

Fabric Manager Web Client

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With Fabric Manager Web Client, you can monitor Cisco MDS switch events, performance, and inventory from a remote location using a web browser. You can also monitor the events, performance, and inventory information of Cisco Nexus 5000 Series switches.

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About Fabric Manager Web Client

Using Fabric Manager Web Client, you can monitor Cisco MDS 9000 Series or Cisco Nexus 5000 Series switch events, performance, and inventory, and perform minor administrative tasks.

Fabric Manager Web Client provides the following features:

• Summary and drill down reports—The Performance Manager summary report provides a high-level view of your network performance. These reports list the average and peak throughput and provides hot-links to additional performance graphs and tables with additional statistics. Both tabular and graphical reports are available for all interconnections monitored by Performance Manager. Performance Manager also analyzes daily, weekly, monthly and yearly trends. You can also view the results for specific time intervals using the interactive zooming functionality. These reports are only available if you create a collection using Performance Manager and start the collector. To view historical performance reports, you need to install Adobe Flash Player 10 or later.

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See the "Historical Performance Monitoring" section on page 11-4.

• Zero maintenance database for statistics storage—No maintenance is required to maintain Performance Manager's round-robin database, because its size does not grow over time. At prescribed intervals the oldest samples are averaged (rolled-up) and saved. A full two days of raw samples are saved for maximum resolution. Gradually the resolution is reduced as groups of the oldest samples are rolled up together.

You see Fabric Manager Web Client window as shown in Figure 7-1.

Figure 7-1 Fabric Manager Web Client

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CISCO					
	Health	Performanc	ell	nventory Reports	SME Admin
♦ S	ummary	Fabric Even	ts	Syslog + Analysis	\$
			1		
SAN				SAN Problems	
	bric_demo			Switches:	11 warning
	bric_demo			ISLs:	4 warning
Fa 🕼	bric_sw17	72-22-46-220			
				Hosts:	0 warning
				Storage:	9 warning
				SAN Events for las	t 24 Hours
				Emergency:	0
					-
				Alert:	0
				Critical:	0
				Error:	0
				Warning:	2
				_	
				Notice:	0
				Info:	3
				Debug:	0

Navigating Fabric Manager Web Client

With most screens, Fabric Manager Web Client has standardized certain navigation conventions.

Navigation Tree

You can use the filter navigation tree in the left pane to access the areas you want as follows:

- Select **SAN** to view information for all fabrics and VSANs in the SAN. When you do this, a Fabric column is added as the first column of the tables.
- Click a fabric folder to view information for that specific fabric.
- Some screens have expandable fabric folders. You can expand the fabric folders (by clicking the + or icons in front of the folders) to see a list of VSANs in that fabric. Select a VSAN to view information for that VSAN.

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The features accessible from the tabs are limited to the areas you select in the filter tree.

Table Filtering and Navigation

You can filter the display of some tables to view subsets of the information. At the top right of these tables are one or more drop-down lists. Select an item from these lists, and then click **Filter** to filter the table information on that item.

You can change the number of rows displayed per page by selecting a number from the **Rows per page** drop-down list at the lower left corner of the table. Once you select a number, the table is updated with the new number of rows; you do not have to click a button.

For tables with multiple pages of information, you can:

- Jump to the first or last page of the table by clicking the first page or last page icons (arrows with a bar in front of it)
- Jump to the next page or previous page by clicking the next page or previous page icons (arrows)
- Jump to a specific page by entering the page number in the **Go to page** field and clicking the **Go** button.

You can search certain columns in the tables for information if a table column has a black icon next to the column head. Click the icon to display a Search dialog box.

Printing

There is a **Print** icon in the lower right corner of some tables. Click this icon to view the table in a printer-friendly format. You can then print the page from the browser.

Exporting to a File

There is an **Export** icon in the lower right corner of some tables. Click this icon to export the data to a .CSV file that can be read by programs such as Microsoft Excel.

Sorting Columns

On some screens, you can click a column head to sort the information for that column.

Installing Fabric Manager Web Client

If you are installing the Fabric Manager Web Client software for the first time, or if you want to update or reinstall the software, you access the supervisor module of the switch using a web browser. Install Fabric Manager Web Client on the same workstation where you installed Fabric Manager Server.

You must install Fabric Manager Web Client to view Performance Manager reports through a web browser.

For switches running Cisco MDS 9000 FabricWare, you need to install the Fabric Manager Web Client software from the CD-ROM included with your switch, or download Fabric Manager from Cisco.com.

To install Fabric Manager Web Client from the CD-ROM, navigate to the Fabric Manager installation notes and follow the directions.

To download the software from Cisco.com (requires a valid user name and password), open a web browser and go to the following website: http://www.cisco.com/

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The Cisco web page opens.

From the Support menu, choose Download Software.

To download and install the software on your workstation, follow these steps:

Step 1 Optionally, enter the IP address or host name of the supervisor module running Cisco MDS NX-OS in the Location or Address field of your browser. You see the installation page displayed by the HTTP server of the supervisor module.

When you connect to the server for the first time, it checks to see if you have the correct Sun Java Virtual Machine version installed on your workstation. If you do not have the correct version installed, a link is provided to the appropriate web page on the Sun Microsystems website so you can install it.

- a. Click the Sun Java Virtual Machine software link (if required) to install the software.
- **b.** Using the instructions provided by the Sun Microsystems website, reconnect to the supervisor module by reentering the IP address or host name in the Location or Address field of your browser.



- **Note** We recommend Java version 1.5(x) or later. To use IPv6 addresses, you must have Java version 1.5. To change the Java Runtime Environment (JRE) version, start **Java Web Start** and set the Java preferences.
- **Step 2** Click the **Fabric Manager Web Client** installation link. You see a prompt asking for permission to install the application on your workstation.
- **Step 3** Click **Yes** to run the installer, which detects the installed version of the software, and prompts for upgrades or downgrades and other options if applicable.

Note If TCP port 80 is in use, Fabric Manager Web Client checks port 8080 next. If that port is also in use, Fabric Manager Web Client uses the next available port. You can set the TCP port that you want Fabric Manager Web Client to use during the installation process.

Unless you specify a different directory on a Windows PC, the software is installed in the default location of C:\Program Files\Cisco Systems\MDS 9000. A Cisco MDS 9000 program group is created under Start > Programs. This program group contains shortcuts to Fabric Manager and Device manager.

On a UNIX (Solaris or Linux) machine, the installation path is /usr/local/cisco_mds9000. If this directory is not writable by the user, which is the case for non-root users, the default is set to \$HOME/cisco_mds9000. Shell scripts are created in the bin directory.

Note

On a Windows PC, you install Fabric Manager Web Client as a service. This service can then be administered using the Services Panel from the Windows Control Panel. By default, Fabric Manager Web Client automatically starts when the workstation is rebooted. You can change this behavior by modifying the properties in the Services Panel.



You need to configure the Fabric Manager Server on the DNS server for remote logins unless the Fabric Manager Server is binding to a specific interface.

Using Fabric Manager Web Client with SSL

Fabric Manager Web Client uses TCP port 80 by default. If you want to install SSL certificates and use Fabric Manager Web Client over HTTPS (using TCP port 443 or another custom port), you need a certificate for each external IP address that accepts secure connections. You can purchase these certificates from a well-known Certificate Authority (CA).

To enable SSL, users must set up the keystore to use either a self-signed certificate or a certificate from a trusted third-party company such as Verisign.

To create a local certificate, follow these steps:

Step 1 Set up a keystore to use self-signed certificate (local certificate). From the command line, enter the following command:

%JAVA_HOME%/bin/keytool -genkey -alias tomcat -keyalg RSA -keystore "C:\Program Files\Cisco Systems\MDS 9000\keystore"

Step 2 Enter your name, organization, state, and country. Enter changeit when prompted for a keystore password. If you prefer to use your own password, do not forget to change the keystorepass attribute in the server.xml file. When prompted for a key password, press Enter or use the same password as the keystore password.

Note

You can now follow the steps in the next section for modifying Fabric Manager Web Client to use SSL.

In order to obtain a certificate from the Certificate Authority of your choice, you must create a Certificate Signing Request (CSR). The CSR is used by the certificate authority to create a certificate that identifies your website as secure.

To create a CSR, follow these steps:

Step 1 Create a local certificate (as described in the previous section).

Note

You must enter the domain of your website in the field first and last name in order to create a working certificate.

Step 2 The CSR is then created with this command:

keytool -certreq -keyalg RSA -alias tomcat -file certreq.csr -keystore "C:\Program Files\Cisco Systems\MDS 9000\keystore"

Now you have a file called certreq.csr. The file is encoded in PEM format. You can submit it to the certificate authority. You can find instructions for submitting the file on the Certificate Authority website. You will receive a certificate.

- **Step 3** Once you have your certificate, you can import it into your local keystore. You must first import a Chain Certificate or Root Certificate into your keystore. You can then import your certificate.
- **Step 4** Download a Chain Certificate from the Certificate Authority where you obtained the certificate:
 - For Verisign.com commercial certificates, go to:

http://www.verisign.com/support/install/intermediate.html

- For Verisign.com trial certificates, go to: http://www.verisign.com/support/verisign-intermediate-ca/Trial_Secure_Server_Root/index.html
- For Trustcenter.de, go to:

http://www.trustcenter.de/certservices/cacerts/en/en.htm#server

• For Thawte.com, go to:

http://www.thawte.com/certs/trustmap.html

Import the Chain Certificate into your keystore by entering the following command:

keytool -import -alias root -keystore "C:\Program Files\Cisco Systems\MDS 9000\keystore" -trustcacerts -file filename_of_the_chain_certificate

• Import the new certificate in X509 format:

keytool -import -alias tomcat -keystore "C:\Program Files\Cisco Systems\MDS 9000\keystore" -trustcacerts -file your_certificate_filename

To modify Fabric Manager Web Client to use SSL, follow these steps:

- Step 1 Stop Fabric Manager Web Client if you have already launched it. If you installed this on Windows, you can stop the service using Windows Services under Administrative Tools.
- **Step 2** Use a text editor to open **\jboss\server\default\deploy\jboss-web.deployer\server.xml** from the directory where Fabric Manager Web Client is installed. You see the following lines in the beginning after some copyright information:

Step 3 Comment the first <Connector> element and uncomment the second one. Note that the port changes from 8443 to 443 and keystore and keypass are added. Your file should look like the following example:

```
port="443" minProcessors="5" maxProcessors="75"
enableLookups="true"
acceptCount="10" debug="0" scheme="https" secure="true">
<Factory className="org.apache.catalina.net.SSLServerSocketFactory"
clientAuth="false" protocol="TLS"
keystoreFile="C:\Program Files\Cisco Systems\MDS 9000\keystore"
keystorePass="changeit"/>
</Connector>
```

Step 4 Save this file.

Step 5 Restart Fabric Manager Web Client.



If you restart Fabric Manager Server with SSL enabled, you must restart Fabric Manager Web Client. If you want to stop and restart Fabric Manager Server with SSL disabled, then you must restart Fabric Manager Web Client.

Launching Fabric Manager Web Client

Before you can use Fabric Manager Web Client to monitor a switch, the service must be started on the server you are connecting through. The browser does not have to be on the same workstation where Fabric Manager Web Client is installed.

To launch Fabric Manager Web Client, follow these steps:

Step 1 If you are on the same workstation where you installed Fabric Manager Web Client, then open your browser and in the Location field enter http://localhost:PORT. Enter your port number if you specified a different port during installation. You can omit the port number if you used port 80 by default.

If you are on a different workstation from where you installed Fabric Manager Web Client, then open your browser and in the Location field enter http://<*yourServerAddress*>:*PORT*, where <*yourServerAddress*> is the address where you installed Fabric Manager Web Client, and *PORT* is 80 by default. Enter your port number if you specified a different port during installation.

<u>)</u> Tip

Choose **Start > Control Panel > Administrative Tools > Services** to verify that Fabric Manager Web Client has started. To start Fabric Manager Web Client, use a browser to go to the location of the service.

You can also view this information using the Admin > Status menu of the Fabric Manager Web Client.

On a UNIX workstation, use the following command: \$ /usr/local/cisco_mds9000/bin/FMWebClient.sh status

You see the Fabric Manager Web Client Login dialog box as shown in Figure 7-2. The text field at the bottom shows the Message of the Day from the server you logged into.

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Step 2 Enter your user name and password.

Step 3 Click Login.

Note If you have a new installation of Fabric Manager, the default user ID and password is admin/password. We recommend you change your password the first time you use Fabric Manager Server. If you do not have a new installation, you can use any existing passwords.

<u>Note</u>

If you are using Firefox to access Fabric Manager Web Client, you may receive a warning message indicating a problem with the security certificate of the website. To resolve this issue, you may need to add the security exception.

To add the security exception, follow these steps:

- Step 1 On the warning page, click **Or you can add an exception**.
- Step 2 Click Add Exception.

The Add Security Exception dialog will appear.

Step 3 Click Get Certificate.

Read the text describing the problems with this site.

Step 4 Click Confirm Security Exception.

After launching Fabric Manager Web Client, you see the screen as shown in Figure 7-1, which you can also see by choosing **Health** > **Summary**. Fabric Manager Web Client polls the Fabric Manager Server database to display the managed devices in the left pane.

Health

The Health tab shows events and issues for the selected items, persistent across user sessions.

The Health tab contains the following subtabs:

- **Summary**—Shows a summary of events and problems for all SANs, or a selected SAN, fabric, or switch. You can click any of the blue links for more information about that item.
- **Fabric**—Shows a detailed list of events and hardware, or accounting. You can filter these events by severity, date, and type of event.
- **Syslog**—Shows a detailed list of system messages. You can filter these events by severity, date, and type of event.
- Analysis—Enables you to schedule or run analysis reports and compile results to analyze the Fabric Manager Server database statistics.

Viewing Summary Information

To view a summary of events and problems using Fabric Manager Web Client, follow these steps:

Step 1 Click the Health tab, and then click Summary tab.

You see the Summary tab window. In the left navigation pane you see a list of the fabrics managed by Fabric Manager Server. In the right pane is a summary table of problems and events for the last 24 hours as shown in Figure 7-3.

Figure 7-3	Summary Tab			
cisco	Fabric Manager	Web Client		
	Ith Performance I	nventory Reports	SME Admin	
Summ	ary 🔹 Fabric Events	♦ Syslog ♦ Analysis	s 🔶	
SAN	dama 1	SAN Problems		
Fabric_(Switches:	11 warning	
:	sw172-22-46-220	ISLs:	4 warning	
		Hosts:	0 warning	
		Storage:	9 warning	
		SAN Events for la	st 24 Hours	
		Emergency:	0	
		Alert:	0	
		Critical:	0	
		Error:	0	
	Γ	Warning:	2	
	4	Notice:	0	
		Info:	3	
		Debug:	0	90 0 0 0 0 0
				200

Step 2 Do one of the following:

- Choose SAN to display summary information for all fabrics.
- Choose one of the fabrics to display summary information for that fabric.
- **Step 3** Click the warnings next to Switches, ISLs, Hosts, or Storage (other than 0) to see an inventory of switches, ISLs, or end devices for that fabric.
- **Step 4** Choose the number of events next to the event severity levels (Emergency, Alert, Critical, Error, Warning, Notice, Info, or Debug) to see a table of events and descriptions for that fabric.

Viewing Fabric Information

To view a detailed list of events and hardware or accounting using Fabric Manager Web Client, follow these steps:

Step 1 Click the Health tab, and then click Fabric Events tab. You see the Fabric tab window as shown in Figure 7-4.

