CHAPTER 1

Overview of the NAM Traffic Analyzer

These topics provide information about using the various components of the NAM Traffic Analyzer:

Introducing the NAM Traffic Analyzer

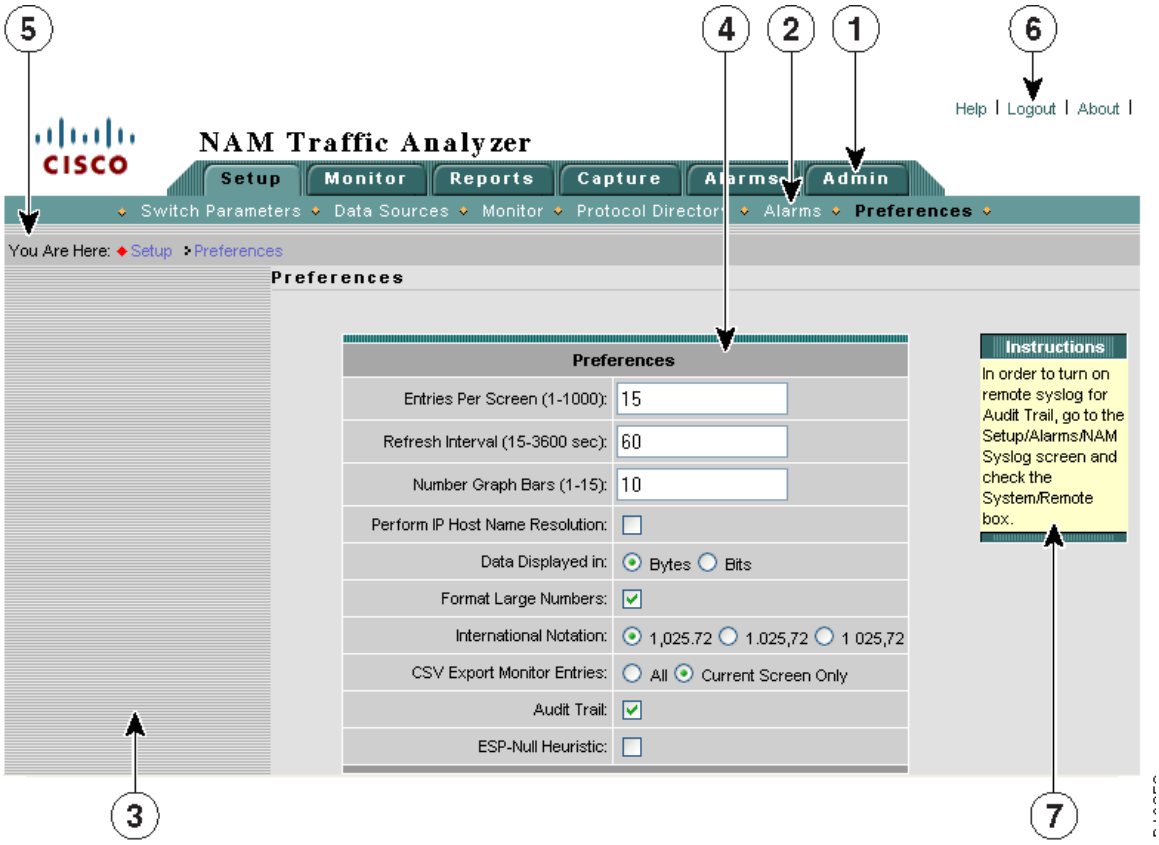
The Cisco Network Analysis Module (NAM) is an integrated module that enables network managers to understand, manage, and improve how applications and services are delivered to end-users. The NAM offers flow-based traffic analysis of applications, hosts, and conversations, performance-based measurements on application, server, and network latency, quality of experience metrics for network-based services such as voice over IP (VoIP) and video, and problem analysis using deep, insightful packet captures. The Cisco NAM includes an embedded, web-based Traffic Analyzer GUI that provides quick access to the configuration menus and presents easy-to-read performance reports on Web, voice, and video traffic.

Using the NAM Graphical User Interface

The Cisco NAM Traffic Analyzer supports browser-based access to the NAM graphical user interface (GUI). To access the NAM GUI, enter a machine name and its domain or an IP address in your browser address field. The NAM GUI prompts you for your user name and password. After you enter your user name and password, click **Login** to access the NAM GUI.

Figure 1-1 shows an example of the NAM Traffic Analyzer GUI.

