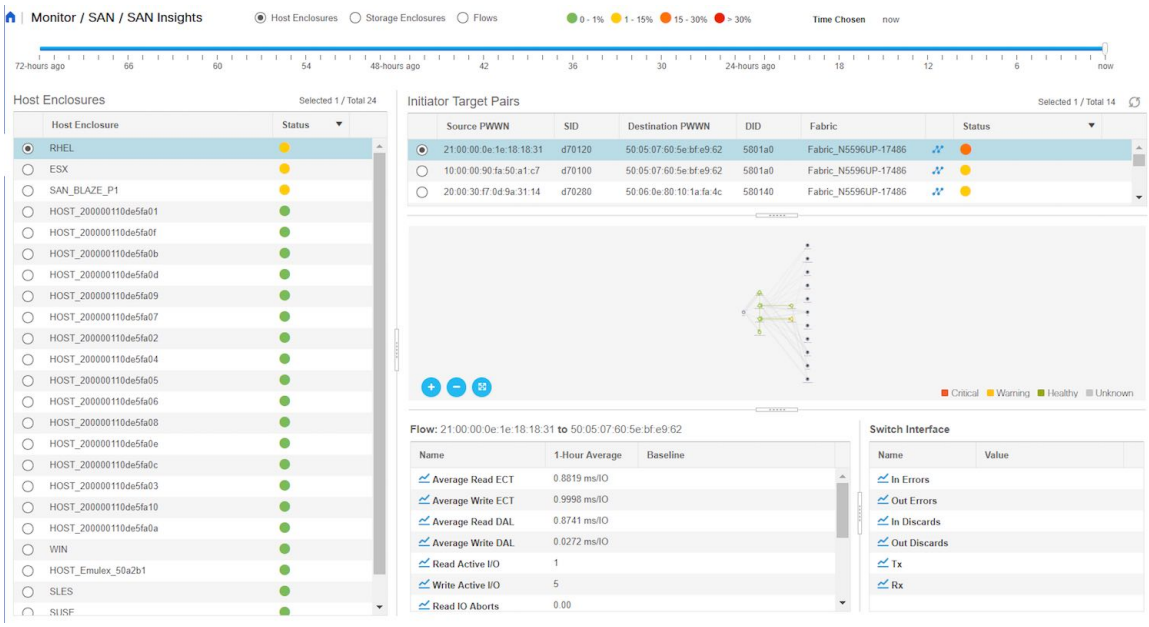
The SAN Insights page displays the health-related indicators in the interface so that you can quickly identify issues in your environment. You can use health indicators to understand where problems are in your fabrics.

Note If the interface is down, it is displayed in grey color.

Procedure

Step 1 To monitor the SAN Insights feature, choose **Monitor > SAN > SAN Insights**. The SAN Insights page appears.



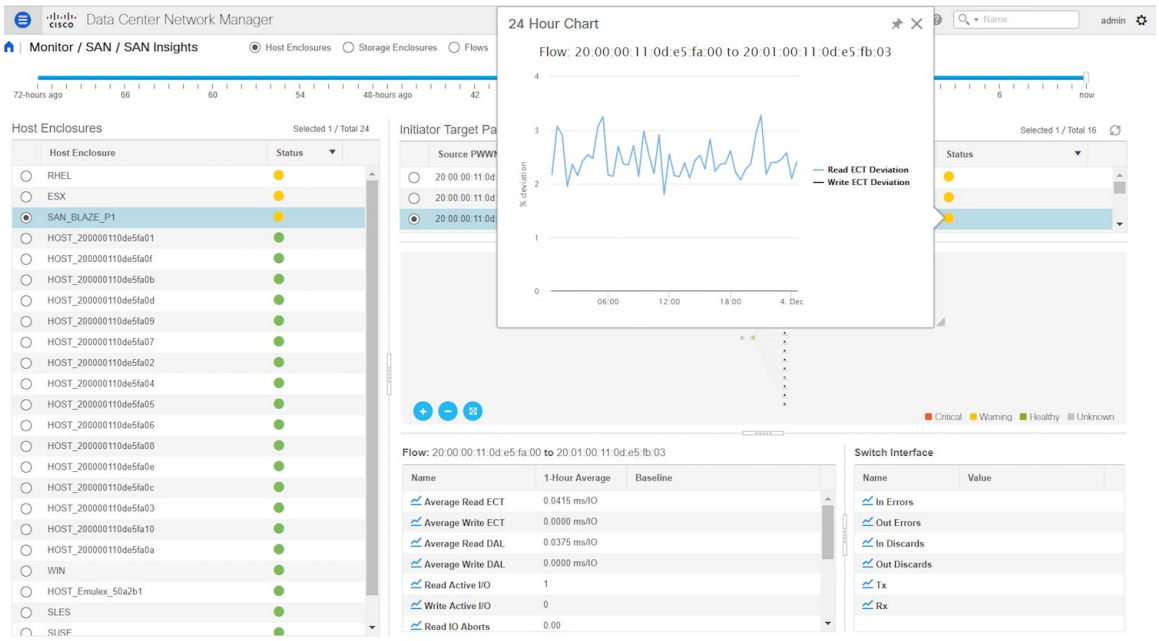


This page provides the basis for Insights data visualization showing counter data, visual topology map with indicators on the map. Also, you can view analytical information and historical insights. In **Monitor > SAN Insights** window, you can perform the tasks that are mentioned in the steps below.

The color of the status is arrived as an hourly average of Read and Write deviation for the respective Initiator Target Pairs.

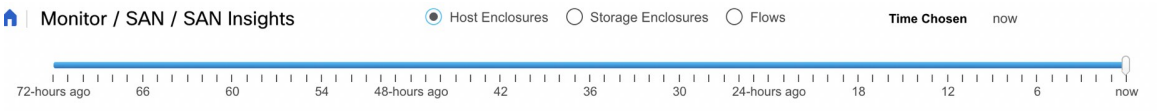
Note You can click the Status circle icon in the Initiator-target Pair table to view the 24-Hour deviation chart.

You can click the **View SAN Insights Metrics** icon in each row of the Initiator-target Pair table to navigate to the ECT Analysis page for more details on the respective Initiator-Target pair.

