



CHAPTER 5

Creating and Viewing Reports

The reports function allows you to store and retrieve up to 100 days of historical data about the network traffic monitored by the NAM. The Reports window (Figure 5-1) provides options for creating and viewing basic, custom, and scheduled exports. The submenu of the Reports window provides the following options:

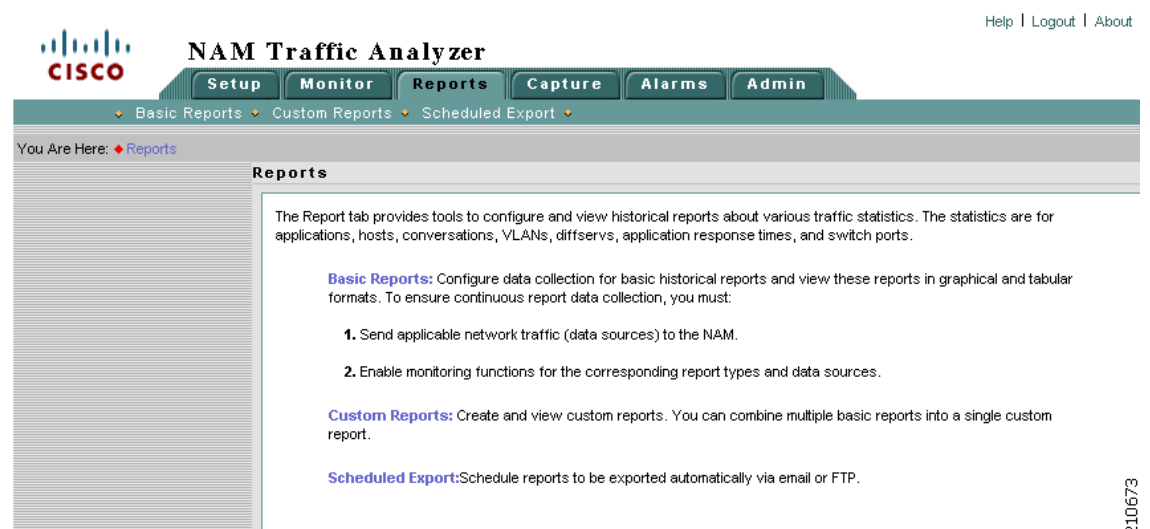
- [Basic Reports, page 5-2](#), enables you to configure data collection for basic historical reports and view these reports in several different formats.
- [Custom Reports, page 5-25](#), enables you to create and view custom reports. You can also combine multiple basic reports into a single custom report.
- [Scheduled Exports, page 5-28](#), enables you to schedule a report to be generated automatically and exported by e-mail or FTP transfer.



Note

NAM 4.2 supports IPv6 for all reporting functionality.

Figure 5-1 Reports Window



Basic Reports

The Basic Reports option enables you to view reports about a specific target like a network host, a protocol, or the TopN list of the most active hosts or the TopN list of the most active top protocols.

When a basic report is created, a background process periodically polls the datasource and stores the data in the database. You can configure the polling interval when you create the basic report. See the section [Creating a Basic Report, page 5-4](#), for more information.

Figure 5-2 shows an example of the Basic Reports window.

Figure 5-2 Basic Reports Window

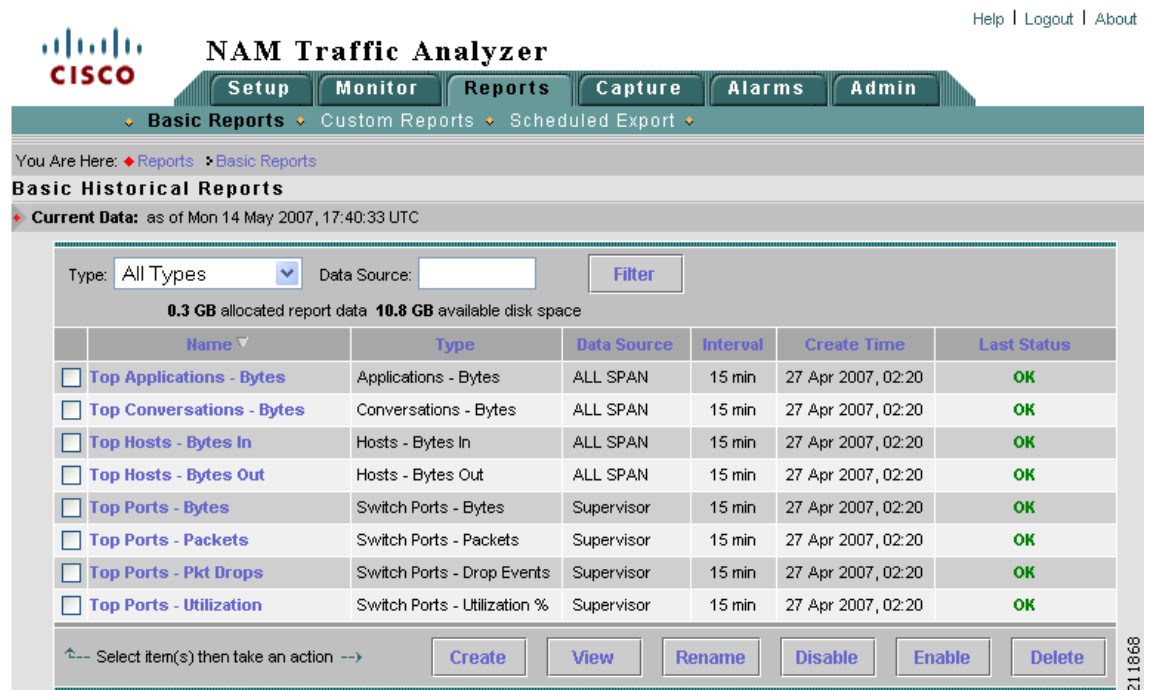


Table 5-1 lists and describes the fields of the Basic Reports window.

