

Monitor

This chapter contains the following topics:

- Monitoring Switch, on page 1
- Monitoring LAN, on page 5
- Monitoring Report, on page 9
- LAN Telemetry, on page 11
- Alarms, on page 40

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 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 LAN Switches

- 1. From the menu bar, choose Administration > Performance Setup > LAN Collections.
- 2. Select the **Temperature Sensor** check box.
- 3. Select the type of LAN switches for which you want to collect performance data.
- 4. Click Apply to save the configuration.

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 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 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				
Choose Mo	onitor > LAN > Link.			
	caffic and Errors window is displayed. This panel displays the ISL information for the end devices be. You can reduce or expand the scope of what is displayed by using the scope menu.			
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 N	NaN (Not a Number) in the data grid means that the data is not available.			
	variations to this procedure. In addition to these basic steps, you can perform the following steps ailed information for ISLs:			
• To cha	ange 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 t 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 th	e 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 			
	f the performance tables do not contain any data, see the Performance Setup Thresholds section to urn on performance.			
a vPC				
	Choose Me The ISL Tr in that scop You can us Month, and Note N There are v to view det • To cha • To vie for wh • Use th Predia list in • To exp then c • For th Note I t			

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.



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 1: vPC Performance, on page 7 displays the following vPC configuration details in the data grid view.

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.
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.

Table 1: vPC Performance

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 th	e menu bar, select Monitor > Report > Generate.				
	You see	the Generate Report window.				
Step 2	In the c	onfiguration window, use the drop-down to define the scope for report generation.				
	hosts ar that is g	cope drop-down, you can select a scope group with dual fabrics, the traffic data that is generated by ad storage end devices are displayed side by side which enables you to view and compare traffic data enerated on dual fabrics. To view this report, in the Other Predefined folder, select Traffic by VSAN abrics). Click Options to select the Device Type and Fabrics . Click Save to save the configuration.				
Step 3	In the p	ane on the left, expand the folders and select the report.				
Step 4	· •	al) In the pane on the right, you can edit the Report Name .				
Step 5	· •	al) Check the Export to Csv/Excel check box to export the report to a Microsoft Excel spreadsheet.				
Step 6		Repeat radio buttons, if you select:				
	• Ne	ver - The report is generated only during the current session.				
	• Or	ice - 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.					
	• W	eekly - 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.					
	devices	ou generate a report for Network Configuration Audit, the daily job generates a report for the selected for last one day. Similarly, the weekly job generates a report for the last 7 days, and the monthly job es a report for the last 30 days.				
Step 7	Click th	e 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 rep	ort is divided into two sections:				
	de	summary report for all the devices that have faulty modules. The table displays information for every vice that includes the device hostname, number of faulty modules and the module number with its D.				
	• A (PID.A detailed information for the device of the module. The table contains details about the tests failed.				

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.

LAN Telemetry

The LAN Telemetry menu includes the following submenus:

Monitoring LAN Telemetry

Once LAN telemetry has been successfully enabled, the LAN Telemetry Summary window is available. You can navigate to the LAN Telemetry Summary window by choosing **Monitor > LAN Telemetry > Explore**. Select the fabric (for example, Default_LAN) for which LAN telemetry has been enabled through the SCOPE at the top.

e ditulti Data Center Network Manager scope				SCOPE: Default_LAN V	Q ₄ ≠ Name admin ✿	
LAN Telemetry Su Data as of Fri Nov 30 2018 11-28:56 GMT+0530 (Default_LAN Default_SAN	
Alerts				Physical Overview	_	
0	0	0	7	5	2	22
Critical	🔺 Major	V Minor	 Info 	Switches	VPC Peers	Transceivers

There are six insights (Alerts, Physical Overview, Logical Overview, Control Plane, Interface, and Environment) shown through interactive visualizations depicting different aspects of switch metrics. Click the Alerts, Physical Overview, Logical Overview, Control Plane, and Interface tiles to find more information about the metrics. On the Environment tile, click the donut chart icons to display more information. The Environment tile displays metrics for CPU usage, Memory, Temperature, Power, and Fans.

ts				Physical Overview		
0	0	0	7	5	2	22
Critical	A Major	V Minor	 Info 	Switches	VPC Peers	Transceivers
rface			Total • 157 175 • 18	Logical Overview		
			175 • 18	4	5	4
13		RX TX 4 4		VRFs	VLANs	VTEPs
				Control Plane		
0	0	RX 0	TX RX TX 0 0 0		21	0
00-60% 60-8	% 80-100%	00-60% 60-	80% 80-100%	11	21	0
Inter-Switch Li	k Utilization	Host Interfac	ce Utilization	BGP Sessions	OSPF Sessions	ISIS Sessions
ironment						Тор 5 🗸 🗸
ste-n9k-bg1		ste-n9k-9				ste-n9k-10
	ste-n9k-10	ste-ntx-s	ste-n9k-10	ste-n9k-bg1 ste-n9k-18-deep	ste-n9k-bg1 ste-n9k	ste-n9k-11 -18-d

Alerts

The **Alerts** tile displays the number of alerts that have occurred. The alerts are classified as Critical, Major, Minor, and Info. Each kind of alert is associated with a specific color.

Alerts			
0	0	0	7
Critical	🔺 Major	V Minor	1 Info

1. Click the **Alerts** tile for more information about the alerts. You can select a specific switch for which you want to display the metrics. You can also select **All Switches** to display metrics for all the switches in the selected fabric.

-	Data Center Netv	vork Manager			SCOPE: Default_LAN V 🖉 🔍 v Name	adr
	/ /	30 2018 15:17:50 GMT+053	D (India Standard Time)			
	-n9k-10 ^ (Switches	3			2018-11-06 14:47:41	8-11-30 15:17:41 E
	-n9k-9 -n9k-11			•	Ê	Critical
	-n9k-18-deep -n9k-bg1					🛦 Major
ste-	-n9k-10					🔻 Minor
						1 Info
	03:00			Nav 30, 05:00	Noy 30, 09:00	
v 30, 0						
v 30, (Creation Time 💲	Severity 💲 🎖	Switch Name 💲	Affected Object 👙	Description 👙	
v 30, 0	Creation Time \$	Severity 속 모 info	Switch Name \$ ste-n9k-10	Affected Object 🗘	Description Current physical memory usage 1398 has been spiked or dropped to 15 times f and process anacon with U 6852. An abnormal average value (2006.80) of fiel occurred avoid 2018-11-29 19 24:36 PST. Preceding that time, the field had an (1396.00) within 0.0500	d 'physicalMemory'

2. You can select a specific time interval to view the alerts that have occurred in that time interval. Click the fields showing the date and time to select the required date and time interval. Click **Now** to display metrics for the current date and time. Click the **Refresh** icon next to the switch selection dropdown to display metrics for the last 30 minutes.