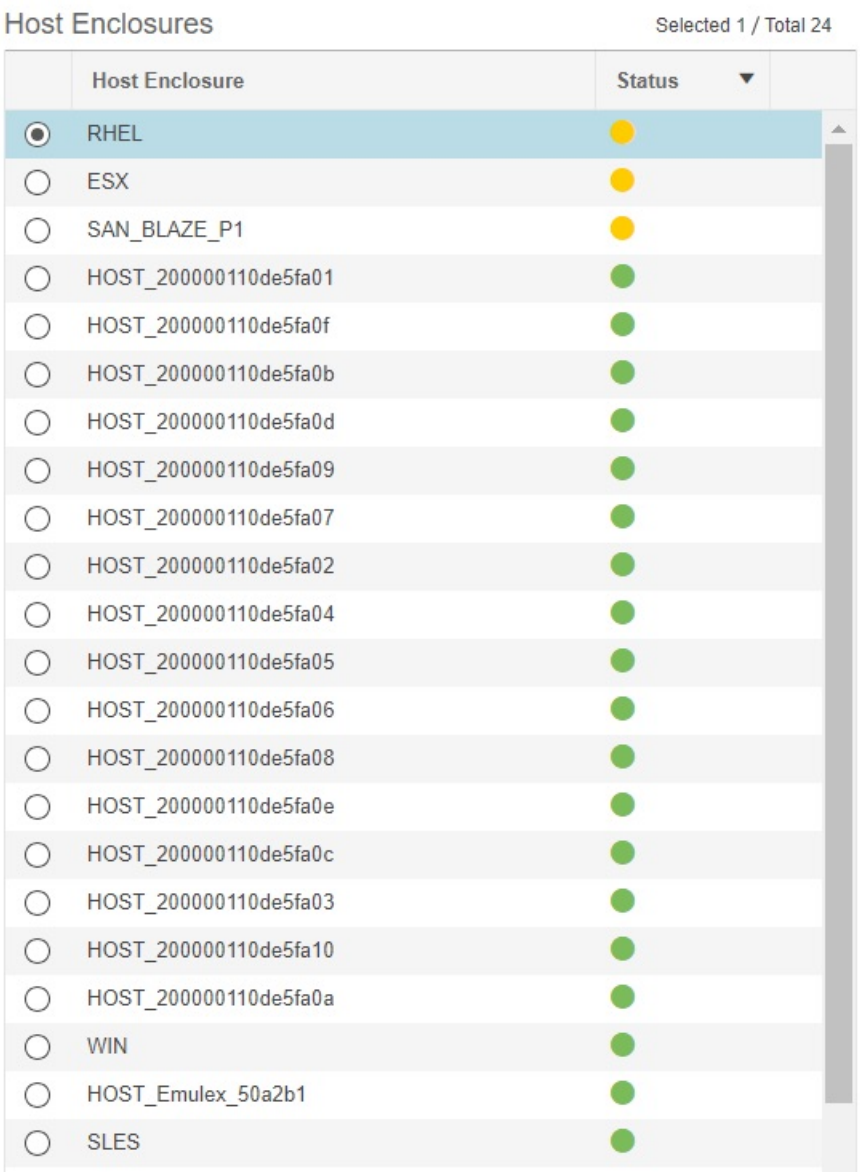


Step 2 View details about **Host Enclosure**, **Storage Enclosure**, or **Flows**.
The Host Enclosures, Storage Enclosures, or IT-pairs can be filtered using the quick-filter functionality.

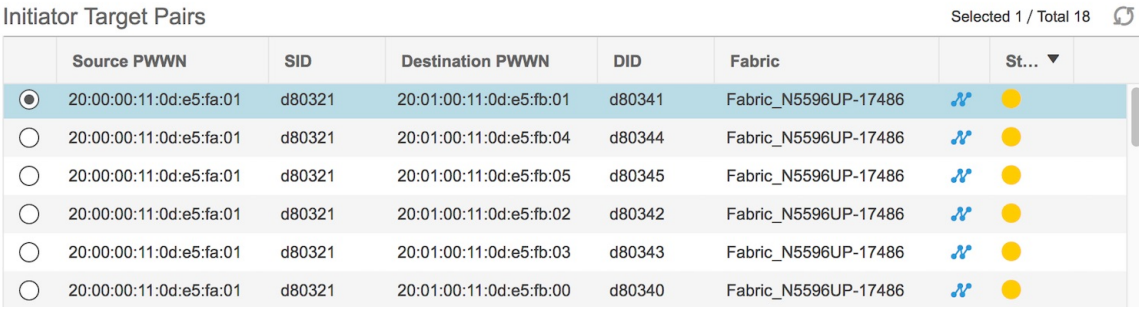
Step 3 Select time interval (such as now, 6-hours ago, 12-hours ago) to calculate status and fetch flow and port counters.



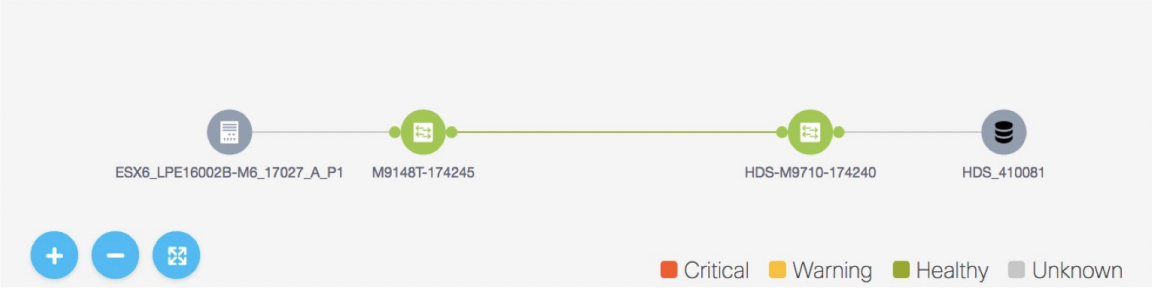
Step 4 View the status of the host or storage enclosures.



Step 5 View initiator target pair details such as Source PWWN, SID, destination PWWN, DID, fabric name, and status.