Table 5-1 Basic Reports Table

Field	Description
Basic Report Type	Filters the list of reports by report type
Name	Name of the basic report
Type	Type of the report data
Data Source	The data source from which the report data were collected

Table 5-1 Basic Reports Table (continued)

Field	Description
Interval	<p>The polling interval of the report data collection. The default is 15 minutes. A more frequent polling interval allows the report to have finer granularity but requires more data storage space.</p> <p>Note Polling intervals are based on a 60-minute clock that begins at the top of the hour. If you use the default polling interval and start collecting data for a report at seven minutes past the hour, the first polling interval will end at 15 minutes past the hour and have a duration of eight minutes. Similarly, the current polling interval might also show as less than the polling interval.</p>
Create Time	Time the report was created.
Last Status	<p>Note See Table 5-16, Last Status Conditions, for a complete list status conditions and their definitions.</p> <ul style="list-style-type: none"> • OK—Enabled and data is being collected. • Disabled—No data is being collected. • Pending—Report is enabled, but no data collected. • Inactive Data Source—Data source was deleted. • No Data—No data was collected for this period. This can be due to the report being disabled, the NAM not running, or the Report Data Collection task not running. • No Activity—The NAM does not detect any traffic activity for this target. This might be caused by an inactive target or a data source configuration problem. See Table 5-15 or Table 5-16 for more information about reports that show no activity. <p>However for certain monitoring metrics when the system is missing data on errors, special conditions, and similar measurements, the status <i>No Activity</i> is substituted by a more appropriate term such as <i>No Drops Stats</i> or <i>No Concealment Stats</i>.</p> <p>This means there was no information on drops or concealment, but does not imply there was no normal activity during the reported period.</p> <ul style="list-style-type: none"> • Not Monitored—The monitoring function for this type of traffic statistic is not enabled or is not available for the NAM and/or switch. <p>Note If no data was collected, a time stamp displays the last collection.</p>

WS-SVC-NAM-1 and WS-SVC-NAM-2 devices have the following reports created by default:

- Top Applications—Bytes
- Top Conversations—Bytes
- Top Hosts—Bytes In
- Top Hosts—Bytes Out
- Top Ports—Bytes
- Top Ports—Packets

- Top Ports—Packet Drops
- Top Ports—Utilization

NME-NAM devices have the following reports created by default:

- Top Applications—Bytes
- Top Conversations—Bytes
- Top Hosts—Bytes In
- Top Hosts—Bytes Out
- Top Interfaces—Bytes In
- Top Interfaces—Bytes Out
- Top Interfaces—Utilization In
- Top Interfaces—Utilization Out

NAM appliances have the following reports created by default:

- Top Applications—Bytes
- Top Conversations—Bytes
- Top Hosts—Bytes In
- Top Hosts—Bytes Out
- Top Ports—Bytes
- Top Ports—Packets
- Top Ports—Packet Drops
- Top Ports—Utilization



Note

If you turn off collections on a data source on which a report is running, the reports function will automatically turn the collections back on.

The following sections describe how to manage your basic reports:

- [Creating a Basic Report, page 5-4](#)
- [Viewing Basic Reports, page 5-20](#)
- [Renaming a Report, page 5-25](#)
- [Enabling Reports, page 5-24](#)
- [Disabling Reports, page 5-25](#)
- [Deleting a Report, page 5-25](#)

Basic reports can be customized and combined to create custom reports. See [Custom Reports, page 5-25](#), for more information about customized reports.

Creating a Basic Report

Before you can create reports, you should make sure the applicable network traffic is being sent to the NAM and that monitoring functions are enabled for the type of statistic and data sources. For more information on enabling monitoring functions, see the [“Monitoring” section on page 3-52](#).

To create a basic report:

Step 1 Click **Reports > Basic Reports**.

The Basic Historical Reports window displays.

Step 2 Click **Create**.

The Create Basic Historical Report window displays as shown in [Figure 5-3](#). Using a NAM-1 or NAM-2 device, you can create the following reports:

- Applications—See [Creating an Applications Report, page 5-6](#)
- Application Groups—See [Creating an Application Groups Report, page 5-8](#)
- Hosts—See [Creating a Hosts Report, page 5-8](#)
- Conversations—See [Creating a Conversations Report, page 5-10](#)
- VLANs—See [Creating a VLANs Report, page 5-11](#)
- Differentiated Services—See [Creating a DiffServ Report, page 5-12](#)
- Response Time—See [Creating a Response Time Report, page 5-13](#)
- Switch Port—See [Creating a Switch Port Report, page 5-14](#)
- Switch Health—[Creating a Switch Health Report, page 5-15](#)
- MPLS—See [Creating an MPLS Stats Report, page 5-18](#)
- Voice Over IP/RTP Stream Statistics—[Creating a Voice Over IP/RTP Stream Report, page 5-19](#)

Using NME-NAM devices, you can create the following reports:

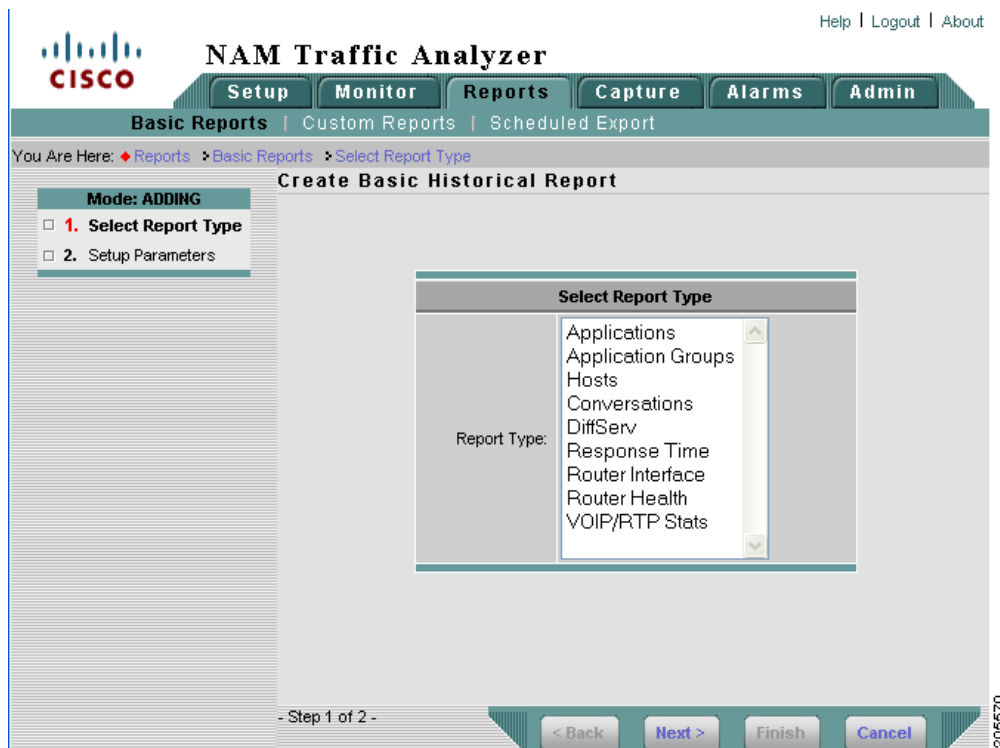
- Applications—See [Creating an Applications Report, page 5-6](#)
- Application Groups—See [Creating an Application Groups Report, page 5-8](#)
- Hosts—See [Creating a Hosts Report, page 5-8](#)
- Conversations—See [Creating a Conversations Report, page 5-10](#)
- Differentiated Services—See [Creating a DiffServ Report, page 5-12](#)
- Response Time—See [Creating a Response Time Report, page 5-13](#)
- Router Interface—See [Creating a Router Interface Report, page 5-16](#)
- Router Health—[Creating a Router Health Report, page 5-17](#)
- Voice Over IP/RTP Stream Statistics—[Creating a Voice Over IP/RTP Stream Report, page 5-19](#)

Step 3 Choose the report type, then click **Next**.