	., , , , , , , , , , , , , , , , , , ,	30 2018 15:17:50 GMT+053) (India Standard Time)											
ste-	-n9k-10 🗸 (3				2018	-11-06 14	:47:41				15:17:41		
						« «		Nov 20	018		> »			
				•		4 11 18 25 2	29 3 5	7 3 14 0 21 7 28 5	1 8 15 22 29 6	2 9 16 23 30 7	3 10 17 24 1 8	tical jor nor		
						Now			select		Ok U III	0		
w 30, I	03:00			Nev 30, 06:00		Now			ov 30, 0			0		
w 30, I	03:00 Creation Time 🗘	Severity \$	Switch Name 💲	Nev 30, 06:00	Description ¢	Now						o		
30, 1		Severity 속 당 info	Switch Name \$ ste-r0k-10		Description Current physical memory usage 1398 and process anaron with 1d 6852 An occurred around 2018-11-29 19:24-36 (1396.00) within 0.05:00	has been sp abnormal av	erage va	N opped t ue (205	ov 30, 0 to 1.5 tit 96.80) (19:00 mes fo	r switc	th ste-n9k-		

3. Hover over specific points on the graph for the time at which the alert has occurred.

cisc	b Data Center Netv	vork Manager			SCOP	E: Default_LAN	¥	0	O ₆ v Na	me	adr
	1	30 2018 15:22:59 GMT+053	0 (India Standard Time)								
ste-	n9k-10 🗸 (3				2018-11-	06 14	4:51:(9 🖻	2018-11-30 15:2	1:09 E
				For info on Fr Nov 30 2018 05:59:00 GMT+ 1	-0530 (india Standard Time)					Critical	
										Major	
										Info	
30, 0	13:00			Nov 30, 06:00					Nov 30, 05	:00	
	Creation Time \$	Severity $\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \$	Switch Name 💲	Affected Object 💲	Description \$						
	11/30, 9:00 AM	info	ste-n9k-10	environment	Current physical memory usage and process anacron with Id 685 occurred around 2018-11-29 19: (1396.00) within 0:05:00	52. An abnormal avera	ge val	ilue (2	2096.80) o	field 'physicalMe	mory'
	11/30, 5:59 AM	info	ste-n9k-10	environment	Current physical memory usage and process dcos_sshd: with Id 1 'physicalMemory' occurred arour average value of (15676.57) withi	16014. An abnormal av nd 2018-11-29 14:13:3	erage	e valu	ie (9724.00)) of field	

4. Click the icon at the top right of the graph to download the graph as a PNG image, PDF document, JPEG image or an XLS file.

-ilia cisc	 Data Center Netw Alerts 	vork Manager			SCOPE: Default_LAN V @ O ₄ + Hame admin
G	Data as of Fri Nov	30 2018 15:22:59 GMT+0530	(India Standard Time)		2018-11-06 14:51:09
0 Nov 30, 0	13.90			Nov 30, 06:00	For info on fin Nov 30 2018 09:00:00 CMT+0 Owwood PK0 mono Dewrinded XXS Image: Compare the second sec
	Creation Time	Severity 🛊 🗑	Switch Name	Affected Object 👙	Description 💲
	11/30, 9:00 AM	info	ste-n9k-10	environment	Current physical memory usage 1398 has been spiked or dropped to 1.5 times for switch ste-r/9k-10 and process anacoro with Id 6852. An abnormal average value (2098.60) of field "physical/Aemory occurred acound 2018-11-29 19-24-38 PST. Preceding that time, the field had an average value of (1398.00) within 0.05:00
	11/30, 5:59 AM	info	ste-n9k-10	environment	Current physical memory usage 9724 has been spiked or dropped to 1.5 times for switch ster-98k-10 and process doss, starb, within U 8004, An abnormal average value (9724.00) of field physical/kenny' occurred around 2018-11-29 1413:35 FST. Preceding that time, the field had an average value of (16576-57), within 0.05:00

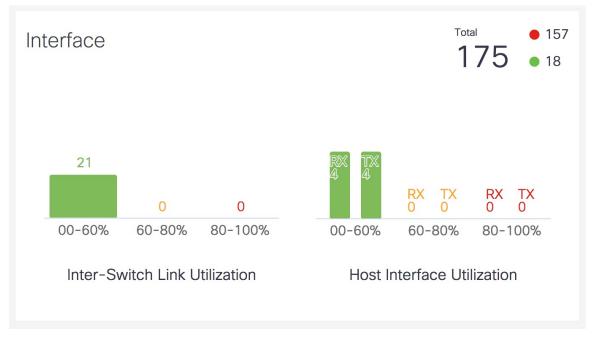
5. The bottom of the page has the following fields: Creation Time, Severity, Switch Name, Affected Object and Description. These fields provide more information about each alert. Click the filter icon next to Severity to filter the alerts based on severity level.

		Critical		
		Major		Current physical memory usage 1396 has been spiked or dropped to 1.5 times for switch ste-n9k- and process anacron with Id 6852. An abnormal average value (2096.80) of field 'physicalMemory'
11/30, 9:00 AM	info	Minor a-n9k-10	environment	occurred around 2018-11-29 19:24:36 PST. Preceding that time, the field had an average value of
		🗹 Info		(1396.00) within 0:05:00
		OK Reset		Current physical memory usage 9724 has been spiked or dropped to 1.5 times for switch ste-n9k-
11/30, 5:59 AM	info	ste-n9k-10	environment	and process does, shd: with 14 16014. An abnormal average value (9724.00) of field physicalMemory occurred around 2018-11-29 14:13:35 PST. Preceding that time, the field had an average value of (15676.57) within 0:05:00

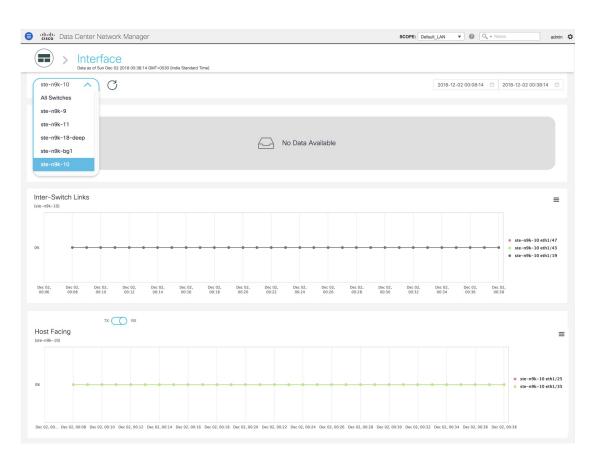
6. Click the icon next to Alerts at the top of the window to go back to the LAN Telemetry Summary window.