Summary + Fabric Even	ts + Syslog + Analysis +	Admin		_		User	r ID: a
SAN Fabric_demo1	SAN						
Fabric_demo2				Minimum Severity:	All	✓ Interval: All	v 1
Fabric_sw172-22-46-220		_					
	Fabric	Туре	Time	Source	Severity		De
	1. Fabric_sw172-22-46-220	CFS	2008/08/10-22:20:43	Trap sw172-22-46-221	Warning	ciscoCFSMergeFailNotif, o cfsMergeFailScopeType.0 rgeFailReasonDescription databases	D=none
	2. Fabric_sw172-22-46-220	CFS	2008/08/10-22:20:42	Trap sw172-22-46-221	Info	feature callhome, lastAct ess	tion: e
	3. Fabric_sw172-22-46-220	CFS	2008/08/10-22:17:20	Trap sw172-22-46-221	Info	feature callhome, lastAct cess	tion: d
	4. Fabric_sw172-22-46-220	License	2008/08/10-21:44:13	Trap sw172-22-47-133	Warning	clmLicenseFileMissingNot T_ACTIVATION_PKG=16	
	5. Fabric_sw172-22-46-220	Other	2008/08/10-16:40:33	Trap sw172-22-46-221	Info	fcNameServerRejectRegN 1=10:00:00:00:5e:00:0 leToPerformCmdReq, fcl Explanation	2:17,
	6. Fabric_sw172-22-46-220	CFS	2008/08/10-11:47:27	Trap sw172-22-46-223	Warning	ciscoCFSMergeFailNotif, o as, cfsMergeFailScopeTy fsMergeFailReasonDescr	pe.0=r

Figure 7-4 Fabric Events Tab



Viewing Syslog Information

To view a detailed list of system messages using Fabric Manager Web Client, follow these steps:

Step 1Click the Health tab, and then click Syslog tab.You see the Syslog tab as shown in Figure 7-5.

SAN SAN	 Syslog Analysis Fabric_sw 152-40-50-4 		
Fabric_sw152-40-50-999	Fauric_sw152-40-50-3		nowing 1-10 of 15 records
🝺 mchinnMcData	Switch	Files	Registered
📝 sw152-40-50-001 📝 sw152-40-50-002	1. mchinnBrokeAid		No
	2. mchinnMcData		No
	3, sw152-40-50-001	accounting0.log,events0.log	Yes
📝 sw152-40-50-005 📝 sw152-40-50-006	4. sw152-40-50-002	accounting0.log,events0.log	Yes
	5, sw152-40-50-003	events0.log	Yes
	6. sw152-40-50-004		Yes
	7, sw152-40-50-005	accounting0.log,events0.log	Yes
📝 sw152-40-50-010 📝 sw152-40-50-011	 € 8. sw152-40-50-006 	accounting0.log,events0.log	Yes
	9, sw152-40-50-007	events0.log	Yes
👩 sw152-40-50-013	10, sw152-40-50-008	events0.log	Yes

Figure 7-5 Syslog Tab

- **Step 2** Select one of the fabrics to display a table of syslog information for that fabric.
- **Step 3** Expand a fabric and select one of the switches to display syslog information for that switch.
- Step 4 If you have selected a fabric and one or more switches in that fabric have system messages, you see Events, Hardware, Accounting, and Link Incidents in the Files column. Click one of these message types to see system messages for the switches in that fabric filtered by the message type you clicked.

Note

If you select a switch, choose an interval and a message type from the drop-down lists, and then click **Filter** to see system messages filtered by the message type you chose.

<u>Note</u>

To view MDS configuration changes, click accountingX.log under **Files**. To view the configuration changes of a switch using Device Manager, click **Logs** > **FMServer** > **Accounting** > **Current**.

Viewing Analysis Reports

As of Cisco SAN-OS Release 3.2(1) and up to Cisco NX-OS 4.1(3), you can run or schedule analysis reports to summarize the Fabric Manager Server database statistics. You can run or schedule the following analysis reports:

• **Connectivity** (Host to Storage or Storage to Host)—The connectivity report summarizes zoning for multiple hosts or storage devices. If you choose host to storage, the report shows all storage devices zoned as accessible by each host. If you choose storage to host, the report shows all hosts that can access a specific storage device.

- **Zoning Discrepancies**—The zoning discrepancies report identifies zoning issues that might impact connectivity or security.
- **Multi Path**—The multi path report determines the number of active and inactive paths between hosts and storage enclosures.
- Switch Health—The switch health report provides status information on all critical Cisco MDS 9000 system, module, port, and Fibre Channel services.
- **Fabric Configuration**—The fabric configuration analysis compares multiple switches to a specific switch or a saved configuration.

To run analysis reports using Fabric Manager Web Client, follow these steps:

Step 1 Click the Health tab, and then click Analysis tab.

You see the Analysis tab shown in Figure 7-6.

ahaha cisco	Fabric Manage	Char r Web Client Inventory Reports SME Admin	nge
	Summary	Syslog * Analysis *	
🛨 🔐 F	abric_demo1 abric_demo2 abric_sw172-22-46-220	SAN Report Type: Zone Discrepancy Run Report	188508

Figure 7-6 Analysis Tab

- **Step 2** Select a report from the Report Type drop-down list.
- **Step 3** Click **Run Report** to run the report.

To schedule a report to run at a specified time, see "Generating Custom Reports by Template" section on page 7-45.

Performance

The Performance tab shows an overview of the average throughput and link utilization of SAN components. You see pie charts for the throughput and utilization. You can click a pie chart to view a table of the data. In these tables, clicking a blue link displays a graph of that data, if applicable. The Filter drop-down list at the top right of the screen allows you to filter the data based on various periods of time.

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The Performance tab contains the following subtabs:

- Summary—Shows the total utilization and throughput in summary form.
- End Devices—Shows a detailed list of end devices (host or storage), port traffic, and errors.
- ISLs—Shows a detailed list of ISL traffic and errors.
- NPV Links— Shows a detailed list of traffic between NPV devices and ports.
- Flows—Shows a detailed list of host-to-storage traffic.
- Ethernet—Shows a detailed list of Gigabit Ethernet ports and Cisco Nexus 5000 Series Ethernet ports and Ethernet port channels.
- Others—Shows a detailed list of other statistics.
- Traffic Analyzer—Shows a summary of SPAN ports configured in the SAN and any traffic analyzers configured.
- **Prediction**—Displays a graph that predicts future performance to help determine when storage network connections will become overutilized.
- Switch Bandwidth—Shows total bandwidth for a switch.

Viewing Performance Summary Information

To view total utilization and throughput in summary form using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Performance** tab, and then click **Summary** tab. You see the Summary tab shown in Figure 7-7.



Step 2 Expand a fabric and select one of the VSANs to display network throughput and link utilization information for that VSAN.



Click a pie chart (Hosts, Storage, or ISLs) to go to the appropriate performance table.

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License compliance information is provided at the top of the pane indicating that unlicensed switches may not be supported in the future. You can click the link to view the list of unlicensed switches.

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To view performance information, you must activate performance collector. To configure Performance Manager, follow the instructions described in the "Creating Performance Collections" section on page 7-62.

Performance Detail Summary Report

To view a detailed summary report of the performance details using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Performance** tab, and then click **Summary** tab.

Step 2 Click the Performance Utilization Summary Details link at the bottom of the page.

Figure 7-7 Summary Tab

You will see the summary report details as shown in Figure 7-8.

Theorement The	rformance Sum	mary D	etails - Win	dows Int	ernet E	kplorer										
🕥 - 🙋 http:,	//bepemc26/s310a	a.do?fite	er.fabricId=-?	18isGroup=	false			_					 • +9 ×	Live Search		2
😚 🄏 FM Web(Client Performan	ice Summ	nary Details		1									💁 • 📾 • 🖷	· E Bage ·	Tools +
formance Utili vice Bandwidth																
		ver por	0 ~ 25%		1	25 ~ 759	6	14	75 ~ 100%		Traffic					
Fabric Name	Device Count	Avg1	Max Rx1	Max Tx1	Avg2			Avg3	Max Rx3 Max	Tx3 Average (rx+t	x) Max Rx	Max Tx				
Fabric_FS02	971	962	898	90	2 3	63	60	6	10	9 18.078MB	25.325M	B 22.255MB				
Fabric_FS01	969	960	893	89			70			8 17.698MB		B 24.737MB				
TOTALS	1940	1922	1791	179	3 7	7 130	130	11	19	17 17.888MB	24.532M	B 23.495MB				
Bandwidth Uti	ilization (per		0 ~ 25%			25 ~ 75%			75 ~ 100%		Traffic	_				
Bandwidth Uti Fabric Name	ISL Count		0~25%			25 ~ 75%			75 ~ 100%		Traffic	02090				
Fabric Name	ISL Count	vg1 M.	lax Rx1 M	Contraction in the	rectioned in	Max Rx2 M	accession of the	Avg3 1	lax Rx3 Max T	x3 Average (rx+tx)	Max Rx	Max Tx				
Fabric Name	ISL Count A1	vg1 M. 18	lax Rx1 M	12	0	Max Rx2 M	6	Avg3 1 0	fax Rx3 Max T 0	0 450.526MB	Max Rx 462.867MB	462.867MB				
Fabric Name 1. Fabric_FS02 2. Fabric_FS01 3. TOTALS	ISL Count A 18 18 36	vg1 M. 18 18 36	lax R×1 M 12 9 21	12 9 21	rectioned in	Max Rx2 M	accession of the	Avg3 1	lax Rx3 Max T	and here and here the second	Max Rx 462.867MB 494.788MB	and the second second second				
Bandwidth Uti Fabric Name 1. Fabric_FS02 2. Fabric_FS01 3. TOTALS e: ISL Bandwidth	ISL Count A 18 18 36	vg1 M. 18 18 36	lax R×1 M 12 9 21	12 9 21	0	Max Rx2 M 6 9	6 9	Avg3 1 0 0	fax Rx3 Max T 0 0	0 450.526MB 0 508.573MB	Max Rx 462.867MB 494.788MB	462.867MB 494.788MB				

Figure 7-8 Performance Utilization Detail Summary Report

Viewing Performance Information for End Devices

To view host and storage port traffic and errors using Fabric Manager Web Client, follow these steps:

Step 1 Click the Performance tab, and then click End Devices tab.You see the End Devices tab window as shown in Figure 7-9.

Fabric Manag	e Inve	entory Reports S		in Ethernet + Others + Traffic /		ange Password Prediction *		- U:
AN Sabric_sw-244-42	SA	N		_			_	
—		Fabric	VSAN Id	Name 🛱	I/F Speed	Avg. Rx/sec	Avg. Tx/sec	(Rx+Tx)/sec
	1	. Fabric_sw-9509-207	1	10:00:00:00:00:04:00:00	n/a	104.297MB	104.297MB	208.594MB
	2.	. Fabric_sw-9509-207	1	10:00:00:00:00:02:00:00	n/a	104.297MB	104.297MB	208.594MB
	3	. Fabric_sw-9509-207	1	10:00:00:00:03:00:00	n/a	104.297MB	104.297MB	208.594MB
	4.	. Fabric_sw-9509-207	1	10:00:00:00:00:01:00:00	n/a	104.297MB	104.297MB	208.594MB
	5	. Fabric_sw-9509-207	1	Qlogic 21:01:00:e0:8b:39:5d:57	n/a	OB	OB	OB
	6.	. Fabric_sw-9509-207	1	Qlogic 21:00:00:e0:8b:19:5d:57	n/a	OB	OB	OB
	< 7.	. Fabric_sw-9509-207	1	Qlogic 21:00:00:e0:8b:19:ff:58	n/a	OB	OB	OB
		. Fabric_sw-9509-207		Qlogic 21:01:00:e0:8b:39:ff:58	n/a	OB	OB	OB
	9.	. Fabric_sw-9509-207	1	Qlogic 21:01:00:e0:8b:39:70:57	n/a	OB	OB	OB
			1	Qlogic 21:00:00:e0:8b:19:2b:59	n/a	OB	OB	OB

- **Step 2** Expand a fabric and select one of the VSANs to display performance information for the end devices in that VSAN.
- **Step 3** Click the name of a device in the Name column to see a graph of the traffic on that device for the past 24 hours.

Note 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 end devices:

- 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 specific period, drag the slider control to choose the time interval for which you need the information.
- To view information in grid format, click the grid icon in the bottom right corner.
- To export the data into a spreadsheet, click the excel icon in the upper right corner and then click **Save**.
- To view real time information, select **Real Time** from the drop-down list in the upper right corner. Real time data is updated in every 10 seconds.

Viewing Performance Information for ISLs

To view ISL traffic and errors using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Performance** tab, and then click **ISLs** tab.

You see the ISLs tab window as shown in Figure 7-10.

Figure 7-10 ISLs Tai	b						
cisco Fabric Manage Health Performance		Web Client ventory Reports SME	Admin	Change Passw	ord I Down	load I Logout	
 Summary End Devices SAN Fabric_demo1 Fabric_demo2 Fabric_sw172-22-46-220 		SLS * NPV Links * Flow	rs ♦ Ethe	ernet 🔹 Others 🔹 Traffic Analyzer 👻 Prediction	♦ Switch E	andwidth 🔶	
	Ľ	Fabric	VSAN Id	Name 🗮	I/F Speed	Avg. Rx/sec	
	Ľ	1. Fabric_sw172-22-46-220	1,2,4	sw172-22-46-220 fc3/2<->sw172-22-46-174 fc3/2	1.000GB	210.148MB	1
	Ш	2. Fabric_sw172-22-46-220	1,2	sw172-22-47-135 fc3/1<->sw172-22-46-174 fc5/10	400.000MB	1.224KB	
	Ш	3. Fabric_sw172-22-46-220	1,2,4	sw172-22-46-224 fc1/17<->sw172-22-46-221 fc2/17	200.000MB	634B	
	Ш	4. Fabric_sw172-22-46-220	1,2,4	sw172-22-46-220 fc2/10<->sw172-22-46-221 fc2/13	200.000MB	352B	
	Ш	5. Fabric_sw172-22-46-220	1,2,4	sw172-22-46-220 fc2/16<->sw172-22-46-221 fc2/25	200.000MB	313B	
		6. Fabric_sw172-22-46-220	1,444	sw172-22-46-222 fc1/4<->sw172-22-46-225 fc1/4	200.000MB	167B	
	< .	7. Fabric_sw172-22-46-220	1,2,4	sw172-22-46-225 fc1/5<->sw172-22-46-224 fc1/5	200.000MB	214B	
	11	8. Fabric_sw172-22-46-220	1,444	sw172-22-46-223 fc1/16<->sw172-22-46-222 fc1/16	200.000MB	211B	
	Ш	9. Fabric_sw172-22-46-220	1	172.22.47.167 fc1/1<->sw172-22-46-174 fc10/30	400.000MB	143B	
		10. Fabric_sw172-22-46-220	1,2,4	sw172-22-46-225 fc1/13<->sw172-22-46-224 fc1/13	200.000MB	113B	
		Rows per page: 10	v				188601

- **Step 2** Expand a fabric and select one of the VSANs to display performance information for the ISLs in that VSAN.
- **Step 3** Click the name of an ISL from the Name column to see a graph of the traffic across that ISL for the past 24 hours.

You see the ISL traffic information window as shown in Figure 7-11.



Figure 7-11 ISL Traffic (24 Hours)

			Clone
		L	ast: 24 Hours 💌
Time	Rx Bytes/sec	Tx Bytes/sec	
Thu Dec 18 16:05:00 2008 UTC	NaN	NaN	*
Thu Dec 18 16:10:00 2008 UTC	NaN	NaN	
Thu Dec 18 16:15:00 2008 UTC	NaN	NaN	
Thu Dec 18 16:20:00 2008 UTC	NaN	NaN	
Thu Dec 18 16:25:00 2008 UTC	NaN	NaN	-
Thu Dec 18 16:30:00 2008 UTC	210184413.347	1360.88	
Thu Dec 18 16:35:00 2008 UTC	209906142.121	1337.293	
Thu Dec 18 16:40:00 2008 UTC	210373403.419	1343.886	
Thu Dec 18 16:45:00 2008 UTC	210229340.27	1324.247	
Thu Dec 18 16:50:00 2008 UTC	205548740.519	1325.865	
Thu Dec 18 16:55:00 2008 UTC	213463547.463	1364.802	
Thu Dec 18 17:00:00 2008 UTC	211480043.782	1346.2	
Thu Dec 18 17:05:00 2008 UTC	208072386.933	1322.069	
Thu Dec 18 17:10:00 2008 UTC	211651585.508	1332.18	

Figure 7-12 ISL Traffic Grid View



Notation NaN (Not a Number) in the data grid means it is a negative value.



Figure 7-13 ISL Traffic (Real Time)



There are variations to this procedure. In addition to the basic steps described above, you can also 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 specific period, drag the slider control to choose the time interval for which you need the information.
- To view information in grid format, click the grid icon in the bottom right corner.
- To export the data into a spreadsheet, click the excel icon in the upper right corner and then click **Save**.
- To view real time information, select **Real Time** from the drop-down list in the upper right corner. Real time data is updated in every 10 seconds.