Figure 1-1 NAM Traffic Analyzer GUI



1	Tabs for accessing main functions; tabs are displayed in every window in user interface (except in the detail pop-up windows).	**5**	Context line that shows path to the current function. Click any link in this area to go back to the associated window.
2	Options associated with each tab; functions change in each tab depending on context.	**6**	Toolbar to access global functions such as online help, logging out, learning more about the application.
3	Content Menu shows links to functions from the current window. Click any link in the menu to go to the corresponding window.	**7**	Instruction box provides helpful information about how to use this GUI window.
4	Content area where graphs, tables, dialog boxes, charts, and instruction boxes are displayed.		

Note All times in the Traffic Analyzer are typically displayed in 24-hour clock format. For example, 3:00 p.m. is displayed as 15:00.

A Closer Look at Some User Interface Components

Context Line

The Context line shows where you are in the hierarchy of operations. In this case, you would be viewing the Response Time Client/Server Table.

You can click:

- **Response Time** to return to the Response Time Server Table.
- **Monitor** to return to the Monitor Overview window.

Contents

The contents (present in only some windows) displays options that are subordinate to the options within the individual tabs. The example above displays after you click **Setup** > **Monitor**.

Toolbar

The toolbar is displayed in the upper right corner of every window of the user interface.

- Click **Logout** to log out of the NAM Traffic Analyzer.
- Click **Help** for context-sensitive information (information relevant to the current function). Help is displayed in a separate browser window.
- Click **About** to see information about the NAM Traffic Analyzer.

Common Navigation and Control Elements

Common Navigation and Control Elements (Table 1-1) describes the common navigation and control elements in the user interface.

Table 1-1 Common Navigation and Control Elements

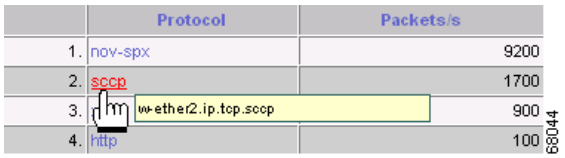
Element	Description
Start	Starts an action.
Stop	Stops an action, such as the active capturing of packets.
Pause	Temporarily suspends an action.
Create	Creates a new record, user, capture, filter, and so on.
Delete	Deletes a record, user, capture, filter, and so on.
Edit	Edits a record, user, capture, filter, and so on.
Go	Jumps to a group of records, beginning at a specific line number.
Prev	Displays the previous group of records.
Next	Displays the next group of records
Filter	Displays information based on different criteria (for example, IP address versus protocol).
Apply	Applies changes; current window continues to display.
Submit	Applies changes; goes to different window.
Reset	Resets (clears) any changes you made in a dialog box.
Close	Closes the window.
Address ▽	Sorts the column information in descending order.
Test	Tests a function (such as read and write access to the router).
Report	Creates a report for the selected variable.
Real-Time	Displays real-time statistics for the selected variable.
Capture	Captures the packets to the buffer.

Table 1-1 Common Navigation and Control Elements (continued)

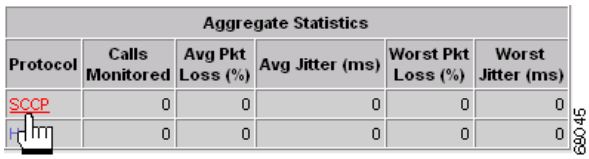
Element	Description
	Exports the data on the screen to a **.csv** text file. If you want to export more data, you must increase the rows per page setting for the table. The default setting is 15 rows per page.
	Exports the data on the screen to a PDF file.
	Opens a printer friendly window of the data on the screen. You can print the window using the Print command from your web browser. If you want to print more data, you must increase the rows per page setting for the table. The default setting is 15 rows per page.
	Starts the online help.

In addition to the common navigation and control elements, you can use these navigation aids:

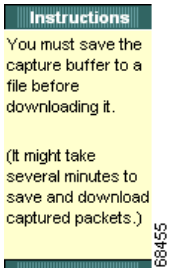
Pop-up help—To expand abbreviated protocol encapsulation information in some links, move your mouse over the link. The full protocol encapsulation name is displayed.



Links—Slide your mouse over text. If the text color changes from blue to red, and the cursor changes to a pointing finger, the text is a link.



Instructions box—Some windows contain an instructions box in the content area that explains what you are expected to do.



Getting Started

To use the NAM Traffic Analyzer effectively, you must perform a specific sequence of tasks:

Step 1 Use the Setup tab (Figure 1-2) to configure and enable monitoring collections on the NAM. For more information, see Chapter 3, "Setting Up the Application."

Figure 1-2 Setup Tab

These options are available from the Setup tab.