Interface

The **Interface** tile displays the Inter-Switch Link Utilization and Host Interface Utilization metrics. It shows the number of Inter-Switch Links in the fabric along with the associated percentage, and the number of host interfaces that are utilized to send and receive data from hosts along with the associated percentage. On the top right of the **Interface** tile, you can see the number of interfaces that are down next to the red dot and the number of interfaces that are up next to the green dot along with the total number of interfaces in the fabric.

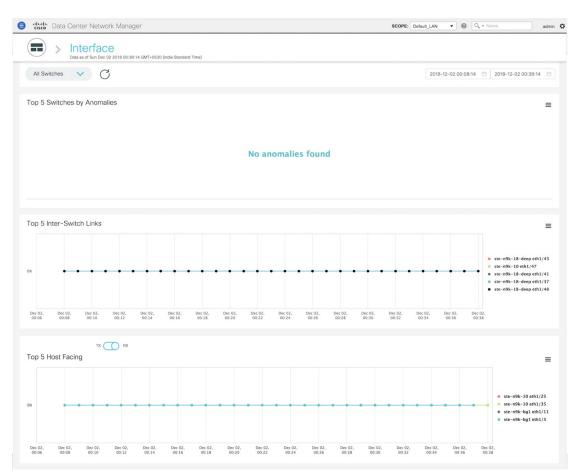


1. Click the **Interface** tile to display more information about the ISLs and Host Interfaces. On the **Interface** window, you can select a specific switch for which you want to display the metrics.

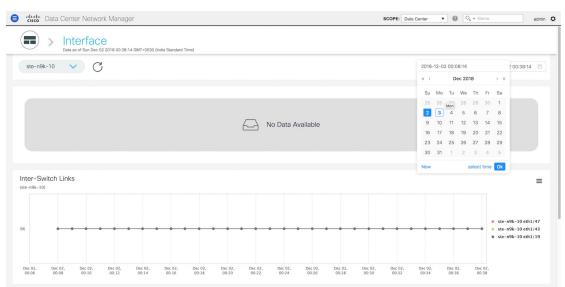


Select **All Switches** to display metrics for all the switches in the selected fabric. This window displays the top five switches based on the number of anomalies, top five ISLs, and the top five host facing links. In the graph displaying the top five switches based on the number of anomalies, each switch has a specific color that is associated with it in the graph. In the graph for the Top 5 Inter-Switch Links and the Top 5 Host Facing links, each switch interface has a specific color that is associated with it in the switches and interfaces on the right of the graph.

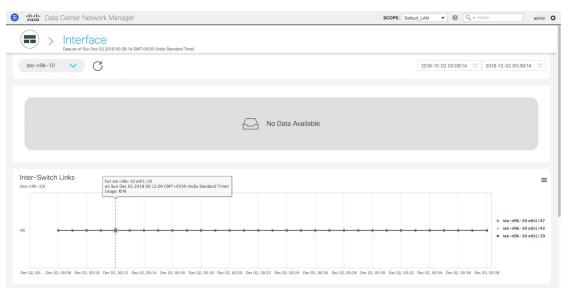
L



2. You can select a specific time interval to view the metrics during that time interval. Click the fields showing the date and time to select the required date and time interval. Click **Now** to display metrics for the current date and time. Click the **Refresh** icon next to the switch selection dropdown to display metrics for the last 30 minutes.



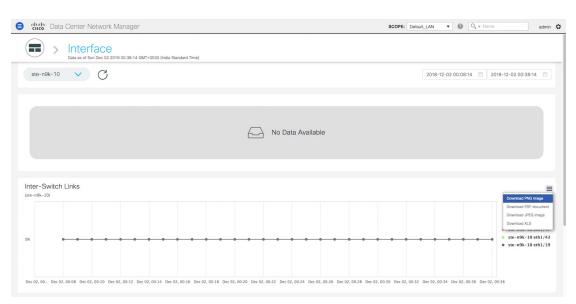
3. Hover over specific points on the respective graphs for more information on the switch anomalies and ISLs at a specific time.



In the graph for Host Facing links, you can toggle between displaying the top five host facing links based on sending traffic (TX) and the top five host facing links based on receiving traffic (RX).



4. Click the icon at the top right of the graph to download the graph as a PNG image, PDF document, JPEG image or an XLS file.



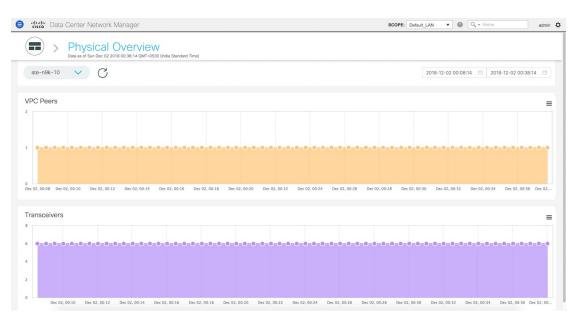
5. Click the icon next to **Interface** at the top of the window to go back to the LAN Telemetry Summary window.

Physical Overview

The **Physical Overview** tile displays the number of switches, Virtual Port Channel (VPC) peers, and Transceivers in the specified fabric.

Physical Overview		
5	3	22
Switches	VPC Peers	Transceivers

1. Click the **Physical Overview** tile to display more information about the VPC peers and Transceivers. On the **Physical Overview** window, you can select a specific switch from the drop-down list for which you want to display the metrics. You can select **All Switches** to display metrics for all the switches in the selected fabric.