Step 4 Enter the parameters required for your selected report type.

Step 5 Click **Finish**.

Figure 5-3 Creating a Basic Historical Report



Creating an Applications Report

To create an Application Protocols report:

-
- Step 1** Click **Reports > Basic Reports**.
- The Basic Historical Reports window displays.
- Step 2** Click **Create**.
- The Create Basic Historical Report window displays as shown in [Figure 5-3](#).
- Step 3** Choose **Applications**, then click **Next**.
- The Create Applications Report window displays as shown in [Figure 5-4](#).

Figure 5-4 Create Application Report Window

Table 5-2 describes the Applications report parameters.

Table 5-2 Applications Report Parameters

Field	Description	Usage Notes
Application	Application check box	Check Application (the default) to choose a specific application (Encapsulation and Protocol).
Encapsulation	Protocol encapsulation type	Choose an encapsulation from the list of IP, IPIP4, GRE.IP, IPv6, or Others.
Protocol	Name of the application protocol.	Choose a protocol from the list.
TopN Applications	Reports on most active application protocols based on bytes/second or packets/second	Check TopN Applications to create a report about the most active applications.
TopN Application TCP/UDP Ports	Reports on most active TCP and UDP ports based on bytes/second or packets/second	Check TopN Application TCP/UDP Ports to create a report about the most active TCP and UDP ports.
Report Settings		
Report Name	Name of the report.	The report name is generated automatically. To change the name of the report, select Customized , then enter the name.
Data Type	The type of data.	Choose a type from the list.
Polling Interval	The interval in which the report data will be polled	Choose an interval from the list.
Data Source	The network traffic source from which report data will be collected	Choose a source from the list.

Step 4 Enter the parameters required for an Applications report.

Step 5 Click **Finish**.

Creating an Application Groups Report

To create an Application Groups report:

-
- Step 1** Choose **Reports > Basic Reports**.
The Basic Historical Reports window displays.
- Step 2** Click **Create**.
The Create Basic Historical Report window as shown in [Figure 5-3](#) displays.
- Step 3** Choose Application Group type, then click **Next**.
The Create Application Group Report Parameters dialog box displays. [Table 5-3](#) describes the Application Group report parameters.

Table 5-3 Application Group Report Parameters

Field	Description	Usage Notes
Application Group	Name of the application group.	
Report Name	Name of the report.	The report name is generated automatically. To change the name of the report, select Customized , then enter the name.
Data Type	The type of data.	Choose a type from the list.
Polling Interval	The interval in which the report data will be polled.	Choose an interval from the list.
Data Source	The network traffic source from which report data will be collected.	Choose a source from the list.

- Step 4** Enter the required parameters required for an Application Group report.
- Step 5** Click **Finish**.
-

Creating a Hosts Report

To create a Hosts report:

-
- Step 1** Click **Reports > Basic Reports**.
The Basic Historical Reports window displays.
- Step 2** Click **Create**.
The Create Basic Historical Report window displays as shown in [Figure 5-3](#).
- Step 3** Choose the Hosts report type, then click **Next**.
The Create Hosts Report window displays as shown in [Figure 5-5](#).

Figure 5-5 Create Hosts Report Window

Table 5-4 describes the Hosts report parameters.

Table 5-4 Hosts Report Parameters Dialog Box

Field	Description	Usage Notes
Host Name or IP Address	The name of the host from which data is polled	Enter the host name or IP address of the host.
Host Application	Check to report on a specific application of the host	When checked, choose protocol and encapsulation type.
Encapsulation	Protocol encapsulation type	Choose an encapsulation from the list.
Protocol	Name of the application protocol	Choose a protocol from the list (optional).
TopN Hosts	Reports on most active host address based on bytes/second (in or out) or packets/second (in or out)	Check TopN Hosts to create a report about the most active hosts
Report Settings		
Report Name	Name of the report	The name of the report is generated generated. To change the name, click Customized , then enter the new name.
Data Type	The type of data	Choose a type from the list
Polling Interval	The interval in which the report data will be polled	Choose an interval from the list
Data Source	The network traffic source from which report data will be collected	Choose a source from the list

Step 4 Enter the parameters required for a Hosts report.

Step 5 Click **Finish**.

Creating a Conversations Report

To create a Conversations report:

Step 1 Click **Reports > Basic Reports**.

The Basic Historical Reports window displays.

Step 2 Click **Create**.

The Create Basic Historical Report window displays as shown in [Figure 5-3](#).

Step 3 Choose **Conversations**, then click **Next**.

The Create Host Conversation Report window displays as shown in [Figure 5-6](#).

Figure 5-6 Create Host Conversation Report Window

[Table 5-5](#) describes the Conversations report parameters.

Table 5-5 Conversations Report Parameters

Field	Description	Usage Notes
Conversation	Conversation check box	Check Conversation (the default) to enter specific host names or IP addresses.
Host 1 and Host 2	The identification of the conversation hosts to be reported.	<ul style="list-style-type: none"> Host 1—Enter the host name or IP address of host 1. Host 2—Enter the host name or IP address of host 2.
Encapsulation	Protocol encapsulation type.	Choose an encapsulation from the list.
Protocol	Name of the application protocol.	Choose a protocol from the list.
TopN Conversations	TopN Conversations check box	Check TopN Conversations to create a report about the most active host conversations based on bytes/second or packets/second.

Table 5-5 Conversations Report Parameters (continued)

Field	Description	Usage Notes
Top Conversations (App-Layer)	Top Conversations (Application Layer) check box	Check Top Conversations (App-Layer) to create a report about the most active host conversations based on bytes/second or packets/second occurring in the application layer.
Report Settings		
Report Name	Name of the report.	The report name is automatically generated. To change the report name, click Customized and enter the name.
Data Type	The type of data.	Choose a type from the list.
Polling Interval	The interval in which the report data will be polled.	Choose an interval from the list.
Data Source	The network traffic source from which report data will be collected.	Choose a source from the list.

Step 4 Enter the parameters required for the Conversations report.

Step 5 Click **Finish**.

Creating a VLANs Report



Note

This section is not applicable to NME-NAM devices.

To create a VLAN report:

Step 1 Click **Reports > Basic Reports**.

The Basic Historical Reports window displays.

Step 2 Click **Create**.