Viewing Performance Information for NPV Links

To view traffic between NPV devices and ports using Fabric Manager Web Client, follow these steps:

Step 1 Click the Performance tab, and then click NPV Links.

You see the NPV Links tab window shown in Figure 7-14.

Figur	e 7-14 NP	v	' Links Tab	
🏉 NPV Li	inks - Windows Internet E	xpl	lorer 🗧 🗗	X
Θ	▼	313	3a.do7filter.select=true&filter.type=1&filter.fabricId=101&filter.vsanId=176&filter.fId=1&filter.vi 🗹 🗲 🗙 Google	•
🚖 🎄	😁 👻 🏉 NPV Links		🗙 🚓 Cisco MDS 9000 Family Fabri 🚓 Cisco MDS 9000 Family Fabri 👘 🖓 🔹 🔯 🛀 🔂 🛀 🖶 🗸 🚱	:
cisco	January (1	Inventory Report SME Admin User ID: adm	
		*	ISLs 🔹 NPV Links 🍨 Flows 🍨 Ethernet 🔹 Others 🍨 Traffic Analyzer 🔹 Prediction 🔹 Switch Bandwidth 🔹	
	Fabric_q148		Fabric_q148 > VSAN0004 (Down,Segmented)	
	VSAN0001		Last: Year 💌	
	ficonttest (2,Segmente		Showing 0-0 of 0 records	
	VSAN0002 (Down,Segi		Name 🛱 I/F Speed Avg. Rx/sec Avg. Tx/sec (Rx+Tx)/sec Peak Rx/sec Peak Tx/sec Errors Discards Last Updated	
	VSAN0002 (Down,Seg		No records.	
	VSAN0002 (Segmenter			
	ALEX03		Rows per page: 10 💙 🕅 🕅 🖓 Go to page: 1 of 1 Pages 🖨 🕽 🕅	
	ttre (4,Down,Segment			
	ttre (4,Segmented)			
	VSAN0005 (Down,Segi			
	VSAN0005 (Down,Segi	Π.	Values computed and updated every hour by using the daily traffic average.	
	VSAN0005 (Down,Segi			
	kennlam (6,Down,Segi			
	kennlam (6,Down,Segi			
	kennlam (6,Segmente			
-	FICON7 (Segmented)			
-	VSAN0008 (Down,Segi			
	VSAN0008 (Down,Segi			
	VSAN0009 (Down,Segi			
	VSAN0009 (Down,Segi			
	VSAN0009 (Segmenter			9
	VSAN0010 (Down,Segi			87796
	VSAN0010 (Down,Seg			50
	An MOANOONO (Dama Caralas			~

- **Step 2** Expand a fabric and select one of the VSANs to display performance information for the NPV Links in that VSAN.
- Step 3 Click the name of an NPV Link from the Name column to see a list of the traffic for the past 24 hours.

There are variations to this procedure. In addition to the basic steps described above, 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 it from the drop-down list in the upper right corner.
- To view the detailed information for specific period, drag the slider control to choose the time interval for which you need the information.
- To view information in grid format, click the grid icon in the bottom right corner.
- To export the data into a spreadsheet, click the excel icon in the upper right corner and then click **Save**.
- To view real time information, select Real Time from the drop-down list in the upper right corner. Real time data is updated in every 10 seconds.

Note

Viewing Performance Information for Flows

To view host and storage traffic using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Performance** tab, and then click **Flows**.

You see the Flows tab window as shown in Figure 7-15.





- **Step 2** Expand a fabric and select one of the VSANs to display performance information for the flows in that VSAN.
- **Step 3** Click the name of a flow from the Name column to see a list of the traffic for the past 24 hours.

Note

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 specific period, drag the slider control to choose the time interval for which you need the information.
- To view information in grid format, click the grid icon in the bottom right corner.
- To export the data into a spreadsheet, click the excel icon in the upper right corner and then click Save.
- To view real time information, select Real Time from the drop-down list in the upper right corner. Real time data is updated in every 10 seconds.

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Viewing Performance Information for Gigabit Ethernet and Ethernet Ports

To view Gigabit Ethernet ports and Cisco Nexus 5000 Series Ethernet ports and Ethernet PortChannel using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Performance** tab, and then click **Ethernet**.

You see the Ethernet tab window as shown in Figure 7-16.

Figure 7-16 Ethernet Tab

Health F		entory Reports SME	Admin vs + Ethernet + Other	rs ♦ Tr	affic Analyz				it About H User ID: ad	
SAN	1 2	AN								
		Fabric	Name 🛱	Detail	I/F Speed	Avg. Rx/sec	Avg. Tx/sec	(Rx+Tx)/sec	Peak Rx/sec	Pe
	1.	. Fabric_sw172-22-46-220	sw172-22-46-220:gigE8/2	fcip	100.000MB	711B	751B	1.463KB	10.564KB	
	2	. Fabric_sw172-22-46-220	sw172-22-46-233:gigE1/1	fcip	100.000MB	751B	711B	1.463KB	8.700KB	
	3	Fabric_sw172-22-46-220	sw172-22-46-174:gigE5/1	fcip	100.000MB	OB	OB	OB	OB	
	4.	. Fabric_sw172-22-46-220	172.22.47.167:gigE1/1	fcip	100.000MB	OB	OB	OB	OB	
		Rows per page: 10								188604

Step 2 Expand a fabric and choose one of the VSANs to display the Gigabit Ethernet ports and Cisco Nexus 5000 Series Ethernet ports and PortChannel in that VSAN.



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

- Select the time range, and click Filter to filter the display.
- Select the name of a GigE port from the Name column to see a graph of the traffic across that GigE 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.

Viewing Other Statistics

To view other statistics using Fabric Manager Web Client, follow these steps:

Step 1Click the Performance tab, and then click Others.You see the Others tab window as shown in Figure 7-17.

		Change Password Download Logout . U • • Prediction • Switch Bandwidth •	s
SAN Fabric_demo1 Fabric_demo2 Fabric_sw172-22-46-220	SAN Fabric Switch A Name Avg. / sec No records. Rows per page: 10 V	Last: 24 Showing 0-0 Peak /sec Last Upda	c
	Ψ Values computed and updated every hour by using the 5 minutes traffic as	verage.	188605

Figure 7-17 Others Tab

Step 2 Expand a fabric and select one of the VSANs to display the other statistics in that VSAN.



- There are variations to this procedure. In addition to these basic steps, you can also:
 - Select the time range, and click **Filter** to filter the display.
 - Select the IP address of a switch from the Name column to see a graph of the traffic across that switch 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 configure Other Statistics, follow the instructions described in the "Configuring Other Statistics" section on page 7-63.

Viewing Detailed Traffic Information

To view SPAN port detailed traffic using Fabric Manager Web Client, follow these steps:

Step 1Click the Performance tab, and then click Traffic Analyzer.You see the Traffic Analyzer tab window as shown in Figure 7-18.

T. (C. A. ...

Figure 7-18 Traffic Analy	/zer lad
,I	Change Password Pr Web Client Inventory Reports SME Admin + ISLs + NPV Links + Flows + Ethernet + Others + Traffic Analyzer + Prediction +
SAN Fabric_demo1 Fabric_demo2 Fabric_sw172-22-46-220	Showing 0-0 of 0 records Fabric Switch SPAN Interface Status Analyzer Sources No records. Rows per page: 10 V Image of 0 for the state of 1 Pages in the state of 1 P

Step 2 Do one of the following:

- Select a SAN to display a list of SPAN ports for switches in all fabrics in the SAN.
- Select one of the fabrics to display a list of SPAN ports for switches in that fabric.

Viewing Switch Bandwidth

To view the total bandwidth for a switch using Fabric Manager Web Server, follow these steps:

Step I	Choose Performance > Switch Bandwidth.
Step 2	Select the period of time (24 Hours, Week, Month or Year) for which you want to view bandwidth
	usage from the Last drop-down list.

1 1 1/1

a 41 b

Viewing Predicted Future Performance

To plan storage network changes, it is necessary to determine when configuration changes (such as rezoning) may be needed to meet growing performance demands. Fabric Manager Server provides a performance prediction report to enable you to more easily predict when storage network connections will become overutilized.

In general, to create a performance prediction report, do the following:

- Specify the period of time in the past that you want to use as a sample to predict the future performance.
- Specify the threshold values that you do not want to exceed.
- Specify the period of time in the future for which you want to view performance.

Fabric Manager Server extrapolates the performance and lists in chronological order which interfaces are expected to reach the threshold within the specified time period.

Using the Default Values

When you first view predicted future performance by clicking the **Performance** tab and then the **Prediction** tab, you see a table showing the predicted performance for your entire SAN using the default values. The default values are as follows:

- Scope—Entire SAN
- Past performance period—Month
- Future performance period—Month
- Threshold—80%
- SAN elements or links—ISLs
- Performance prediction type—Average

Click a link in the Name column to view a graph of that ISL's performance for the past 24 hours. To view the performance for the past week, month, year, or custom time, select an option from the drop-down list.

Using Your Own Values

To view a table of predicted future performance with your own values using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Performance** tab, and then click **Prediction**.

You see the Prediction tab window as shown in Figure 7-19.

Figure 7-19 Prediction Tab



Step 2 Expand a fabric and select one of the VSANs to specify that the prediction report will be generated for that VSAN.

L

- **Step 3** Select the period of time (Week, Month, 3 Months, 6 Months or Year) to use to predict performance from the past drop-down list.
- **Step 4** Select the period of time (Week, Month, 3 Months, 6 Months or Year) for which to make the prediction from the future drop-down list.
- **Step 5** Enter the threshold percentage (1-100) of utilization that you do not want the traffic to exceed.
- **Step 6** Enter the number of ISLs, hosts, storage devices, port group or flows for which you want to make the prediction. The prediction will show the top 10, top 20, or top 50 with the most traffic.
- **Step 7** Select the type of traffic prediction to show:
 - Average—The average value of all the sample data is used.
 - **Peak**—The average value of all the peak values is used. The number of peak values is obtained by dividing the total number of records into groups based on the number you enter in the Use Peak Value of Every *xx* Records field. For example, if you have 1000 records and you enter 100 into the field, your records are divided into 10 groups and 10 peak values are used.

Step 8 Click Predict.

You see the prediction table with the new data. Click the links in the Name column to show performance charts based on the history data.

Viewing Switch Bandwidth

To view the total bandwidth for a switch using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Performance** tab, and then click **Switch Bandwidth**.

You see the Switch Bandwidth tab window as shown in Figure 7-20.

	h Bandwidth Tab		Change Passwo	ora i Down	iload i Logout	
CISCO	er Web Client					
Health Performanc	e Inventory Reports SME	Admin				
 Summary End Devices 	♦ ISLS ♦ NPV Links ♦ Flow	vs 🔹 Eth	ernet 🔹 Others 🔹 Traffic Analyzer 🔹 Prediction	 Switch B 	andwidth 🔸	
SAN E Fabric_demo1	SAN					
E Fabric_demo2						
🗄 🔐 Fabric_sw172-22-46-220				_	_	
	Fabric	VSAN Id	Name 🗸	I/F Speed	Avg. Rx/sec	4
	1. Fabric_sw172-22-46-220	0 1,2,4	sw172-22-46-220 fc3/2<->sw172-22-46-174 fc3/2	1.000GB	210.148MB	
	2. Fabric_sw172-22-46-220	1,2	sw172-22-47-135 fc3/1<->sw172-22-46-174 fc5/10	400.000MB	1.224KB	
	3. Fabric_sw172-22-46-220	0 1,2,4	sw172-22-46-224 fc1/17<->sw172-22-46-221 fc2/17	200.000MB	634B	
	4. Fabric_sw172-22-46-220	1,2,4	sw172-22-46-220 fc2/10<->sw172-22-46-221 fc2/13	200.000MB	352B	
	5. Fabric_sw172-22-46-220	0 1,2,4	sw172-22-46-220 fc2/16<->sw172-22-46-221 fc2/25	200.000MB	313B	
				200.000MB	167B	
	-		sw172-22-46-225 fc1/5<->sw172-22-46-224 fc1/5	200.000MB	214B	
			sw172-22-46-223 fc1/16<->sw172-22-46-222 fc1/16		211B	
	9. Fabric_sw172-22-46-220		172.22.47.167 fc1/1<->sw172-22-46-174 fc10/30	400.000MB	143B	
	10. Fabric_sw172-22-46-220	1,2,4	sw172-22-46-225 fc1/13<->sw172-22-46-224 fc1/13	200.000MB	113B	
	Rows per page: 10					1
	Kows per page: 10					88608
						1886

Step 2 Select the period of time (24 Hours, Week, Month or Year) for which you want to view bandwidth usage from the Last drop-down list.

Inventory

The Inventory tab shows an inventory of the selected SAN, fabric, or switch. You can export this information to an ASCII file in comma-separated value format that can be read by applications such as Microsoft Excel. You can set the number of rows and columns per page.

The Inventory tab contains the following subtabs:

- VSANs—Shows details about VSANs.
- Switches—Shows details about switches.
- Licenses—Shows details about the licenses in use in the fabric.
- Modules—Shows details for MDS switching and services modules, fans, and power supplies.
- End Devices—Shows the host and storage ports.
- ISLs—Shows the Inter-Switch Links.
- NPV Links—Shows the links between NPV devices and ports.
- Zones—Shows the active zone members (including those in inter-VSAN zones).
- Summary—Shows VSANs, switches, ISLs, ports, and end devices.

Inventory

Send documentation comments to fm-docfeedback@cisco.com

Viewing Summary Inventory Information

To view a summary of VSANs, switches, ISLs, ports, and end devices using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Inventory** tab, and then click **Summary**.

You see the Summary tab window as shown in Figure 7-21.

♦ Summary ♦ Map Demo ♦	VSANe A Switches	A Licenses A Mo			Linke A Zanco	
Data Center		V Licenses V Mo		es VISES VINFV	Links V Zones V	
SAN	SAN					
Fabric_sw-dc2-ex-83	SAN Inventory Su	ummary				
Fabric_sw172-22-46-220	Logical	# Switches	# ISLs	# Ports	# End Devices	#
	Open System VSANs	14 N5K-C5020P-BF	1 Regular	32 E/TE Ports	66 Total Hosts	510
	FICON VSANs	0 DS-C9222i	1 P-C Members *	3 F/FL Ports	24 Total Storage	533
	Total VSANs	14 DS-C9124	2 Total ISLs	35 Fabric Ports	90 Total Devices	1043
		DS-C9020-20K9	2 Port Channels	3 Total FC	628	
		DS-C9216i	3	Available FC Por	ts 538	
		DS-C9216a	1	Ethernet Ports	104	
		DS-C9120	1			
		DS-C9140	1			
		DS-C9216	2			
-		DS-C9513	1			
		DS-C9509	1			
		DS-C9506	1			
		Other	2			
			12			

Figure 7-21 Summary Tab

Step 2 Do one of the following:

- Select a SAN to display a summary of inventory information for all fabrics in the SAN.
- Select one of the fabrics to display a summary of inventory information for that fabric.

Viewing Detailed Summary Inventory Information

Detailed summary includes a number of key summary statistics such as port usage and any statistics information, license use summary, environmental status and switch states, monitoring and alerting status that is useful for creating comprehensive SAN health reports.

To view a detailed summary using Fabric Manager Web Client, follow these steps:

- **Step 1** Click the **Inventory** tab, and then click **Summary**.
- Step 2 Click Inventory Summary Details at the bottom of the page.

You see the Inventory Summary Details as shown in Figure 7-22.