- Chassis Parameters—To verify there is connectivity between the NAM-1 or NAM-2 device and the switch.
- Router Parameters—To set up the parameters to be used by the NAM to communicate with the router

Note The Router Parameters options are for NM-NAM or NME-NAM devices only.

- Managed Device Parameters—To set up the parameters to be used by the NAM appliance to communicate with the managed device, a switch or router to which you connect the NAM appliance to receive and monitor traffic.

Note The Managed Device Parameters options are for Cisco 2200 Series NAM appliances only. NAM appliances are the following SKUs: NAM2220, NAM2204-RJ45, and NAM2204-SFP.

- Data Sources—To specify the network traffic to be collected from the switch or router to this NAM for monitoring. Also used to create NetFlow data sources.
- Monitor—To specify the types of traffic statistics to be collected and monitored.
- Protocol Directory—To specify protocol groups and URL-based protocols.
- Alarms—To set up alarm conditions and thresholds.
- Preferences—To establish global preferences for *all* NAM Traffic Analyzer users. These preferences determine how data displays are formatted.

Step 2 Use the **Admin** tab (Figure 1-3) to create, edit, or delete NAM Traffic Analyzer accounts. You must have the required permissions to perform these tasks.

For more information, see Chapter 2, "User and System Administration."

Figure 1-3 Admin Tab

These options are available from the Admin tab.

- Users—To add, delete, and edit NAM Traffic Analyzer users and TACACS+ authentication and authorization.
- System—To establish system and network parameters and NAM community string settings.
- Diagnostics—To generate information used for troubleshooting NAM problems.

Step 3 Use the Monitor tab(Figure 1-4), Reports tab(Figure 1-5), Capture tab(Figure 1-6), and Alarms tab(Figure 1-7) in any sequence to set up real-time data displays, capture data using specific criteria, and configure notifications.

Monitor Tab

The Monitor tab provides tools for configuring specific monitoring collections on the NAM except for capture buffers and alarms. Examples include conversation collections, protocol collections, and voice collections. For more information, see Chapter 4, "Monitoring Data."

Figure 1-4 Monitor Tab

These options are available from the Monitor tab.

- Overview—To see several types of statistics, including most active applications, most active hosts, protocol suites, and server response times.
- Apps—To see the distribution of packets and bytes based on the application protocol.
- Voice/Video—To view troubleshooting data collected from any enabled voice protocols on the NAM (including SCCP, SIP, H.323 and MGCP).
- Hosts—To view results from any active hosts collections in the RMON1 and RMON2 host tables per network host.
- Conversations—To view conversations data collected per pairs of network hosts.
- VLAN—To view VLAN data collected on the NAM based on VLAN ID or priority.

Note VLAN data is not available on NM-NAM or NME-NAM devices.

- DiffServ—To view the distribution of packets and bytes based on the Differentiated Services (DiffServ) data collected on the NAM.
- Response Time—To view client-server application response times.
- Switch—To view various data collected per switch port.

- Router—To view router interface statistics, health and NBAR.

Note NME-NAM devices have an Interface Stats option used to view various data collected per router interface.

- MPLS—To view traffic statistics per MPLS tag.

Note MPLS data is not available on NM-NAM or NME-NAM devices.

Reports Tab

Use the **Reports** function (Figure 1-5) to store and retrieve short- and medium-term historical data about the network traffic monitored by the NAM. For more information, see Chapter 5, "Creating and Viewing Reports."

Figure 1-5 Reports Tab

These options are available from the Reports tab:

- Basic Reports—To set up and view reports
- Custom Reports—To set up and view multiple basic reports
- Scheduled Export—To set up a report to be generated and exported automatically

Capture Tab

The Capture tab (Figure 1-6) provides windows to set up and display capture buffer data. For more information, see Chapter 6, "Capturing and Decoding Packet Data."

Figure 1-6 Capture Tab

These options are available from the Capture tab:

- Buffers—Set up and manage capture buffers (including capture filters); start and stop captures; view and decode captured packets.
- Files—Save packets in capture buffers to files; decode and download files.
- Custom Filters—Customized capture and display filters.

Alarms Tab

The Alarms tab (Figure 1-7) provides mechanisms for displaying alarms generated from thresholds established in the Setup tab. For more information, see Chapter 7, "Viewing Alarms."

Figure 1-7 Alarms Tab

These options are available from the Alarms tab:

- NAM—To display all threshold events for NAM MIB thresholds and NAM voice-monitoring thresholds.
- Chassis—To display the RMON logTable from the switch mini-RMON MIB.

Note The Chassis option is not available on NM-NAM or NME-NAM devices.