2. You can select a specific time interval to view the metrics during that time interval. Click the fields showing the date and time to select the required date and time interval. Click **Now** to display metrics for the current date and time. Click the **Refresh** icon next to the switch selection dropdown to display metrics for the last 30 minutes.



3. Hover over specific points on the respective graphs to display the number of VPC peers and Transceivers that are associated with a switch at a specific time.

dude Data Center Network Manager	SCOPE: Default_LAN V @ O. v Name admin
Physical Overview Data as of Sun Dec 02 2018 00.38 14 OWT-0530 (India Standard Time)	
ste-n9k-10 V C	2018-12-02 00:08:14
VPC Peers For VPC Peers Area Chart or Sun Dec 02 2018 00.15.14 GMT+0530 (India Standard Time) Count: 1	=
	2,00.24 Dec 02,00.36 Dec 02,00.32 Dec 02,00.34 Dec 02,00.36 Dec 02,
*	=
6 0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.0.	-0

4. Click the icon at the top right of the graph to download the graph as a PNG image, PDF document, JPEG image or an XLS file.

digitie Data Center Network Manager		SCOPE: Default_LAN
Physical Overview Data as of Sun Dec 02 2018 00.38:14 GMT-0530 (India Standard Time)		
ste-n9k-10 V		2018-12-02 00:08:14
VPC Peers		Download PNG image
		Download PDF document Download JPE0 image Download XLS
1 0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-	0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-	-0
0 Dec 02, 00:08 Dec 02, 00:10 Dec 02, 00:12 Dec 02, 00:14 Dec 02, 00:16 Dec	00:18 Dec 02, 00:20 Dec 02, 00:22 Dec 02, 00:24 Dec 02, 00:26 Dec 0	2, 00:28 Dec 02, 00:30 Dec 02, 00:32 Dec 02, 00:34 Dec 02, 00:36 Dec 02,

5. Click the icon next to **Physical Overview** at the top of the window to go back to the LAN Telemetry Summary window.

Logical Overview

The **Logical Overview** tile displays the number of Virtual Routing and Forwarding instances (VRFs), VLANs, and VXLAN Tunnel Endpoints (VTEPs) in the specified fabric.

Logical Overview		
4	5	4
VRFs	VLANs	VTEPs

1. Click the Logical Overview tile to display more information about the VRFs, VLANs, and VTEPs. On the Logical Overview window, you can select a specific switch from the drop-down list for which you

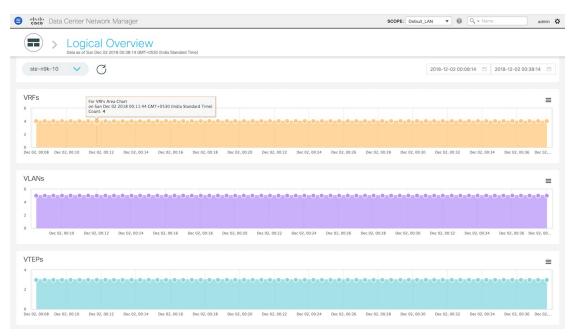
want to display the metrics. You can select **All Switches** to display metrics for all the switches in the selected fabric.

Logical Overview Date as of San Dec 02 2018 00-38:14 CMT-0530 (India Standard Time)
ste-n9k-10 C All Switches 2018-12-02 00:08:14
ste-n9k-9 ste-n9k-11
ste-n9k-18-deep ste-n9k-bg1 ste-n9k-10
VLANS
0 Dec 02, 00:10 Dec 02, 00:12 Dec 02, 00:14 Dec 02, 00:16 Dec 02, 00:18 Dec 02, 00:20 Dec 02, 00:22 Dec 02, 00:24 Dec 02, 00:26 Dec 02, 00:28 Dec 02, 00:30 Dec 02, 00:32 Dec 02, 00:34 Dec 02, 00:36 Dec 02, 00:30
2 De c02, 00:08 Dec 02, 00:10 Dec 02, 00:12 Dec 02, 00:14 Dec 02, 00:16 Dec 02, 00:18 Dec 02, 00:20 Dec 02, 00:22 Dec 02, 00:24

2. You can select a specific time interval to view the metrics during that time interval. Click the fields showing the date and time to select the required date and time interval. Click **Now** to display metrics for the current date and time. Click the **Refresh** icon next to the switch selection dropdown to display metrics for the last 30 minutes.

ste-n9k-10 V							2018-12-	02 00:08:	4		2 00:38:14
Ũ							« ‹	Dec	2018	> >>	
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							2 3	4	5 6	7 8	
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							16 17	18 1	9 20	21 22	
							23 24	25 2	6 27	28 29	
ec 02, 00:08 Dec 02, 00:10 Dec 02, 00:12	Dec 02, 00:14 Dec 02, 00:16	Dec 02, 00:18 Dec 02, 00:20	0 Dec 02, 00:22 D	ec 02, 00:24 Dec 02, 00:	26 Dec 02, 00:28	Dec 02, 00:30	30 31	1 3	2 3	4 5	00:36 Dec 02
							Now		select t	ime Ok	
'LANs											
Dec 02, 00:10 Dec 02, 00:12		Dec 02, 00:18 Dec 02, 00:20		02, 00:24 Dec 02, 00:26		Dec 02, 00:30	Dec 02, 00:		02, 00:34		00:36 Dec 02, 00
TEPs	Dec 02, 00:14 Dec 02, 00:16	Dec 02, 00:18 Dec 02, 00:20	Dec 02, 00.22 Dec 1	02, 00.24 Dec 02, 00.26	Dec 02, 00.28	Dec 02, 00:30	Dec 02, 00.	52 Dec	02, 00.54	Dec 02, 0	0.36 Dec 02, 00

3. Hover over specific points on the respective graphs to display the number of VRFs, VLANs, and VTEPs associated with a switch at a specific time.



4. Click the icon at the top right of the graph to download the graph as a PNG image, PDF document, JPEG image or an XLS file.

cisco Data	a Center Netwo	ork Manager						SCOPI	E: Default_LAN		ame admin
•	Logical Data as of Sun Dec 0			standard Time)							
ste-n9k-10	✓ C	5							2	2018-12-02 00:08:14	2018-12-02 00:38:14
RFs											
											Download PNG image Download PDF document
•-•-•-	0-0-0-0-0-0	0-0-0-0-	0-0-0-0-	0-0-0-0-	0-0-0-0-0	 0-0-0-0-0	-0-0-0-0-	0-0-0-0-0		0-0-0-0-0-0-0-0-0	Download JPEG image

5. Click the icon next to Logical Overview at the top of the window to go back to the LAN Telemetry Summary window.

Control Plane

The **Control Plane** tile displays the number of Border Gateway Protocol (BGP) sessions, Open Shortest Path First (OSPF) sessions, and Intermediate System-to-Intermediate System (IS-IS) sessions in the specified fabric.

