



Network Analysis Module Command Reference

Release 3.5(1)

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Network Analysis Module Command Reference

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Preface

This preface describes the audience, organization, and conventions of this publication, and provides information on how to obtain related documentation.

Audience

This publication is for experienced network administrators who are responsible for configuring and maintaining Catalyst 6500 series switches, the Catalyst 6500 series and Cisco 7600 series Network Analysis Module (NAM), and the Cisco Branch Routers Series Network Analysis Module (NM-NAM).

Organization

This publication is organized as follows:

Chapter	Title	Description
Chapter 1	Command-Line Interface	Describes how to log in to the NAM from the switch supervisor engine, information about the two CLI command modes (the command mode and subcommand mode) and information about NAM CLI edit and create modes.
Chapter 2	Network Analysis Module Commands	Lists alphabetically and provides detailed information for commands that are specific to the Catalyst 6500 series and Cisco 7600 series Network Analysis Module.
Appendix A	NAM Maintenance Partition CLI	Lists the NAM maintenance partition commands.
Appendix B	Acronyms	Defines the acronyms used in this publication.

Related Documentation

The Catalyst 6500 series switch Cisco IOS documentation set includes these documents:

- *Release Notes for Catalyst 6500 Series Switch and Cisco 7600 Series Router Network Analysis Module*
- *Catalyst 6500 Series Switch and Cisco 7600 Series Router Network Analysis Module Installation and Configuration Note*
- *User Guide for the Network Analysis Module Traffic Analyzer, Release 3.1*
- *Catalyst 6500 Series Switch Module Installation Guide*
- *Catalyst 6500 Series Switch Cisco IOS Software Configuration Guide*
- *Catalyst 6500 Series Switch Cisco IOS System Message Guide*
- *Release Notes for Catalyst 6500 Series Switch Cisco IOS Software, Release X.X*

For information about the NAM, refer to this URL:

<http://www.cisco.com/en/US/products/sw/cscowork/ps5401/index.html>

The Cisco IOS documentation set includes these documents:

- *Configuration Fundamentals Configuration Guide*
- *Command Reference*

For information about the NM-NAM network module, refer to this URL:

http://lbj.cisco.com/targets/ucdit/cc/td/doc/product/software/ios123/123newft/123limit/123x/123xd/nm_nam.htm

For information about MIBs, refer to this URL:

<http://www.cisco.com/public/sw-center/netmgmt/cmtk/mibs.shtml>

For information about the Support Information for Platforms and Cisco IOS Software Images, use the Cisco Feature Navigator. The Cisco Feature Navigator allows you to find information about platform support and Cisco IOS software image support. Access the Cisco Feature Navigator at <http://www.cisco.com/go/fn>. You must have an account on Cisco.com. If you do not have an account or have forgotten your username or password, click Cancel at the login dialog box and follow the instructions that appear.

Conventions

This document uses the following conventions:

Convention	Description
boldface font	Commands, command options, and keywords are in boldface .
<i>italic font</i>	Arguments for which you supply values are in <i>italics</i> .
[]	Elements in square brackets are optional.
{ x y z }	Alternative keywords are grouped in braces and separated by vertical bars. Braces can also be used to group keywords and/or arguments; for example, { interface interface type }.

Convention	Description
[x y z]	Optional alternative keywords are grouped in brackets and separated by vertical bars.
string	A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.
screen font	Terminal sessions and information the system displays are in <code>screen font</code> .
boldface screen font	Information you must enter is in boldface screen font .
<i>italic screen font</i>	Arguments for which you supply values are in <i>italic screen font</i> .
^	The symbol ^ represents the key labeled Control—for example, the key combination ^D in a screen display means hold down the Control key while you press the D key.
< >	Nonprinting characters, such as passwords are in angle brackets.
[]	Default responses to system prompts are in square brackets.
!, #	An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.

Notes use the following conventions:



Note

Means *reader take note*. Notes contain helpful suggestions or references to material not covered in the publication.

Cautions use the following conventions:



Caution

Means *reader be careful*. In this situation, you might do something that could result in equipment damage or loss of data.

Obtaining Documentation

Cisco documentation and additional literature are available on Cisco.com. Cisco also provides several ways to obtain technical assistance and other technical resources. These sections explain how to obtain technical information from Cisco Systems.

Cisco.com

You can access the most current Cisco documentation at this URL:

<http://www.cisco.com/techsupport>

You can access the Cisco website at this URL:

<http://www.cisco.com>

You can access international Cisco websites at this URL:

http://www.cisco.com/public/countries_languages.shtml

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<http://www.cisco.com/go/psirt>

To see security advisories, security notices, and security responses as they are updated in real time, you can subscribe to the Product Security Incident Response Team Really Simple Syndication (PSIRT RSS) feed. Information about how to subscribe to the PSIRT RSS feed is found at this URL:

http://www.cisco.com/en/US/products/products_psirt_rss_feed.html

Reporting Security Problems in Cisco Products

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- For Emergencies only—security-alert@cisco.com

An emergency is either a condition in which a system is under active attack or a condition for which a severe and urgent security vulnerability should be reported. All other conditions are considered nonemergencies.

- For Nonemergencies—psirt@cisco.com

In an emergency, you can also reach PSIRT by telephone:

- 1 877 228-7302
- 1 408 525-6532



Tip

We encourage you to use Pretty Good Privacy (PGP) or a compatible product (for example, GnuPG) to encrypt any sensitive information that you send to Cisco. PSIRT can work with information that has been encrypted with PGP versions 2.x through 9.x.

Never use a revoked or an expired encryption key. The correct public key to use in your correspondence with PSIRT is the one linked in the Contact Summary section of the Security Vulnerability Policy page at this URL:

http://www.cisco.com/en/US/products/products_security_vulnerability_policy.html

The link on this page has the current PGP key ID in use.

If you do not have or use PGP, contact PSIRT at the aforementioned e-mail addresses or phone numbers before sending any sensitive material to find other means of encrypting the data.

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Cisco Technical Support provides 24-hour-a-day award-winning technical assistance. The Cisco Technical Support & Documentation website on Cisco.com features extensive online support resources. In addition, if you have a valid Cisco service contract, Cisco Technical Assistance Center (TAC) engineers provide telephone support. If you do not have a valid Cisco service contract, contact your reseller.

Cisco Technical Support & Documentation Website

The Cisco Technical Support & Documentation website provides online documents and tools for troubleshooting and resolving technical issues with Cisco products and technologies. The website is available 24 hours a day, at this URL:

<http://www.cisco.com/techsupport>

Access to all tools on the Cisco Technical Support & Documentation website requires a Cisco.com user ID and password. If you have a valid service contract but do not have a user ID or password, you can register at this URL:

<http://tools.cisco.com/RPF/register/register.do>

**Note**

Use the Cisco Product Identification (CPI) tool to locate your product serial number before submitting a web or phone request for service. You can access the CPI tool from the Cisco Technical Support & Documentation website by clicking the **Tools & Resources** link under Documentation & Tools. Choose **Cisco Product Identification Tool** from the Alphabetical Index drop-down list, or click the **Cisco Product Identification Tool** link under Alerts & RMAs. The CPI tool offers three search options: by product ID or model name; by tree view; or for certain products, by copying and pasting **show** command output. Search results show an illustration of your product with the serial number label location highlighted. Locate the serial number label on your product and record the information before placing a service call.

Submitting a Service Request

Using the online TAC Service Request Tool is the fastest way to open S3 and S4 service requests. (S3 and S4 service requests are those in which your network is minimally impaired or for which you require product information.) After you describe your situation, the TAC Service Request Tool provides recommended solutions. If your issue is not resolved using the recommended resources, your service request is assigned to a Cisco engineer. The TAC Service Request Tool is located at this URL:

<http://www.cisco.com/techsupport/servicerequest>

For S1 or S2 service requests, or if you do not have Internet access, contact the Cisco TAC by telephone. (S1 or S2 service requests are those in which your production network is down or severely degraded.) Cisco engineers are assigned immediately to S1 and S2 service requests to help keep your business operations running smoothly.

To open a service request by telephone, use one of the following numbers:

Asia-Pacific: +61 2 8446 7411 (Australia: 1 800 805 227)

EMEA: +32 2 704 55 55

USA: 1 800 553-2447

For a complete list of Cisco TAC contacts, go to this URL:

<http://www.cisco.com/techsupport/contacts>

Definitions of Service Request Severity

To ensure that all service requests are reported in a standard format, Cisco has established severity definitions.

Severity 1 (S1)—An existing network is down, or there is a critical impact to your business operations. You and Cisco will commit all necessary resources around the clock to resolve the situation.

Severity 2 (S2)—Operation of an existing network is severely degraded, or significant aspects of your business operations are negatively affected by inadequate performance of Cisco products. You and Cisco will commit full-time resources during normal business hours to resolve the situation.

Severity 3 (S3)—Operational performance of the network is impaired, while most business operations remain functional. You and Cisco will commit resources during normal business hours to restore service to satisfactory levels.

Severity 4 (S4)—You require information or assistance with Cisco product capabilities, installation, or configuration. There is little or no effect on your business operations.

Obtaining Additional Publications and Information

Information about Cisco products, technologies, and network solutions is available from various online and printed sources.

- The *Cisco Product Quick Reference Guide* is a handy, compact reference tool that includes brief product overviews, key features, sample part numbers, and abbreviated technical specifications for many Cisco products that are sold through channel partners. It is updated twice a year and includes the latest Cisco offerings. To order and find out more about the Cisco Product Quick Reference Guide, go to this URL:

<http://www.cisco.com/go/guide>

- Cisco Marketplace provides a variety of Cisco books, reference guides, documentation, and logo merchandise. Visit Cisco Marketplace, the company store, at this URL:

<http://www.cisco.com/go/marketplace/>

- *Cisco Press* publishes a wide range of general networking, training and certification titles. Both new and experienced users will benefit from these publications. For current Cisco Press titles and other information, go to Cisco Press at this URL:

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- *Packet* magazine is the Cisco Systems technical user magazine for maximizing Internet and networking investments. Each quarter, Packet delivers coverage of the latest industry trends, technology breakthroughs, and Cisco products and solutions, as well as network deployment and troubleshooting tips, configuration examples, customer case studies, certification and training information, and links to scores of in-depth online resources. You can access Packet magazine at this URL:

<http://www.cisco.com/packet>

- *iQ Magazine* is the quarterly publication from Cisco Systems designed to help growing companies learn how they can use technology to increase revenue, streamline their business, and expand services. The publication identifies the challenges facing these companies and the technologies to help solve them, using real-world case studies and business strategies to help readers make sound technology investment decisions. You can access iQ Magazine at this URL:

<http://www.cisco.com/go/iqmagazine>

or view the digital edition at this URL:

<http://ciscoiq.texterity.com/ciscoiq/sample/>

- *Internet Protocol Journal* is a quarterly journal published by Cisco Systems for engineering professionals involved in designing, developing, and operating public and private internets and intranets. You can access the Internet Protocol Journal at this URL:

<http://www.cisco.com/ipj>

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Command-Line Interface

This chapter provides information for understanding and using the Network Analysis Module (NAM) software by using the command-line interface (CLI). This chapter includes the following sections:

- [Logging in to the NAM, page 1-1](#)
- [Getting Help, page 1-2](#)
- [Command Mode, page 1-3](#)
- [Subcommand Mode, page 1-3](#)
- [Creation and Edit Modes, page 1-4](#)

For an overview of the Catalyst 6500 series Cisco IOS configuration, refer to the *Catalyst 6500 Series Switch Cisco IOS Software Configuration Guide*. For Catalyst 6500 series switch Cisco IOS commands, refer to the *Catalyst 6500 Series Switch Cisco IOS Command Reference*.