😔) 🔻 🙋 http	o://171.7	1.49.16	5/s211.do?filt	er.fabric	:Id=-1								~	47 🗙 🛛	Google		
🕸 🌈 Summar	y Details														{	<u>ه</u> - ا	a - E
ventory Detail vice Count	Summ	ary Re	port														
	De	vice De	scription				Count Device Description					n	Count				
1. QLogic							1 Cisco 15										
rt Usage																	
	Port Use								F	an Out Rai	ios		Port Mo	dule T	ypes		
Fabric Name	Disk	Таре	Unknown D	evice	Host	ISL	NPV	Free	Total	Host:Disk	Port:ISL	Device:ISL	DWDM	10G SFP	SFP	GBIC	OTHER
1. Fabric_q148	4	0		0	4	62	0	-70	0	1.0:1	-1.0:1	0.12:1	0	0	78	0	5
2. TOTALS	4	0		0	4	62	0	-70	0	1.0:1	-1.0:1	0.12:1	0	0	78	0	5
	d Moni	toring															
alth Status An	d Moni c Name	_	SI	vitch St	ate O	к	F	AILED		Supplies OFF	ON	FAN	WARN	Fans	DOWN	1	UP
alth Status An		_			0	к 4	F	AILED				FAN	WARN		DOWN	1	UP 22
alth Status An Fabri 1. Fabric_q148		_		N	0		F	AILED		OFF	13		WARN		DOWN		
alth Status An Fabri 1. Fabric_q148 2. TOTALS	c Name		WAR	N 12	0	4	ţ	AILED	0	OFF 8	13		WARN	0	DOWN	5	22
alth Status An Fabri 1. Fabric_q148 2. TOTALS	c Name se Sun	nmary	WAR	N 12	0	4	I		0	OFF 8	13		WARN PORT	0		5	22
alth Status An Fabri 1. Fabric_q148 2. TOTALS rmanent Licen Fabric Nar	c Name se Sun	nmary	WAR	N 12 12 DMM	0	4			0	OFF 8 8	13 13			0 0		5	22 22 SSE
1. Fabric_q148 2. TOTALS	c Name se Sun	nmary	WAR _PORT	N 12 12 DMM	0	4			0	OFF 8 8 SERVER	13 13	RAME F	ORT	0 0	N	5 5 SME	22 22 SSE 0
Fabric_q148 2. TOTALS TMANNET Licen Fabric_q148 2. TOTALS TMANNET Licen Fabric_q148 2. TOTALS	c Name se Sun ne	nmary 100	war 5_PORT 0	N 12 12 DMM	0	4		: 1	0	OFF 8 8 SERVER 0	13 13	RAME P	PORT 3	0 0	N O	5 5 SME 0	22 22 SSE 0
Fabric_q148 2. TOTALS TMANNET Licen Fabric_q148 2. TOTALS TMANNET Licen Fabric_q148 2. TOTALS	c Name se Sun ne nmary	nmary 100	war 5_PORT 0	N 12 12 DMM	0	4 4 ENTER		1	0 0 FM_5	OFF 8 8 SERVER 0	13 13	RAME P O O	PORT 3	0 0	N 0 0	5 5 SME 0	22 22 SSE 0
Fabric_q148 2. TOTALS Fabric_q148 2. TOTALS Fabric_q148 2. TOTALS Fabric_q148 2. TOTALS Fabric_q148 2. TOTALS	c Name se Sun ne nmary	nmary 100	S_PORT 0 0	N 12 12 DMM	0	4 4 ENTER	RPRIS	1	0 0 FM_5	OFF 8 8 SERVER 0 0	13 13 MAINF	RAME P O O	ORT 3 3	0 0 SAN_EXT	N 0 0	5 5 SME 0 0	22 22 SSE 0 0 0

Figure 7-22 Detailed Summary Information

Viewing Detailed Information for VSANs

To view detailed inventory information about VSANs using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Inventory** tab, and then click **VSANs**.

You see the VSANs tab window as shown in Figure 7-23.

Fabric Mana	ger	Web Client			Cnar	nge Password Download Logou		
	e Ir	nventory Reports SME	A d r	nin				
🔹 Summary 🔹 VSANs 🔹	Swit	ches 🔹 Licenses 🔹 Modul	es	End Devi	ces 🔹 ISLs 🔹 NPV Links 🔹 Zone	s 🔹		
SAN	ТГ	SAN						
Fabric_demo1			-	_		Status: All 🗸		
Fabric_demo2								
-a						Showing 1-10 of 17 record		
		Fabric	Id	Name	Status	Activated Zoneset, When		
		1. Fabric_demo1		VSAN0001		DMM_IPFC_ZS, 2008/07/24-03:34:1		
		2. Fabric_demo1		VSAN0009		zs_9, 2008/07/24-03:31:21		
		3. Fabric_demo1		VSAN0100		dmm_zs100, 2008/07/24-03:31:21		
		4. Fabric_demo2	1	VSAN0001	Up	DMM_IPFC_ZS, 2008/07/29-13:48:0		
		5. Fabric_demo2		VSAN0009	Up	zs_9, 2008/07/29-13:45:58		
		6. Fabric_demo2	100	VSAN0100	Down	dmm_zs100, 2008/07/29-13:45:58		
	4	7. Fabric_sw172-22-46-220	1	VSAN0001	Down, Segmented at sw172-22-47-20	none		
	Ш	8. Fabric_sw172-22-46-220	1	VSAN0001	Up, Segmented at sw172-22-46-220	Zoneset1v1, 2008/08/10-11:09:38		
		9. Fabric_sw172-22-46-220	2	MyVsan2	Up	Zoneset1V2, 2008/08/10-16:22:37		
		10. Fabric_sw172-22-46-220	444	VSAN0444	Up	none		
		Rows per page: 10	~		🛛 🍕 Go to j	page: 1 of 2 Pages 🖒 🕻		
		<u>.</u>						



Step 2

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

• Select the status level, then click **Filter** to filter the display to show all VSANs or just those with errors.

Viewing Detailed Information for Switches

7 00

VOAN. T.

To view detailed inventory information about switches using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Inventory** tab, and then click **Switches**.

You see the Switches tab window as shown in Figure 7-24.

Fabric_sw-dc2-ex-83 IP Address WWN/SerialNo #FC Ports (u-a-t) : I. SAN Fabric_sw-dc2-ex-83 sw-dc2-ex-83 172.28.125.83 20:00:00:00:dec:3e:e0:40 6 - 8 - 14 I. SAN Fabric_sw-dc2-ex-83 sw-dc2-ex-84 172.28.125.84 20:00:00:00:dec:3e:e0:40 6 - 8 - 14 I. SAN Fabric_sw-dc2-ex-83 sw-dc2-ex-84 172.28.125.84 20:00:00:00:dec:3e:e0:40 6 - 8 - 14 I. SAN Fabric_sw-dc2-ex-83 sw-dc2-ex-84 172.28.125.84 20:00:00:00:dec:3e:e0:40 6 - 8 - 14 I. SAN Fabric_sw172-22-46-220 mchinnBrokeAid 172.22.46.227 10:00:00:00:60:69:90:72:eb 0 I. SAN Fabric_sw172-22-46-220 mchinnMcData1 172.22.46.227 10:00:00:00:dec:19:cc:17 20 I. SAN Fabric_sw172-22-46-220 sw172-22-46-127 172.22.46.127 10:00:00:00:dec:19:cc:17 20 I. Some page: Image: Image:			VSANs 🔸 Swi	tches 🔹 Licenses 🔹	Modules 🔶 End D	evices 🔹 ISLs	♦ NPV Links ♦ Zones	<u> ب</u>
PressAN Fabric_sw172-22-46-220 Network Fabric_sw-dc2-ex-83 WWN/SerialNo #FC Ports (u-1 1. SAN Fabric_sw-dc2-ex-83 sw-dc2-ex-83 172.28.125.83 20:00:00:0d:ec:38:e0:40 6 - 8 - 14 2. SAN Fabric_sw-dc2-ex-83 sw-dc2-ex-83 172.28.125.84 20:00:00:0d:ec:38:e0:40 6 - 8 - 14 3. SAN Fabric_sw-dc2-ex-83 sw-dc2-ex-83 172.28.125.84 20:00:00:0d:ec:39:07:40 6 - 8 - 14 3. SAN Fabric_sw-fd2-ex-83 sw-dc2-ex-83 172.28.125.84 20:00:00:0d:ec:19:07:21:eb 0 4. SAN Fabric_sw172-22-46-220 mchinnBrokeAid 172.22.46.227 10:00:08:00:88:00:80:4b 16 5. SAN Fabric_sw172-22-46-220 sw172-22-46-127 172.22.46.127 10:00:00:0d:ec:19:cc:17 20 Rows per page: 5 w w: No. of currently used fc ports a: available fc ports a: available fc ports a: available fc ports t: total fc ports	🖕 Data C	enter						_
Pabric_sw172-22-46-220 Network Fabric Name IP Address WWN/SerialNo #FC Ports (u-1) 1. SAN Fabric_sw-dc2-ex-83 sw-dc2-ex-83 172.28.125.83 20:00:00:0d:ec:3e:00:40 6 - 8 - 14 2. SAN Fabric_sw-dc2-ex-83 sw-dc2-ex-84 172.28.125.84 20:00:00:0d:ec:39:00:40 6 - 8 - 14 3. SAN Fabric_sw172-22-46-220 mchinnBrokeAid 172.28.125.84 20:00:00:0d:ec:39:00:72 0 4. SAN Fabric_sw172-22-46-220 mchinnBrokeAid 172.22.46.227 10:00:00:00:0d:ec:19:0c:17 20 Rows per page: 5 * #FC Ports (u - a - t) :	SAN		SAN					
Retwork Fabric Name IP Address WWN/SerialNo #FC Ports (u-1) 1. SAN Fabric_sw-dc2-ex-83 sw-dc2-ex-83 172.28.125.83 20:00:00:00:0d:ec:3e:00:40 6 - 8 - 14 2. SAN Fabric_sw-dc2-ex-83 sw-dc2-ex-84 172.28.125.84 20:00:00:00:0d:ec:3f:00:40 6 - 8 - 14 3. SAN Fabric_sw-f22-ex-83 sw-dc2-ex-84 172.28.125.84 20:00:00:0d:ec:3f:00:40 6 - 8 - 14 3. SAN Fabric_sw172-22-46-220 mchinnBrokeAid 172.22.46.227 10:00:00:06:69:90:72:eb 0 4. SAN Fabric_sw172-22-46-220 mchinnMcData1 172.22.46.127 10:00:00:00:00:0d:ec:19:cc:17 20 Rows per page: 5 8 #FC Ports (u - a - t) : . 9 #FC Ports (u - a - t) : 9 #FC Ports (u - a - t) : 9 #FC Ports (u - a - t) : 9 #FC Ports (u - a - t) : 9 to cone of the following: . <td< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></td<>								
• one of the following:		_			_			_
2. SAN Fabric_swrdc2-ex-83 swrdc2-ex-84 172.28.125.84 20:00:00:0d:ec:3f:00:40 6 - 8 - 14 3. SAN Fabric_sw172-22-46-220 mchinnBrokeAid 172.22.46.226 10:00:00:60:69:90:72:eb 0 4. SAN Fabric_sw172-22-46-220 mchinnMcData1 172.22.46.227 10:00:00:00:00:80:00:88:60:80:4b 16 5. SAN Fabric_sw172-22-46-220 sw172-22-46-127 172.22.46.227 10:00:00:0d:ec:19:cc:17 20 Rows per page: 5 ▼ #FC Ports (u - a - t) : u: No. of currently used fc ports a: available fc ports a: available fc ports t: total fc ports b: t: total fc ports t: total fc ports			Network	Fabric	Name	IP Address	WWN/SerialNo	#FC Ports (u-a-t
3. SAN Fabric_sw172-22-46-220 mchinnBrokeAid 172.22.46.226 10:00:00:60:69:90:72:eb 0 4. SAN Fabric_sw172-22-46-220 mchinnMcData1 172.22.46.227 10:00:08:00:88:60:80:4b 16 5. SAN Fabric_sw172-22-46-220 sw172-22-46-127 172.22.46.127 10:00:00:0d:ec:19:cc:17 20 Rows per page: 5 ▼			1. SAN	Fabric_sw-dc2-ex-83	sw-dc2-ex-83	172.28.125.83	20:00:00:0d:ec:3e:e0:40	6 - 8 - 14
 4. SAN Fabric_sw172-22-46-220 mchinnMcData1 172.22.46.227 10:00:08:00:88:60:80:4b 16 5. SAN Fabric_sw172-22-46-220 sw172-22-46-127 172.22.46.127 10:00:00:0d:ec:19:cc:17 20 Rows per page: 5 ▼ #FC Ports (u - a - t) : u: No. of currently used fc ports a: available fc ports t: total fc ports t: total fc ports 			2. SAN	Fabric_sw-dc2-ex-83	sw-dc2-ex-84	172.28.125.84	20:00:00:0d:ec:3f:00:40	6 - 8 - 14
 5. SAN Fabric_sw172-22-46-220 sw172-22-46-127 172.22.46.127 10:00:00:0d:ec:19:cc:17 20 Rows per page: 5 #FC Ports (u - a - t) : u: No. of currently used fc ports a: available fc ports t: total fc ports o one of the following: 			3. SAN	Fabric_sw172-22-46-220	mchinnBrokeAid	172.22.46.226	10:00:00:60:69:90:72:eb	0
Rows per page: 5 Rows per page: 5 #FC Ports (u - a - t) : u: No. of currently used fc ports a: available fc ports t: total fc ports t: total fc ports			4. SAN	Fabric_sw172-22-46-220	mchinnMcData1	172.22.46.227	10:00:08:00:88:60:80:4b	16
<pre> #FC Ports (u - a - t): u: No. of currently used fc ports a: available fc ports t: total fc ports t: total fc ports</pre>			5. SAN	Fabric_sw172-22-46-220	sw172-22-46-127	172.22.46.127	10:00:00:0d:ec:19:cc:17	20
<pre> #FC Ports (u - a - t): u: No. of currently used fc ports a: available fc ports t: total fc ports t: total fc ports</pre>		8						
 u: No. of currently used fc ports a: available fc ports t: total fc ports t: total fc ports 			Rov	vs per page: 5 💌				
			■ u: No. ■ a: ava	of currently used fc port ilable fc ports	s			
Select a SAN to display switch inventory information for all fabrics in the SAN.		f the following:						
	one c	of the following.		intronton infor	mation for a	ll fabrics i	in the SAN.	
Select one of the fabrics to display switch inventory information for that fabric.		•	lay switch	inventory infor	matron for a			
	Sele	ct a SAN to disp	•	•		nation for		
Expand a fabric and salest one of the VSANs to display switch inventory information for that	Sele Sele	ct a SAN to disp ct one of the fab	rics to disp	olay switch inve	ntory inform		that fabric.	for that
 Select one of the fabrics to display switch inventory information for that fabric 		f the following:			mation for a	ll fabrics i	in the SAN.	
	Sele	ct a SAN to disp	•	•		nation for		
	Sele Sele	ct a SAN to disp ct one of the fab	rics to disp	olay switch inve	ntory inform		that fabric.	
Expand a fabric and select one of the VSANs to display switch inventory information for that	Sele Sele	ct a SAN to disp ct one of the fab	rics to disp	olay switch inve	ntory inform		that fabric.	for that

Viewing License Information

Step 2

To view license information for switches using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Inventory** tab, and then click **Licenses**.

You see the Switch Licenses tab window as shown in Figure 7-25.

Figure 7-25 Switch Licenses Tab

Health Performance Summary Map Demo				End Devi	ices 🔶 ISLs 🔶 NF	Use PVLinks ♦ Zones ♦
Data Center	Fal	oric_sw172-22-	46-220			
Fabric_sw-dc2-ex-83						Status: All
⊡ 🔓 Fabric_sw172-22-46-220		_				Showing 1-10 of 170 r
		Switch	Feature	Status	Туре	Errors
	1.	sw172-22-47-133	ENTERPRISE_PKG	Unused	Permanent License	
	2.	sw172-22-46-233	IOA_184	Unused	Unlicensed	Grace Period: 108 days 5 hours 42 mins 25 se
	3.	sw172-22-46-233	PORT_ACTIVATION_PKG	Unused	Unlicensed	
	4.	sw172-22-46-233	MAINFRAME_PKG	Unused	Permanent License	
	5.	sw172-22-46-233	10G_PORT_ACTIVATION_PKG	Unused	Unlicensed	
	6.	sw172-22-46-233	ENTER PRISE_PKG SAN_EXTN_OVER_IP_IPS2		Permanent License	
	7.	sw172-22-46-233			Permanent License	
	8.	sw172-22-46-233	XRC_ACCL	Unused	Unlicensed	Grace Period: 108 days 5 hours 42 mins 25 se
	9.	sw172-22-46-233	STORAGE_SERVICES_SSN16	Unused	Unlicensed	Grace Period: 108 days 5 hours 42 mins 25 se
	10.	sw172-22-46-174	STORAGE_SERVICES_184	Unused	Unlicensed	Grace Period: 108 days 5 hours 42 mins 26 se
		Rows per pag	ge: 10 💌		[🕅 📢 Go to page: 🚺 of 17 Pages 🖨 🕻



Step 2

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

• Select the status level, and click **Filter** to filter the display to show all licenses or just those with errors.