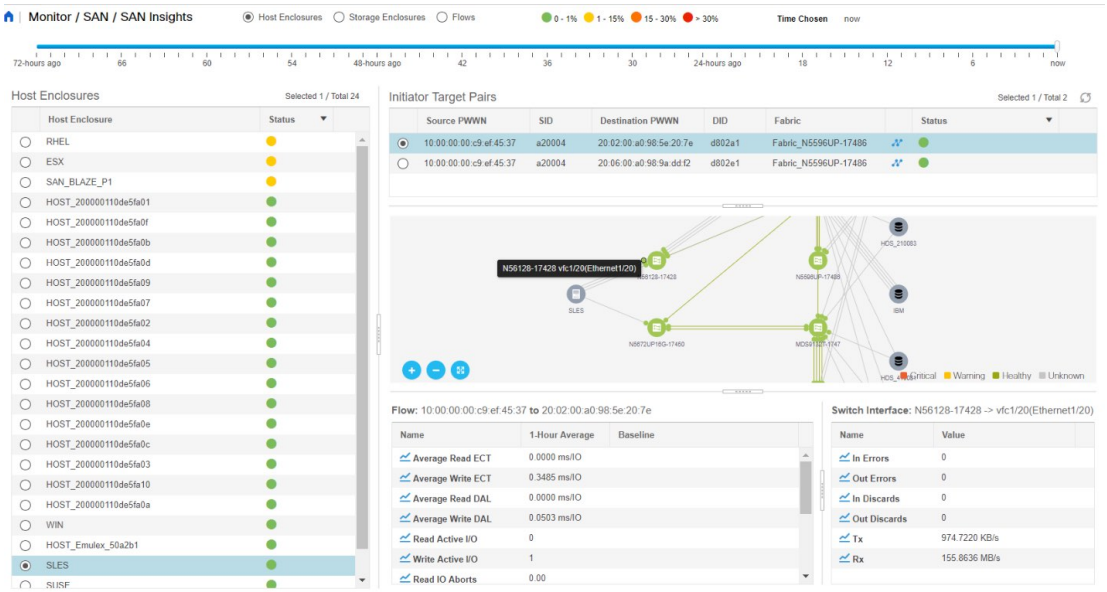
Step 6 Use the map to view end-to-end connectivity from initiator to target. Host, storage, and switch have colored status indications. The color codes in the Topology area are only for the switch status. That color code is identical to what you see in the main DCNM Topology legend.. The switch interfaces also have status indications. The switch interface is rendered as a small circle at the end of the link that is attached to the switch. Selecting a switch interface populates one of the counter tables. Map displays latest connectivity (not affected by time slider setting).



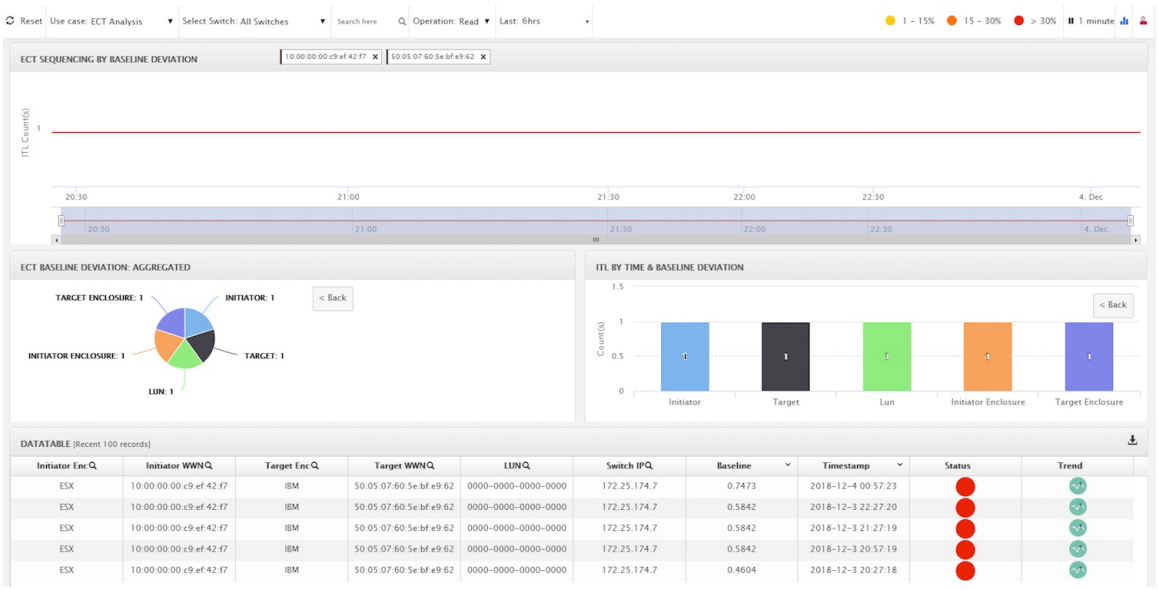
Step 7 View counter data for selected flow and switch interface.

- Select the IT flow to display the topology and the flow metrics from the switch telemetry infrastructure in the bottom-left table.

  Select the specific interface in the topology view to display interface metrics from port-monitoring infrastructure.