Control Plane		
11	21	0
BGP Sessions	OSPF Sessions	ISIS Sessions

 Click the Control Plane tile to display more information about the BGP sessions, OSPF sessions, and IS-IS sessions. On the Control Plane window, you can select a specific switch from the drop-down list for which you want to display the metrics. You can select All Switches to display metrics for all the switches in the selected fabric.

e titelte Data Center Network Manager	SCOPE: Default_LAN 🔻 🔞 🔍 v Name admin 🌣
Control Plane Data as of Sun Dec 02 2018 00:38:14 (MMT-0530 (India Standard Time)	
ste-n9k-10 All Switches	2018-12-02 00:08:14 🗇 2018-12-02 00:38:14 🗎
ste-n9k-9 ste-n9k-11 ste-n9k-18-deep	=
ste-insk-10-deep ste-n9k-bg1 ste-n9k-10 Dec 02, 00.12 Dec 02, 00.14 Dec 02, 00.16 Dec 02, 00.18 Dec 02, 00.22 Dec 02, 00.24 Dec 02, 00.25 Dec	
OSPF Sessions	=
2	0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-
0	00.28 Dec 02, 00.30 Dec 02, 00.32 Dec 02, 00.34 Dec 02, 00.36 Dec 02,
No Data Available	

2. You can select a specific time interval to view the metrics during that time interval. Click the fields showing the date and time to select the required date and time interval. Click **Now** to display metrics for the current date and time. Click the **Refresh** icon next to the switch selection dropdown to display metrics for the last 30 minutes.

Control Plane Data as of Sun Dec 02 2018 00:38:14 GMT-0530 (India Standard Time)								
ste-n9k-10 V C	2018	-12-02	00:08:	14			2 00:38:	:14
	« ‹		Dec	2018		> »		
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	2				6 7			
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			25 2					
20 00 08 Dec 02, 00:10 Dec 02, 00:12 Dec 02, 00:14 Dec 02, 00:16 Dec 02, 00:18 Dec 02, 00:20 Dec 02, 00:22 Dec 02, 00:24 Dec 02, 00:26 Dec 02, 00:28 Dec 02, 00:3	0		1				00:36	Dec
9-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0-0	0-0-1	0-0	-0-0	•	0-0-	-0-0	••	•
02,00 08 Dec 02,00 10 Dec 02,00 12 Dec 02,00 14 Dec 02,00 16 Dec 02,00 18 Dec 02,00 20 Dec 02,00 22 Dec 02,00 24 Dec 02,00 26 Dec 02,00 28 Dec 02,00 3	0 Dec	: 02, 00:	32 C	lec 02,	00:34	Dec 0	2, 00:36	Dec
No Data Available								

3. Hover over specific points on the respective graphs to display the number of BGP sessions, OSPF sessions, and IS-IS sessions associated with a switch at a specific time.

	ntrol Pla Sun Dec 02 2018 0		30 (India Standard)	Time)						DPE: Default_LA	N v Ø	Q, v Name		ad
ste-n9k-10 🗸	C										2018-12-02 00	:08:14 🗎 2	018-12-02 00:	38:14
GP Sessions	Count: 1	018 00:11:44 GN	T+0530 (India Sta		-0-0-0-0		-0-0-0-0	-0-0-0-0	-0-0-0-0	-0-0-0-0		-0-0-0-0		0-0-
: 02, 00:08 Dec 02, 00:10	Dec 02, 00:12	Dec 02, 00:14	Dec 02, 00:16	Dec 02, 00:18	Dec 02, 00:20	Dec 02, 00:22	Dec 02, 00:24	Dec 02, 00:26	Dec 02, 00:28	Dec 02, 00:30	Dec 02, 00:32	Dec 02, 00:34	Dec 02, 00:36	Dec
SPF Sessions														
•-•-•-	0-0-0-0-	0-0-0-0-	0-0-0-0-	0-0-0-0	-0-0-0-0		-0-0-0-0		-0-0-0-0	-0-0-0-0-	0-0-0-0	-0-0-0-0	-0-0-0-(0-0-
02, 00:08 Dec 02, 00:10	Dec 02, 00:12	Dec 02, 00:14	Dec 02, 00:16	Dec 02, 00:18	Dec 02, 00:20	Dec 02, 00:22	Dec 02, 00:24	Dec 02, 00:26	Dec 02, 00:28	Dec 02, 00:30	Dec 02, 00:32	Dec 02, 00:34	Dec 02, 00:36	Dec
					6		ata Available	9						

4. Click the icon at the top right of the graph to download the graph as a PNG image, PDF document, JPEG image or an XLS file.

🛢 🥼 cscb Data Center Network Manager	SCOPE: Default_LAN V 🚱 🔍 Name admin 🗶
Control Plane Data as of Sun Dac 02 2018 00.38:14 GMT-0530 (India Standard Time)	
ste-n9k-10 V C	2018-12-02 00:08:14
BGP Sessions	Download PMG Image
1	Download PDF document Download JPEG Image Download XLS
0 Dec 02, 00:08 Dec 02, 00:10 Dec 02, 00:12 Dec 02, 00:14 Dec 02, 00:16 Dec 02, 00:18 Dec 02, 00:20 Dec 02, 00:22 Dec 02, 00:24 Dec 02, 00:26 Dec 02	2, 00:28 Dec 02, 00:30 Dec 02, 00:32 Dec 02, 00:34 Dec 02, 00:36 Dec 02,

5. Click the icon next to Control Plane at the top of the window to go back to the LAN Telemetry Summary window.

Environment

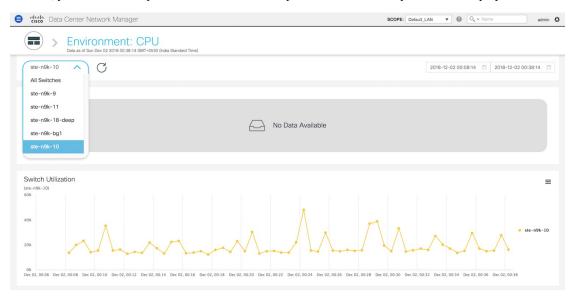
The **Environment** tile displays metrics for CPU usage, Memory, Temperature, Power, and Fans. On the top right of the **Environment** tile, you can select the Top N switches from the dropdown to display metrics for the top N switches. For example, if **Top 5** is selected, donut charts are plotted for the top five switches based on specific metrics.