Viewing Detailed Information for Modules

To view detailed inventory information about modules using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Inventory** tab, and then click **Modules**.

You see the Modules tab window as shown in Figure 7-26.

Isco Fabric Manag						Change Pa	issword Do	wnloa	ad Logout Abou	
Summary VSANs									User 1	ID: a
SAN Baric_demo1 Baric_demo2 Baric_sw172-22-46-220	SAN	I								
		Fabric	Switch	Name	ModelName	SerialNum	Туре	Slot	Hardware Revision	Sol
	1.	Fabric_demo1	demo1	MDS 9509 (9 Slot) Chassis	DS-C9509	FOX083706RW	chassis	N/A	0.501	
	2.	Fabric_demo1	demo1	1/2 Gbps FC Module	DS-X9016	jab063908gg	module	2	0.3	4.1
	з.	Fabric_demo1	demo1	Advanced Services Module	DS-X9032-SMV	JAB074104F7	module	8	1.0	4.1
	4.	Fabric_demo1	demo1	Advanced Services Module	DS-X9032-SMV	JAB0714051G	module	з	0.505	4.1
	5.	Fabric_demo1	demo1	Supervisor/Fabric-1	DS-X9530-SF1-K9	JAB072405QC	module	5	1.4	4.1
	6.	Fabric_demo1	demo1	Fan Module-1	WS-9SLOT-FAN		fan	N/A	0.0	
	7.	Fabric_demo1	demo1	PowerSupply-2	WS-CAC-2500W	ART060800RG	powerSupply	N/A	1.0	
	8.	Fabric_demo2	demo2	Fan Module-1	DS-9SLOT-FAN	DCH09050100	fan	N/A	1.3	
	9.	Fabric_demo2	demo2	MDS 9509 (9 Slot) Chassis	DS-C9509	VIRTVEGAS4	chassis	N/A	0.0	
	10.	Fabric_demo2	demo2	PowerSupply-2	DS-CAC-2500W	ART06200081	powerSupply	N/A		
		Rows per		0.2					N.	1.

Step 2 Do one of the following:

- Select a SAN to display module inventory information for all fabrics in the SAN.
- Select one of the fabrics to display module inventory information for that fabric.
- Expand a fabric and select one of the VSANs to display module inventory information for that VSAN.

Viewing Detailed Information for End Devices

To view detailed inventory information about end devices using Fabric Manager Web Client, follow these steps:

Step 1 Click the Inventory tab, and then click End Devices.

You see the End Devices tab window as shown in Figure 7-27.

End Devices Tab

Health Performance	er Web Client Inventory Reports SME witches + Licenses + Modul		evices + ISLs	◆ NPV Links ◆ Zones ◆		Use	er ID: adı
SAN	SAN						
🕞 Fabric_demo1 🔐 Fabric_demo2 🕞 Fabric_sw172-22-46-220							Type:
	Fabric	VSAN Id	Enclosure	Name 🛱	Port WWN	FcId	Switch 1
	1. Fabric_demo2	1 T	EST	TEST	10:00:00:00:c9:3d:55:ec	0×320000	demo2 fe
	2. Fabric_demo2	9 H	DS11356	NS11356-2	50:06:0e:80:04:2c:5c:50	0x66000e	demo2 f
	3. Fabric_demo2	9 н	DS11356	ES11356-2	50:06:0e:80:04:2c:5c:70	0×660013	demo2 f
	4. Fabric_demo2	9 L	INUX1-SRVR	Linux1-Srvr	21:00:00:e0:8b:08:5e:3e	0×660100	demo2 f
	5. Fabric_sw172-22-46-220	4004 S	eagate d2:03:c1-S	22:00:00:20:37:d2:03:c1	22:00:00:20:37:d2:03:c1	0×610f39	mchinnB
	6. Fabric_sw172-22-46-220	4004 S	eagate d2:12:07-S	22:00:00:20:37:d2:12:07	22:00:00:20:37:d2:12:07	0x610fd5	mchinnB
	7. Fabric_sw172-22-46-220	4004 S	eagate d2:11:42-S	22:00:00:20:37:d2:11:42	22:00:00:20:37:d2:11:42	0x610fd1	mchinnB
	8. Fabric_sw172-22-46-220	4004 S	eagate d2:10:f9-S	22:00:00:20:37:d2:10:f9	22:00:00:20:37:d2:10:f9	0x610f54	mchinnBr
	9. Fabric_sw172-22-46-220	4004 S	eagate d2:11:f0-S	22:00:00:20:37:d2:11:f0	22:00:00:20:37:d2:11:f0	0x610fd4	mchinnBr
	10. Fabric_sw172-22-46-220	4004 S	eagate d2:03:ed-S	22:00:00:20:37:d2:03:ed	22:00:00:20:37:d2:03:ed	0x610fce	mchinnBi

Step 2 Expand a fabric and select one of the VSANs to display end device inventory information for that VSAN.

Note

If you filter by hosts or enclosures, you can click a host in the resulting table to see host enclosure performance, a list of hosts, a list of hosts to which your device is connected, and the connection paths. This allows you to see performance statistics for hosts and enclosures.

You can also filter by end devices or by port groups to view aggregate information for those port groups, such as peak and average usage.

Viewing Detailed Information for ISLs

Figure 7-27

To view detailed inventory information about ISLs using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Inventory** tab, and then click **ISLs**.

You see the ISLs tab window as shown in Figure 7-28.
)I	er Web Client Inventory Reports SME A vitches • Licenses • Modules				Download I Logo	ut I About I User ID:
SAN Fabric_demo1 Fabric_demo2 Fabric_sw172-22-46-220	SAN					-
B B 1 abitc_sw172-22-40-220	Fabric	VSANs	From Switch	From Interface	To Switch	To Interface
	1. Fabric_sw172-22-46-220 1	1	172.22.47.167	fc1/1	sw172-22-46-174	fc10/30
	2. Fabric_sw172-22-46-220		172.22.47.167	fcip2	sw172-22-46-174	fcip2
	3. Fabric_sw172-22-46-220 4	4005	mchinMcData	5	sw172-22-46-225	fc1/17
	4. Fabric_sw172-22-46-220 4	444	sw172-22-46-220	fc1/14	sw172-22-46-174	fc10/14
	5. Fabric_sw172-22-46-220 1	1,2,444,666,777,4002,4003	sw172-22-46-220	fc9/1	sw172-22-46-174	fc1/1
	6. Fabric_sw172-22-46-220 4	444	sw172-22-46-220	channel4	sw172-22-46-174	channel1
	7. Fabric_sw172-22-46-220 1	1,2,444,666,777,4002,4003	sw172-22-46-220	fc3/2	sw172-22-46-174	fc3/2
	8. Fabric_sw172-22-46-220 1	1,2,444,666,777,4001,4002,4003	sw172-22-46-220	fc2/5	sw172-22-46-221	fc2/5
	9. Fabric_sw172-22-46-220 1	1,2,444,666,777,4001,4002,4003	sw172-22-46-220	fc2/10	sw172-22-46-221	fc2/13
	10. Fabric_sw172-22-46-220		sw172-22-46-220	fc2/9	sw172-22-46-221	
	Rows per page: 10	v				I { { G₀

Step 2 Expand a fabric and select one of the VSANs to display ISL inventory information for that VSAN.



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

• Select the status level, and click Filter to filter the display to show all ISLs or only those with errors.

Viewing Detailed Information for NPV Links

To view detailed inventory information about NPV Links using Fabric Manager Web Client, follow these steps:

Step 1 Click the Inventory tab, and then click NPV Links.

You see the NPV Links tab window as shown in Figure 7-29.

	et Explorer							
💽 👻 🙋 http://171.71.49.16	65/s245.do					✓ 49	× a4	size
🕸 🌈 NPV Links								🗿 • 🔊 - 🖶
SCO	ager Web Clier		MEAdmin			Change Passv	vord	Download Logout
Summary VSANs				vices 🔹 ISLs 🔹	NPV Links 🔹	Zones 🔹		
SAN	SAN							
Fabric_q148						Statu	s: All	
		-	_	_	_			4 records
	Fabric	VSANs	From NPIV(Core)	From Interface	To NPV Device	To Interface	Speed	Status
		1	v-30	fc8/8	npv1	fc1/5	2Gb	ok
	1. Fabric_q148	-				e	2Gb	ok
	1. Fabric_q148 2. Fabric_q148		v-30	fc8/4	npv2	fc1/3	200	U.C.
		1	v-30 v-30	fc8/4 fc8/13	npv2 npv2	fc1/3 fc1/5	2Gb	ok
	2. Fabric_q148	1						
	2. Fabric_q148 3. Fabric_q148 4. Fabric_q148	1 1 1	v-30	fc8/13 fc8/14	npv2	fc1/5 fc1/6	2Gb	ok ok



Viewing Detailed Information for Zones

To view detailed inventory information about zones using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Inventory** tab, and then click **Zones**.

You see the Zones tab window as shown in Figure 7-30.

Figure 7-30

Zones Tab

Send documentation comments to fm-docfeedback@cisco.com

Fabric Manag Health Performance • Summary • VSANs • S	eIn	ventory Repo	rts SME		cices ♦ ISLs ♦ NPV Links ♦ Zone:	ye Passworu T s ♦	r Downioau i Eog	User ID: adm
SAN Fabric_demo1		SAN						
Fabric_demo2				_		_	_	_
		Fabric	VSAN Id	Zoneset	Zone 🛱	Туре	Switch Interface	Member 🕷
		1. Fabric_demo1	1	DMM_IPFC_ZS	\$default_zone\$	FCID		
		2. Fabric_demo1	1	DMM_IPFC_ZS	\$default_zone\$	FCID		
		3. Fabric_demo1	1	DMM_IPFC_ZS	DMM_IPFC_ZN	IP Subnet(v4)		10.1.2.3
		4. Fabric_demo1	1	DMM_IPFC_ZS	DMM_IPFC_ZN	IP Subnet(v4)		10.1.2.8
		5. Fabric_demo1	1	DMM_IPFC_ZS	DMM_IPFC_ZN	IP Subnet(v4)		10.1.2.5
		6. Fabric_demo1	9	zs_9	DMM_Zone_admin_2008_07_01_18_09	WWN		21:2b:00:05:30:00
		7. Fabric_demo1	9	zs_9	DMM_Zone_admin_2008_07_01_18_09	WWN	demo2 fc1/10	ES11356-2
		8. Fabric_demo1	9	zs_9	DMM_Zone_admin_2008_07_01_18_09	WWN	demo2 fc1/9	NS11356-2
		9. Fabric_demo1	9	zs_9	DMM_Zone_admin_2008_07_10_18_21	WWN	demo2 fc1/10	ES11356-2
		10. Fabric demo1	1.1	zs 9	DMM_Zone_admin_2008_07_10_18_21	MANAZAL	demo2 fc1/9	NS11356-2

Step 2 Expand a fabric and select one of the VSANs to display zone inventory information for that VSAN.



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

• Select the status level, and click Filter to filter the display to show all zones or just those with errors.

Reports

The Reports tab allows you to create customized reports based on historical performance, events, and inventory information gathered by the Fabric Manager Server. You can create aggregate reports with summary and detailed views. You can also view previously saved reports.

The Report tab contains the following subtabs:

- View—Displays previously saved reports.
- Generate—Generates a custom report based on the selected report template.
- **Configuration**—Creates and configures a report template, allowing you to select any combination of events, performance categories, and inventory.
- Scheduled Jobs—Displays scheduled jobs based on the selected report template.

Creating a Custom Report Template

You can create custom reports from all or any subset of information gathered by Fabric Manager Server. You create a report template by selecting events, performance, and inventory statistics that you want in your report and set the desired SAN, fabric or VSAN to limit the scope of the template. You can generate

and schedule a report of your fabric based on this template immediately or at a later time. Fabric Manager Web Client saves each report based on the report template used and the time you generate the report.

As of 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 funcationalities in a single page. You can choose multiple fabrics and VSANs using the new navigation system and it has good scalability to add new items and categories in future.

The new design model has three panels:

- Template panel.
- Configuration panel.
- User selection panel.

The Template panel allows you to navigate through the available templates, add new templates and delete existing templates.

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 will be disabled until the user either adds a new template or select an existing template. The upper portion of the configuration panel is stacked with categories that you can choose and configure.

The User Selection panel displays the user's configuration options in real time. While the configuration panel can display information pertaining to one category at a time, user selection panel displays all the user's selection or configuration.

To create a custom report template using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Report** tab, and then click **Configuration**.

You see the Report Configuration tab as shown in Figure 7-31.

View 🔶 Generate 🔶 Configuration 🔶	Scheduled Jobs 🔸			
Templates	Configuration m	/_new_perf_temp	User Selection my_new_p	erf_te
alex2	Scope Health Inve	ntory Performance	Inventory	
my_new_perf_temp	🛛 🝙 🗁 Inventory		Summary (Include Summary Details : or	1)
new perf	Summary	✓ Include Details	VSANs	
CLICK TO ADD NEW TEMPLATE	VSANs	Status: All	Switches	
CLICK TO ADD NEW TEMPLATE	✓ Switches	Options	Visio Topology Map	
	Licenses	options	Show Link Label	
			Expand Multiple Links	
	Modules		Show End Devices	
	End Devices		Performance	
	ISLs		Utilization Summary	
	Zones		End Devices (Show Top:10)	
	🔻 🗹 🚞 Visio Topology	Мар	(Embed Charts in Reports:on	
	🗹 Show Link Labe	al de la constante de la consta	(Use Fixed Value Range for ch	arts:on
	🗹 Expand Multipl	e Lin	(Show Top:10)	
	✓ Show End Devi	ces	(Embed Charts in Reports:on) (MinYAxis:MB) (MaxYAxis:MB)	J
			Switch Bandwidth	

Figure 7-31 Report Configuration Tab

- Step 2 Click CLICK TO ADD NEW TEMPLATE in the Templates panel to create a new name for your report.
- **Step 3** Click **Scope** in the configuration panel to define the scope.
- **Step 4** Indicate the information you want in the report by navigating to each category such as **Health**, **Performance**, and **Inventory** in the Configuration panel.

Fabric Manager Web Cli Health Performance Inventory		User II
Templates	Configuration my_new_perf_temp	User Selection my_new_perf_ten
alex2	Scope Health Inventory Performance	Performance
my_new_perf_temp	V 🗹 🗁 Data Center	Utilization Summary
new	V Data Center	End Devices
perf	V Brite_mtv5-a09-san-sw2	(Show Top:10) (Embed Charts in Reports:on)
CLICK TO ADD NEW TEMPLATE	VSAN0001	(MinYAxis:MB) (MaxYAxis:MB)
	MTV5_SODC_VMWARE(1201)	ISLs
	MTV5_SODC_NETAPP(1401)	Flows
	MTV5_SODC_VFRAME(1601)	(Show Top:10) (Embed Charts in Reports:on)
	MTV5_NON-SODC_HP-UX(2001)	(MinYAxis:MB) (MaxYAxis:MB)
	MT¥5_NON-SODC_LINUX(2201)	(MaxiAxisimB) Switch Bandwidth
	MTV5_NON-SODC_NETAPP(2401)	Ethernet
	MTV5_NON-SODC_SOLARIS(2601)	
	MTV5_EAP_VMWARE(3101)	
	WMW-Int-Prod(3121)	

- (Optional) Select Severity for events, Status for inventory information, or Type of end devices for Step 5 performance information and inventory information.
- Click **Save** to save this report template. Step 6

Viewing Custom Reports by Template

To view a custom report based on a specific template using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Reports** tab, and then click **View**.

You see the Report table window as shown in Figure 7-33.