The Create Basic Historical Report window displays as shown in [Figure 5-3](#).

Step 3 Choose the VLAN report type, then click **Next**.

The Create VLAN Report Parameters dialog box displays. [Table 5-6](#) describes the VLAN report parameters.



Note

VLAN reports are not available for NetFlow data sources.

Table 5-6 VLAN Report Parameters

Field	Description	Usage Notes
VLAN Number	Name or number of the VLAN to be reported.	Enter the VLAN name or number.
Top N VLANs	Reports the top N VLANs.	Click to select the reporting of the top N VLANs.

Table 5-6 VLAN Report Parameters (continued)

Field	Description	Usage Notes
Report Name	Name of the report.	The report name is automatically generated. To change the report name, click Customized and enter the name.
Data Type	The type of data.	Choose a type from the list.
Polling Interval	The interval in which the report data will be polled.	Choose an interval from the list.
Data Source	The network traffic source from which report data will be collected.	Choose a source from the list. Note Supervisor engine module- based data sources require Supervisor II engine module or later.

Step 4 Enter the parameters required for a VLAN report.

Step 5 Click **Finish**.

Creating a DiffServ Report

To create a Differentiated Services (DiffServ) report:

Step 1 Click **Reports > Basic Reports**.

The Basic Historical Reports window displays.

Step 2 Click **Create**.

The Create Basic Historical Report window displays as shown in [Figure 5-3](#).

Step 3 Choose the **DiffServ**, then click **Next**.

The Create DiffServ Report Parameters dialog box displays. [Table 5-7](#) describes the DiffServ parameters.

Table 5-7 Differentiated Services Report Parameters

Field	Description	Usage Notes
DiffServ Information	The identification of the differentiated services (DiffServ) statistics to be reported.	<ul style="list-style-type: none"> DiffServ Profile—Choose the name of the DiffServ profile. Aggregation Group—Choose the aggregation group. Encapsulation—If the Protocol check box is checked, select an encapsulation from the list. Protocol—If the Protocol check box is checked, select a protocol from the list. Host Name—If the Host check box is checked, enter the hostname or IP address of the host (optional).
Report Name	Name of the report.	The report name is automatically generated. To change the report name, click Customized and enter the name.
Data Type	The type of data.	Choose a type from the list.

Table 5-7 Differentiated Services Report Parameters

Field	Description	Usage Notes
Polling Interval	The interval in which the report data will be polled.	Choose an interval from the list.
Data Source	The network traffic source from which report data will be collected.	Choose a source from the list. Note NetFlow is not an available data source.

Step 4 Enter the parameters required for a DiffServ report.

Step 5 Click **Finish**.

Creating a Response Time Report

To create an Application Response Time report:

Step 1 Choose **Reports > Basic Reports**.

The Basic Historical Reports window displays.

Step 2 Click **Create**.

The Create Basic Historical Report window displays as shown in [Figure 5-3](#).

Step 3 Choose **Response Time**, then click **Next**.

The Create Response Time Report Parameters dialog box displays. [Table 5-8](#) describes the Response Time report parameters.

Table 5-8 Response Time Report Parameters

Field	Description	Usage Notes
Application Info		
Target Report	The identification of the application response time (ART) statistics to be reported.	<ul style="list-style-type: none"> Encapsulation—Choose an encapsulation from the list. Protocol—Choose a protocol from the list. Server—Enter the name or IP address of the server. Client—Enter the name or IP address of the client (optional).
Top N Servers	Creates a response time statistics report based on the top network servers.	Use the radio button to select a report for Top Server or Top N Client/Server networks.
Top N Client/Servers	Creates a response time statistics report based on the top client/server networks.	
Report Settings		
Report Name	Name of the report.	The report name is automatically generated. To change the report name, click Customized and enter the name.

Table 5-8 Response Time Report Parameters (continued)

Field	Description	Usage Notes
Data Type	The type of data.	Choose a data type from the list of the following options: Avg App Delay, Avg Nwk Delay, Avg Clt Nwk Delay, Avg Svr Nwk Delay, Avg Transaction, Max App Delay, Max Nwk Delay, Max Clt Nwk Delay, Max Svr NwkDelay, Max Transaction, Min App Delay, Min Nwk Delay, Min Clt Nwk Delay, Min Svr Nwk Delay, Min Transaction, # Transactions, # Connections, # Retries, # Timeout/Late, Client Bytes, Client Packets, Server Bytes, Server Packets, Total Sessions, Closes Conns, Refused Sessions, Unresponsive Conns, Session Duration, Data XmtTime, Retransmission Delay
Polling Interval	The interval in which the report data will be polled.	Choose an interval from the list: 1 minute, 5 minutes, 15 minutes, 30 minutes, 1 hour, 2 hours, 4 hours, or 8 hours. Note The minimum polling interval for TopN report type cannot be set to 1 minute.
Data Source	The network traffic source from which report data will be collected.	Choose a source from the list. Note NetFlow is not an available data source.

Step 4 Enter the parameters required for an Application Response Time report.

Step 5 Click **Finish**.

Creating a Switch Port Report



Note This section also applies to the Cisco 2200 Series NAM appliances. Menu options for the NAM appliances would use Managed Device Port Report.



Note This section is not applicable to NME-NAM devices.

To create a Switch Port Statistics report:

Step 1 Click **Reports > Basic Reports**.

The Basic Historical Reports window displays.

Step 2 Click **Create**.

The Create Basic Historical Report window displays as shown in [Figure 5-3](#).

Step 3 Choose **Switch Port Statistics** or for the NAM appliance choose **Managed Device Port Statistics**, then click **Next**.

The Create Switch Port Statistics Report Parameters dialog box displays. [Table 5-9](#) describes the Switch Port Statistics parameters.

Table 5-9 Switch Port Statistics Report Parameters Dialog Box

Field	Description	Usage Notes
Switch Module/Port	List of switch modules and the corresponding ports available on the module.	Choose a switch module and port to generate reports from.
Top N Ports	Reports the top N switch ports.	Click to select reporting of the top N ports. This requires mini-RMON to be enabled on the Supervisor engine module.
Report Name	Name of the report.	The report name is automatically generated. To change the report name, click Customized and enter the name.
Data Type	Type of data to be reported: <ul style="list-style-type: none"> • Bytes/sec • Packets/sec • Utilization % • Broadcast Bytes/sec • Multicast Bytes/sec • Drop Events/sec 	Choose the data type from the list.
Polling Interval	The interval in which the report data will be polled.	Choose an interval from the list.

Step 4 Enter the parameters required for the Switch Port Statistics report.

Step 5 Click **Finish**.

Creating a Switch Health Report



Note

This section also applies to the Cisco 2200 Series NAM appliances. Menu options for the NAM appliances would use Managed Device Health Report.