For an overview of the Catalyst 6500 series operating system software configuration, refer to the *Catalyst 6500 Series Switch Configuration Guide*. For Catalyst 6500 series switch operating system software commands, refer to the *Catalyst 6500 Series Switch Command Reference*.

For information about supported platforms, Cisco IOS releases, and Catalyst operating system releases, refer to this URL:

<http://www.cisco.com/en/US/products/sw/cscowork/ps5401/index.html>

Logging in to the NAM

There are two levels of access on the Network Analysis Module, each with different privileges:

- Guest—Read-only access (default password is guest)
- Root—Full read-write access (default password is root)



Note

The root account uses the # prompt; the guest account uses the > prompt.

To log into the NAM, perform these steps:

-
- Step 1** Log into the Catalyst 6500 series switch using the Telnet connection or the console port connection.
 - Step 2** Establish a console session with the NAM at the CLI prompt, using the **session** command:

Cisco IOS Software:

```
switch> session slot 4 processor 1
The default escape character is Ctrl-^, then x.
You can also type 'exit' at the remote prompt to end the session
Trying 127.0.0.41 ... Open
```

```
Cisco Network Analysis Module (WS-SVC-NAM-2)
```

```
login:
```

Catalyst Operating System Software:

```
switch> session 3
Trying NAM-3...
Connected to NAM-3.
Escape character is '^']'.
```

```
Cisco Network Analysis Module (WS-SVC-NAM-1)
```

```
login:
```

- Step 3** Log into the NAM by typing **root** to log in as the root user or **guest** to log in as a guest user at the login prompt.

```
login: root
```

- Step 4** At the password prompt, enter the password for the account. The default password for the root account is “root,” and the default password for the guest account is “guest.”

```
Password:
```

After a successful login, the command-line prompt appears as follows:

```
Cisco Network Analysis Module (WS-SVC-NAM-1) Console, 3.4(0.15)
Copyright (c) 1999-2005 by cisco Systems, Inc.
```

```
root@localhost.cisco.com#
```

Getting Help

When you have successfully logged in, type a **?** and press Return or enter the **help** command for a list of commands used to configure the NAM. For example:

```
Cisco Network Analysis Module (WS-SVC-NAM-1) Console, 3.1(0.22)
Copyright (c) 1999-2003 by cisco Systems, Inc.
```

```
root@localhost.cisco.com# ?
? - display help
alarm - configure NAM MIB/voice alarms
autostart - enable/disable autostart collections
clear - clear access log / system alerts
config - configure NAM
coredump - retrieve the coredump file
custom-filter - configure capture/decode custom filters
diffserv - differentiated service related configurations
exit - log out of system
exsession - enable/disable outside logins
help - display help
ip - set ip parameters
logout - log out of system
```

mfgtest	- Manufacturing only tests
monitor	- enable collections
no	- delete various configurations
nslookup	- query nameservers
password	- set new password
patch	- download and install new patch
ping	- ping a network device
preferences	- configure web interface preferences for all users
reboot	- reboot the system
rmon	- configure RMON collections
rmwebusers	- remove all web users from local web user database
show	- show system parameters
shutdown	- shut down the system
snmp	- set snmp parameters
syslog	- configure NAM syslog
terminal	- set terminal parameters
time	- configure NAM system time settings
traceroute	- traceroute to a network device
trap-dest	- create/edit NAM trap destination
upgrade	- download and install new maintenance image
voice	- enable/disable voice collections
web-user	- create/edit local web user

Command Mode

The Network Analysis Module provides a configurable command mode accessible when you log into the NAM as “root.” Certain commands enter into a subcommand mode. In all command and subcommand modes, the asterisk (*) specifies that the subcommand is mandatory.

Subcommand Mode

Some commands enter into a subcommand mode, which provides additional configuration commands that you can use in that mode. For example:

```
root@localhost.cisco.com# monitor host
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-host)#
```

When you have entered the subcommand mode, type a ? or enter the [help](#) command for a list of commands available in that subcommand mode. For example:

```
root@localhost.cisco.com(sub-monitor-host)# ?
? - display help
cancel - discard changes and exit from sub-command mode
control-index - specify the collection control index
data-source - specify the collection data source (*)
exit - exit from the sub-command mode
help - display help
owner - specify the collection owner
```



Note

For the commands that enter into a subcommand mode, the actual configuration is completed only when you enter the **Exit** command.

Creation and Edit Modes

Some commands run in a creation mode and an edit mode, which alternate depending on whether you are creating or changing (editing) a configuration. For example, if you are configuring an RMON buffer collection and you specify an index using the **index** command, if the index already exists, you will be in the edit mode. If the index does not exist, you will be in the creation mode. If you specify an index in creation mode, the index will be used. If you do not specify an index, or the index did not exist, a random index is used.



Network Analysis Module Commands

This chapter contains an alphabetical listing of the commands unique to the Catalyst 6500 series and Cisco 7600 series Network Analysis Module (NAM) and the NM-NAM network module.

For information about Cisco IOS commands that are used to configure the switch, refer to the current Cisco IOS documentation including:

- *Catalyst 6500 Series Switch Cisco IOS Software Configuration Guide*
- *Catalyst 6500 Series Switch Cisco IOS Software Command Reference*

For information about Catalyst operating system commands that are used to configure the switch, refer to the current Catalyst operating system documentation including:

- *Catalyst 6500 Series Switch Configuration Guide*
- *Catalyst 6500 Series Switch Command Reference*

For information about the NM-NAM network module, refer to this URL:

http://lbj.cisco.com/targets/ucdit/cc/td/doc/product/software/ios123/123newft/123limit/123x/123xd/nm_nam.htm

alarm event

To enter the alarm event configuration subcommand mode, and then configure alarm NAM events, use the **alarm event** command. To remove an alarm event, use the **no** form of this command.

alarm event

no alarm event *1-65535*

Syntax Description	<i>1-65535</i>	Specifies the event control index.
---------------------------	----------------	------------------------------------

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Usage Guidelines	When you enter the alarm event submode, the following commands are available:
-------------------------	---

- **cancel**—Discards changes and exits from the subcommand mode.
- **community** *community_string*—(Optional) Sets the community string.
- **description** *description-string*—Sets the alarm description.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **index** *index*—(Optional) Sets the alarm index. Range is from 1 to 65535.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.



Note The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”

- **type** [**both** | **log** | **none** | **trap**]—(Optional) Sets the event to both log and trap, log, none, or trap.

Examples	This example shows how to configure an alarm event:
-----------------	---

```

root@hostname.cisco.com# alarm event
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@hostname.cisco.com(sub-alarm-event)# ?
?
cancel                - discard changes and exit from subcommand mode
community             - set community string
description            - set description
exit                  - exit from subcommand mode
help                  - display help
index                  - set index
owner                  - set owner string

```



```
type - set type
root@hostname.cisco.com(sub-alarm-event)# community public
root@hostname.cisco.com(sub-alarm-event)# description test-event
root@hostname.cisco.com(sub-alarm-event)# index 100
root@hostname.cisco.com(sub-alarm-event)# owner monitor
root@hostname.cisco.com(sub-alarm-event)# type both
root@hostname.cisco.com(sub-alarm-event)# exit
Successfully created the event.
root@hostname.cisco.com# show alarm event
Index:      100
Description: test-event
Type:       Log and trap
Community:  public
Owner:      monitor
root@hostname.cisco.com#
```

Related Commands

[alarm mib](#)
[alarm voice](#)
[show alarm event](#)
[show alarm mib](#)
[show alarm voice](#)

alarm mib

To enter the alarm MIB configuration subcommand mode, and then configure NAM MIB alarms, use the **alarm mib** command. To remove an alarm MIB entry, use the **no** form of this command.

alarm mib

no alarm mib *1-65535*

Syntax Description	<i>1-65535</i>	Specifies the event control index.
---------------------------	----------------	------------------------------------

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Usage Guidelines When you enter the alarm MIB submode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **falling-event** *1-65535*—Sets the falling event index. Range is from 1 to 65535.
- **falling-threshold** *number*— (Optional) Sets the number of packets for the falling event threshold. Default is 0 packets.
- **index** *1-65535*—(Optional) Sets the alarm index. Range is from 1 to 65535.
- **interval** *seconds*—(Optional) Sets the polling interval in seconds. Default is 60 seconds.
- **owner** *string*—(Optional) Sets the owner string. Default is monitor.



Note The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”

- **rising-event** *1-65535*—Sets the rising event index. Range is from 1 to 65535.
- **rising-threshold** *number*—(Optional) Sets the number of packets for the rising event threshold. Default is 0 packets.
- **sample-type** **absolute** | **delta**—Sets the sample type to absolute or delta.
- **startup-alarm** **both** | **falling** | **rising**—Sets the startup alarm to both rising and falling, falling, or rising.
- **variable** *OID*—Sets the object identifier (OID) variable.

Examples

This example shows how to set a MIB alarm:

```

Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@hostname.cisco.com(sub-alarm-mib)# ?
?
cancel                - discard changes and exit from subcommand mode
exit                  - exit from subcommand mode
falling-event         - set falling event index (*)
falling-threshold     - set number of pkts for falling threshold
help                  - display help
index                 - set alarm index
interval              - set polling interval
owner                 - set owner string
rising-event          - set rising event index (*)
rising-threshold      - set number of pkts for rising threshold
sample-type           - set sample type (*)
startup-alarm         - set startup alarm (*)
variable              - set variable (*)

(*) - denotes a mandatory field for this configuration.
root@hostname.cisco.com(sub-alarm-mib)# falling-event 100
root@hostname.cisco.com(sub-alarm-mib)# rising-event 100
root@hostname.cisco.com(sub-alarm-mib)# sample-type delta
root@hostname.cisco.com(sub-alarm-mib)# startup-alarm both
root@hostname.cisco.com(sub-alarm-mib)# variable nlHostInPkts.29673.0.1.4.10.77.201.68
root@hostname.cisco.com(sub-alarm-mib)# exit
Successfully created the NAM MIB alarm.
root@hostname.cisco.com# show alarm mib
Index:                19967
Polling interval:    60 secs
Variable:             nlHostInPkts.29673.0.1.4.10.77.201.68
Sample type:         Delta
Startup:              Rising & falling
Rising threshold:    0 Pkts
Falling threshold:   0 Pkts
Rising event index:  100
Falling event index: 100
Owner:                monitor

root@hostname.cisco.com#

```

Related Commands

[alarm mib](#)
[alarm voice](#)
[show alarm event](#)
[show alarm mib](#)
[show alarm voice](#)

alarm voice

To enter the alarm voice configuration subcommand mode, and then configure NAM voice alarms, use the **alarm voice** command. To disable voice alarm, use the **jitter-alarm disable** or the **pkt-loss-alarm disable** subcommands.

alarm voice

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the alarm voice submode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **jitter-alarm *enable* | *disable***—(Optional) Enables or disables the jitter alarm.
- **jitter-threshold *int***—(Optional) Sets the jitter threshold in milliseconds. Default for SCCP is 30 milliseconds, H.323 is 150 milliseconds, and MGCP is 30 milliseconds.
- **pkt-loss-alarm *enable* | *disable***—(Optional) Enables or disables the packet loss alarm.
- **pkt-loss-threshold *int***—(Optional) Sets the packet loss threshold in percentage(%). Default is 5 percent for all three protocols, SCCP, H.323, and MGCP.
- **protocol *H.323* | *SCCP* | *MGCP***—Sets the voice protocol to H323, SCCP, or MGCP.