Figure 7-33	View Re	eport	Table					
	c Manage		Client ory Reports SME Admi	in			Change Password	I Dow
🛃 Reports	erate 🔶 Edit	♦ Creat	e 🔹 Scheduled Jobs 🔶	_			_	
⊕ Templates ⊕ ⊡ Users						sł	howing 1-2 of 2 reco	rds
		1.	Report 2009-04-17_07-51-12.html	Generation Time		Context SAN	Template SAN_Health_Fabric	
		2.				SAN	SAN_Health_Summ	ary
			Rows per page: 10 💌	I (to page:	1 0	of 1 Pages 🖒 🕨	-11
							Remove	

- **Step 2** In the left pane expand **Templates**.
- **Step 3** Select the report that you want to view. You can view the report in the main screen or you can view the report in a new browser window if you click the report in the report table.
- **Step 4** To delete a specific report, click the check box and then click **Remove**.
- Step 5 To delete all the reports click the check box in the header and then click Remove.

Viewing Custom Reports by Users

To view a custom report based on a specific user using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Reports** tab, and then click **View**.

You see the report table window as shown in Figure 7-34.

Reports

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Figure 7-34	View Re	eport Ta	able				
Health Pe		Inventor	Client y Reports SME Admi + Scheduled Jobs +	in			Change Password T Do
Reports Templates Templates						sł	nowing 1-2 of 2 records
		1. 2	Report 009-04-17_07-51-12.html	Generation Time		Context	Template SAN_Health_Fabric
		2. 2	009-04-17_07-47-57.html	2009/04/17-07:48:07	admin	SAN	SAN_Health_Summary
			Rows per page: 10 💟	I	to page:	1 0	f 1 Pages 🖒 🕅
							Remove

- **Step 2** In the left pane, click to expand **Users**.
- **Step 3** Double-click the user name.
- **Step 4** Select the report that you want to view. You can view the report in the main screen or you can view the report in a new browser window if you click the report in the report table.
- **Step 5** To delete a specific report, click the check box and then click **Remove**.
- **Step 6** To delete all reports click the check box in the header and then click **Remove**.

Delete a Report Template

To delete a custom report using Fabric Manager Web Client, follow these steps:

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

пеа	ith Performance Inventory Re	ports	c	onfig File SME Adr	nin		
 View 	 Generate Configuration S 	hedule	ed Jo	obs 🔸			
	Templates			Configurat	ion test		Use
alex2				Scope Health Inve	entory Perf	ormance	Data Center
my_ne	w_perf_temp		١.	📄 🚞 Inventory			SAN
new				Summary			Fabric_mtv5-a
perf				·			Inventory
CLICK	TO ADD NEW TEMPLATE			VSANs			Switches
				Switches		Options	Licenses
				✓ Licenses	Status:	All	Modules
				✓ Modules	Status:	All	
				End Devices			
				ISLs			
				Zones			
				🔻 🔄 🗁 Visio Topology	у Мар		
				Show Link Lab	el		
				Expand Multip	le Lin		
				Show End Dev	ices		
		_					
	~	_	L				
	my_new_perf_te	6					

Step 2 Drag the selected report template to the trash at the right-bottom corner of the Template panel.

Figure 7-36 Delete Report Template Confirm

D. J. C. D.

Templates	Configuration test	User Selec
alex2	Scope Health Inventory Performance	Data Center
my_new_perf_temp	V 🛄 🎦 Inventory	SAN
new	Summary	Fabric_mtv5-a09-san
perf	-	Inventory
CLICK TO ADD NEW TEMPLATE	VSANs	Switches
	Switches Options	Licenses
	✓ Licenses Status: All	Modules
	Warm	
	and the Dedoes	
	Do you want to remove: my_new_perf_temp ?	1
	Yes No	
	Visio Topology Mag	
	Show Link Label	
	Expand Hultiple Lin	
	Show End Devices	

Generating Custom Reports by Template

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

To generate a report or to schedule a report using Fabric Manager Web Client, follow these steps:

Step 3

- **Step 1** Select a SAN, fabric, or VSAN on which to base the report.
- **Step 2** Click the **Reports** tab, and then click **Generate**.

You see the Generate Custom Report tab window as shown in Figure 7-37.

Figure 7-37 Generate Custom Report Tab

Fabric Manage	the second s		Change Password Download
 View ◆ Generate ◆ Edit Data Center G. SAN 	◆ Create ◆ Sche	duled Jobs 🔶	
Er SAN Fabric_sw-dc2-ex-83 Fabric_sw172-22-46-220	Available: Report Name:	SAN_Health_Summary 2009-05-26_11-21-21	Use Scope from Template Private
	Email Report		Generate Schedule >>

- **Step 3** Choose a report template from the Available drop-down list.
- **Step 4** (Optional) Change the name of the report. By default, report names are based on the date and time generated.
- **Step 5** (Optional) Uncheck the **Use Scope from Template** check box to override the scope defined by the filter type.
- **Step 6** (Optional) Check the **Private** check box to change the attribute of the report. If selected, the report can be viewed only by the specific user and network administrator.
- Step 7 (Optional) Check the Email Report check box to receive an e-mail notification.
- **Step 8** Click **Generate** to generate a report based on this template.

You see the report results in a new browser window. Alternatively, you can view the report by clicking **Report > View** and selecting the report name from the report template you used in the navigation pane.

Step 9 Click **Schedule** to schedule a report based on this template. You see the schedule panel.

You see the Generate Custom Report tab window as shown in Figure 7-38.

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Schedule Reports

ululu Fabric Manage	r Web Clier	nt line in the second
CISCO Health Performance		
♦ View ♦ Generate ♦ Edit		
	♦ Create < St	inequied Jobs +
Data Center		
E Fabric_sw172-22-46-223	Available:	SAN_Health_Switch V Use Scope from Template V Private
🗄 🔐 Fabric_v54	Report Name	
	Email Repo	t Generate Schedule <<
	Start Date:	2009-Apr-17
	Start Time:	09:59:55 PM 💌
	End Date:	2009-Apr-17
	End Time:	11:59:55 PM 💌
	Run:	⊙ Once ○ Daily ○ Weekly ○ Every 5 minutes
	Job Name:	test one
		Email Notification
	Create Job	Cancel

- Step 10 In the schedule panel, specify the scheduled run time and how often you want the report to run.
- Step 11 Click the calendar next to Start Date or End Date to modify the date settings.
- Step 12 Select the Start Time or End Time drop-down list to modify time settings.
- Step 13 Select the frequency at which you need the report to be generated.
- Enter a name for the report in the Job Name field and click Create Job to save the report. Step 14

You can view the scheduled jobs on the Scheduled Jobs page but once the scheduled jobs have started running, they are removed from the Scheduled Job table.



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

Modifying a Custom Report Template

To edit a custom report template using Fabric Manager Web Client, follow these steps:

Step 1	Click the Reports tab, and then click Configuration .
	You see the Templates, Configuration and User Selection panels.
Step 2	Double-click to select a report from the template panel.
	You see the current information about this report in the Configuration panel as shown in Figure 7-39.

Figure 7-38

Fabric Manager Web Clie Health Performance Inventory Re View • Generate • Configuration • S	eports		nin		User	11
Templates		Configuration m		f tomp	User Selection my new perf to	_
•		-				
alex2		Scope Health Inv	entory Perfe	ormance	Inventory	
my_new_perf_temp		🔻 🚬 🗁 Inventory			Summary (Include Summary Details : on)	
new		Summary	🖌 Inclu	ude Details	VSANs	
perf		VSANs	Status:	All	Switches	
CLICK TO ADD NEW TEMPLATE		✓ Switches		Options	Visio Topology Map	
				opuons	Show Link Label	
		Licenses			Expand Multiple Links	
		Modules			Show End Devices	
		End Devices			Performance	
		ISLs			Utilization Summary	
		Zones			End Devices	
		Visio Topolog	u Mar		(Show Top:10) (Embed Charts in Reports:on)	
		Show Link Lab			(Use Fixed Value Range for charts or	0
		✓ Expand Multip			Flows (Show Top:10)	
		Show End Dev			(Embed Charts in Reports:on) (MinYAxis:MB) (MaxYAxis:MB)	
					Switch Bandwidth	

- **Step 3** Indicate the information you want to gather in the report by clicking the **Health**, **Performance**, and **Inventory** tabs in the configuration panel.
- **Step 4** (Optional) Select a severity level for events, status for inventory information, or type of end device for performance information and inventory information.
- **Step 5** Click **Save** to save this report template.
 - <u>Note</u>

Figure 7-39

Report

You cannot change the SAN, fabrics or VSAN the report is based on. Generate a new report for a new SAN, fabrics or VSAN.

Deleting Custom Reports

Reports you generate are saved by Fabric Manager Server. To delete a custom report, you need to first select the report you want to delete. To delete a custom report based on a specific user using Fabric Manager Web Client, follow these steps:

- **Step 1** Click the **Reports** tab, and then click **View**.
- **Step 2** In the left pane, expand **Users**.
- **Step 3** Double-click the user name.
- **Step 4** In the right pane, select the report that you want to delete and then click **Remove**.

Viewing Scheduled Jobs by Report Template

To view scheduled jobs by report template using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Reports** tab, and then click **Scheduled Jobs**.

You see the Scheduled Jobs table window as shown in Figure 7-40.

_ . .

Figure 7-40	Scheduled Jobs Table	

Health Performanc	ger Web Client e Inventory Reports SME Admin it • Create • Scheduled Jobs •		
Report Templates	Scheduled Job	Template	Showing 0-0 of 0 records Generation Time
	Rows per page: 10 💌	🕅 🍕 Go to page:	1 of 1 Pages 🖒 🕅

Step 2 Click a report template in the left navigation pane to view the scheduled jobs based on the selected template.

Modifying Scheduled Jobs

To modify scheduled jobs using Fabric Manager Web Client, follow these steps:

- Step 1 Click the **Reports** tab, and then click **Scheduled Jobs**.
- **Step 2** In the right pane, click **View**.

You see the modify options in the Scheduled Jobs table as shown in Figure 7-41.

)	er Web Client Inventory Reports SME Admin	Change Password
Report Templates	Start Date: 2008-Aug-04 Start Time: 11:59:55 PM ♥ Run: Once Daily Weekly Every 5 minutes Job Name: admin.perfFull Email Notification Edit Job Cancel 	
analysis	Scheduled Job Template Generatio	

Figure 7-41 Modify Scheduled Jobs

- **Step 3** Click the calendar next to Start Date to modify the date settings.
- **Step 4** Select the Start Time drop-down list to modify time settings.
- Step 5 Click to select the appropriate radio button to change the frequency of generating report.
- **Step 6** (Optional) Check the **Email Notification** check box to get the report by e-mail.
- Step 7 Click Edit Job to save changes.

Admin



Only network administrators can access the Fabric Manager Web Client Admin tab. Network operators cannot view the Admin tab.

The Admin tab allows you to perform minor administrative and configuration tasks on the Fabric Manager Server sending data to your web client.

The Admin tab contains the following subtabs:

• **Status**—Displays the status of the Database Server, and allows you to start and stop Performance Collector services on your server. You should to restart services only if something is not working properly, or if too large a percentage of system resources are being consumed.



Note You cannot start or stop the Database Server services using Fabric Manager WebClient. If you are using Microsoft Windows operating system, you need to use Microsoft Management Console to stop, start, or restart the Database Server.

• Configure—Allows you to configure various parameters for Fabric Manager Server.

• Logs—Allows you to view all the logs from the various services running on the Fabric Manager Server.



If you see a database file lock error in the database log, you can fix it by shutting down and restarting the database server using the web client.

Recovering a Web Server Password

Fabric Manager Web Client user passwords are encrypted and stored locally on the workstation where you installed Web Server. If you forget a password, you can create a new network-admin user locally on the workstation where you installed Web Server and then log in and delete the old user account under the Admin tab.

To create a user on the workstation where you installed Web Server and delete the old user, follow these steps:

- **Step 1** Go to the Web Server installation directory and enter the **cd** command to access the bin directory.
- Step 2 Enter the following line to create a user: addUser.{sh,bat} <userName> <dbpassword>
- Step 3 Choose Admin > Configure > Web Users > Local Database.
 You see the list of users in the local database.
- Step 4 Select the user that you want to delete and click Delete to remove the old user.

Starting, Restarting, and Stopping Services

To start, restart, or stop services using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Admin** tab, and then click **Status**.

You see a table of services and the status of each as shown in Figure 7-42.

L

co •	Fabric Manager We Health Performance Inven Status & Configure & Logs &	
5er	vices Service Name	Status
0	Database Server	Running
~	Performance Collector	Running
0		

Step 2 Select the services you want to start, restart, or stop.

Step 3 Click Start or Stop, or Restart.

The selected services are started, restarted, or stopped.

\$. Note

If the word "more" is in the Status column, you can click it to view a detailed status of the service.

Note

You need to configure Performance collection in order to start, stop or restart Performance Collector.

Adding, Editing, and Removing Managed Fabrics

Fabric Manager Web Client reports information gathered by the Fabric Manager Server on any fabric known to the Fabric Manager Server.

To start managing a fabric from the Fabric Manager Server using Fabric Manager Web Client, follow these steps:

- **Step 1** Click the **Admin** tab, and then click **Configure**.
- **Step 2** Click **Fabrics** in the left navigation pane.

You see the list of fabrics (if any) managed by Fabric Manager Server in the Opened column as shown in Figure 7-43.

Figure 7-43	List of Fabrics Managed by the Fa	ıbric Manager Server
-------------	-----------------------------------	----------------------

	anager Web Client mance Inventory Reports SME re + Logs +	EAdmin		Change Pa	assword D	ownload Logout Al
• Fabrics					sł	nowing 1-3 of 3 records
·· Registration	Fabric Name	Opened Use FC Alias	User User Role	Licensed	Use SNMPv3	Last Opened
•• Forwarding •• Clients	1. Fabric_demo1	false false	admin network-admin	Eval In Grace	true	07/31/2008 11:13:31
> Preferences	2. 🗌 Fabric_demo2	false false	admin network-admin	Licensed	true	07/31/2008 11:38:47
Communities FMS Users	3. Fabric_sw172-22-46-220 f	true false	admin network-admin	Licensed	true	08/11/2008 06:05:08
AAA						
Local Database Local Roles	Rows per page: 10 💟		[<] 🜖 Go to pag	ge: 1 o	f 1 Pages 🖨 🖒 🕅
 Performance Collections Others 			Add Edit	Remove	Purge Down	Elements
•• Thresholds •• Database						

Step 3 Click Add.

You see the Add Fabric dialog box as shown in Figure 7-44.

🛚 Add Fabric - Microsoft I 📃 🗆 🔀						
Fabric Seed Switch:						
Community:						
Use SNMPV3:						
	Add Close					

Figure 7-44 Add Fabric Dialog Box

- **Step 4** Enter the seed switch IP address, read community and write community for this fabric.
- **Step 5** Enter the user name and password for this fabric.
- Step 6 (Optional) Check the SNMPV3 check box. If you check SNMPV3, the fields Read Community and Write Community change to User Name and Password. You must enter your user name and password.
- **Step 7** Select the privacy settings from the **Auth-Privacy** listbox.
- **Step 8** Click **Add** to begin managing this fabric.
- **Step 9** Select the IP address of the server from the **Server** listbox.

To stop managing a fabric from Fabric Manager Server using Fabric Manager Web Client, follow these steps:

- **Step 1** Click the **Admin** tab, and then click **Configure**.
- **Step 2** Click **Fabrics** in the left navigation pane.

Step 3 Check the check box next to the fabric that you want to remove and click **Remove** to discontinue data collection for that fabric.

To edit a fabric from Fabric Manager Server using Fabric Manager Web Client, follow these steps:

- Step 1 Click the Admin tab, and then click Configure.
- **Step 2** Click **Fabrics** in the left navigation pane.
- Step 3 Check the check box next to the fabric that you want to edit and click Edit.You see the Edit Fabric dialog box as shown in Figure 7-45.

Figure 7-45 Edit Fabric Dialog Box

Edit Fat	oric - Microso	oft I 📃 🗆 🔀
Fabric Name:	Fabric v185	
User Name:	admin	
Password:		
Use SNMPV3:		
Auth-Privacy:	MD5 💌	
Monitor:	TRUE	Manage Continuously 💌
	Modify Close	

- **Step 4** Enter a new fabric name, user name and password and specify how you want Fabric Manager Server to manage the fabric by selecting an option from the drop-down list.
- **Step 5** Click **Modify** to save the changes.