Note

This section is not applicable to NME-NAM devices.

A Switch Health report is a historical report about the switch health statistics. To create a Switch Health report:

Step 1 Click **Reports > Basic Reports**.

The Basic Historical Reports window displays.

Step 2 Click **Create**.

The Create Basic Historical Report window displays as shown in [Figure 5-3](#).

Step 3 Choose **Switch Health** or for the NAM appliance choose **Managed Device Health**, then click **Next**.

The Create Switch Statistics Report Parameters dialog box displays. [Table 5-10](#) describes the Switch Health report parameters.

Table 5-10 Switch Statistics Report Parameters Dialog Box

Field	Description	Usage Notes
Component	Component upon which to report	Choose from Switch DRAM Memory, Switch Backplane, Switching CPU, or Routing CPU.
Report Name	Name of the report	The report name is automatically generated. To change the report name, click Customized and enter the name.
Data Type	Type of data to be reported	Utilization percentage of the selected component.
Polling Interval	The interval in which the report data will be polled.	Choose an interval from the list.

Step 4 Enter the parameters required for a Switch Statistics report.

Step 5 Click **Finish**.

Creating a Router Interface Report



Note This section is only applicable to NME-NAM devices.

A router interface report contains a history of a router's interface statistics. To create an Router Interface report:

Step 1 Click **Reports > Basic Reports**.

The Basic Historical Reports window displays.

Step 2 Click **Create**.

The Create Basic Historical Report window displays as shown in [Figure 5-3](#).

Step 3 Choose **Router Interfaces**, then click **Next**.

The Create Interface Stats Report Parameters dialog box displays. [Table 5-11](#) describes the Router Interfaces report parameters.

Table 5-11 Router Interfaces Report Parameters

Field	Description	Usage Notes
Interface	List of interfaces	Choose an interface to generate reports from.
Top N Interfaces	Reports the top N interfaces	Click to select reporting of the top N interfaces.
Report Name	Name of the report	The report name is automatically generated. To change the report name, click Customized and enter the name.

Table 5-11 Router Interfaces Report Parameters (continued)

Field	Description	Usage Notes
Data Type	Type of data to be reported	Choose the data type from the list: Bytes/sec, Packets/sec, Non-unicasts Packets/sec, Discarded Packets/sec, Error Packets/sec, Utilization
Polling Interval	Interval in which the report data will be polled	Choose an interval from the list.

Step 4 Enter the parameters required to create a Router Interfaces report.

Step 5 Click **Finish**.

Creating a Router Health Report



Note This section applies only to NME-NAM devices.

A Router Health report is a historical report about the router health statistics. To create a Router Health report:

Step 1 Click **Reports > Basic Reports**.

The Basic Historical Reports window displays.

Step 2 Click **Create**.

The Create Basic Historical Report window displays as shown in [Figure 5-7](#).

Step 3 Choose **Router Health**, then click **Next**.

The Setup Router Health Report Parameters dialog box displays. [Table 5-12](#) describes the Router Health Report parameters.

Figure 5-7 Set Up Router Health Report Parameters

The screenshot shows a dialog box titled "Setup Report Parameters". It has a "Component" dropdown menu set to "I/O Memory". Below that is a "Report Settings" section with a "Report Name" text box containing "I/O Memory" and an unchecked "Customized" checkbox. The "Data Type" dropdown is set to "Utilization %", and the "Polling Interval" dropdown is set to "15 minutes". A vertical ID number "20165916" is visible on the right side of the dialog box.

Table 5-12 Router Statistics Report Parameters Dialog Box

Field	Description	Usage Notes
Component	Component upon which to report	Choose from Routing CPU, Processor Memory, or I/O Memory.
<i>Report Settings</i>		

Table 5-12 Router Statistics Report Parameters Dialog Box (continued)

Field	Description	Usage Notes
Report Name	Name of the report	The report name is automatically generated. To change the report name, click Customized and enter the name.
Data Type	Utilization %	Utilization percentage of the selected component.
Polling Interval	The interval in which the report data will be polled.	Choose an interval from the list.

Step 4 Enter the parameters required for a Switch Statistics report.

Step 5 Click **Finish**.

Creating an MPLS Stats Report



Note This section is not applicable to NME-NAM devices.

An MPLS report contains a collection of MPLS data. You can set up a report about a specific MPLS tag. To create an MPLS report:

Step 1 Click **Reports > Basic Reports**.

The Basic Historical Reports window displays.

Step 2 Click **Create**.

The Create Basic Historical Report window displays as shown in [Figure 5-3](#).

Step 3 Choose **MPLS Stats**, then click **Next**.

The Create MPLS Report Parameters dialog box displays. [Table 5-13](#) describes the MPLS Report Parameters dialog box.

Table 5-13 MPLS Stats Report Parameters

Field	Description	Usage Notes
MPLS Type	Specific MPLS type	Selects one of VRF, VC, Label, or All Labels; this selects the MPLS data source type.
Name	Name of the MPLS data source	Selects the MPLS data source (if defined) for one of the selected MPLS types.
Top N MPLS	System-wide Top N report	Selects the system-wide Top N report for one of the selected MPLS types.
<i>Report Settings</i>		
Report Name	Name of the report.	Choose one of the following: Bytes/sec (default), Packets/sec, Non-unicast Bytes/sec, or Non-unicast Packets/sec
Data Type	Type of data	Choose one of the following: 5 minutes (default), 15 minutes, 30 minutes, 1 hour, 2 hours, 4 hours, or 8 hours

Table 5-13 MPLS Stats Report Parameters (continued)

Field	Description	Usage Notes
Customized		
Polling Interval	The network traffic source from which the report data will be collected.	Choose one of the following: 1 minute, 5 minutes, 15 minutes, 30 minutes, 1 hour, 2 hours, 4 hours, or 8 hours.

Step 4 Enter the parameters required for an MPLS report.

Step 5 Click **Finish**.

Creating a Voice Over IP/RTP Stream Report

You can configure the NAM to create a report for a specific VOIP phone or to gather report data for the following:

- Worst phones
- Worst calls
- Call Volume
- Top RTP Streams

To create a VOIP/RTP Streams report:

Step 1 Choose **Reports > Basic Reports**.

The Basic Historical Reports window displays.

Step 2 Click **Create**.

The Create Basic Historical Report window displays as shown in [Figure 5-3](#).

Step 3 From the pull-down menu, choose VOIP/RTP Stats.

The Setup Report Parameters window displays as shown in [Figure 5-8, Setup VOIP Report Parameters](#).

Step 4 Click a radio button to choose the type of report to create.

[Table 5-14, VOIP Report Types](#), describes the different types of reports you can create.