The MGCP protocol option is specific to the Network Analysis Module (NAM) software release running on network modules in the Cisco 2600, 3600, 3700 routers.

Examples

This example shows how to set a voice alarm:

```
root@localhost# alarm voice
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@hostname.cisco.com(sub-alarm-voice)# ?
?                - display help
cancel           - discard changes and exit from subcommand mode
exit             - exit from subcommand mode
help            - display help
jitter-alarm    - enable/disable jitter alarm
jitter-threshold - set jitter threshold
pkt-loss-alarm  - enable/disable packet loss alarm
pkt-loss-threshold - set packet loss threshold
protocol        - set protocol (*)
```

(*) - denotes a mandatory field for this configuration.

```
root@hostname.cisco.com(sub-alarm-voice)# protocol SCCP
root@hostname.cisco.com(sub-alarm-voice)# jitter-alarm enable
root@hostname.cisco.com(sub-alarm-voice)# jitter-threshold 50
root@hostname.cisco.com(sub-alarm-voice)# exit
Successfully updated the SCCP configuration.
root@hostname.cisco.com# show alarm voice
SCCP:
    Jitter alarm:          Disabled
    Packet lost alarm:     Disabled
    Jitter threshold:      30 msec
    Packet lost threshold: 5%
H.323:
    Jitter alarm:          Disabled
    Packet lost alarm:     Disabled
    Jitter threshold:      150 msec
    Packet lost threshold: 5%
MGCP:
    Jitter alarm:          Enabled
    Packet lost alarm:     Enabled
    Jitter threshold:      31 msec
    Packet lost threshold: 6%
```

Related Commands

[alarm mib](#)
[show alarm event](#)
[show alarm mib](#)
[show alarm voice](#)

application group

To enter the application group submode and define an application group, use the **application group** command.

application group

no application group *group-name*

Syntax Description	<i>group-name</i> Application group name.
---------------------------	---

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Usage Guidelines	When you enter the application group submode, the following commands are available:
-------------------------	---

- **add** *protocol-specifier*—Adds a protocol to the group. You only can add one protocol to a group at a time (for example, HTTPS). This command allows you to group statistics for more than one specified protocol into one counter.

To add two or more protocols to an application group, repeat the **add** command for each protocol. The protocols are added only when you exit application group subcommand mode.

- **cancel**—Discards changes and exits from the subcommand mode; see the “[cdp enable](#)” command section.
- **delete** *protocol-specifier*—Removes a protocol from the group. You only can remove one protocol from a group at a time.

To remove two or more existing protocols from an existing application group, repeat the **delete** command for each protocol. The protocol is removed only when you exit the application group subcommand mode.

- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **help**—Displays help and keeps you in the application group subcommand mode; see the “[help](#)” command section.
- **name** *string*—Sets the the application group name.

You must provide protocol specifiers in the *add* or *delete* parameters, or both the *add* and *delete* parameters.

Examples	This example shows how to create an application group named appBrpSample with two protocols in the group:
-----------------	---

```
root@NAM# application group
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@NAM(sub-application-group)# ?
```

```

?                - display help
add              - add a protocol to the group (*)
cancel          - discard changes and exit from subcommand mode
delete          - remove a protocol from the group (*)
exit            - exit from subcommand mode
help            - display help
name            - set application group name (*)

(*) - denotes a mandatory field for this configuration.
root@NAM(sub-application-group)# add 16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.3.68.4.0.1.0.0
root@NAM(sub-application-group)# add 16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.4.60.4.0.1.0.0
root@NAM(sub-application-group)# name appGrpSample
root@NAM(sub-application-group)# exit
Sucessfully create application group appGrpSample.
root@NAM#
root@NAM#
root@NAM# show application group appGrpSample
Application Group: appGrpSample
  Number of Protocols: 2
    - w-ether2.ip.tcp.tcp-836
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.3.68.4.0.1.0.0
    - w-ether2.ip.udp.udp-1084
      16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.4.60.4.0.1.0.0

root@NAM#

```

Related Commands [show application group](#)

audit-trail enable

To enable and audit trail of GUI and CLI accesses, use the **audit-trail enable** command. To disable audit trail of GUI and CLI accesses, use the **no** form of this command:

audit-trail enable

no audit-trail enable

Defaults

Audit trail of the CLI and GUI accesses is enabled.

Command Modes

Command mode

Examples

This example shows how to enable an audit trail for GUI and CLI accesses:

```
root@hostname.cisco.com# audit-trail enable
```

Related Commands

[show audit-trail](#)

autostart

To enable or disable autostart collections, use the **autostart** command.

```
autostart collection {enable | disable}
```

Syntax Description		
<i>collection</i>		Specifies a collection. Valid collections are etherstats , addressmap , priostats , vlanstats , and art .
enable		Enables autostart.
disable		Disables autostart.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to enable autostart collections on the NAM:

```
root@hostname.cisco.com# autostart ?
addressmap      - enable/disable autostart address map
art             - enable/disable autostart art
etherstats      - enable/disable autostart ether stats
priostats       - enable/disable autostart prio stats
vlanstats       - enable/disable autostart vlan stats
root@hostname.cisco.com# autostart etherstats enable
root@hostname.cisco.com# show autostart
etherstats enable
addressmap disable
priostats disable
vlanstats disable
art disable
root@hostname.cisco.com#
```

Related Commands [show autostart](#)

cdp enable

To enable the Cisco Discovery Protocol (CDP) on the NM-NAM, use the **cdp enable** command. To disable CDP on the NM-NAM, use the **no** form of this command.

cdp enable

no cdp enable

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Usage Guidelines This command is supported only on the NM-NAM. This command is disabled on the NAM-1 and NAM-2.

Examples This example shows how to enable CDP:

```
root@localhost.cisco.com# cdp enable
root@localhost.cisco.com#
```

Related Commands [cdp hold-time](#)
[cdp interval](#)
[show cdp settings](#)

cdp hold-time

To set the Cisco Discovery Protocol (CDP) messages hold time, use the **cdp hold-time** command. To return the CDP messages hold time to the default value, use the **no** form of this command.

cdp hold-time *time*

no cdp hold-time

Syntax Description	<i>time</i> Specifies the CDP hold time. Range is from 10 to 255 seconds.
Defaults	180 seconds.
Command Modes	Command mode
Examples	This example shows how to set the CDP messages hold time: <pre>root@localhost.cisco.com# cdp hold-time 30 root@localhost.cisco.com#</pre>
Related Commands	cdp enable cdp interval show cdp settings

cdp interval

To set the Cisco Discovery Protocol (CDP) messages interval on the NM-NAM, use the **cdp interval** command. To return the CDP messages interval on the NM-NAM to the default value, use the **no** form of this command.

cdp interval *time*

no cdp interval

Syntax Description	<i>time</i>	Specifies the CDP messages interval. Range is from 5 to 254 seconds.
---------------------------	-------------	--

Defaults	60 seconds
-----------------	------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to set the CDP messages interval:
-----------------	--

```
root@localhost.cisco.com# cdp interval 200
root@localhost.cisco.com#
```

Related Commands	cdp enable cdp hold-time show cdp settings
-------------------------	--

clear access log

To clear the access log, use the **clear access log** command.

clear access-log

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to clear the access log:

```
root@localhost# clear access-log
```

Related Commands [clear system-alerts](#)
[config clear](#)

clear system-alerts

To clear the system alerts, use the **clear system-alerts** command.

clear system-alerts

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to clear the system alerts:

```
root@localhost# clear system-alerts
```

Related Commands [clear access log](#)
[config clear](#)

config clear

To reset the NAM and return it to the factory-default state, use the **config clear** command.

config clear [all | ip]

Syntax Description	all	(Optional) Resets the NAM to the factory-default state including the NAM IP parameters configuration. The NAM reboots automatically for the changes to take effect.
	ip	(Optional) Resets the NAM IP parameters to the manufacturing-default state. The NAM reboots automatically, and you must session into the NAM from the switch supervisor engine to configure the NAM IP parameters so that the module can come online.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to clear the configuration:

```
root@localhost# config clear
This operation will reset the NAM configuration with the exception
of NAM IP parameters.

This operation will also reboot the NAM to allow the changes to
take effect.

Do you wish to continue? (y/n) [n]:y
Successfully updated the SCCP configuration.
Successfully updated the H.323 configuration.
NAM syslog settings updated successfully.
NAM web interface preferences updated successfully.

Successfully modified the configuration.
NAM will be rebooted now, for the changes to take effect ...
```

config network

To import a NAM configuration into the NAM from a specified location, use the **config network** command.

config network *url*

Syntax Description	<i>url</i>	Specifies the NAM configuration location.
--------------------	------------	---

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to download a configuration file to a NAM named kluu-test.config, which is located at the FTP server namlab-pc1 in the user home directory named /home/kluu directory.

```

root@NAM #
root@NAM # config network ftp://kluu@namlab-pc1//home/kluu/kluu-test.config
Downloading ftp://kluu@namlab-pc1//home/kluu/kluu-test.config, please wait ...

Password for kluu@namlab-pc1:
ftp://kluu@namlab-pc1//home/kluu/kluu-test.config (9K)
/tmp/lrcfile.txt.1007 [#####] 9K | 4916.90K/s
9748 bytes transferred in 0.00 sec (4274.44k/sec)

Download completed.

Configuring the NAM. This may take few minutes, please wait ...

NAM configuration completed.
To view the results, use the command 'show log config'.
root@NAM #

```


config upload

To upload the running NAM configuration to a specified location, use the **config upload** command.

```
config upload url [filename]
```

Syntax Description	<i>url</i>	Specifies the configuration location.
	<i>filename</i>	(Optional) Specifies the filename for the configuration.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to upload the NAM running configuration to the FTP server named namlab-pc1 with a filename of example.config:

```
root@NAM# config upload ftp://kluu@namlab-pc1.cisco.com example.config  
Building configuration, please wait... Done.
```

```
Uploading the configuration to 'example.config'  
on 'ftp://kluu@namlab-pc1.cisco.com', This may take few minutes ...
```

```
Password:
```

```
Successfully uploaded the NAM configuration.  
root@NAM#
```

coredump

To retrieve the core dump file, use the **coredump** command.

```
coredump ftp://user:passwd@host/full-path/
```

Syntax Description

ftp://user:passwd@host/full-path/ Sets the path to the core dump file.