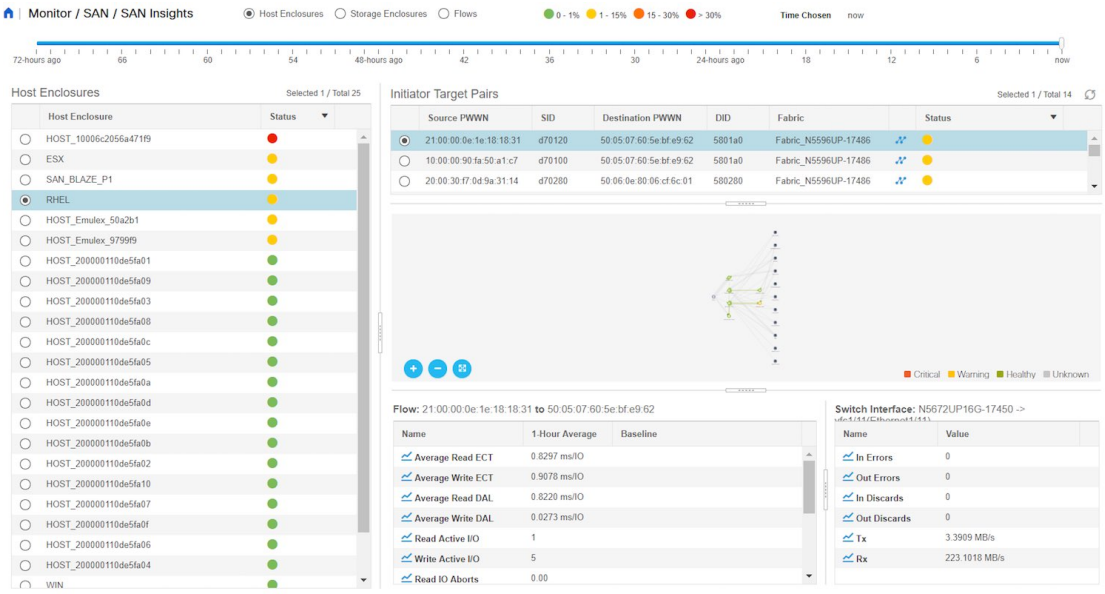


Step 8 You can click the icon in each row of the Initiator-target Pair table to navigate to the ECT Analysis page from from Monitor > SAN Insights page for more details on the respective Initiator-Target pair.



Viewing Host Enclosures

1. Choose **Monitor > SAN > SAN Insights**, and then choose **Host Enclosure**.



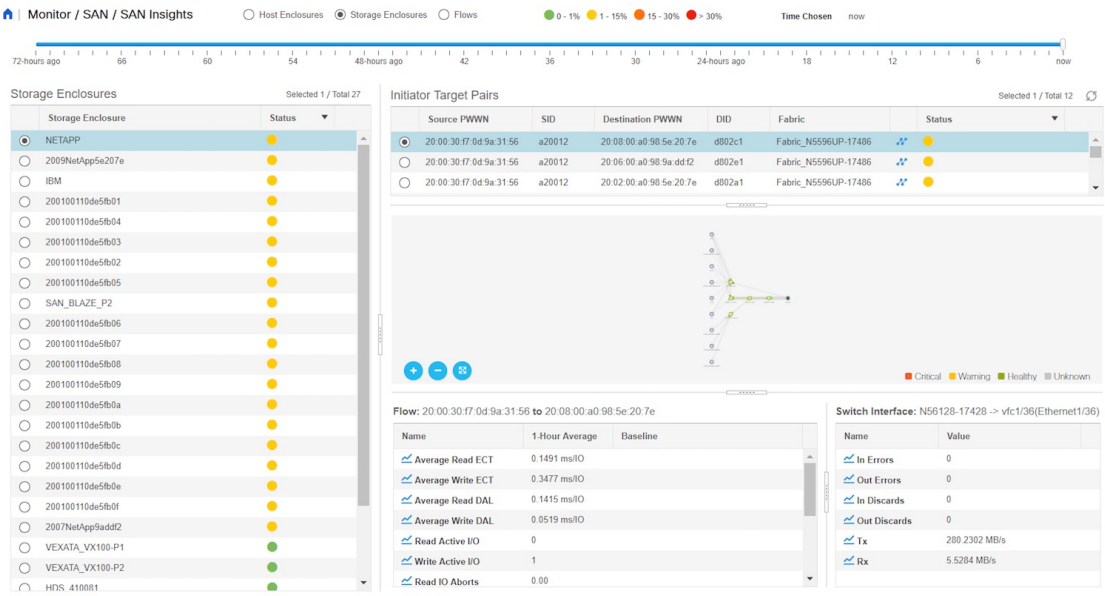
2. Specify a time interval using the time slider.
3. Select a host from the **Host Enclosures** table, which lists all the host enclosures.
4. Select one initiator-target pair from the **Initiator Target Pairs** table. This table lists all the initiator-target pairs for the selected host.

   The flow table shows the details of all metrics on ECT/DAL/read/write times, active I/Os, aborts, failures etc. along with their one hour average and the baseline information.

5. Select a switch interface from the topology map. The **Switch Interface** table displays data for the selected interface.
6. Click the status ball in the **Initiator Target Pairs** table. 24-hour normalized R/W ECT deviation chart is displayed for the selected IT-pair.

Viewing Storage Enclosures

1. Choose **Monitor > SAN > SAN Insights**, and then choose **Storage Enclosure**.

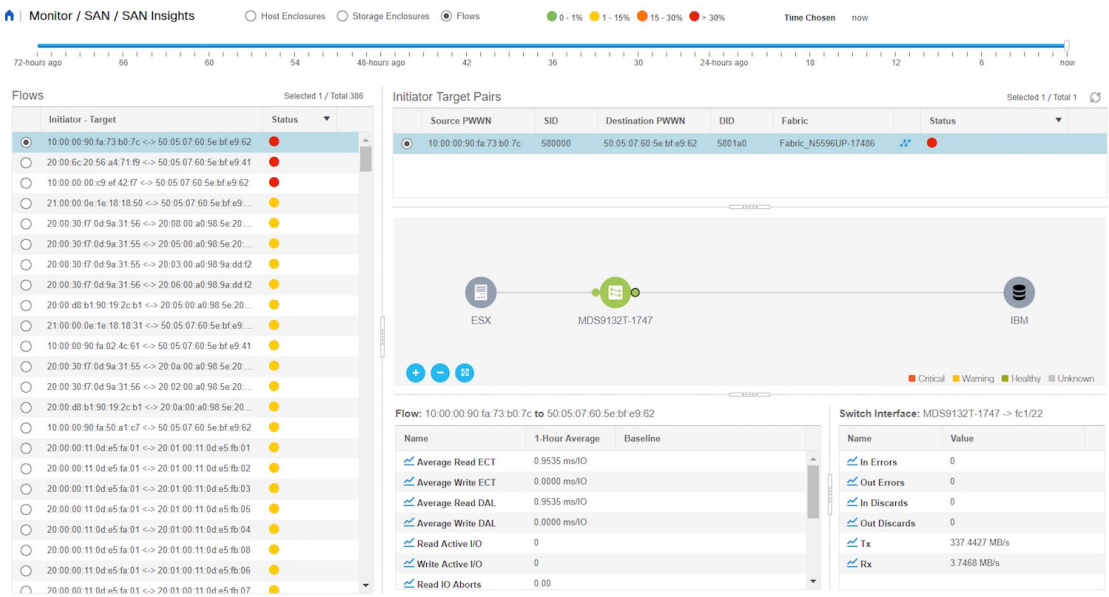


2. Specify a time interval using the time slider.
3. Select a storage enclosure from the **Storage Enclosures** table.
4. Select a initiator-target pair from the **Initiator Target Pairs** table.
5. Click the status ball.