Table 5-14 VOIP Report Types

Report Type	Description
Target VOIP Phone	Enter the IP address of a specific phone to generate a report based on the Metrics and polling interval.
Worst Phones	Creates a report of the worst quality phones based on the Metrics and polling interval.
Worst Calls	Creates a report of the worst quality calls based on the Metrics and polling interval.
Call Volume	Creates a report of total call volume.
Top RTP Streams	Creates a report of Top N RTP Streams based on chosen metrics.

Figure 5-8 Setup VOIP Report Parameters

Step 5 Under Report Settings, enter a name for the report.

Step 6 Use the pull-down menu to choose the Metrics upon which to base the report.

MOS	Mean opinion score is a number from 1 to 5 where the higher number indicates better quality.
Jitter	Delay and delay variation of a call stream
Adjusted Packet Loss	Adjusted percentage of packets lost
Actual Packet Loss	Actual percentage of packets lost
SSC	Seconds of severe concealment
SOC	Seconds of concealment

Step 7 Use the pull-down menu to choose the Polling Interval upon which to base the report.

The Polling Interval determines how often the metrics for the chosen report type are collected. The Polling Interval can be from one minute to eight hours; the default Polling Interval is 15 minutes.

Step 8 Click **Finish**.

After clicking Finish, the report is added to the list of Basic Reports.

Step 9 Click to choose the report, then click **Enable** to begin gathering data for the report.

Viewing Basic Reports

Report data is stored in the NAM database for 100 days. Report data older than 100 days is overwritten sequentially by new report data.

To view a basic report, click **Reports > Basic Reports**.

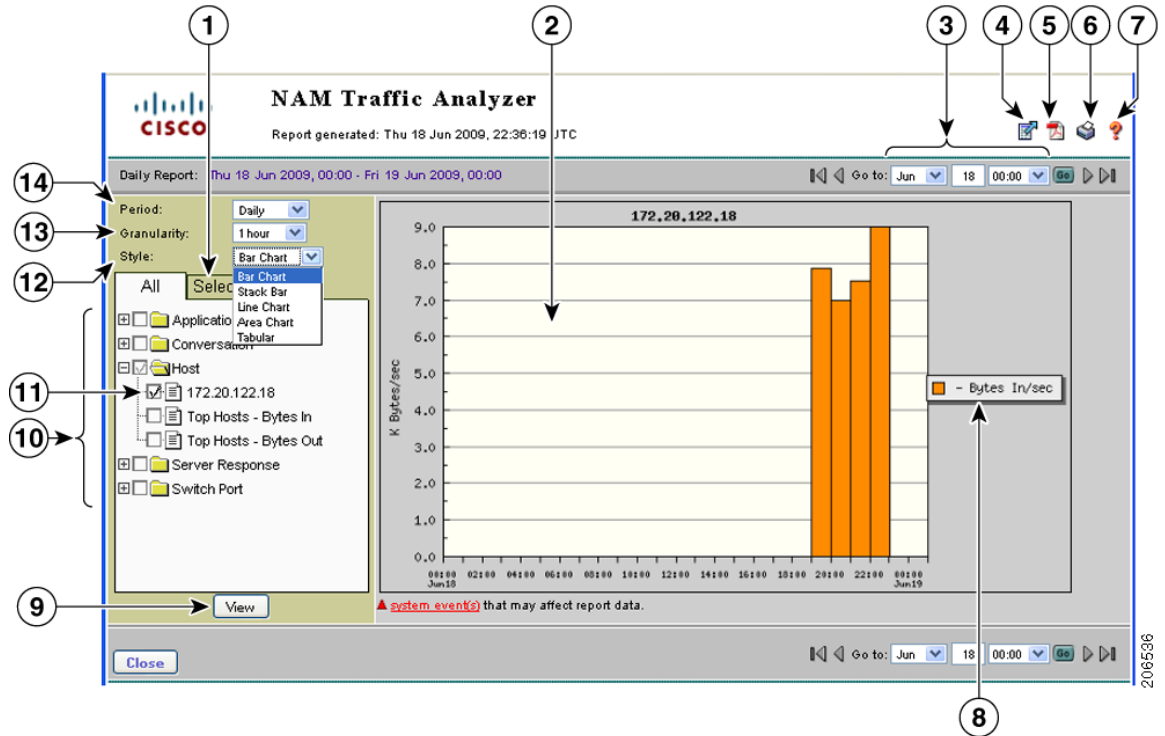
The Basic Reports Window displays and lists all basic reports that have been set up for data collection as shown in [Figure 5-2](#).

Viewing Report Details

To view the details of a report, click the report name in the Basic Reports window, or select report and click **View**.

Figure 5-9 shows an example of an Application report window.

Figure 5-9 Viewing Report Details



1	Displays the selected reports.	8	Report type.
2	Report graph.	9	Choose the target reports to be displayed.
3	Navigated between time periods.	10	Report file structure.
4	Downloads the report to a file.	11	Selected report.
5	Generates PDF file of the report.	12	Style of the graph; not all styles are available for all reports. See Viewing Report Options .
6	Prints the report.	13	Granularity of the report.
7	Launches the online help.	14	Length of the report time period.



Note

You can select only one Top N report.

Viewing Report Options

You can view generated reports as tables or graphs. Tables provide exact values, while graphs show bars, area, or line charts with differing orders of magnitude. It is often difficult to determine the actual value of shorter bar graphs when the bar values differ by several orders of magnitude. Smaller bars might not be visible, and zero values are not visible using the bar or area style. Zero values are only apparent in tables and in line charts.

The NAM enables you to view reports in different ways using the menus provided for Period, Granularity, Show, and Style shown in [Figure 5-10](#).

Figure 5-10 Report Options

The image shows a screenshot of a web interface with four dropdown menus. The first menu is labeled 'Period:' and has 'Daily' selected. The second menu is labeled 'Granularity:' and has '1 hour' selected. The third menu is labeled 'Show:' and has 'Top 10' selected. The fourth menu is labeled 'Style:' and has 'Tabular' selected. The entire interface is set against a light olive green background. On the right side of the dropdown menus, there is a vertical text label '200824'.

Period

The Period menu enables you to choose the length of time between reports. The time period might be hourly, daily, every eight hours, every day, every three days, every week, or every month, depending on the requirements for the report.

Granularity

Report granularity cannot exceed the polling frequency of the report. For example, a report with a 15-minute polling interval cannot be displayed with a 5-minute granularity. If you select a report granularity lower than the polling frequency, the report data will be aggregated accordingly.

Show

The show menu, when available, enables you to choose among the Top 10, Top 5, Top 3, Top 1 objects of this report to view.

Style

The style menu enables you to choose from among Bar Chart, Line Chart, Area Chart, Tabular, or Stack Area (stacked) presentation style. Stack Area style limits your report to *showing the Top 10 or less*. Other options such as Top 20 or Top 50 produce reports that cannot be read. Not all reports support the Stack style.