Defaults

This command has no default settings.

Command Modes

Command mode

Examples

This example shows how to retrieve a core dump:

```
root@localhost# coredump ftp://user:passwd@host/full-path/
```

custom-filter capture

To enter the custom filter capture subcommand mode, and then configure custom filter capture settings, use the **custom-filter capture** command. To remove custom filter capture, use the **no capture-filter *filtername*** command.

custom-filter capture

no capture-filter *filtername*

Syntax Description

<i>filtername</i>	Specifies the filter to remove.
-------------------	---------------------------------

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the custom filter capture submode, the following commands are available:

- **base *OID***—(Optional) Sets the base object identifier (OID) variable.
- **cancel**—Discards changes and exits from the subcommand mode.
- **data *hex-string***—(Optional) Sets the data.
- **data-mask *hex-string***—(Optional) Sets the data mask.
- **data-not-mask *hex-string***—(Optional) Sets the data-not mask.
- **description *string***—(Optional) Sets the filter description.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **filter-name *string***—Sets the filter name.
- **offset *0-65535***—(Optional) Sets the offset. Range is 0 to 65535.
- **protocol *OID***— Sets the protocol object identifier (OID) variable.
- **status *0-65535*** (Optional)—Sets the status. Range is 0 to 65535.
- **status-mask *0-65535***—(Optional) Sets the status mask. Range is 0 to 65535.
- **status-not-mask *0-65535***—(Optional) Sets the status-not mask. Range is 0 to 65535.

Examples

This example shows how to configure custom filter settings:

```
root@localhost# custom-filter capture
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-custom-filter-capture)#
```

Related Commands

[custom-filter capture](#)
[custom-filter decode](#)
[show custom-filter capture](#)
[show custom-filter decode](#)

custom-filter decode

To enter the custom-filter decode subcommand mode, and then configure custom filter decode settings, use the **custom-filter decode** command. To remove custom filter decode, use the **no decode-filter *filtername*** command.

custom-filter decode

no decode-filter *filtername*

Syntax Description

filtername Specifies the filter to remove.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the custom-filter decode submode, the following commands are available:

- **address-type ip | mac**—(Optional) Sets the address type to IP or MAC.
- **base *OID***—(Optional) Sets the base object identifier (OID) variable.
- **cancel**—Discards changes and exits from the subcommand mode.
- **data *hex-string***—(Optional) Sets the data.
- **description *string***—(Optional) Sets the filter description.
- **direction both | single**—(Optional) Applies the filter to both directions or a single direction.
- **dst-address *address***—(Optional) Sets the traffic destination address.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **filter-expression *expression-string***—(Optional) Sets the filter expression.
- **filter-name *string***—Sets the filter name.
- **offset *0-1518***—(Optional) Sets the offset. Range is 0 to 1518.
- **protocol *string***— Sets the protocol.
- **src-address *address*** (Optional)—Sets the data stream source address.

Examples

This example shows how to custom filter decode settings:

```
root@localhost<sub># custom-filter decode
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-custom-filter-decode)# filter-name 12345
```

Related Commands

[custom-filter capture](#)
[custom-filter decode](#)
[show custom-filter capture](#)
[show custom-filter decode](#)

diffserv aggregate

To enter the differentiated services aggregate configuration subcommand mode, and then configure differentiated services aggregation, use the **diffserv aggregate** command. To remove differentiated services aggregation, use the **no** form of this command.

diffserv aggregate

no diffserv aggregate *control-index*

Syntax Description

control-index Specifies the collection control index. Range is from 1 to 65535.

Defaults

The control index is random.

Command Modes

Command mode

Usage Guidelines

When you enter the differentiated services aggregation submode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **control-index** *control-index*—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random.
- **description** *description*—Specifies the aggregate description.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.



Note The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”

Examples

This example shows how to configure differentiated services aggregation:

```
root@localhost# diffserv aggregate
Entering into sub-command mode for this command.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost(sub-diffserv-aggregate)# descr test1
root@localhost(sub-diffserv-aggregate)# exit
Successfully created a diffserv aggregate.
root@localhost# show diffserv aggregate
Control index:          25013
Description:           test1
Owner:                  monitor
Status:                 1
root@localhost# no diffserv aggregate 25013
Successfully removed the diffserv aggregate.
```

Related Commands

[diffserv profile](#)
[show diffserv aggregate](#)

diffserv profile

To enter the differentiated services profile configuration subcommand mode, and then configure differentiated services profile, use the **diffserv profile** command. To remove differentiated services aggregation, use the **no** form of this command.

diffserv profile

no diffserv profile *profile-index*

Syntax Description

profile-index

Specifies a differentiated services aggregate control index. Range is from 1 to 65535.

Note Use the **diffserv aggregate** command to first create the differentiated services control index, and then use the **show diffserv aggregate** command to obtain a differentiated services aggregate control index.

Defaults

The profile index is random.

Command Modes

Command mode

Usage Guidelines

When you enter the differentiated services profile submode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **descripton** *DSCP-value* | *description*—(Optional) Specifies the aggregate description.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **profile-index** *profile-index*— Specifies the entry control index for an existing differentiated services aggregate. Range is from 1 to 65535. Default is random.



Note

To create a new differentiated services profile entry, you must obtain a new differentiated services aggregate control index by using the **diffserv aggregate** command to create a new differentiated services aggregate entry before using the **diffserv profile** command.

Examples

This example shows how to configure a differentiated services profile:

```
root@localhost# show diffserv aggregate
Control index:          25013
Description:           test1
Owner:                 monitor
Status:                1
root@localhost.cisco.com# diffserv profile
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-diffserv-profile)# profile-index 25013
```



```
root@localhost.cisco.com(sub-diffserv-profile)# descr 0 dscpA
root@localhost.cisco.com(sub-diffserv-profile)# descr 1 dscpB
root@localhost.cisco.com(sub-diffserv-profile)# exit
Successfully updated the differentiated service profile.
root@localhost.cisco.com# show diffserv profile 25013
Aggregate Profile Index:25013
DSCP Value      Description
0                dscpA
1                dscpB
root@localhost.cisco.com# no diffserv profile 25013
Successfully removed the diffserv profile.
```

Related Commands

[show diffserv aggregate](#)
[show diffserv profile](#)

email

To set up an email server that sends both alarm and report data through email, enable or disable alarm messages sent through email, and enter the subcommand mode, use the **email** command. To remove the email server, use the **no email server** command. To stop sending out both scheduled report data and alarm messages through email, use the **no email alarm** command.

email

no email server

no email alarm

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Usage Guidelines (Note: the recipients are alarm messages recipients. Report data recipients are not supported on CLI because there is not any CLI command for setting up a scheduled report.)

When you enter the email subcommand mode, the following commands are available:

- **? or help**—Displays help; see the “[help](#)” command section.
- **cancel**—Discards changes and exits from the subcommand mode.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **server *email-server***—Specifies the email server name.
- **alarm enable**— Enables sending alarm messages through email.
- **alarm disable**—Disables sending alarm messages through email.
- **alarm recipients *space-separated-list-of-email-addresses***—

Examples This example shows how to set up the NAM to send scheduled reports through email to abc@example.com and xyz@example.com:

```
root@localhost# email
root@localhost(sub-email)# server example-email.domain.com
root@localhost(sub-email)# alarm enable
root@localhost(sub-email)# alarm recipients admin@domain.com another_admin@domain.com
root@localhost(sub-email)# exit
Successfully set email configuration settings.
```

Related Commands [show email](#)

entity alias

To configure an entity alias for the entity MIB, use the **entity alias** command.

entity alias *string*

Syntax Description	<i>string</i>	Specifies the entity string used to configure the entPHysicalAlias.
---------------------------	---------------	---

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Usage Guidelines	The entity MIB makes the entPhysicalTable and entLastChangeTime available through SNMP. The clear configuration command deletes the entity alias and asset ID by setting them to an empty string.
-------------------------	---

Examples	This example shows how to log out of the NAM:
-----------------	---

```
root@localhost# entity alias 123456
```

Related Commands	show entity
-------------------------	-----------------------------

entity assetid

To configure an entity MIB asset ID, use the **entity assetid** command.

entity assetid *string*

Syntax Description	<i>string</i> Specifies the entity string used to configure the entPhysicalAssetID.
Defaults	This command has no default settings.
Command Modes	Command mode
Usage Guidelines	The entity MIB makes the entPhysicalTable and entLastChangeTime available through SNMP. The clear configuration command deletes the entity alias and asset ID by setting them to an empty string.
Examples	This example shows how to log out of the NAM: <pre>root@localhost# entity assetid 1234566</pre>
Related Commands	show entity

exit

To log out of the system or to leave a subcommand mode, use the **exit** command.

exit

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Usage Guidelines To leave a subcommand mode, use the **exit** command. The **exit** command saves any changes before leaving the submode.

Examples This example shows how to log out of the NAM:

```
root@localhost# exit
```

exsession

To enable or disable outside logins, use the **exsession** command.

exsession on [ssh]

exsession off

Syntax Description

on	Enables outside logins.
off	Disables outside logins.
ssh	(Optional) Sets the outside logins to SSH.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

A strong crypto patch is required if you use the **ssh** option.

Examples

This example shows how to allow outside logins to the NAM:

```
root@localhost# exsession on
```

ftp

To set the FTP server and directory for storing scheduled reports, use the **ftp** command. To disable FTP scheduled reports, use the **no** form of this command.

ftp

no ftp

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Usage Guidelines When you enter the FTP subcommand mode, the following commands are available:

- **?** or **help**—Displays help; see the “[help](#)” command section.
- **cancel**—Discards changes and exits from the subcommand mode.
- **directory** *WORD*—Specifies the FTP location on the FTP server.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **password** *WORD*—Specifies the user password on the FTP server.
- **user** *WORD*—Specifies the user name on the FTP server.
- **server** *WORD*—Specifies the FTP server name or IP address.

Examples This example shows how to set the FTP server for storing scheduled reports:

```
root@localhost<sub-email># ftp
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@namlab-kom7.cisco.com(sub-ftp)# ?
```

Related Commands [show ftp](#)

help

To display help, use the **help** command or **?**. You must press the **Enter** key after entering the **?**.

help | ?