Viewing Trap and Syslog Registration Information

To view trap and syslog registration information from Fabric Manager Server using Fabric Manager Web Client, follow these steps:

- Step 1 Click the Admin tab, and then click Configure.
- **Step 2** Click **Registration** in the left navigation pane.
- **Step 3** Select a fabric to display registration information for that fabric.

You see the Registration screen showing the registration information for the selected fabric as shown in Figure 7-46.

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rigure 7-40 F	negistration Screen			
CISCO	anager Web Client mance Inventory Reports SI	MEAdmin	Change Pass	word Download Logout About User ID
Status < Configuration	re 🔹 Logs 🔹			
	SAN	Fabric_demo2		
Fabrics Events Registration Forwarding	Fabric_demo2 Fabric_sw172-22-46-220	Syslog Server Address: 172.23		d, 13994 dropped, 32673 processed) ropped, 0 processed)
·· Clients				Showing 0-0 of 0 records
 Preferences Communities 		Switch Re	gistered For Traps	Registered For Syslog
> FMS Users		No records.		
•• AAA •• Local Database				
Local Roles Performance		Rows per page: 10 💙	🕅 🌗 Go to j	page: 1 of 1 Pages 🖨 👂 🕅
Collections Others Thresholds Database		4		Purge All Events
		111		7

Step 4

4 (Optional) Click the **Print** icon or the **Export Report** icon for a copy of the information.

Configuring Forwarding of Notifications for Events

Address: hpov Minimum Severity: Warning

¥

You can use Fabric Manager Web Client to add and remove notification forwards for system messages.

Fabric Manager Web Client forwards fabric events via e-mail or SNMPv1 traps.
To add a notification forward using Fabric Manager Web Client, follow these steps:
Click the Admin tab, and then click Configure.
Click Forwarding in the left navigation pane.
Click Add.
You see the Add Notification dialog box as shown in Figure 7-47.
Figure 7-47 Add Notification Dialog Box
Add Notification - Micro
Туре: Тгар 🗸
Fabric: All
VSAN Scope: 🗹 All (or Id List :

Step 4 In the Type field, either choose E-Mail or SNMP Trap. If you choose Trap, a Port field is added to the dialog box.

Close

Port: 162

Add

- **Step 5** From the Fabric drop-down list, choose the fabric for notification.
- **Step 6** Either check the **VSAN Scope** check box to receive notifications for all VSANs, or enter the VSAN IDs in the ID List field to limit the VSANs for which you want to receive notifications.
- **Step 7** Enter the e-mail address for notifications in the Address field.
- **Step 8** From the Minimum Severity drop-down list, select the severity level of the messages to receive.
- Step 9 Click Add to add the notification.



```
The traps sent by Fabric Manager Server correspond to the severity type followed by a text description:
```

```
trap type(s) = 40990 (emergency) 40991 (alert) 40992 (critical) 40993 (error) 40994
(warning) 40995 (notice) 40996 (info) 40997 (debug)textDescriptionOid = 1, 3, 6, 1, 4, 1,
9, 9, 40999, 1, 1, 3, 0
```

To remove a notification forward using Fabric Manager Web Client, follow these steps:

- **Step 1** Click the **Admin** tab, and then click **Configure**.
- **Step 2** Click **Forwarding** in the left navigation pane.
- **Step 3** Check the check box in front of the notification that you want to remove.
- Step 4 Click Remove.

Viewing and Disconnecting Clients

To view or disconnect clients from the Fabric Manager Server using Fabric Manager Web Client, follow these steps:

- **Step 1** Click the **Admin** tab, and then click **Configure**.
- **Step 2** Click **Clients** in the left navigation pane.

You see the Clients page as shown in Figure 7-48.

Admin

Figure 7-48 List	of Clients		
	anager Web Client nance Inventory Reports SME Admir re + Logs +		nange Password D
·· Fabrics > Events		Showin	g 1-1 of 1 records
Registration Forwarding Clients	Session ID User IP Address 1. 29 admin 64.104.150.11	Role Login 1 network-admin 2008/08/11-05:33:13 2008	Last Access 8/08/11-06:10:38
Preferences Communities FMS Users AAA	Rows per page: 10 💌	🕅 🍕 Go to page: 1 of 1 Pa	ages \Rightarrow $\left $ $\left $
·· Local Database ·· Local Roles Performance		Discon	nect 📚 🚔
Performance Collections Others Thresholds Database			

Step 3 Check the check box next to the client you want to disconnect.

Step 4 Click Disconnect.

Configuring Fabric Manager Server Preferences

To configure Fabric Manager Server preferences, click the **Admin** tab, click **Configure** and then click **Preferences** in the left navigation pane. Follow the on-screen instructions.

Adding and Removing Communities

You can use Fabric Manager Web Client to add and remove communities.

To add a community fabric using Fabric Manager Web Client, follow these steps:

- Step 1 Click the Admin tab, and then click Configure.
- **Step 2** Click **Communities** in the left navigation pane.
- Step 3 Click Add.

You see the Add Community dialog box shown in Figure 7-49.

Γ

Admin

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Figure 7-49

e 7-49 Add Community Dialog Box

Add Comm	nunity 📘 🗆 🔀
IP Mask/Address:	
Community:	
	Add Close
	Ŏ

Step 4 Enter the IP mask or address of the community in the IP Mask/Address field.



Step 5 Enter the name of the community in the Community field.

Step 6 Click **Add** to add the community.

To remove a community using Fabric Manager Web Client, follow these steps:

- **Step 1** Click the **Admin** tab, and then click **Configure**.
- Step 2 Click Communities in the left navigation pane.

You see the Communities page shown in Figure 7-50.

Figure 7-50 Communities Page

	anager Web Client	Change Password I
♦ Status ♦ Configur	re + Logs +	
 Fabrics Events Registration Forwarding Clients Preferences Communities FMS Users AAA 	The IP Mask can contain wildcards (0s) which are typically used to assign comm For example: 10.0.0.0=public would be used for all class A addresses beginning FM will not contact switches with \$IGNORE_COMMUNITY\$. Show IP Mask/Address Read No records.	
Local Database Local Roles Performance Collections Others Thresholds Database	Rows per page: 10 💌 🕅 🕼 Go to page: 1 of 1	nove

Step 3 Check the check box next to the community that you want to remove and click **Remove**.



Cisco Fabric Manager 3.0(1) does not require you to make changes to the communities.properties file even if you are using a Cisco MDS 9020 switch or any third-party devices.

Configuring AAA Information

To configure Fabric Manager Server preferences, click the **Admin** tab, click **Configure**, and then in the left pane, select **FMS Users** and **AAA** and follow the instructions on the screen.

Adding and Removing Users

You can use Fabric Manager Web Client to add and remove Web Server users.

To add a user using Fabric Manager Web Client, follow these steps:

- Step 1 Click the Admin tab, and then click Configure.
- **Step 2** Select **Local Database** in the left navigation pane.

You see the Local Database page as shown in Figure 7-51.

Figure 7-51 Local Database Page



Step 3 Click Add.

You see the Add User dialog box as shown in Figure 7-52.

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Admin

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	Figure 7-52	Add User Dialog Box
--	-------------	---------------------

Add User	- Microsoft Int 📃 🗆 🔀	
User Name:		
Role:	network-operator 💌	
Password:		
Confirm Password:		
	Add Close	84695

Step 4 Enter the user name in the User Name field.

- **Note** The user name **guest** is a reserved name (case insensitive). The guest user can only view reports. The guest user cannot change the guest password, nor can the guest user access the Admin tab in Fabric Manager Web Client.
- **Step 5** Select a role for the user from the Role drop-down list.
- **Step 6** Enter the password in the Password field.
- **Step 7** Enter the password again in the Confirm Password field.
- **Step 8** Click **Add** to add the user to the database.
- **Step 9** Repeat Steps 3 through 7 to continue adding users.

To remove a user using Fabric Manager Web Client, follow these steps:

- Step 1 Click the Admin tab, and then click Configure.
- **Step 2** Select **Local Database** in the left navigation pane.
- **Step 3** Click the radio button next to the user that you want to remove and click **Remove**.

Adding and Removing Roles

You can use Fabric Manager Web Client to add and remove Web Server roles.

To add a role using Fabric Manager Web Client, follow these steps:

Step 1 Click the Admin tab, and then click Configure.

Step 2 Click Local Roles in the left navigation pane.You see the Local Roles page as shown in Figure 7-53.

Figure 7-53 Local R	loles Page		
	anager Web Client nance Inventory Reports re + Logs +	SME Admin	Change Pa
	No records.	Role Name	Showing 0-0 of 0 records Access
 FMS Users AAA Local Database Local Roles Performance Collections Others Thresholds Database 	Rows per page: 10	Go to page: 1	of 1 Pages 🖒 🕨 🕅

Step 3 Click Add.

You see the Add Role dialog box as shown in Figure 7-54.

Figure 7-54	Add Role Dialog Box
-------------	---------------------

Role Name:	
Select Fal	brics Visible to Operator Role
Available Fabrics	Selected Fabrics
Fabric rtp5-iops-sw2	
Fabric sw172-22-47-132	
	> Add >>
	Aug 22
	<< Remove <

- **Step 4** Enter the role name in the Role Name field.
- **Step 5** Select fabrics that the role can access from the Available Fabrics column and add them to the Selected Fabrics column.
- **Step 6** Click **Add** to add the role to the database.
- **Step 7** Repeat Steps 3 through 5 to add additional roles.

To remove a role using Fabric Manager Web Client, follow these steps:

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Admin

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- **Step 1** Click the **Admin** tab and then click **Configure**.
- **Step 2** Select Local Roles in the left navigation pane.
- Step 3 Click the radio button next to the role you want to remove and click Remove.

Creating Performance Collections

If you are managing your fabrics with Performance Manager, you need to set up an initial set of flows and collections on the fabric. You can use Fabric Manager Web Client to add and remove performance collections. The fabric has to be licensed and in the Managed Continuously state before a collection for the fabric can be created.



You cannot manage performance collections for multiple devices through a single port interface. Since only one set of statistics exists per interface, Fabric Manager Web Client can manage performance collections for only one visible FL or iSCSI device through an interface.

To add a collection using Fabric Manager Web Client, follow these steps:

- Step 1 Click the Admin tab, and then click Configure.
- Step 2 Click Collections in the left navigation pane.

You see the Collections page as shown in Figure 7-55.

Figure 7-55 Collections Page

CISCO	anager Web Client mance Inventory Reports S re + Logs +	MEAdmin				Chan	ye rasso	ora i Download	User I	
	Automatically collect new Interpolate missing statist							Showi	Apply	
 FMS Users AAA Local Database 	Fabric		SLs Hosts	Storage	Flows	Ethernet	Others	Traffic Threshold	Event Threshold	
Local Roles Performance Collections Others Thresholds Database	1. Fabric_sw172-22-46-2: Rows per page: 10 V	20 all tru	ue true	true	true	true	Go to pa	true Ige: 1 of 1 l Edit Rem		88678

Step 3 Click Add.

You see the Create Collection dialog box as shown in Figure 7-56.

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Figure 7-56 Create Collection Dialog Box

Create Colle	ection - Microsoft Int 🔳 🗆 🔀
Fabric:	Fabric v185 💌
VSAN Scope:	All (or ld List:)
Туре:	SLs Hosts Storage Flows
Enable Thresholds:	Traffic Event
	Create Close

- **Step 4** Select a fabric for which to collect performance data from the Fabric drop-down list.
- **Step 5** Either check the **VSAN Scope** check box to receive notifications for all VSANs, or enter the VSAN IDs in the **ID List** field to limit the VSANs for which you want to collect performance data.
- **Step 6** Check the check boxes for the type(s) of entities for which you want to collect performance data.
- **Step 7** Check the check boxes for the type(s) of thresholds you want to enable.
- **Step 8** Click **Create** to add the collection and add it to the table.
- **Step 9** Repeat Steps 3 through 8 to continue adding roles.

Note

 Performance Manager shows statistics for fabrics that you have configured collections for using the Collection Wizard.

To remove a collection using Fabric Manager Web Client, follow these steps:

- Step 1 Click the Admin tab, and then click Configure.
- **Step 2** Click **Collections** in the left navigation pane.
- Step 3 Check the check box next to the collection you want to remove and click Remove.

Configuring Other Statistics

To configue other statistics using Fabric Manager Web Client, follow these steps:

Step 1 Click the **Admin** tab, and then click **Configure**.

Step 2Click Others in the left navigation pane.You see the Others page as shown in Figure 7-57.

Figure 7-57	Others Page
Healt	Change abric Manager Web Client th Performance Inventory Reports SME Admin + Configure + Logs +
Fabrics Events Registration Forwarding Clients Preferences Communities FMS Users AAA Local Databa Local Databa Collections	Add Remove
•• Others •• Thresholds •• Database	

Step 3 Click Add.

Admin

You see the Add Oid dialog box as shown in Figure 7-58.

Figure 7-58	Add Oid Dialog Box
-------------	--------------------

add Oid	l - Microsoft Internet Explorer 🔳 🗖 🔀
Fabric:	Fabric rtp5-iops-sw2 💌
Other OID:	User Specify 💌
DisplayName:	
Switch:	II All
Туре:	GAUGE 🔽
	Add Close
•	

- **Step 4** Select a fabric for which you want to add other statistics.
- **Step 5** Select the statistic that you want to add from the Other OID drop-down list and specify a name for the statistic in the Display Name field.
- **Step 6** Click **Add** to add this statistic.

Configuring Collection Thresholds

To configure collection thresholds using Fabric Manager Web Client, follow these steps:

- Step 1 Click the Admin tab, and then click Configure.
- Step 2 Select Thresholds in the left navigation pane.

You see the Thresholds page as shown in Figure 7-59.

Figure 7-59	Thresholds Page
-------------	-----------------

ahah cisco		anager Web Client mance Inventory Reports SME Admin re + Logs +	
·· Forw ·· Clients ·· Prefer ·· Com FMS U: ·· AAA ·· Loca	stration varding ences munities sers I Database	Use Absolute Values: Send Critical when traffic exceeds 80 595% (100=capacity) Send Warning when traffic exceeds 50 595% (100=capacity) Baseline Values over past 1 Week Send Critical when traffic exceeds 400 100500% (100=normal) Send Warning when traffic exceeds 200 100500% (100=normal)	
> Perfo Colle Othe	esholds	Apply	188630

Step 3 If you are using absolute values, follow these steps, otherwise skip to Step 3.

- **a.** To configure conditions for sending Critical notifications, check the **Send Critical** check box. In the "...when traffic exceeds" field, enter a number (from 5 to 95) to indicate the percentage at which the Critical notification is sent. For example, entering **10** causes a notification to be sent when traffic at any given time exceeds 10% of capacity.
- **b.** To configure conditions for sending Warning notifications, check the **Send Warning** check box. In the "...when traffic exceeds" field, enter a number (from 5 to 95) to indicate the percentage at which the Warning notification is sent. For example, entering **9** causes a notification to be sent when traffic at any given time exceeds 9% of capacity.
- **Step 4** Select the time period for the collection (1 Week, 1 Month, or 1 Year) from the Baseline Values over past drop-down list. The baseline value represents the sum of the absolute values.
 - **a.** To configure conditions for sending Critical notifications, check the **Send Critical** check box. In the "...when traffic exceeds" field, enter a number to indicate the percentage at which the Critical notification is sent. For example, entering **300** causes a notification to be sent when traffic for the selected period exceeds 300% of capacity.

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Admin

b. To configure conditions for sending Warning notifications, check the Send Warning check box. In the "...when traffic exceeds" field, enter a number to indicate the percentage at which the Warning notification is sent. For example, entering 150 causes a notification to be sent when traffic for the selected period exceeds 150% of capacity.

Step 5 Click Apply.

Admin

Importing the RRD Statistics Index

To manually import the RRD statistics index, follow these steps:

- **Step 1** Stop Fabric Manager Server.
- **Step 2** Copy the original RRD file into \$INSTALLDIR/pm/db.
- **Step 3** Run \$INSTALLDIR/bin/pm.bat s.
- **Step 4** Restart the Fabric Manager Server and add the fabric.