Environment - CPU

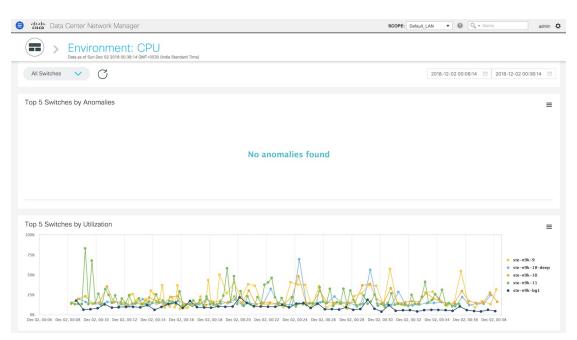
The first donut chart shows the proportion of top five or top ten switches based on CPU usage values. When hovered, it shows the switch name and the corresponding metric value.



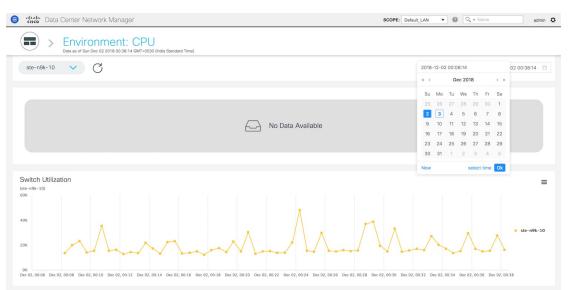
1. Click the CPU usage donut to display more information about CPU usage. On the Environment: CPU window, you can select a specific switch from the drop-down list for which you want to display the metrics.



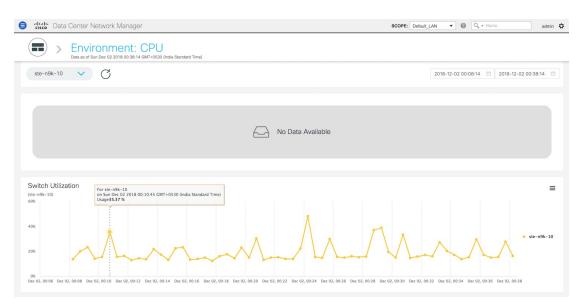
You can select **All Switches** to display metrics for all the switches in the selected fabric. This window displays the top five switches based on the number of anomalies and top five switches based on CPU utilization. Each switch has a specific color that is associated with it in the graph. You can see the colors that are associated with the switches on the right of the graph.



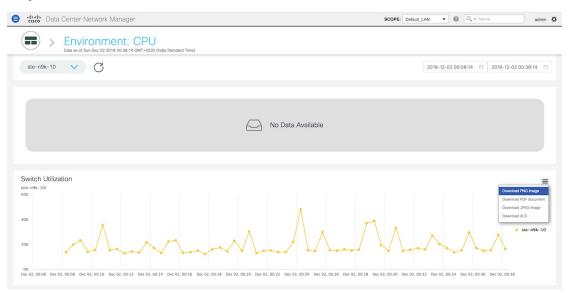
2. You can select a specific time interval to view the metrics during that time interval. Click the fields showing the date and time to select the required date and time interval. Click **Now** to display metrics for the current date and time. Click the **Refresh** icon next to the switch selection dropdown to display metrics for the last 30 minutes.



3. Hover over specific points on the graph for more information on CPU utilization at a specific time.



4. Click the icon at the top right of the graph to download the graph as a PNG image, PDF document, JPEG image or an XLS file.



5. Click the icon next to Environment: CPU at the top of the window to go back to the LAN Telemetry Summary window.

Environment - Memory

The second donut chart shows the proportion of top five or top ten switches based on memory usage values. When hovered, it shows the switch name and the corresponding metric value.



Click the memory usage donut to display more information about memory usage. The memory dashboard depicts the actual memory consumption (RAM) on every switch in Gigabytes (GB). On the Environment: Memory window, you can select a specific switch from the drop-down list for which you want to display the metrics.

bata as of Sun Dec 02 2	nent: Memo 1018 00:38:14 GMT+0530 (India	Standard Time)						
ste-n9k-10 C All Switches ste-n9k-9						2018-12-02 0	0:08:14 📋 2018-12	-02 00:38:14 6
ste-n9k-11 ste-n9k-18-deep ste-n9k-bg1 ste-n9k-10			lo Data Available	9				
vitch Utilization								:
n9k-10)			 ••••		•••••	••••	•••••	
								• ste-n9k-1

You can select **All Switches** to display metrics for all the switches in the selected fabric. This window displays the top five switches based on the number of anomalies and top five switches based on memory utilization. Each switch has a specific color that is associated with it in the graph. You can see the colors that are associated with the switches on the right of the graph.

cisco	Data Ce	enter Nei	work Mar	ayei									5	SCOPE:	Default_LA	N Y	0	0, * N	lame	a
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2. You can select a specific time interval to view the metrics during that time interval. Click the fields showing the date and time to select the required date and time interval. Click **Now** to display metrics for the current date and time. Click the **Refresh** icon next to the switch selection dropdown to display metrics for the last 30 minutes.

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3. Hover over specific points on the respective graphs for more information on memory utilization at a specific time.

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cisco Da	Data Center Networ	k Manager									SCOPE: D	efault_LAN	• 0	O, v Narr	18	admin
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4. Click the icon at the top right of the graph to download the graph as a PNG image, PDF document, JPEG image or an XLS file.

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•	Data as of Sun Dec 02	nent: Me	MORY 530 (India Standard T	ime)							
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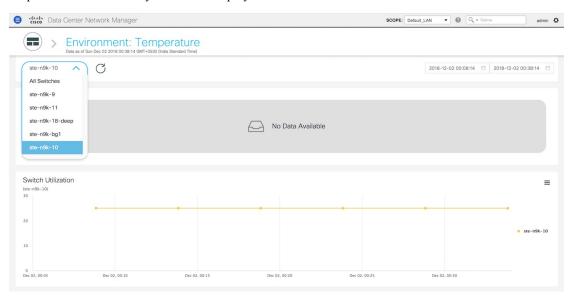
5. Click the icon next to Environment: Memory at the top of the window to go back to the LAN Telemetry Summary window.