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode or subcommand mode

Examples This example shows how to display help:

```

root@localhost# help
?                - display help
alarm            - configure NAM MIB/voice alarms
autostart        - enable/disable autostart collections
clear            - clear access log / system alerts
config           - configure NAM
coredump         - retrieve the coredump file
custom-filter    - configure capture/decode custom filters
diffserv         - differentiated service related configurations
exit             - log out of system
exsession        - enable/disable outside logins
help             - display help
ip               - set ip parameters
logout           - log out of system
mfgtest          - Manufacturing only tests
monitor          - enable collections
no               - delete various configurations
nslookup         - query nameservers
password         - set new password
patch            - download and install new patch
ping             - ping a network device
preferences      - configure web interface preferences for all users
reboot           - reboot the system
rmon             - configure RMON collections
rmwebusers       - remove all web users from local web user database
show             - show system parameters
shutdown         - shut down the system
snmp             - set snmp parameters
syslog           - configure NAM syslog
time             - configure NAM timezone/time sync settings
traceroute       - traceroute to a network device
trap-dest        - create/edit NAM trap destination
upgrade          - download and install new maintenance image
voice            - enable/disable voice collections
web-user         - create/edit local web user

```


ip address

To set the system IP address, use the **ip address** command.

```
ip address ip-address subnet-mask
```

Syntax Description		
	<i>ip-address</i>	Sets the system IP address.
	<i>subnet-mask</i>	Sets the subnet mask.

Defaults This command has no default settings.

Command Modes Command mode

Usage Guidelines After setting the IP address, the gateway address may be set to 0.0.0.0. When this situation occurs, use the **ip gateway** command to set the gateway address.

The broadcast address is automatically set with an address that is created using the new IP address and network mask. To select a different broadcast address, use the **ip broadcast** command

Examples This example shows how to set the system IP address:

```
root@localhost# ip address 172.20.104.74 255.255.255.192
IP address and netmask configured successfully.
NOTE: Default gateway address has been reset to 0.0.0.0
Please use 'ip gateway' command to configure it.
root@localhost# ip gateway 172.20.104.66
root@localhost# show ip
IP address:                172.20.104.74
Subnet mask:                255.255.255.192
IP Broadcast:              172.20.255.255
DNS Name:                  namlab-kom8.cisco.com
Default Gateway:          172.20.104.66
Nameserver(s):            171.69.2.133
HTTP server:               Enabled
HTTP secure server:       Disabled
HTTP port:                 80
HTTP secure port:         443
TACACS+ configured:       No
Telnet:                    Enabled
SSH:                       Disabled
root@localhost#
```

Related Commands

- [ip broadcast](#)
- [ip gateway](#)
- [ip host](#)
- [show ip](#)

ip broadcast

To set the system broadcast address, use the **ip broadcast** command.

ip broadcast *broadcast-address*

Syntax Description	<i>broadcast-address</i>	Sets the system broadcast address.
---------------------------	--------------------------	------------------------------------

Defaults	This command has no default settings.	
-----------------	---------------------------------------	--

Command Modes	Command mode	
----------------------	--------------	--

Examples	This example shows how to set the system broadcast address:	
-----------------	---	--

```
root@localhost# ip broadcast 172.20.104.127
root@localhost#
```

Related Commands	ip address ip gateway ip host ip interface show ip
-------------------------	--

ip gateway

To set the system default gateway address, use the **ip gateway** command.

```
ip gateway default-gateway
```

Syntax Description	<i>default-gateway</i>	Sets the default gateway address.
---------------------------	------------------------	-----------------------------------

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to set the IP gateway address:
-----------------	---

```
root@localhost# ip gateway 123.34.56.0
```

Related Commands	ip address ip broadcast ip host ip interface show ip
-------------------------	--

ip host

To set the system host name, use the **ip host** command.

ip host *name*

Syntax Description	<i>name</i>	Sets the IP host name.
---------------------------	-------------	------------------------

Defaults	This command has no default settings.	
-----------------	---------------------------------------	--

Command Modes	Command mode	
----------------------	--------------	--

Examples	This example shows how to set the IP host name:	
-----------------	---	--

```
root@localhost# ip host orion
```

Related Commands	ip address ip gateway ip interface show ip
-------------------------	---

ip hosts add

To add or replace host entries, use the **ip hosts add** command.

```
ip hosts add ip-address host-name [alias1] [alias2]
```

```
ip hosts add ftp://user:passwd@host/full-path/filename
```

Syntax Description		
	<i>ip-address</i>	Sets the host IP address.
	<i>host-name</i>	Sets the host name which can be an FTP URL with a filename.
	alias1 alias2	(Optional) Sets the host alias.
	<i>ftp://user:passwd@host/full-path/filename</i>	Sets the path to the host parameters file location.

Defaults This command has no default settings.

Command Modes Command mode

Usage Guidelines Use the **ip hosts add** *ftp://user:passwd@host/full-path/filename* command to import host entries to the NAM. A maximum of 1,000 entries can exist on the NAM.

Examples This example shows how to add a specific IP host:

```
root@localhost# ip hosts add 30.50.68.10 orion
```

Related Commands [ip hosts delete](#)
[show hosts](#)

ip hosts delete

To delete host entries, use the **ip hosts delete** command.

ip hosts delete *ip-address*

ip hosts delete *ftp://user:passwd@host/full-path/filename*

Syntax Description		
	<i>ip-address</i>	Sets the host IP address.
	<i>ftp://user:passwd@host/full-path/filename</i>	Sets the path to the host parameters file location.

Defaults This command has no default settings.

Command Modes Command mode

Usage Guidelines Use the **ip hosts delete** *ftp://user:passwd@host/full-path/filename* command to remove host entries from the NAM.

Examples This example shows how to delete a specific host:

```
root@localhost# ip hosts delete 172.20.98.129
```

Related Commands [ip hosts add](#)
[show hosts](#)

ip http port

To set the HTTP port, use the **ip http port** command.

```
ip http port 1-65535
```

Syntax Description	<i>1-65535</i>	Specifies a port number in the range of 1 through 65535.
---------------------------	----------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to specify an HTTP port for the NAM: <pre>root@localhost# ip http port 233</pre>
-----------------	---

Related Commands	ip http secure generate ip http server ip http tacacs+ show ip
-------------------------	---

ip http secure generate

To generate a certificate request, use the **ip http secure generate** command.

```
ip http secure generate { certificate-request | self-signed-certificate }
```

Syntax Description

certificate-request	Generates a certificate request.
self-signed-certificate	Generates a self-signed certificate.

Defaults

This command has no default settings.

Command Modes

Command mode

Examples

This example shows how to set up a secure server:

```
root@localhost# ip http secure generate certificate-request
```

Related Commands

[ip http port](#)
[ip http secure install certificate](#)
[ip http server](#)
[ip http tacacs+](#)
[show ip](#)

ip http secure install certificate

To install a certificate, use the **ip http secure install certificate** command.

ip http secure install certificate

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to set up a secure server:
root@localhost# **ip http secure install certificate**

Related Commands

- [ip http port](#)
- [ip http secure generate](#)
- [ip http server](#)
- [ip http tacacs+](#)
- [show ip](#)

ip http secure server

To set up a secure server, use the **ip http secure server** command.

```
ip http secure server {enable | disable}
```

Syntax Description	server enable disable	Enables or disables the HTTP server.
--------------------	-------------------------	--------------------------------------

Defaults	This command has no default settings.
----------	---------------------------------------

Command Modes	Command mode
---------------	--------------

Usage Guidelines	A strong crypto patch is required before applying this command.
------------------	---

Examples	This example shows how to set up a secure server: <pre>root@localhost# ip http secure server enable</pre>
----------	--

Related Commands	ip http port ip http secure generate ip http secure install certificate ip http server ip http tacacs+ show ip
------------------	---

ip http secure port

To set up a secure server port, use the **ip http secure port** command.

ip http secure port *port*

Syntax Description	<i>port</i>	Sets the HTTP secure port.
---------------------------	-------------	----------------------------

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to set up a secure server: <pre>root@localhost# ip http secure port 30</pre>
-----------------	--

Related Commands	ip http port ip http secure generate ip http secure install certificate ip http server ip http tacacs+ show ip
-------------------------	---

ip http server

To enable an HTTP server, use the **ip http server** command.

ip http server {enable | disable}

Syntax Description	enable	Enables the HTTP server.
	disable	Disables the HTTP server.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how enable an HTTP server:

```
root@localhost# ip http server enable
```

Related Commands

- [ip http port](#)
- [ip http secure generate](#)
- [ip http tacacs+](#)
- [show ip](#)

ip http tacacs+

To enable a TACACS+ server, use the **ip http tacacs+** command.

```
ip http tacacs+ enable primary-srv [backup-srv] [en-secret-key encrypted-secret-key]
```

```
ip http tacacs+ disable
```

Syntax Description

disable	Disables the TACACS+ server.
enable	Enables the TACACS+ server.
<i>primary-srv</i>	Specifies the primary TACACS+ server.
backup-srv	(Optional) Specifies the backup TACACS+ server.
en-secret-key	(Optional) Argument name to enable the secret key.
<i>encrypted-secret-key</i>	(Optional) Argument value.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

The **en-secret-key** keyword is used only during the importing of NAM configurations. This key cannot be used unless you can specify a DES-encrypted string as the argument to this keyword, as in this example:

```
root@localhost# ip http tacacs+ enable 10.0.0.1 10.0.0.2 en-secret-key "dEAF="
```

Examples

These examples show how to enable and disable TACACS+.

To enable TACACS+, enter this command:

```
root@hostname.cisco.com# ip http tacacs+ enable 10.0.0.1 10.0.0.2
Secret key:
Repeat secret key:
Successfully enabled Tacacs+
root@hostname.cisco.com# show ip
IP address:                172.20.98.177
Subnet mask:                255.255.255.192
IP Broadcast:              172.20.255.255
DNS Name:                   hostname.cisco.com
Default Gateway:           172.20.98.129
Nameserver(s):              171.69.2.133
HTTP server:                Enabled
HTTP secure server:         Disabled
HTTP port:                  80
HTTP secure port:           443
TACACS+ configured:        Yes
TACACS+ primary server:    10.0.0.1
TACACS+ backup server :    10.0.0.2
Telnet:                     Enabled
```

```
SSH: Disabled
root@hostname.cisco.com#
```

To disable TACACS+, enter this command:

```
root@hostname.cisco.com# ip http tacacs+ disable
TACACS+ disabled successfully.
root@hostname.cisco.com# show ip
IP address: 172.20.98.177
Subnet mask: 255.255.255.192
IP Broadcast: 172.20.255.255
DNS Name: hostname.cisco.com
Default Gateway: 172.20.98.129
Nameserver(s): 171.69.2.133
HTTP server: Enabled
HTTP secure server: Disabled
HTTP port: 80
HTTP secure port: 443
TACACS+ configured: No
Telnet: Enabled
SSH: Disabled
root@hostname.cisco.com#
```

Related Commands

ip http port
ip http secure generate
ip http server
show ip

ip interface

To select the external port or the internal ports for the NM-NAM, use the **ip interface** command.

ip interface external | internal

Syntax Description	external	Selects the RJ-45 Fast Ethernet connector on the NM-NAM.
	internal	Selects the internal LAN segment to the router through the PCI interface for IP communication (for example Telnet, SNMP, HTTP, and so forth) to the NM-NAM.

Defaults This command has no default settings.

Command Modes Command mode

Usage Guidelines This command is supported only on the NM-NAM.

Examples This example shows how to specify an interface port for the NM-NAM:
root@localhost# **ip interface external**

Related Commands [ip address](#)
[show ip](#)

ip nameserver

To set or disable system name server entries, use the **ip nameserver** command.

```
ip nameserver ip-addr ip-addr ip-addr
```

or

```
ip nameserver disable
```

Syntax Description

<i>ip-addr</i>	Sets the name server address.
disable	Disables the name server entries.