Disable Reports and Errors

A red exclamation displays in the report selector for disabled reports and reports with error conditions. For more information on reports with error conditions, see [Table 5-15, Report Error Conditions](#). Also see [Table 5-16, Last Status Conditions](#), for a complete list status conditions and what they mean.

Table 5-15 Report Error Conditions

Error Condition	Description
Not Started	The report has not been created and data collection has not been started for this time period.
Data Pending	Data for the current period is being collected.
No Data	No data was collected for this period. This can be due to: <ul style="list-style-type: none"> • Report is disabled. • NAM is not running. • Report Data Collection task is not running.
Blank data	No traffic to display during selected period.
No Activity	The NAM does not detect any traffic activity for this target. This can be caused by an inactive target or a data source configuration problem. The NAM does not detect any traffic activity for this target. This might be caused by an inactive target or a data source configuration problem. However for certain monitoring metrics when the system is missing data on errors, special conditions, and similar measurements, the status <i>No Activity</i> is substituted by a more appropriate term such as <i>No Drops Stats</i> or <i>No Concealment Stats</i> . This means there was no information on drops or concealment, but does not imply there was no normal activity during the reported period.
Not Monitored	The monitoring function for this type of traffic statistic is not enabled or is not available for the NAM and/or switch.
Data Expired	Indicates that the data is more than 100 days old and no longer be available; NAM stores historical data for up to 100 days.

Viewing the System Event Log

System events that affect report data collection and are displayed as red triangles in the Reports Window. Events that are logged include system restarts, SPAN changes and the enabling, disabling, creating, editing, and deleting of reports.

To view the System Events Log, click **system events**. The System Config Log is displayed with the system configuration event, the time of the event and the user. The events that are displayed correspond to the report period. For example, if you are viewing a weekly report, the System Config Log will display events that occurred during the week.



Tip

- Move the mouse cursor over the report name in the report selector to see more information about the report.
- Use the tabular report style to view numeric data and information about the errors or exception conditions related to the report data collection.

Enabling Reports

Enable a report to activate the background process that polls the data for the report. You can enable reports directly from the Basic Reports window. To enable a report, choose a report from those listed, then click **Enable**. When a report is enabled, it continues to run until it is disabled.


Note

Reports in the Basic Reports table are enabled by default. In other words.

After you enable a report, you can check the status of the report in the right-most column on the **Reports > Basic Reports** window. [Table 5-16](#) provides status definitions of the conditions you might see under the Last Status column.

Table 5-16 Last Status Conditions

Condition	Description
OK	Report is enabled and collecting data
Disabled	Report is not enabled and no data is being collected
Pending	Data for the current period is being collected but is not yet displayed.
Inactive Data Source	Report is enabled, but the data source for which this report is configured is in either the inactive or disabled state.
No Data	No data was collected for this period. This can be due to: <ul style="list-style-type: none"> • Report is disabled • NAM is not running • Report Data Collection task is not running
Not Monitored	The monitoring function for this type of traffic statistic is not enabled or is not available for the NAM and/or switch.
Data Expired	Indicates that the data is more than 100 days old and no longer be available; NAM stores historical data for up to 100 days.
Counter Reset	Indicates that the data collection was reset by the monitoring daemon.
Data Error	Indicates an internal error with NAM reporting
No Activity	No Activity—The NAM does not detect any traffic activity for this target. This might be caused by an inactive target or a data source configuration problem. However for certain monitoring metrics when the system is missing data on errors, special conditions, and similar measurements, the status <i>No Activity</i> is substituted by a more appropriate term such as <i>No Drops Stats</i> or <i>No Concealment Stats</i> . This means there was no information on drops or concealment, but does not imply there was no normal activity during the reported period. Note If no data was collected, a time stamp displays the last collection.
No Retries Stats	Indicates that traffic is normal and there are no <i>retry</i> statistics to be reported for <i>ART retries</i> and <i>retries</i> bytes.
No Timeouts	Indicates that traffic is normal and there are no <i>ART timeout</i> statistics to be reported.

Table 5-16 Last Status Conditions (continued)

Condition	Description
No Outage Stats	Indicates that traffic is normal and there are no <i>outage</i> statistics to be reported ART refused sessions, unresponsive connections, and VOIP MOS-based and jitter-based metrics reports.
No Utilization Stats	Indicates that traffic is normal and there are no <i>retry</i> statistics to be reported for ART retries.
No Drops Stats	Indicates that traffic is normal and there are no <i>drop</i> statistics to be reported. No packets were dropped for any of the chassis ports.
No Packet Loss Stats	Indicates that traffic is normal and there are no actual packet loss or adjusted packet loss statistics to be reported for VOIP.
No Concealment Stats	Indicates that traffic is normal and there are no <i>concealment</i> statistics to be reported for VOIP seconds of concealment (SOC) and severe seconds of concealment (SSC).

Disabling Reports

Disable a report to suspend the background process that polls the data for the report. You can still view the data collected previously, but no new data are added to the database. You can disable reports directly from the Basic Reports window. To disable a report, select the report from those listed, then click **Disable**.

Renaming a Report

-
- Step 1** Choose a report from the Basic Reports window and click **Rename**.
A text window appears.
- Step 2** Enter the new name of the report and do one of the following:
- To accept the changes, click **OK**.
 - To delete the changes and return to the Basic Reports table, click **Cancel**.
-

Deleting a Report

To delete a report, select the report from the Basic Reports window and click **Delete**.

Custom Reports

After you create reports in the Basic Reports table, you can combine and customize them. The following sections describe how to manage your custom reports:

- [Creating a Custom Report, page 5-26](#).
- [Editing a Custom Report, page 5-27](#).

- [Deleting a Custom Report, page 5-27.](#)
- [Viewing a Custom Report, page 5-27.](#)

Creating a Custom Report

To create a custom report:

Step 1 Choose **Reports > Custom Reports**.

The Custom Reports table displays.

Step 2 Click **Create**.

The Create Custom Report Dialog Box ([Table 5-17](#)) displays.

Table 5-17 Create Custom Report Dialog Box

Field	Usage Note
Report Name	Enter the name of the custom report
Folder	Choose the folder you want the report to be in.
Period	Choose the length of the report time period.
Granularity	Choose the date granularity of the report.
Style	Choose the style of the graph.
Report Data	Choose the basic reports to include in the custom report. You can select multiple target data report types, but you can only include one TopN report type in a custom report. To view all of your selected reports, click the Selection tab.

Step 3 Do one of the following:

- To accept the changes, click **Submit**.
 - To clear the changes, click **Reset**.
-

Creating a New Folder

You can create a new folder directly from the Custom Reports table to store additional custom reports.