   The 24hr normalized R/W ECT deviation chart is displayed for the selected IT-pair.
6. View the topology map represented for the selected initiator-target pair and the flow metrics. The flow metrics are displayed in the flow table.
7. Select a switch interface from the topology map. The **Switch Interface** table displays data for the selected interface.

Viewing Flows

1. Choose **Monitor > SAN > SAN Insights**, and then choose **Flows**.



2. Specify a time interval using the time slider.
3. Choose a flow from the **IT Pairs** table. The initiator-target pairs are listed in the **Initiator Target Pairs** table, the topology map is represented for the selected I-T pair. The flow metrics are displayed in the Flows table.
4. The flow table in this window shows details about all metrics on ECT/DAL/read/write times,active I/Os, aborts, failures and so on. Also, the flow table shows one hour average and the baseline information.
5. Click the status ball in the **Initiator Target Pairs** table. 24-hour normalized R/W ECT deviation chart is displayed for the selected IT-pair.
6. Select a switch interface from the topology map. The **Switch Interface** table displays data for the selected interface.

Monitoring LAN

The LAN menu includes the following submenus:

Monitoring Performance Information for Ethernet

To monitor the performance information for ethernet from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > LAN > Ethernet**.

The **Ethernet** window is displayed.

Step 2 You can use the drop-down to filter the view by Last 10 Minutes, Last Hour, Last Day, Last Week, Last Month, and Last Year.

There are variations to this procedure. In addition to these basic steps, you can also perform the following steps:

- Select the name of an Ethernet port from the **Name** column to see a graph of the traffic across that Ethernet port for the past 24 hours. You can change the time range for this graph by selecting it from the drop-down list in the upper-right corner.
- To export the data into a spreadsheet, click the **Export** icon in the upper-right corner and click **Save**.
- Use the chart icons to view the traffic chart in varied views. You can also use the icons to **Append**, **Predict**, and **Interpolate Data**.
- For the Rx/Tx calculation, see the following Rx/Tx calculation.

  Note The conversion for Fabrics is 10 bit = 1 byte and for LAN traffic, the conversion is 8 bit = 1 byte.

  - Average Rx/Tx % = Average Rx/Tx divided by Speed * 100
  - Peak Rx/Tx % = Peak Rx/Tx divided by Speed * 100

Note If the performance tables do not contain any data, see the Thresholds section to turn on performance data collection.

Monitoring ISL Traffic and Errors

To monitor the ISL traffic and errors from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > LAN > Link**.

The **ISL Traffic and Errors** window is displayed. This panel displays the ISL information for the end devices in that scope. You can reduce or expand the scope of what is displayed by using the scope menu.

Step 2 You can use the drop-down to filter the view by Last 10 Minutes, Last Hour, Last Day, Last Week, Last Month, and Last Year.

Note **NaN** (Not a Number) in the data grid means that the data is not available.

There are variations to this procedure. In addition to these basic steps, you can perform the following steps to view detailed information for ISLs:

- To change the time range for this graph, select it from the drop-down list in the upper-right corner.
- To view the detailed information for a specific period, drag the slider control to choose the time interval for which you need the information.

- Use the chart icons to view the traffic chart in varied views. You can also use the icons to **Append**, **Predict**, and **Interpolate Data**. To view real-time information, choose **Real Time** from the drop-down list in the **Chart** menu.
- To export the data into a spreadsheet, choose **Export** from the drop-down list in the **Chart** menu and then click **Save**.
- For the Rx/Tx calculation, see the following Rx/Tx calculation.

Note The conversion for Fabrics is 10 bit = 1 byte and for LAN traffic, the conversion is 8 bit = 1 byte.

- Average Rx/Tx % = Average Rx/Tx divided by Speed * 100
- Peak Rx/Tx % = Peak Rx/Tx divided by Speed * 100

Note If the performance tables do not contain any data, see the Performance Setup Thresholds section to turn on performance.

Monitoring a vPC

The virtual port channel (vPC) feature enables you to view the links that are physically connected to different devices as a single port channel. A vPC is an extended form of a port channel which allows you to create redundancy and increase bisectional bandwidth by enabling multiple parallel paths between nodes and allowing load balancing traffic. Traffic is distributed among two single device vPC endpoints. If there is an inconsistency in the vPC configurations, the vPC does not function correctly.

Note To view the vPC in **vPC Performance**, both primary and secondary device should be designated to the user. If either one kind of switch is not designated, vPC information is isplayed.

Cisco DCNM **Web Client > Monitor> vPC** displays only consistent vPCs displays both the consistent and inconsistent vPCs.

You can identify the inconsistent vPCs and resolve the inconsistencies in each vPC by using the Cisco DCNM **Web UI > Configure > Deploy > vPC Peer** and **Web Client > Configure > Deploy > vPC**.

Table 2: vPC Performance, on page 24 displays the following vPC configuration details in the data grid view.

Table 2: vPC Performance

Column	Description
Search box	Enter any string to filter the entries in their respective column.
vPC ID	Displays vPC ID's configured device.
Domain ID	Displays the domain ID of the vPC peer switches.
Multi Chassis vPC EndPoints	Displays the multi-chassis vPC endpoints for each vPC ID under a vPC domain.

Column	Description
Primary vPC Peer - Device Name	Displays the vPC Primary device name.
Primary vPC Peer - Primary vPC Interface	Displays the primary vPC interface.
Primary vPC Peer - Capacity	Displays the capacity for the primary vPC peer.
Primary vPC Peer - Avg. Rx/sec	Displays the average receiving speed of primary vPC peer.
Primary vPC Peer - Avg. Tx/sec	Displays the average sending speed of primary vPC peer.
Primary vPC Peer - Peak Util%	Displays the peak utilization percentage of primary vPC peer.
Secondary vPC Peer - Device Name	Displays the vPC secondary device name.
Secondary vPC Interface	Displays the secondary vPC interface.
Secondary vPC Peer - Capacity	Displays the capacity for the secondary vPC peer.
Secondary vPC Peer - Avg. Rx/sec	Displays the average receiving speed of secondary vPC peer.
Secondary vPC Peer - Avg. Tx/sec	Displays the average sending speed of secondary vPC peer.
Secondary vPC Peer - Peak Util%	Displays the peak utilization percentage of secondary vPC peer.