Defaults

This command has no default settings.

Command Modes

Command mode

Examples

This example shows how to set a system name server:

```
root@localhost# ip nameserver 171.69.2.133
```

Related Commands

[ip address](#)
[show ip](#)

logout

To log out of the system, use the **logout** command.

logout

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to log out of the NAM:
root@localhost# **logout**

monitor addrmap

To enter the address map collection configuration subcommand mode, and then configure address map collections, use the **monitor addrmap** command. To remove address map collections, use the **no** form of this command.

monitor addrmap

no monitor addrmap *control-index*

Syntax Description	<i>control-index</i> Specifies the collection control index. Range is from 1 to 65535.
Defaults	The control index is random.
Command Modes	Command mode
Usage Guidelines	When you enter the address map collection submode, the following commands are available: <ul style="list-style-type: none"> • cancel—Discards changes and exits from the subcommand mode. • control-index <i>control-index</i>—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random. • data-source <i>data-source</i>—Specifies the collection data source. • exit—Saves changes and exits from the subcommand mode; see the “exit” command section. • owner <i>owner-string</i>—(Optional) Specifies the collection owner. Default is monitor.



Note

The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”

Examples

This example shows how to configure address map collections:

```
root@localhost.cisco.com# monitor addrmap
  Entering into sub-command mode for this command.
  Type 'exit' to come out of this mode.
  Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-addrmap)# data-source vlan1
root@localhost.cisco.com(sub-monitor-addrmap)# exit
  Successfully created an addrmap collection.
root@localhost.cisco.com# show monitor addrmap
  Control index:          65465
  Data source:           vlan1
  Owner is               monitor
root@localhost.cisco.com# no monitor addrmap 65465
  Successfully removed the addrmap collection.
```

Related Commands [show monitor addrmap](#)

monitor art

To enter the ART MIB collection subcommand mode, and then monitor ART MIB collections, use the **monitor art** command. To remove ART MIB collection monitoring, use the **no** form of this command.

monitor art

no monitor art *control-index*

Syntax Description	<i>control-index</i> Specifies the collection control index. Range is from 1 to 65535.
---------------------------	--

Defaults	The control index is random.
-----------------	------------------------------

Command Modes	Command mode
----------------------	--------------

Usage Guidelines	When you enter the ART MIB collection subcommand mode, the following commands are available:
-------------------------	--

- **cancel**—Discards changes and exits from the subcommand mode.
- **control-index** *control-index*—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random.
- **data-source** *string*— Specifies the collection data source.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **max-entries** *int*—(Optional) Specifies the maximum collection entries. Range is from 1 to 65535. Default is 500.
- **owner** *string*—(Optional) Specifies the collection owner. Default is monitor.



Note	The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”
-------------	--

- **rsp-time1** *int*—(Optional) Specifies the collection response time of 1 millisecond. Range is from 0 to 2147483647 (milliseconds). Default is 5 milliseconds.
- **rsp-time2** *int*—(Optional) Specifies the collection response time of 1 millisecond. Range is from 0 to 2147483647 (milliseconds). Default is 15 milliseconds.
- **rsp-time3** *int*—(Optional) Specifies the collection response time of 1 millisecond. Range is from 0 to 2147483647 (milliseconds). Default is 50 milliseconds.
- **rsp-time4** *int*—(Optional) Specifies the collection response time of 1 millisecond. Range is from 0 to 2147483647 (milliseconds). Default is 100 milliseconds.
- **rsp-time5** *int*—(Optional) Specifies the collection response time of 1 millisecond. Range is from 0 to 2147483647 (milliseconds). Default is 200 milliseconds.
- **rsp-time6** *int*—(Optional) Specifies the collection response time of 1 millisecond. Range is from 0 to 2147483647 (milliseconds). Default is 500 milliseconds.

- **rsp-timeout** *int*—(Optional) Specifies the collection response time timeout in milliseconds. Range is from 0 to 2147483647 (milliseconds). Default is 3000 milliseconds.
- **time-remaining** *seconds*—(Optional) Specifies the time remaining in seconds. Range is from 1 to 86400 (seconds). Default is 1800 milliseconds.

Examples

This example shows how to monitor ART MIB collections:

```
root@localhost.cisco.com# monitor art
  Entering into sub-command mode for this command.
  Type 'exit' to come out of this mode.
  Type 'cancel' to discard changes and to come out of this mode.

root@localhost.cisco.com(sub-monitor-art)# data-source vlan1
root@localhost.cisco.com(sub-monitor-art)# exit
  Successfully created an art collection.

root@localhost.cisco.com# show monitor art
  Control index:                33060
  Data source:                  vlan1
  Owner is                      monitor
  Status:                       1
  Time remaining:              1707
  Response time 1:              5
  Response time 2:              15
  Response time 3:              50
  Response time 4:              100
  Response time 5:              200
  Response time 6:              500
  Response timeout:             3000
  Maximum entries:             500
  Status:                       1

root@localhost.cisco.com# no monitor art 33060
  Successfully removed the art collection.
```

Related Commands [show monitor art](#)

monitor diffserv host

To enter the differentiated services host collection configuration subcommand mode, and then configure the differentiated services host collections, use the **monitor diffserv host** command. To remove the differentiated services host collections, use the **no** form of this command.

monitor diffserv host

no monitor diffserv host *control-index*

Syntax Description

<i>control-index</i>	Specifies the control index. The control index range is from 1 to 65535.
Note	If the <i>control-index</i> value is not specified for the monitor diffserv host , monitor diffserv matrix , monitor diffserv pdist , and monitor diffserv stats commands, the command defaults to the index of the first aggregate created using the diffserv aggregate command.

Defaults

The control index is random.

Command Modes

Command mode

Usage Guidelines

When you enter the differentiated services host collection subcommand mode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **control-index** *control-index*—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random.
- **data-source** *string*—Specifies the collection data source.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **ipv4-prefix-len** *ipv4-prefix-length*—(Optional) Sets the IP version 4 prefix length. Default is 32.
- **ipv6-prefix-len** *ipv6-prefix-length*—(Optional) Sets the IP version 6 prefix length. Default is 128.
- **max-entries** *number*—(Optional) Specifies the maximum differentiated services maximum entries. Range is from 1 to 65535. Default is -1.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.



Note

The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”

- **profile-index** *profile-index*—(Optional) Specifies the differentiated services profile index. Range is from 1 to 65535. Default is the first profile index that exists.

Examples

This example shows how to configure the differentiated services host collections:

```
root@localhost.cisco.com# monitor diffserv host
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-diffserv-host)# data-source vlan1
root@localhost.cisco.com(sub-monitor-diffserv-host)# exit
Successfully created a diffserv host collection.
root@localhost.cisco.com#

root@localhost.cisco.com# show monitor diffserv host
Control index:                24864
Data source:                  vlan1
Owner is                       monitor
Status:                        1
Max entries:                   Max possible
Profile index:                 23723
IPv4 prefix length:           32
IPv6 prefix length:           128

root@localhost.cisco.com# no monitor diffserv host 24864
Successfully removed the diffserv host collection.
```

Related Commands

[monitor diffserv host](#)
[show monitor diffserv host](#)

monitor diffserv matrix

To enter the differentiated services matrix collection configuration subcommand mode, and then configure the differentiated services matrix collections, use the **monitor diffserv matrix** command. To remove the differentiated services matrix collections, use the **no** form of this command.

monitor diffserv matrix

no monitor diffserv matrix *control-index*

Syntax Description	<i>control-index</i>	Specifies the collection control index. Range is from 1 to 65535.
---------------------------	----------------------	---

Defaults	The control index is random.	
-----------------	------------------------------	--

Command Modes	Command mode	
----------------------	--------------	--

Usage Guidelines	When you enter the differentiated services matrix collection subcommand mode, the following commands are available:	
-------------------------	---	--

- **cancel**—Discards changes and exits from the subcommand mode.
- **control-index** *control-index*—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random.
- **data-source** *string*—Specifies the collection data source.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **max-entries** *number*—(Optional) Specifies the maximum differentiated services maximum entries. Range is from 1 to 65535. Default is -1.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.



Note	The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”	
-------------	--	--

- **profile-index** *profile-index*—(Optional) Specifies the collection profile index. Range is from 1 to 65535. Default is the first profile index that exists.

Examples

This example shows how to configure the differentiated services matrix collections:

```
root@localhost.cisco.com# monitor diffserv matrix
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-diffserv-matrix)# data-source vlan1
root@localhost.cisco.com(sub-monitor-diffserv-matrix)# max-entries 50
root@localhost.cisco.com(sub-monitor-diffserv-matrix)# owner test
```



```
root@localhost.cisco.com(sub-monitor-diffserv-matrix)# exit
Successfully created a diffserv matrix collection.
root@localhost.cisco.com# show monitor diffserv matrix
Control index:          1269
Data source:           vlan1
Owner:                 test
Status:                1
Max entries:           50
Profile index:         23723

root@localhost.cisco.com# no monitor diffserv matrix 1269
Successfully removed the diffserv matrix collection.
```

Related Commands

[monitor diffserv matrix](#)
[show monitor diffserv host](#)

monitor diffserv pdist

To enter the differentiated services protocol distribution collection configuration subcommand mode, and then configure the differentiated services protocol distribution collections, use the **monitor diffserv pdist** command. To remove the differentiated services protocol distribution collections, use the **no** form of this command.

monitor diffserv pdist

no monitor diffserv pdist *control-index*

Syntax Description	<i>control-index</i>	Specifies the collection control index. Range is from 1 to 65535.
---------------------------	----------------------	---

Defaults	The control index is random.
-----------------	------------------------------

Command Modes	Command mode
----------------------	--------------

Usage Guidelines	When you enter the differentiated services protocol distribution collection subcommand mode, the following commands are available:
-------------------------	--

- **cancel**—Discards changes and exits from the subcommand mode.
- **control-index** *control-index*—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random.
- **data-source** *string*—Specifies the collection data source.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **max-entries** *number*—(Optional) Specifies the maximum differentiated services maximum entries. Range is from 1 to 65535. Default is 1.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.



Note	The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”
-------------	--

- **profile-index** *profile-index*—(Optional) Specifies the profile index. Range is from 1 to 65535. Default is the first profile index that exists.