Step 1 Click **New Folder**.

A text box appears.

Step 2 Enter the name of the folder, then click **OK**.

The new folder appears in the Custom Reports table.

Editing a Custom Report

To edit a custom report:

-
- Step 1** Choose **Reports > Custom Reports**.
The Custom Reports table displays.
- Step 2** Choose the custom report to edit, then click **Edit**.
The Edit Custom Reports dialog box displays.
- Step 3** Make the necessary changes, then do one of the following:
- To accept the changes, click **Submit**.
 - To leave the configuration unchanged, click **Reset**.
-

Deleting a Custom Report

To delete a custom report, select it in the Custom Report window, then click **Delete**.

Viewing a Custom Report

To view a custom report:

-
- Step 1** Choose **Reports > Custom Reports**.
The Custom Reports window displays.
- Step 2** Choose the custom report to view, then click **View**.
The [Viewing Report Details](#) (Figure 5-9) displays.
-

Moving a Custom Report to a Different Folder

To move a custom report to a different folder:

-
- Step 1** Click **Reports > Custom Reports**.
The Custom Reports window displays.
- Step 2** Choose the custom report to edit, then click **Edit**.
The Edit Custom Reports dialog box displays.
- Step 3** Choose a new folder from the Folder drop-down list and click **Submit**.
-

Scheduled Exports

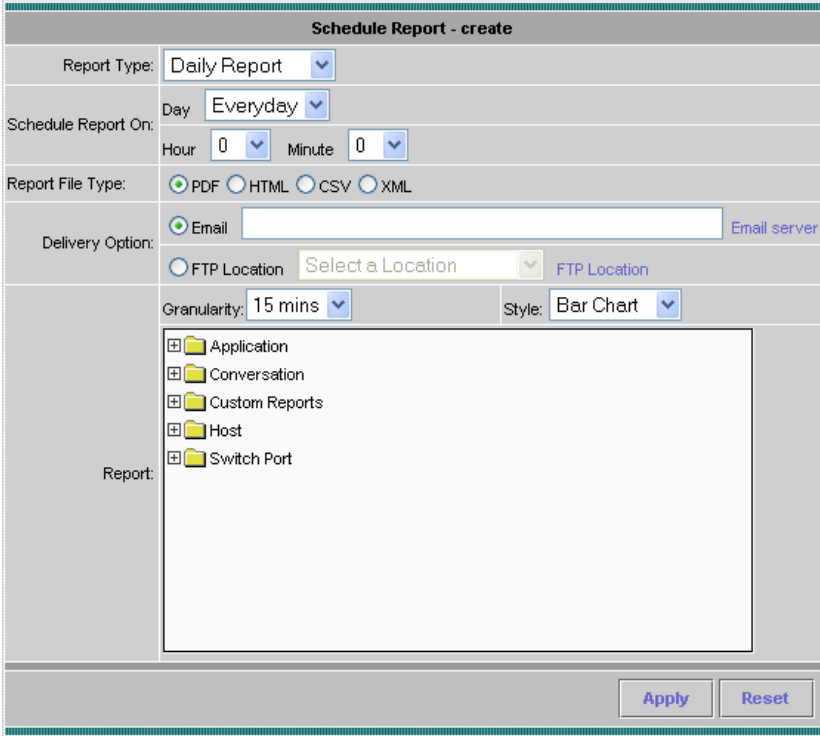
The Scheduled Exports option enables you to schedule a report to be generated automatically and to be exported at a specific time. The format of the report can be PDF, HTML, CSV, or XML. The NAM transmits the HTML reports by e-mail. The other formats can be transmitted by e-mail or FTP.

Scheduling a Report Export

To schedule a report export:

- Step 1** To schedule a report export, you must first create a basic or customized report.
See either section [Basic Reports, page 5-2](#), or section [Custom Reports, page 5-25](#) for information about creating a report.
- Step 2** Click **Reports > Scheduled Exports**.
The Scheduled Exports window displays. [Figure 5-11](#) shows an example of the Scheduled Export window.

Figure 5-11 Create Scheduled Exports



[Table 5-18, Scheduled Exports Window Options](#), describes the Scheduled Exports options available.

Table 5-18 Scheduled Exports Window Options

Field	Description	Usage Notes
Report Type	Type of report	Choose an option from among Daily, Weekly, or Monthly
Schedule Report On	Day and time to export report	Choose an option from the list and enter the time (hour and minute) to export the report: <ul style="list-style-type: none"> Daily—Report is exported every day Weekly—Choose a day of the week to export the report Monthly—Choose a day of the month to export the report; choose a specific date or choose the first or last day of the month.
Report File Type	File format of exported report	You can export report in one of four formats: PDF, HTML, CSV, or XML.
Delivery Option	Method of report delivery	Choose e-mail and provide one or more valid e-mail addresses separated by a space. Note You might schedule different reports to go to different individuals. Choose FTP Location and choose a location from those in the drop-down list. See section FTP Configuration, page 2-18 , for information about configuring the FTP delivery option.
Granularity	Frequency of report	Choose an option from among 15 minutes, 30 minutes, 1 hour, 4 hours, 8 hours, 12 hours, or 1 day. Granularity specifies the frequency of the data points to be showed in the report. For example a daily report can have 24 hourly data points or 96 15-minute data points. The later will have more granularity.
Style	Output style of report	Choose from among Bar Chart, Stack Bar, Line Chart, Area Chart, or Tabular.
Report	Folders with configured reports	Each folder contains reports that have been configured and can be exported.

Step 3 Choose the Report Type from the options in the list.

Step 4 Choose the day on which to export the report.

This option depends on the Report Type you select. If you select Daily Report, the default (and only option) is Every Day. For a Weekly Report, select the day of the week on which to run the report. For a Monthly Report, select the date on which to run the report.

Step 5 Enter the hour and minute for the time you want to export the report.

Step 6 Choose the Report File Type.

Step 7 Click to choose a Delivery Option for the report export, then enter the e-mail address or choose the FTP Location.

Step 8 Choose the Granularity and Report style.

- Step 9** After specifying Scheduled Export parameters, click **Apply** to commit the scheduled export, or click **Reset** to abandon the scheduled export.
-

Editing a Report Export

After you schedule a report to be exported, you can modify its configuration. To edit a report export:

-
- Step 1** Choose **Reports > Scheduled Exports**.
The Schedule Export window displays.
- Step 2** Choose a report from those listed by checking its check box, then click **Edit**.
The selected Scheduled Export - edit window displays and lists the current configuration for that report.
- Step 3** Make any changes to the report export and click **Apply**, or click **Reset** to cancel your changes.
See [Table 5-18, Scheduled Exports Window Options](#), for information about the configuration options.
-