You can use this feature as following:

Monitoring vPC Performance

You can view the relationship among consistent virtual port channels (vPCs). You can view the statistics of all member interfaces and the aggregate of the statistics at the port channel level.

Note This tab only displays consistent vPCs.

To view the VPC performance information from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > LAN > vPC**.

The **vPC Performance** statistics is displayed. The aggregated statistics of all vPCs are displayed in a tabular manner.

Step 2 Click the **vPC ID**.

The vPC topology, **vPC Details**, **Peer-link Details**, and **Peer-link Status** is displayed.

The **vPC Consistency**, **Peer-link Consistency**, and **vPC Type2 Consistency** for the vPC is displayed.

- Click the **vPC Details** tab, you can view the parameter details of vPC **Basic Setting** and **Layer 2 Settings** for both Primary and Secondary vPC devices.

- Click the **Peer-link Details** tab, to view the parameter details of peer-link **vPC Global Setting** and **STP Global Settings** for both Primary and Secondary vPC devices.
- Click the **Peer-link Status** tab, the **vPC Consistency**, and **Peer-Link Consistency** status is displayed. The parameter details of **Role Status** and **vPC Peer keep-alive Status** for both Primary and Secondary vPC devices is also displayed.

Step 3 Click the peer-link icon in front of the **Device Name** in the **Primary vPC peer** or **Secondary vPC peer** column to view its member interface.

Step 4 Click the **Show Chart** icon of the corresponding interface to view its historical statistics.

The traffic distribution statistics appear at the bottom of the vPC window. By default, the Cisco DCNM Web Client displays the historical statistics for 24 hours.

There are variations to this procedure. In addition to these basic steps, you can also perform the following steps to view detailed information for flows:

- To change the time range for this graph, select it from the drop-down list in the upper right corner.
- To view the detailed information for a specific period, drag the slider control to choose the time interval for which you need the information.
- Use the chart icons to view the traffic chart in varied views.
- You can also use the icons to **Append**, **Predict**, and **Interpolate Data**.
- To print the vPC Utilization data, click the **Print** icon in the upper-right corner. The vPC Utilization page appears.
- To export the data into a spreadsheet, click the **Export** icon in the upper-right corner and click **Save File**.

Note If the performance tables do not contain any data, see the Thresholds section to turn on performance data collection.

Monitoring Report

The Report menu includes the following submenus:

Viewing Reports

You can view the saved reports that are based on the following selection options:

- **By Template**
- **By User**
- From the menu bar, select **Monitor > Report > View**.

To view the reports from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 In the left pane, expand **By Template** or **By User** folder.

Step 2 Select the report that you wish to view.

You can view the report in the main screen or you can select the report in the **Report** column to view the HTML version of the report in a new browser.

Step 3 To delete a specific report, select the check box and click the **Delete** icon.

Step 4 To delete all reports, check the check box in the header, and click the **Delete** icon.

Note If you have multiple fabrics, you can select the DCNM-SAN group in the Scope to view Host to Storage connectivity of multiple fabrics in a single report.

The report is divided into two sections:

- A summary report for all the devices that have faulty modules. The table displays information for every device that includes the device hostname, number of faulty modules, and the module number with its PID.
- The information for the device of the module. The table contains details about the tests failed.

Generating a Report

You can generate reports that are based on a selected template or you can schedule the report to run at a specified time.

Procedure

Step 1 From the menu bar, select **Monitor > Report > Generate**.

You see the **Generate Report** window.

Step 2 In the configuration window, use the drop-down to define the scope for report generation.

In the **Scope** drop-down, you can select a scope group with dual fabrics, the traffic data that is generated by hosts and storage end devices are displayed side by side which enables you to view and compare traffic data that is generated on dual fabrics. To view this report, in the **Other Predefined** folder, select **Traffic by VSAN** (Dual Fabrics). Click Options to select the **Device Type** and **Fabrics**. Click **Save** to save the configuration.

Step 3 In the pane on the left, expand the folders and select the report.

Step 4 (Optional) In the pane on the right, you can edit the **Report Name**.

Step 5 (Optional) Check the **Export to Csv/Excel** check box to export the report to a Microsoft Excel spreadsheet.

Step 6 In the **Repeat** radio buttons, if you select:

- **Never** - The report is generated only during the current session.
- **Once** - The report is generated on a specified date and time apart from the current session.
- **Daily** - The report is generated everyday based on the Start and End date at a specified time.

- **Weekly** - The report is generated once a week based on the Start and End date at a specified time.
- **Monthly** - The report is generated once every month based on the Start and End date at a specified time.

When you generate a report for Network Configuration Audit, the daily job generates a report for the selected devices for last one day. Similarly, the weekly job generates a report for the last 7 days, and the monthly job generates a report for the last 30 days.

Step 7 Click the **Create** button to generate a report that is based on the specifications.

You see the report results in a new browser window.

Alternatively, you can view the report by choosing **Monitor > Report > View** and selecting the report name from the report template that you used in the navigation pane.

Note The **Start Date** must be at least five minutes earlier than the **End Date**.

The report is divided into two sections:

- A summary report for all the devices that have faulty modules. The table displays information for every device that includes the device hostname, number of faulty modules and the module number with its PID.
- A detailed information for the device of the module. The table contains details about the tests failed.

Creating SAN User Defined Reports

You can create custom reports from all or any subset of information that is obtained by Cisco DCNM-SAN. You create a report template by selecting events, performance, and inventory statistics you want in your report and set the desired SAN, fabrics, or VSAN to limit the scope of the template. You can generate and schedule a report of your fabric that is based on this template immediately or later. Cisco DCNM Web Client saves each report, which is generated based on the report template, and the time you generate the report.

Since the Cisco MDS NX-OS Release 5.0, the report template design has changed to resolve the limitations of the earlier versions. With the new design model, you can perform add, delete, and modify functionalities on a single page. You can choose multiple fabrics and VSANs using the new navigation system, which allows you to add new items and categories in the future.