Examples

This example shows how to configure the differentiated services protocol distribution collections:

```
root@localhost.cisco.com# monitor diffserv pdist
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-diffserv-pdist)# profile-index 31645
root@localhost.cisco.com(sub-monitor-diffserv-pdist)# data-source allspan
```

```
root@localhost.cisco.com(sub-monitor-diffserv-pdist)# owner monitor
root@localhost.cisco.com(sub-monitor-diffserv-pdist)# exit
Successfully created a diffserv pdist collection.
root@localhost.cisco.com# show monitor diffserv pdist
Control index:          61188
Data source:           allspan
Owner:                 monitor
Status:                1
Max entries:           Max possible
Profile index:         31645

root@localhost.cisco.com# no monitor diffserv pdist 61188
Successfully removed the diffserv pdist collection.
```

Related Commands [show monitor pdist](#)

monitor diffserv stats

To enter the differentiated services statistics collection configuration subcommand mode, and then configure the differentiated services statistics collections, use the **monitor diffserv stats** command. To remove the differentiated services statistics collections, use the **no** form of this command.

monitor diffserv stats

no monitor diffserv stats *control-index*

Syntax Description	<i>control-index</i>	Specifies the collection control index. Range is from 1 to 65535.
---------------------------	----------------------	---

Defaults	The control index is random.	
-----------------	------------------------------	--

Command Modes	Monitor differentiated services command mode	
----------------------	--	--

Usage Guidelines	When you enter the differentiated services statistics collection subcommand mode, the following commands are available:	
-------------------------	---	--

- **cancel**—Discards changes and exits from the subcommand mode.
- **control-index** *control-index*—(Optional) Specifies the collection control index. Range is from 1 to 65535.
- **data-source** *string*—Specifies the collection data source.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.



Note	The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”	
-------------	--	--

- **profile-index** *profile-index*—(Optional) Specifies the profile index. Range is from 1 to 65535. Default is the first profile index that exists.

Examples

This example shows how to configure the differentiated services statistics collections:

```
root@localhost.cisco.com# monitor diffserv stats
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-diffserv-stats)# data-source vlan1
root@localhost.cisco.com(sub-monitor-diffserv-stats)# exit
Successfully created a diffserv stats collection.
root@localhost.cisco.com# show monitor diffserv stats
Control index:          42204
Data source:           vlan1
```

```
Owner:                monitor
Status:               1
Profile index:        23723
root@localhost.cisco.com# no monitor diffserv stats 42204
Successfully removed the diffserv stats collection.
```

Related Commands [show monitor diffserv host](#)

monitor etherstats

To enter the Ethernet statistics collection configuration subcommand mode, and then configure Ethernet statistics collections, use the **monitor etherstats** command. To remove the Ethernet statistics collections, use the **no** form of this command.

monitor etherstats

no monitor etherstats *control-index*

Syntax Description	<i>control-index</i> Specifies the collection control index. Range is from 1 to 65535.
---------------------------	--

Defaults	The control index is random.
-----------------	------------------------------

Command Modes	Command mode
----------------------	--------------

Usage Guidelines	When you enter the monitor Ethernet statistics collection subcommand mode, the following commands are available:
-------------------------	--

- **cancel**—Discards changes and exits from the subcommand mode.
- **control-index** *control-index*—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random.
- **data-source** *string*—Specifies the collection data source.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.

Examples	This example shows how to configure Ethernet statistics collections:
-----------------	--

```

root@localhost.cisco.com# monitor etherstats
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-etherstats)# control-index 15
root@localhost.cisco.com(sub-monitor-etherstats)# data-source vlan1
root@localhost.cisco.com(sub-monitor-etherstats)# exit
Successfully created a etherstats collection.
root@localhost.cisco.com# show monitor etherstats 15
Control index:          15
Data source:           vlan1
Owner:                 monitor
Status:                1

root@localhost.cisco.com# no monitor etherstats 15
Successfully removed the etherstats collection.

```

Related Commands [monitor etherstats on-switch](#)
[show monitor etherstats](#)

monitor etherstats on-switch

To enable the supervisor engine mini-RMON statistics polling on the NAM, use the **monitor etherstats on-switch** command. To disable the supervisor engine mini-RMON statistics polling on the NAM, use the **no** form of this command.

monitor etherstats on-switch

no monitor etherstats on-switch

Syntax Description This command has no arguments or keywords

Defaults The control index is random.

Command Modes Command mode

Usage Guidelines This command is supported only on the NAM-1 and NAM-2. This command is not supported on the NM-NAM.

Examples This example shows how to enable the supervisor engine mini-RMON statistics polling on the NAM:

```
root@localhost.cisco.com# monitor etherstats on-switch
```

Related Commands [show monitor etherstats on-switch](#)

monitor history

To enter the history collection configuration subcommand mode, and then configure history collections, use the **monitor history** command. To remove the history collections, use the **no** form of this command.

monitor history

no monitor history *control-index*

Syntax Description	<i>control-index</i>	Specifies the collection control index. Range is from 1 to 65535.
---------------------------	----------------------	---

Defaults	The control index is random.
-----------------	------------------------------

Command Modes	Command mode
----------------------	--------------

Usage Guidelines	When you enter the monitor history collection subcommand mode, the following commands are available:
-------------------------	--

- **cancel**—Discards changes and exits from the subcommand mode.
- **buckets** *number*—(Optional) Specifies the bucket size. Range is from 1 to 65535. Default is 50.
- **control-index** *control-index*—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random.
- **data-source** *string*—Specifies the collection data source.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **interval** *seconds*—(Optional) Interval range is from 1 to 3600 (seconds). Default is 1800.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.

Examples

This example shows how to configure a history collection:

```
root@localhost.cisco.com# monitor history
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-history)# control-index 5
root@localhost.cisco.com(sub-monitor-history)# interval 5
root@localhost.cisco.com(sub-monitor-history)# owner test
root@localhost.cisco.com(sub-monitor-history)# buckets 100
root@localhost.cisco.com(sub-monitor-history)# data-source allspan
root@localhost.cisco.com(sub-monitor-history)# exit
Successfully created a history collection.
root@localhost.cisco.com# show monitor history 5
Control index:          5
Data source:           allspan
Owner:                 test
Status:                1
Buckets:               100
Interval:              5
```

■ monitor history

```
root@localhost.cisco.com# no monitor history 5  
Successfully removed the history collection.
```

Related Commands [show monitor history](#)

monitor hlhost

To enter the host layer host collection configuration subcommand mode, and then configure host layer collections, use the **monitor hlhost** command. To remove the host layer collections, use the **no** form of this command.

monitor hlhost

no monitor hlhost *control-index*

Syntax Description

control-index Specifies the collection control index. Range is from 1 to 65535.

Defaults

The control index is random.

Command Modes

Command mode

Usage Guidelines

When you enter the monitor host layer host collection subcommand mode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **al-max** *max-entries*—(Optional) Specifies the maximum entries for the application layer. Range is from -1 to 2147483647. Default is -1.
- **control-index** *control-index*—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random.
- **data-source** *string*—Specifies the collection data source.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **nl-max** *seconds*—(Optional) Specifies the maximum entries for the network layer. Range is from -1 - 2147483647. Default is -1.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.



Note The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”

Examples

This example shows how to configure a host layer host collection:

```
root@localhost.cisco.com# monitor hlhost
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-hlhost)# al-max 200
root@localhost.cisco.com(sub-monitor-hlhost)# nl-max 200
root@localhost.cisco.com(sub-monitor-hlhost)# control-index 59
root@localhost.cisco.com(sub-monitor-hlhost)# owner test
```

```
root@localhost.cisco.com(sub-monitor-hlhost)# data-source allspan
root@localhost.cisco.com(sub-monitor-hlhost)# exit
Successfully created a hlhost collection.
root@localhost.cisco.com# show monitor hlhost
Control index:          59
Data source:            allspan
Owner:                  test
Status:                 1
Network layer max entries: 200
Application layer max entries:200

root@localhost.cisco.com# no monitor hlhost 59
Successfully removed the hlhost collection.
```

Related Commands [show monitor hlhost](#)

monitor hlmatrix

To enter the host layer matrix collection configuration subcommand mode, and then configure host layer matrix collections, use the **monitor hlmatrix** command. To remove the host layer matrix collections, use the **no** form of this command.

monitor hlmatrix

no monitor hlmatrix *control-index*

Syntax Description

control-index Specifies the collection control index. Range is from 1 to 65535.

Defaults

The control index is random.

Command Modes

Command mode

Usage Guidelines

When you enter the monitor host layer matrix collection subcommand mode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **al-max** *max-entries*—(Optional) Specifies the maximum entries for the application layer. Range is from -1 to 2147483647. Default is -1.
- **control-index** *control-index*—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random.
- **data-source** *string*—Specifies the collection data source.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **nl-max** *seconds*—(Optional) Specifies the maximum entries for the network layer. Range is from -1 - 2147483647. Default is -1.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.



Note The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”

Examples

This example shows how to configure host layer matrix collections:

```
root@localhost.cisco.com# monitor hlmatrix
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-hlmatrix)# control-index 15
root@localhost.cisco.com(sub-monitor-hlmatrix)# data-source vlan1
root@localhost.cisco.com(sub-monitor-hlmatrix)# al-max 15
root@localhost.cisco.com(sub-monitor-hlmatrix)# nl-max 15
```

```
root@localhost.cisco.com(sub-monitor-hlmatrix)# exit
Successfully created a hlmatrix collection.
root@localhost.cisco.com# show monitor hlmatrix 15
Control index:          15
Data source:           vlan1
Owner:                 monitor
Status:                1
Network layer max entries: 15
Application layer max entries:15

root@localhost.cisco.com# no monitor hlmatrix 15
Successfully removed the hlmatrix collection.
```

Related Commands [show monitor hlmatrix](#)

monitor host

To enter the host collection configuration subcommand mode, and then configure host collections, use the **monitor host** command. To remove the host collections, use the **no** form of this command.

monitor host

no monitor host *control-index*

Syntax Description	<i>control-index</i>	Specifies the collection control index. Range is from 1 to 65535.
---------------------------	----------------------	---

Defaults	The control index is random.	
-----------------	------------------------------	--

Command Modes	Command mode	
----------------------	--------------	--

Usage Guidelines	When you enter the monitor host collection subcommand mode, the following commands are available:	
-------------------------	---	--

- **cancel**—Discards changes and exits from the subcommand mode.
- **control-index** *control-index*—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random.
- **data-source** *string*—Specifies the collection data source.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.



Note	The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”
-------------	--

Examples

This example shows how to configure host collections:

```

root@localhost.cisco.com# monitor host
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-host)# data-source allspan
root@localhost.cisco.com(sub-monitor-host)# exit
Successfully created a host collection.
root@localhost.cisco.com# show monitor host
Control index:          16850
Data source:           allspan
Owner:                 monitor
Status:                1

root@localhost.cisco.com# no monitor host 16850
Successfully removed the host collection.

```

■ monitor host

Related Commands [show monitor host](#)

monitor ifstats

To enable router interface statistics collection on the NM-NAM, use the **monitor ifstats** command. To disable router interface statistics collection, use the **no** form of this command.

monitor ifstats

no monitor ifstats

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Usage Guidelines This command is supported only on the NM-NAM.