Configuring the RRD Database

Configuring the RRD database allows you to set the intervals at which data samples are collected. After applying the configuration, the database storage format is converted to a new format at those intervals. Since database formats are incompatible with each other, you must copy the old data (before the conversion) to the \$INSTALLDIR/pm directory. See"Importing the RRD Statistics Index" section on page 7-66.

To configure the RRD database using Fabric Manager Web Client, follow these steps:

- Step 1 Click the Admin tab, and then click Configure.
- **Step 2** Select **Database** in the left navigation pane.

You see the Performance Database (collection interval) page as shown in Figure 7-60.

Figure 7-60

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Performance Database Page

♦ Status ♦ Config	ormance Inven jure + Logs +	tory Reports	SME Admin		
Fabrics Events Registration Forwarding	Days	In Default	tervals ISLS	S Default	amples ISLS
Clients Preferences Communities	2.083	5 min 30 min	5 min 💙	600	600
FMS Users ·· AAA ·· Local Database ·· Local Roles	64.583	2 hr 1 day		775	
Collections Others	Disk Space	e per ISL/End Space in Use:		500	
• Thresholds • Database					Apply Defaults

Step 3 Enter the number of days to collect samples at 5-minute intervals in the top row of the Days column.

- **Step 4** Enter the number of days to collect samples at 30-minute intervals in the second row of the Days column.
- **Step 5** Enter the number of days to collect samples at 2-hour intervals in the third row of the Days column.
- **Step 6** Enter the number of days to collect samples at 1-day intervals in the bottom row of the Days column.



As of Cisco SAN-OS Release 3.1(1) and later, you can configure the sampling interval for ISLs. Select a sampling interval from the ISLs drop-down list.

Step 7 Click **Apply** to apply your changes, or click **Defaults** to reset the file sizes to the default values.

If you are applying new values, or if the current values are not the default values, you see a message indicating that conversion of the RRD files will take a certain amount of time and that the database will be unavailable until then. The time it takes depends on the difference between the old and new values.



The system allows you to convert data, one process at a time. When you start converting the data, the Apply and Default buttons change to Refresh and Cancel so that another process cannot be inadvertently started. The display is the same for all browsers accessing the server during this time. Click **Refresh** to view the latest progress. Click **Cancel** to cancel the process of converting the data. If the job is successfully canceled, you see the Apply and Default buttons again. If the cancel job is not successful, you see a message indicating that the cancellation has failed.

If you want to perform this procedure, it is best to perform it before collecting a lot of data. Otherwise, converting the data can take a long time.

Viewing Log Information

You may occasionally want to view logs such as the Fabric Manager Server log. These processes have no corresponding GUI to allow you to view information about these log files. If you see errors, preserve these two files for viewing.

To view log information using Fabric Manager Web Client, follow these steps:

- Step 1Click the Admin tab, and then click Logs.You see a list of viewable logs in the left column.
- **Step 2** Click a log file to view it.

Downloading Fabric Manager Client

You must use Fabric Manager Web Client to launch Fabric Manager Client. See the "Launching Fabric Manager Client in Cisco SAN-OS Release 3.2(1) and Later" section on page 5-2 for information on launching Fabric Manager Client.

To launch Fabric Manager Client, follow these steps:

Step 1 Choose Admin > Download.

Step 2 Click the link for either Fabric Manager or Device Manager.

If you are launching Fabric Manager Client for the first time, you see a message asking whether you want to create shortcuts for Fabric Manager.

Step 3 Click **Yes** to create shortcuts for Fabric Manager.



This message only appears the first time you launch Fabric Manager Client.

Fabric Manager Web Search Engine

The search engine helps you locate records that mach a specific criteria. The search entity is divided into two categories: inventory and performance. In the inventory type, you can search by the switch (name of the switch, IP address of the switch and WWN), Endport (alias, IP address of the switch and WWN) and VSANs (name of the VSAN, IP address of the principle switch and WWN). In the performance type, you can search by end device (Endport alias, Endport WWN), Flow (name of the flow) and ISLs (name of the ISL and WWN of the ISL). You can also use wild card characters in the search.

Using Fabric Manager Search Engine

To conduct a search, follow these steps:

Step 1 Click Search on the top.

You see the search page as shown in Figure 7-61.

Figure	7-61 Search Page	
diala cisco	Fabric Manager Web Client Health Performance Inventory Reports Config File SME Admin	Search Change A
	Name Find	
	Name	
	IP Address	
	WWW	
	Alias	
	Event Description	
		277680
		27

- **Step 2** Enter the name to search in the text box.
- **Step 3** Select the appropriate type from the combo box and then click **Find**.
 - A window appears with your results as shown in Figure 7-62.

igure 7-62	Search Re	sults				
diala cisco	Fabric Mar	nager Web Clie	ent		~ 4	
H	lealth Perform	ance Inventory R	eports	Config	File SM	E Admin
sw		Name		F	ind	Found 200 resi
	ntory ormance		-	-	_	
Name	ormance				Туре	
				•	End Device	•
	S_HBAO					
SWAN:	S_HBA1				End Device	_
rtp5-b	ackup-sw1:channel1<	->rtp5-backup-sw2:channe	el1		ISL	
rtp5-ei	rp-sw3:channel2<->rt	p5-erp-sw4:channel2			ISL	
rtp5-sa	angw-sw2:channel10<	->rtp5-inv3608-sw4:chani	nel10		ISL	
rtp5-sa	angw-sw2:channel12<	->rtp5-san34k-sw2:chann	el12		ISL	
rtp5-sa	angw-sw2:channel1<-	>rtp7-sangw-sw2:channel	1		ISL	
rtp5-sa	angw-sw2:channel2<-	>rtp5-iops-sw2:channel2			ISL	
rtp5-sa	angw-sw2:channel3<-	>rtp5-corpsysca-sw2:char	nel2		ISL	
rtp5-sa	angw-sw2:channel4<-	>rtp5-erp-sw3:channel4			ISL	
rtp5-sa	angw-sw2:channel5<-	>rtp5-erp-sw4:channel5			ISL	•
Even	ıt					

Step 4 Click the entity type to see the details.

You see the details of the selected entity in the right pane as shown in Figure 7-63.

Fabric Manage	r Web Client			
Health Performance • Status • Search • Confi	Inventory Reports SME Adm	nin)		
	yara caya c			
fabric*	Name v Search			
		+		
Name	Туре		Name	Fabric1-DA-Init-29
Fabric1-DA-Init-191	End Device	-	Enclosure	FABRICI-DA-INIT-29
Fabric1-DA-Target-306	End Device			
Fabric1-DA-Target-187	End Device		Port WWN	10:01:00:00:c9:00:00:00
Fabric1-DA-Init-310	End Device		FcId	iscsi2/1
Fabric1-DA-Target-221	End Device		Switch Interface	iscsi2/1
Fabric1-DA-Init-344	End Device		If Speed	100000000
Fabric1-DA-Target-340	End Device		Link Staus	none
Fabric1-DA-Init-225	End Device		<u></u>	
Fabric1-DA-Init-29	End Device			
Fabric1-DA-Target-408	End Device			
Fabric1-DA-Target-33	End Device			
Fabric1-DA-Init-404	End Device			
Fabric1-DA-Init-498	End Device			
Fabric1-DA-Target-127	End Device			
Fabric1-DA-Init-123	End Device			
Fabric1-DA-Target-84	End Device			
Fabric1-DA-Init-479	End Device			
Fabric1-DA-Target-475	End Device			

Step 5 Click the chart icon at the bottom of the right pane to view the graphical representation of the data.You see the graph as shown in Figure 7-64.

Figure 7-64 Data in Chart



Step 6 Click the grid icon in the right pane to View the data in grid format.

Figure 7-63 Detailed Results

You see the data in grid format as shown in Figure 7-65.

Figure 7-65 Data in Grid

SW	Name	Find Found 200 results			
Inv	Entity	PM Chart			
entor	Name rtp5-backup-sw1:channel1	Time	Rx	Tx	
<	<>	Thu Dec 10 2009 08:35:00 AM	1.59e6	3.12e7	-
		Thu Dec 10 2009 08:40:00 AM	1.6e6	3.2e7	-
	rtp5-backup-sw2:channel1	Thu Dec 10 2009 08:45:00 AM	1.61e6	3.37e7	
Pe	Avg. Rx/sec 10.287Mb	Thu Dec 10 2009 08:50:00 AM	1.61e6	3.27e7	
fo	Avg. Tx/sec 27.113Mb	Thu Dec 10 2009 08:55:00 AM	1.61e6	3.18e7	
ma	(Rx+Tx)/sec 37.400Mb	Thu Dec 10 2009 09:00:00 AM	1.61e6	3.17e7	
nce		Thu Dec 10 2009 09:05:00 AM	1.61e6	3.31e7	
	Peak Rx/sec 52.029Mb	Thu Dec 10 2009 09:10:00 AM	1.61e6	3.29e7	
	Peak Tx/sec 35.004Mb	Thu Dec 10 2009 09:15:00 AM	1.61e6	3.22e7	
Eve	Errors 0.0	Thu Dec 10 2009 09:20:00 AM	1.53e6	3.26e7	
Ë.	Discards 0.0	Thu Dec 10 2009 09:25:00 AM	1.61e6	3.34e7	

Step 7 Click Range Selecter to analyze performance data in a specific range.

Step 8 You see the range selector as shown in Figure 7-66.

Figure 7-66 Range Selector





Step 10 Click the Range Selector again to turn off the range selector.

Configuring Backups Using Fabric Manager WebClient

Using Fabric Manager WebClient, you can periodically backup startup and running configurations of the switch. You can also view backed-up configurations, schedule configuration backups, compare two backed-up configurations, and restore a configuration onto a switch.

Viewing a Configuration

To view a configuration, follow these steps:

Step 1 Click the Config File tab and then click View.

You see the configuration information as shown in Figure 7-67.

Figure 7-67 Viewing Configuration

						earch Chang	e Password 丨 I	Download Log	out
	Fabric Ma	nager Web C	lient						
	ealth Perform	nance Inventory	Reports Config	File SME Ad	min				
View	v ♦ Compare	♦ Restore ♦ Creat	e Backups 🔸 Show	v Jobs 🔸					
View Conf	figuration								
Fabric:	-Select Fabric	💌 Switch	:Select Switch	Configuration	:Select configu	ration file 💌	View		
						L			
									9
									277640
									N
	♦ View View Cont	Health Perform	Health Performance Inventory View Compare Restore Creat View Configuration	Health Performance Inventory Reports Config • View • Compare • Restore • Create Backups • Shov View Configuration	Health Performance Inventory Reports Config File SME Adu • View • Compare • Restore • Create Backups • Show Jobs • View Configuration	Fabric Manager Web Client Health Performance Inventory Reports Config File SME Admin • View • Compare • Restore • Create Backups • Show Jobs • View Configuration	Fabric Manager Web Client Health Performance Inventory Reports Config File SME Admin • View + Compare + Restore + Create Backups + Show Jobs + View Configuration	Fabric Manager Web Client Health Performance Inventory Reports Config File SME Admin • View + Compare + Restore + Create Backups + Show Jobs + View Configuration	Health Performance Inventory Reports Config File SME Admin • View • Compare • Restore • Create Backups • Show Jobs • View Configuration

- **Step 2** Select a fabric name from the Fabric drop-down list.
- **Step 3** Select a switch from the Switch drop-down list.
- **Step 4** Select a configuration file name from the Configuration file drop-down list.
- Step 5 Click View.

Comparing Configurations

To compare configurations, follow these steps:

Step 1 Click the Config File tab, and then click Compare.You see the compare configuration information as shown in Figure 7-68.

Γ

Figure 7-68 Compare Configurations

	Search Change Password Download Logout
cisco	Fabric Manager Web Client
cisco	Health Performance Inventory Reports Config File SME Admin
<u> </u>	View • Compare • Restore • Create Backups • Show Jobs •
Comp	pare Configurations
Fabr	ic:Select Fabric 💟 Switch:Select Switch 💟 Configuration:Select configuration file 💌
Fabr	ic:Select Fabric 👽 Switch:Select Switch 💌 Configuration: 💿 ArchiveSelect configuration file 💌 ORunning Ostartu
Com	Server Type: TFTP O FTP O SFTP O SCP Legend: Deleted Added Modified

- **Step 2** Select a fabric name from the Fabric drop-down list.
- **Step 3** Select a switch from the Switch drop-down list.
- **Step 4** Select a configuration file name from the Configuration file drop-down list.
- **Step 5** Select a fabric name from the Fabric drop-down list in the second row.
- **Step 6** Select a switch from the Switch drop-down list in the second row.
- **Step 7** Click to select a configuration type (Archive, Running, Startup).
- Step 8 Click to select a Server Type (TFTP, FTP, SFTP, SFP).
- Step 9 Click Compare.

Restoring Configurations

To restore a configuration on a switch, follow these steps:

Step 1 Click the **Config File** tab, and then click **Restore**.

You see the compare configuration information as shown in Figure 7-69.

Figure 7-69 Restore Configurations

										Search I	Change Password I	Download I Logou
	iilii ico	F	Fabric №	lanager V	Veb	Client						
		Hea	lth Perfo	rmance Inv	ento	ry Repo	rts Config	File	SME Admin			
	 Vi 	iew	Compare	+ Restore	♦ C	reate Backi	ups 🔸 Show	/ Jobs	٠			
6	Restor	e Rur	nning Conf	iguration								
	Fabric	:	Fabric_mtv	5-a09-san-sw2	¥	Switch: 1	0.18.217.199	*	Configuration:	Select configurat	ion file 💌	
	Fabric	: [Fabric_mtv	5-a09-san-sw2	~	Switch: 1	0.18.217.73	*		Server Type:		TP OSFTP OSCP
	Resto	re										
												N
												277652
												CV.

- **Step 2** Select a fabric name from the Fabric drop-down list.
- **Step 3** Select a switch from the Switch drop-down list.
- **Step 4** Select a configuration file name from the Configuration file drop-down list.
- **Step 5** Select a fabric name from the Fabric drop-down list in the second row.
- **Step 6** Select a switch from the Switch drop-down list in the second row.
- **Step 7** Click to select a Server Type (TFTP, FTP, SFTP, SFP).
- Step 8 Click Restore.

Creating Backups

To create a backup of the configuration, follow these steps:

Step 1 Click **Config File** tab and then click **Create Backups**.

You see the backup configuration page as shown in Figure 7-70.

Figure 7-70 Creating Backups

dodo e	abric Manager Web Client	
isco	th Performance Inventory Reports Config File SME Admin	
🔹 View 🤞	Compare 🔹 Restore 🔹 Create Backups 🔹 Show Jobs 🔹	
Fabrics:	Select Fabric	
Configuratio	n: 💿 Running Config 🔿 Startup Config	
Server Type		
Start Date:	2009-Dec-11	
Start Time:	09:59:55 PM 💌	
Run:	⊙ Once ○ Daily ○ Weekly ○ Monthly	
Job Name:		
Create Job		

- **Step 2** Select a fabric name from the Fabric drop-down list.
- **Step 3** Click to select a configuration type (Archive, Running, Startup).
- Step 4 Click to select a Server Type (TFTP, FTP, SFTP, SFP).
- **Step 5** Click the calendar icon to select a start date.
- **Step 6** Enter the start time.
- Step 7 Click to select the frequency (Once, Daily, Weekly, Monthly) at which you want to perform backup.
- **Step 8** Enter a name to identify this backup task.
- **Step 9** Click **Create Job** to save this job schedule.

Viewing Scheduled Jobs

To view the scheduled backup jobs, follow these steps:

Step 1 Click the Config File tab, and then click Show Jobs.

You see the scheduled jobs information as shown in Figure 7-71.

Figure 7-71 Viewing Scheduled Jobs

не	alth Performance Inven	tory Reports Config	File SME Admin	
 View 	🔹 Compare 🔹 Restore 🔹	Create Backups 🔹 Show	Jobs 🔸	
			Showin	g O-O of O records
	Scheduled Job	<u>UserName</u>	Generation Time	<u>Details</u>
o records	s,			
	Rows per page: 10 💌	🛛 🌒 Gotopag	e: 1 of 1 Pages	
				Remove

Step 2 Double-click one of the listed scheduled jobs to view them.