The new design model has three panels:

- **Template** panel - The **Template** panel allows you to add new templates, modify existing templates and delete existing templates.
- **Configuration** panel - The **Configuration** panel allows you to configure a new template when it is added, and modify an existing template. The options in the configuration panel are disabled until you either add a new template or select an existing template. The upper portion of the configuration panel contains many categories that you can choose and configure.
- **User Selection** panel - The **User Selection** panel displays your configuration options in real time. While the configuration panel can display information pertaining to one category at a time, the **User Selection** panel displays all of your selections or configurations.

To create custom reports from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > Report > User Defined**.

The **Create User-Defined** window is displayed.

Step 2 In the **Template** panel, under the **Name** column, select **CLICK TO ADD NEW CUSTOM** to edit the **Name** of the new report.

Step 3 In the **Configuration** panel, click **Scope** to define scope of the report. The default scope includes Data Center, SAN, LAN, and Fabric configurations.

Step 4 Click **Inventory** and use the checkbox to select the inventory information that is required in the report. You can also use the drop-down to filter by selecting the Top performance and the timeline that is required in the report.

Step 5 Click **Performance** and use the checkbox to select the performance information required in the report.

Step 6 Click **Health** and use the checkbox to select the health information required in the report.

Step 7 Click **Save** to save this report template.

A confirmation message is displayed confirming that the report is saved.

Deleting a Report Template

To delete a report template from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 In the **Template** panel, select the report template that you want to delete.

Step 2 Click the **Delete** icon to delete the report.

Step 3 In the confirmation pop-up, click **Yes** to delete the template.

Modifying a Custom Report Template

Procedure

Step 1 Choose **Monitor > Report > User Defined**.

You see the **Template**, **Configuration**, and **User Selection** panels.

Step 2 Select a report from the **Template** panel.

You see the current information about this report in the **User Selection** panel.

Step 3 Modify the information in the **Configuration** panel.

Step 4 Click **Save** to save the report template.

A confirmation message is displayed confirming that the report is saved.

Note You cannot change the scope for an existing report. Generate a new report for a new scope.

Viewing Scheduled Jobs Based on a Report Template

To view the scheduled jobs that are based on a report template from the Cisco DCNM Web UI, perform the following steps:

Procedure

Step 1 Choose **Monitor > Report > Jobs**.

The **Report Jobs** window is displayed with details of the reports that are scheduled for generation along with its status.

Step 2 Select the checkbox for a specific report and click the **Delete** Job icon to delete a report.

Alarms

The Alarms menu includes the following submenus:

Monitoring and Adding Alarm Policies

You can add alarm policies for the following:

- **Device Health**: Device health policies enable you to create alarms when Device ICMP Unreachable, Device SNMP Unreachable, or Device SSH Unreachable. Also, these policies enable you to monitor chassis temperature, CPU, and memory usage.
- **Interface Health**: Interface health policies enable you to monitor Up or Down, Packet Discard, Error, Bandwidth details of the interfaces. By default all interfaces are selected for monitoring.
- **Syslog Alarm**: Syslog Alarm Policy defines a pair of Syslog messages formats; one which raises the alarm, and one which clears the alarm.

Before you begin

If you have created a self-signed certificate or imported an SSL certificate to the keystore, you must copy the new fmserver.jks located at `/usr/local/cisco/dcm/wildfly-10.1.0.Final/standalone/configuration` to `/etc/elasticsearch`. If you do not copy the fmserver.jks file to the elasticsearch directory, you will not be able to get the Alarms and Policies. As the elasticsearch database will be stabilizing, you cannot configure any Alarm Policy on the Cisco DCNM **Web UI Monitor > Alarms > Alarm Policies**.

Procedure

Step 1 Choose **Monitor > Alarms > Alarm Policies**.

Step 2 Select the **Enable Alarms** check box to enable alarm policies.

Step 3 From the **Add** drop-down list, choose any of the following:

- Device Health Policy: Select the devices for which you want to create policies. Specify the policy name, description, CPU Utilization parameters, Memory Utilization parameters, Environment Temperature parameters, device availability, and device features.
- Interface Health Policy: Select the devices for which you want to create policies. Specify the policy name, description, link-state, Bandwidth (In/Out), Inbound errors, Outbound errors, Inbound Discards, and Outbound Discards.
- Syslog Alarm Policy: Select the devices for which you want to create policies and then specify the following parameters.
  - Devices: Define the scope of this policy. Select individual devices or all devices to apply this policy.
  - Policy Name: Specify the name for this policy. It must be unique.
  - Description: Specify a brief description for this policy.
  - Severity: Define the severity level for this syslog alarm policy. Choices are: Critical, Major, Minor, and Warning.
  - Identifier: Specify the identifier portions of the raise & clear messages.
  - Raise Regex: Define the format of a syslog raise message. The syntax is as follows: **Facility-Severity-Type: Message**
  - Clear Regex: Define the format of a syslog clear message. The syntax is as follows: **Facility-Severity-Type: Message**

Table 3: Example 1

Identifier	ID1-ID2
Raise Regex	ETHPORT-5-IF_ADMIN_UP: Interface Ethernet15/1 is admin up .
Clear Regex	ETHPORT-5-IF_DOWN_NONE: Interface Ethernet15/1 is down (Transceiver Absent)

In the above example, the regex expressions are part of the syslog messages that appear in the terminal monitor.

Table 4: Example 2

Identifier	ID1-ID2
Raise Regex	ETH_PORT_CHANNEL-5-PORT_DOWN: $(ID1): $(ID2) is down
Clear Regex	ETH_PORT_CHANNEL-5-PORT_UP: $(ID1): $(ID2) is up

Table 5: Example 3

Identifier	ID1-ID2
Raise Regex	ETHPORT-5-IF_SFP_WARNING: Interface $(ID1), High Rx Power Warning
Clear Regex	ETHPORT-5-IF_SFP_WARNING: Interface $(ID1), High Rx Power Warning cleared

Step 4 Click **OK** to add the policy.