Environment - Temperature

The third donut chart shows the proportion of top five or top ten switches based on temperature levels. When hovered, it shows the switch name and the corresponding metric value.



1. Click the temperature levels donut to display more information about temperature levels for the switches in the fabric. On the **Environment: Temperature** window, you can select a specific switch from the drop-down list for which you want to display the metrics.



You can select **All Switches** to display metrics for all the switches in the selected fabric. This window displays the top five switches based on the number of anomalies and top five switches based on temperature. Each switch has a specific color that is associated with it in the graph. You can see the colors that are associated with the switches on the right of the graph.

cisco Data (Center Network	Managor											
>	Environm Data as of Sun Dec 02 2	ent: Ter	mperatu 530 (India Standard Tir	re _{ne)}									
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op 5 Switche	es by Utilization	•	8	0	No an	omalies fou	• •	0	0	*		 ste-n: ste-n: 	9k-11 9k-18-0 9k-10
	es by Utilization	* •		8 0	No an	omalies fou	• •	0 6	s_9			 ste-n ste-n 	9k-11 9k-18-0 9k-10

2. You can select a specific time interval to view the metrics during that time interval. Click the fields showing the date and time to select the required date and time interval. Click **Now** to display metrics for the current date and time. Click the **Refresh** icon next to the switch selection dropdown to display metrics for the last 30 minutes.

Data as	of Sun Dec 02 2018 00:38:14 GM	emperature 1+0530 (India Standard Time)					
ste-n9k-10 🗸	C				2018-12-	-02 00:08:14	2 00:38:14
	0				۹۲ ۲	Dec 2018 >	»
					Su M	10 Tu We Th Fr S	a
					25 2	6 27 28 29 30	1
					2 3	3 4 5 6 7	3
			No Data Ava	ilable	9 10	0 11 12 13 14 1	5
					16 12	7 18 19 20 21 2	2
					23 2	4 25 26 27 28 2	9
					30 3	31 1 2 3 4	5
					Now	select time	0k
witch Utilization (te-n9k-10)					•		=
							• ste-n9k-10

3. Hover over specific points on the graph for more information on the temperature of the selected switch at a specific time.

Data as of Sun Dec 02 2018 0	nt: Temperature 0:38:14 GMT+0530 (India Standard Time)				
ste-n9k-10 V C				2018-12-02 00:08:14	2018-12-02 00:38:14
		No Data Availa	able		
Switch Utilization ^{ste-n9k-10)}	For ste-n9k-10 on Sun Dec 02 2018 00: Usage25 °C	13:51 GMT+0530 (India Standard Time)			
10					 ste-n9k-
10					

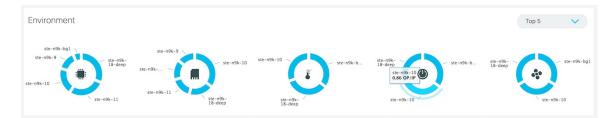
4. Click the icon at the top right of the graph to download the graph as a PNG image, PDF document, JPEG image or an XLS file.

	' Data Cent	er Network Ma	nager				SCOPE: Default_LAN	V O V Nam	admin 🌣
) > En	vironme of Sun Dec 02 2018 (nt: Tempera 20:38:14 GMT+0530 (India Standa	ture ard Time)					
ste-	n9k-10 🗸	C					2	2018-12-02 00:08:14 📋	2018-12-02 00:38:14
					No Da	ta Available			
Switcl (ste-n9k- 30	h Utilization		,						Download FMS Image Download FDF document Download JPCG image Download XLS • ste-n9k-10
10 0 Dec 02, 0	0:05	Dec 02, 0	0:10	Dec 02, 00:15	Dec 02, 00:2	0 Dec 02	, 00:25	Dec 02, 00:30	

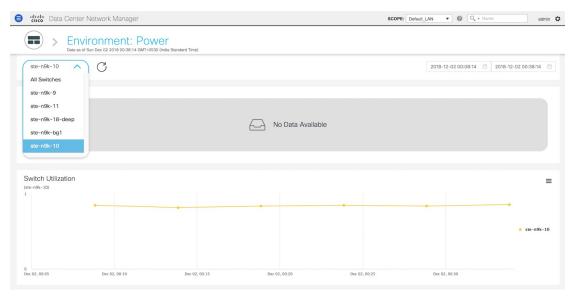
5. Click the icon next to Environment: Temperature at the top of the window to go back to the LAN Telemetry Summary window.

Environment - Power

The fourth donut chart shows the proportion of top five or top ten switches based on the power usage or efficiency of the power supplies. When hovered, it shows the switch name and the corresponding metric value.



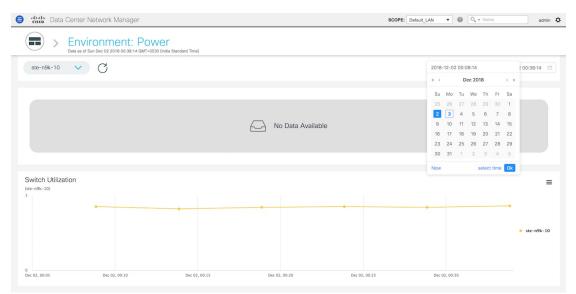
1. Click the Power donut to display more information about the power efficiency metrics for the switches in the fabric. On the **Environment: Power** window, you can select a specific switch from the drop-down list for which you want to display the metrics.



You can select **All Switches** to display metrics for the top five switches based on anomalies and the top five switches based on power usage or efficiency. By definition, efficiency is Output-Power/Input-Power, which therefore results in a maximum efficiency of 1.0. Each switch has a specific color that is associated with it in the graph. You can see the colors that are associated with the switches on the right of the graph.

Data Center N	letwork Manager			SCOPE: Default_LAN	Q v Name admin \$
	Conment: Power un Dec 02 2018 00:38:14 GMT+0530 (India Standard Ti	ne)			
All Switches 🗸	C			2018-12-02 00:0	8:14 🖹 2018-12-02 00:38:14 🗎
Top 5 Switches by An	omalies	No anomalie	s found		Ξ
Top 5 Switches by Ut	lization			*	■ ste-n9k-bg1 = ste-n9k-bg1 = ste-n9k-10 = ste-n9k-11 = ste-n9k-11

2. You can select a specific time interval to view the metrics during that time interval. Click the fields showing the date and time to select the required date and time interval. Click **Now** to display metrics for the current date and time. Click the **Refresh** icon next to the switch selection dropdown to display metrics for the last 30 minutes.



3. Hover over specific points on the graph for more information on the power efficiency or usage at a specific time.

Environment: F		
Data as of Sun Dec 02 2018 00:38:14 0	MT+0530 (India Standard Time)	
ste-n9k-10 V		2018-12-02 00:08:14 📋 2018-12-02 00:38:14
	_	
	No Data Available	
Switch Utilization	For ste-n9k-10	
ste-n9k-10)	on Sun Dec 02 2018 00:13:51 GMT+0530 (India Standard Time) Usage 0.82 OP/IP	
•		
•		0. est
*		 ste-n9
•		● ste-n9

4. Click the icon at the top right of the graph to download the graph as a PNG image, PDF document, JPEG image or an XLS file.

Enviror					AN V 🖉 🔍 Vame	admin 🗘
	Diment: Power 02 2018 00:38:14 GMT+0530 (India Standard Tin	ne)				
ste-n9k-10 V					2018-12-02 00:08:14 🗇 2018-12-0	02 00:38:14 🗎
		► N	io Data Available			
Switch Utilization (ste-n9k-10) 1	Dec 02, 0010 Dec	2, 00.15 Dec 0	2, 020 Drc 0	2, 0025	Downh Downh	ood PNG Image ood PDF document ood JRFG Image ood XLS • ste-n9k-10

5. Click the icon next to Environment: Power at the top of the window to go back to the LAN Telemetry Summary window.

Environment - Fan

The fifth donut chart shows the proportion of top five or top ten switches based on fan utilization. When hovered, it shows the switch name and the corresponding metric value.



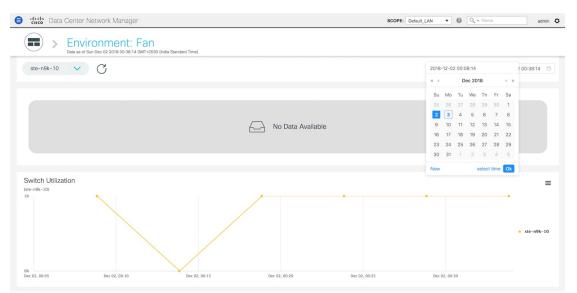
1. Click the Fan donut to display more information about the fan utilization. On the Environment: Fan window, you can select a specific switch from the drop-down list for which you want to display the metrics.

Data Center Network Manager	SCOPE: Default_LAN 🔻 🕲 🔍 × Name admin 🏠
Environment: Fan Data as of Sun Dec 02 2018 00:38:14 GMT-0530 (India Standard Time)	
ste-n9k-10 C All Switches ste-n9k-9	2018-12-02 00:08:14
ste-n9k-11 ste-n9k-18-deep ste-n9k-bg1 ste-n9k-10	No Data Available
Switch Utilization (ster-09k-10) 15	■ • ste-#9k-10
0K Dec 02, 00:05 Dec 02, 00:10 Dec 02, 00:15	Dec 02, 00 20 Dec 02, 00 25 Dec 02, 00 30

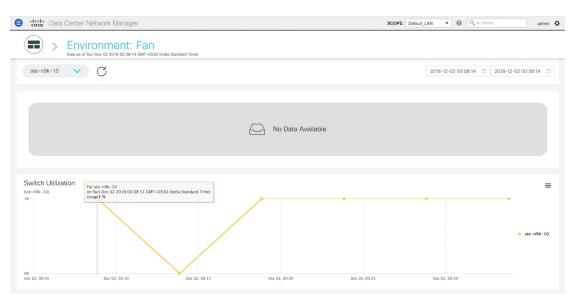
You can select **All Switches** to display metrics for the top five switches based on the number of anomalies and the top five switches based on fan utilization. Each switch has a specific color that is associated with it in the graph. You can see the colors that are associated with the switches on the right of the graph.

• "Indu Data Center Network Manager	SCOPE: Default_LAN 🔻 🚳 🔍 Name admin 🕇
Environment: Fan Data as of Sun Dec 02 2018 00.38: 14 GMT-0530 (India Standard Time)	
All Switches V C	2018-12-02 00:08:14
Top 5 Switches by Anomalies	=
No anomalies found	
Top 5 Switches by Utilization	=
28.	
21	• ste-n9k-9 • ste-n9k-bg1 • ste-n9k-11
	● ste-n9k-18-deep
0% Dec 02, 00:08 Dec 02, 00:10 Dec 02, 00:12 Dec 02, 00:14 Dec 02, 00:16 Dec 02, 00:18 Dec 02, 00:20 Dec 02, 00:22 Dec 02, 00:24 Dec 02, 00:24	0:26 Dec 02, 00:38 Dec 02, 00:30 Dec 02, 00:32 Dec 02, 00:34 Dec 02, 00:36

2. You can select a specific time interval to view the metrics during that time interval. Click the fields showing the date and time to select the required date and time interval. Click **Now** to display metrics for the current date and time. Click the **Refresh** icon next to the switch selection dropdown to display metrics for the last 30 minutes.



3. Hover over specific points on the respective graphs for more info on fan utilization at a specific time.



4. Click the icon at the top right of the graph to download the graph as a PNG image, PDF document, JPEG image or an XLS file.

e viluli Data Center Network Manager	SCOPE: Default_LAN 🔻 🔞 🔍 × Name admin 🏠
Environment: Fan Data as of Sun Dec 02 2018 0038:14 (MIT-0530 (India Standard Time)	
ste-n9k-10 V C	2018-12-02 00:08:14
No Data Available	
Switch Utilization (ste-r8A-10) 15 Dec 02, 0005 Dec 02	25 Dec 62, 00 30

5. Click the icon next to Environment: Fan at the top of the window to go back to the LAN Telemetry Summary window.

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.
 - Clear Regex: Define the format of a syslog clear message.

Table 2: Example1

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 3: Example2

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.

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.