Syslog Messages in Terminal Monitor and Console

The following examples show how the syslog messages appear in the terminal monitor and the console. The regex expression is matched with the part of the syslog messages after the % sign.

```
leaf-9516# terminal monitor
leaf-9516# conf t
leaf-9516(config)# int e15/1-32
leaf-9516(config-if-range)# no shut
2019 Aug 2 04:41:27 leaf-9516 %ETHPORT-5-IF_ADMIN_UP: Interface
Ethernet15/1 is admin up .
2019 Aug 2 04:41:27 leaf-9516 %ETHPORT-5-IF_DOWN_NONE: Interface
Ethernet15/1 is down (Transceiver Absent)
2019 Aug 2 04:41:27 leaf-9516 %ETHPORT-5-IF_ADMIN_UP: Interface
Ethernet15/2 is admin up .
2019 Aug 2 04:41:27 leaf-9516 %ETHPORT-5-IF_DOWN_NONE: Interface
Ethernet15/2 is down (Transceiver Absent)
2019 Aug 2 04:41:28 leaf-9516 %ETHPORT-5-IF_ADMIN_UP: Interface
Ethernet15/3 is admin up .
```

The syslog messages in the console have a similar format as they would appear in the terminal monitor, except for the additional port information enclosed in the %$ signs. However, the regex expression is matched with the part of the syslog messages after the last % sign.

```
SR-leaf1# 2019 Aug 26 23:55:45 SR-leaf1 %$ VDC-1 %$ %PLATFORM-1-
PFM_ALERT: FAN_BAD: fan6
2019 Aug 26 23:56:15 SR-leaf1 %$ VDC-1 %$ %PLATFORM-1-PFM_ALERT:
FAN_BAD: fan6
2019 Aug 26 23:56:18 SR-leaf1 %$ VDC-1 %$ %ASCII-CFG-2-CONF_CONTROL:
System ready
2019 Aug 26 23:56:25 SR-leaf1 %$ VDC-1 %$ %PLATFORM-1-PFM_ALERT:
FAN_BAD: fan6
2019 Aug 26 23:56:35 SR-leaf1 %$ VDC-1 %$ %PLATFORM-1-PFM_ALERT:
FAN_BAD: fan6
2019 Aug 26 23:56:39 SR-leaf1 %$ VDC-1 %$ %VMAN-2-ACTIVATION_STATE:
Successfully activated virtual service 'guestshell+'
2019 Aug 26 23:56:39 SR-leaf1 %$ VDC-1 %$ %VMAN-2-GUESTSHELL_ENABLED:
The guest shell has been enabled. The command 'guestshell' may be used
to access it, 'guestshell destroy' to remove it.
2019 Aug 26 23:56:45 SR-leaf1 %$ VDC-1 %$ %PLATFORM-2-FAN_REMOVED: Fan
module 5 (Serial number ) Fan5(sys_fan5) removed
2019 Aug 26 23:56:45 SR-leaf1 %$ VDC-1 %$ %PLATFORM-1-PFM_ALERT:
System will shutdown in 2 minutes 0 seconds due to fan policy
__pfm_fanabsent_any_singlefan.
2019 Aug 26 23:56:45 SR-leaf1 %$ VDC-1 %$ %PLATFORM-1-PFM_ALERT:
FAN_BAD: fan6
```

```
2019 Aug 26 23:56:54 SR-leaf1 %$ VDC-1 %$ %PLATFORM-1-PFM_ALERT:
System will shutdown in 1 minutes 40 seconds due to fan policy
__pfm_fanabsent_any_singlefan.
2019 Aug 26 23:56:54 SR-leaf1 %$ VDC-1 %$ %PLATFORM-1-PFM_ALERT:
FAN_BAD: fan6
2019 Aug 26 23:57:03 SR-leaf1 %$ VDC-1 %$ %PLATFORM-2-FANMOD_FAN_OK:
Fan module 5 (Fan5(sys_fan5) fan) ok
2019 Aug 26 23:57:03 SR-leaf1 %$ VDC-1 %$ %PLATFORM-1-PFM_ALERT:
FAN_BAD: fan6
```

Activating Policies

After you create new alarm policies, activate them.

Procedure

Step 1 Choose **Monitor > Alarms > Policies**.

Step 2 Select the policies that you want to activate and then click the **Activate** button.

Deactivating Policies

You can deactivate the active alarm policies.

Procedure

Step 1 Choose **Monitor > Alarms > Policies**.

Step 2 Select the policies that you want to deactivate and then click the **Deactivate** button.

Importing Policies

You can create alarm policies using the import functionality.

Procedure

Step 1 Choose **Monitor > Alarms > Policies** and then click the **Import** button.

Step 2 Browse and select the policy file saved on your computer.

You can only import policies in text format.

Exporting Policies

You can export the alarm policies into a text file.

Procedure

Step 1 From the menu bar, choose **Monitor > Alarms > Policies**.

Step 2 Click the **Export** button and then select a location on your computer to store the exported file.

Editing Policies

Procedure

Step 1 From the menu bar, choose **Monitor > Alarms > Policies**.

Step 2 Select the policy that you want to edit.

Step 3 Click the **Edit** button and then make necessary changes.

Step 4 Click the **OK** button.

Deleting Policies

Procedure

Step 1 From the menu bar, choose **Monitor > Alarms > Policies**.

Step 2 Select the policy that you want to delete.

Step 3 Click the **Delete** button. The policy is deleted.

Viewing Alarms and Events

You can view the alarms, cleared alarms, and events.

Procedure

Step 1 Choose **Monitor > Alarms > View**.

Step 2 Choose any of the following tabs.

- **Alarms**: This tab displays the alarms that are generated for various categories. This tab displays information such as ID (optional), Severity, Failure Source, Name, Category, Acknowledged, Creation Time, Last Updated (optional), Policy, and Message. You can specify the **Refresh Interval** in this tab. You can select one or more alarms and then acknowledge or unacknowledge their status using the **Change Status** drop-down list. In addition, you can select one or more alarms and then click the **Delete** button to delete them.
- **Cleared Alarms**: This tab displays the cleared alarms. This tab displays information such as ID (optional), Severity, Failure Source, Name, Category, Acknowledged, Creation Time, Cleared At (optional), Cleared

By, Policy, and Message. You can select one or more alarms and then click the **Delete** button to delete them.

- **Events**: This tab displays the events that are generated for the switches. This tab displays information such as **Ack**, **Acknowledged user**, **Group**, **Switch**, **Severity**, **Facility**, **Type**, **Count**, **Last Seen**, and **Description**. You can select one or more events and then acknowledge or unacknowledge their status using the **Change Status** drop-down list. In addition, you can select one or more alarms and then click the **Delete** button to delete them. If you want to delete all events, click the **Delete All** button.