Examples This example shows how to enable router interface statistics collection:

```
root@localhost.cisco.com# monitor ifstats  
Successfully enable ifstats collection.  
root@localhost.cisco.com# no monitor ifstats  
Successfully disable ifstats collection.
```

Related Commands [show monitor ifstats](#)

monitor interface

To obtain more network traffic analysis GUI detail about the traffic entering or leaving the access router interface, use the **monitor wan-interface** command. To disable the interface statistics detail, use the **no** form of this command.

monitor interface *if-index*

no monitor interface *if-index*

Syntax Description	<i>if-index</i>	Specifies the SNMP interface index of the router interface.
---------------------------	-----------------	---

Defaults	This command has not default settings.	
-----------------	--	--

Command Modes	Command mode	
----------------------	--------------	--

Usage Guidelines	This command is supported only on the NM-NAM only.	
-------------------------	--	--

Examples	This example shows how to increase the detail in the interface traffic display:	
-----------------	---	--

```
root@namlab-jet5.cisco.com# monitor interface 24
Successfully enabled wan monitoring on interface ifIndex(24).
root@namlab-jet5.cisco.com#
```

monitor matrix

To enter the matrix collection configuration subcommand mode, and then configure matrix collections, use the **monitor matrix** command. To remove the host collections, use the **no** form of this command.

monitor matrix

no monitor matrix *control-index*

Syntax Description

control-index Specifies the collection control index. Range is from 1 to 65535.

Defaults

The control index is random.

Command Modes

Command mode

Usage Guidelines

When you enter the monitor matrix collection subcommand mode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **control-index** *control-index*—(Optional) Specifies the collection control index. Range is from 1 to 65535.
- **data-source** *string*—Specifies the collection data source.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.



Note The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”

Examples

This example shows how to configure monitor matrix collections:

```
root@localhost.cisco.com# monitor matrix
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-matrix)# data-source allspan
root@localhost.cisco.com(sub-monitor-matrix)# owner test
root@localhost.cisco.com(sub-monitor-matrix)# control-index 5
root@localhost.cisco.com(sub-monitor-matrix)# exit
Successfully created a matrix collection.
root@localhost.cisco.com# show monitor matrix 5
Control index:          5
Data source:           allspan
Owner:                 test
Status:                1
```

■ monitor matrix

```
root@localhost.cisco.com# no monitor matrix 5  
Successfully removed the matrix collection.
```

Related Commands [show monitor matrix](#)

monitor nbar

To enable supervisor NBAR statistics polling, use the **monitor nbar** command. To disable polling, use the **no** form of this command.

monitor nbar

no monitor nbar

Syntax Description This command has no arguments or keywords.

Defaults This command has no defaults.

Command Modes Command mode

Usage Guidelines The NBAR-PD-MIB must be present to enable the collection of statistical information.

The device using the command determines where statistics are polled from as follows:

- The NM-NAM statistics are polled from the router.
- The NAM-1 or NAM-2 statistics are polled from the supervisor engine.

Examples This example shows how to enable NBAR statistics polling:

```
root@localhost.cisco.com# monitor nbar
Successful enable nbar collection.
root@localhost.cisco.com# no monitor nbar
Successfully disable nbar collection.
```

This example shows how to display NBAR statistics polling:

```
root@localhost.cisco.com# show monitor nbar
nbar collection enabled
```


Related Commands [show monitor nbar](#)

monitor pdist

To enter the protocol distribution collection configuration subcommand mode, and then configure protocol distribution collections, use the **monitor pdist** command. To remove the protocol distribution collections, use the **no** form of this command.

monitor pdist

no monitor pdist *control-index*

Syntax Description	<i>control-index</i> Specifies the collection control index. Range is from 1 to 65535.
Defaults	The control index is random.
Command Modes	Command mode
Usage Guidelines	<p>When you enter the monitor protocol distribution collection subcommand mode, the following commands are available:</p> <ul style="list-style-type: none"> • cancel—Discards changes and exits from the subcommand mode. • control-index <i>control-index</i>—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random. • data-source <i>string</i>—Specifies the collection data source. • exit—Saves changes and exits from the subcommand mode; see the “exit” command section. • owner <i>owner-string</i>—(Optional) Specifies the collection owner. Default is monitor. <p> Note The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”</p>

Examples

This example shows how to configure monitor protocol distribution collections:

```

root@localhost.cisco.com# monitor pdist
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-pdist)# data-source vlan1
root@localhost.cisco.com(sub-monitor-pdist)# exit
Successfully created a pdist collection.
root@localhost.cisco.com# show monitor pdist
Control index:          44272
Data source:           vlan1
Owner:                 monitor
Status:                1

root@localhost.cisco.com# no monitor pdist 44272

```

```
Successfully removed the pdist collection.
```

Related Commands [show monitor pdist](#)

monitor priostats

To enter the priority statistics collection configuration subcommand mode, and then configure priority statistics collections, use the **monitor priostats** command. To remove the priority statistics collections, use the **no** form of this command.

monitor priostats

no monitor priostats *control-index*

Syntax Description	<i>control-index</i> Specifies the collection control index. Range is from 1 to 65535.
Defaults	The control index is random.
Command Modes	Command mode
Usage Guidelines	<p>When you enter the monitor priority statistics collection subcommand mode, the following commands are available:</p> <ul style="list-style-type: none"> • cancel—Discards changes and exits from the subcommand mode. • control-index <i>control-index</i>—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random. • data-source <i>string</i>—Specifies the collection data source. • exit—Saves changes and exits from the subcommand mode; see the “exit” command section. • owner <i>owner-string</i>—(Optional) Specifies the collection owner. Default is monitor.
Examples	<p>This example shows how to configure priority statistics collections:</p> <pre> root@localhost.cisco.com# monitor priostats Entering into sub-command mode for this command. Type 'exit' to come out of this mode. Type 'cancel' to discard changes and to come out of this mode. root@localhost.cisco.com(sub-monitor-priostats)# data-source vlan1002 root@localhost.cisco.com(sub-monitor-priostats)# exit Successfully created a prio stats collection.</pre>
Related Commands	show monitor priostats

monitor protocol

To enter the protocol directory entries configuration subcommand mode, and then configure protocol directory entries, use the **monitor protocol** command. To remove the protocol directory entries, use the **no** form of this command.

monitor protocol

no monitor protocol *prot-specifier*

Syntax Description

<i>prot-specifier</i>	Specifies the protocol entry's SNMP object identifier.
-----------------------	--

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the monitor protocol directory entries subcommand mode, the following commands are available:

- **addressmap** *enable | disable | not-applicable*— Enables or disables address map statistics or sets the address map as not applicable for this protocol.
- **cancel**—Discards changes and exits from the subcommand mode.
- **conversations** *enable | disable | not-applicable*— Enables or disables conversations statistics or sets the conversations as not applicable for this protocol.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **host** *enable | disable | not-applicable*— Enables or disables host statistics or sets the host as not applicable for this protocol.
- **name** *string*—Enters the full name of the protocol. The name string can contain multiple words.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.



Note The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”

- **prot-specifier** *protocol-specifier-string | ip 1-255 | tcp 1-65535 | udp 1-65535 | ncp 1-255 | sunrpc 1-4294967295*—Specifies the collection protocol by protocol.
- **range** *1-255*—Specifies the number of consecutive TCP or UDP ports included in the protocol.

Examples

This example shows how to configure protocol directory entries:

```

root@localhost.cisco.com# monitor protocol
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-protocol)# prot-specifier
12.1.0.0.1.0.0.8.0.0.0.0.17.3.0 .1.0
root@localhost.cisco.com(sub-monitor-protocol)# host disable
root@localhost.cisco.com(sub-monitor-protocol)# conversations disable
root@localhost.cisco.com(sub-monitor-protocol)# exit
Successfully updated the protocol directory entry.
root@localhost.cisco.com# show monitor protocol 12.1.0.0.1.0.0.8.0.0.0.0.17.3 .0.1.0
w-ether2.ip.udp
  Protocol specifier:12.1.0.0.1.0.0.8.0.0.0.0.17.3.0.1.0
  Address map stats: N/A
  Host stats:          Disabled
  Conversation stats:Disabled
  ART stats:          N/A

root@localhost.cisco.com# no monitor protocol 12.1.0.0.1.0.0.8.0.0.0.0.17.3.0 .1.0
Successfully removed the protocol directory entry.
root@localhost.cisco.com# monitor protocol
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-protocol)# prot-specifier
12.1.0.0.1.0.0.8.0.0.0.0.17.3.0 .1.0
root@localhost.cisco.com(sub-monitor-protocol)# host enable
root@localhost.cisco.com(sub-monitor-protocol)# addressmap not-applicable
root@localhost.cisco.com(sub-monitor-protocol)# conversations enable
root@localhost.cisco.com(sub-monitor-protocol)# art disable
root@localhost.cisco.com(sub-monitor-protocol)# exit
Successfully created a protocol directory entry.
root@localhost.cisco.com# show monitor protocol

  Protocol specifier:12.1.0.0.1.0.0.8.0.0.0.0.17.3.0.1.0
  Address map stats: N/A
  Host stats:          Enabled
  Conversation stats:Enabled
  ART stats:          Disabled

```

Related Commands [show monitor protocol](#)

monitor protocol auto-learned

To enable the automatically learned protocols, use the **monitor protocol auto-learned** command. To disable automatically learned protocols, use the **no** form of this command.

monitor protocol auto-learned

no monitor protocol auto-learned

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to set protocol automatic learning:
`root@localhost.cisco.com# monitor protocol auto-learned`

Related Commands [show monitor protocol auto-learned settings](#)

monitor protocol auto-learned max-entry

To set the maximum number of automatically learned protocol entries, use the **monitor protocol auto-learned max-entry** command. To reset the maximum number of automatically learned protocol entries to the default value, use the **no** form of this command.

monitor protocol auto-learned max-entry *entries*

no monitor protocol auto-learned max-entry

Syntax Description	<i>entries</i>	Sets the number of automatic learned protocol entries.
Defaults	100 entries.	
Command Modes	Command mode	
Examples	This example shows how to set protocol automatic learning: <pre>root@localhost.cisco.com# monitor protocol auto-learned max-entry 20</pre>	
Related Commands	show monitor protocol auto-learned settings	

monitor protocol auto-learned tcp exclude

To set the automatically learned protocol feature's TCP port exclusion, use the **monitor protocol auto-learned tcp exclude** command. To remove the automatically learned protocol feature's TCP port exclusion, use the **no** form of this command.

monitor protocol auto-learned tcp exclude *begin-port* | *end-port*

no monitor protocol auto-learned tcp exclude

Syntax Description

<i>begin-port</i>	Specifies the beginning port for the port exclusion.
<i>end-port</i>	Specifies the ending port for the port exclusion.

Defaults

No TCP port is excluded.

Command Modes

Command mode

Examples

This example shows how to set protocol automatic learning:

```
root@localhost.cisco.com# monitor protocol auto-learned tcp exclude 20 50
```

Related Commands

[show monitor protocol auto-learned settings](#)

monitor protocol auto-learned tcp max-port

To set the maximum number of TCP port values that the automatically learned protocol feature can learn up to, use the **monitor protocol auto-learned tcp max-port** command. To reset the maximum TCP port value for automatically learned protocols to the default value, use the **no** form of this command.

monitor protocol auto-learned tcp max-port *max-port*

no monitor protocol auto-learned max-port

Syntax Description

max-port

Sets the maximum number of ports that the automatically learned protocol feature can learn up to. Ports above this setting are not learned. Range is from 1 to 65535.

Defaults

The maximum number of learned ports is 65535.

Command Modes

Command mode

Usage Guidelines

If you apply the **monitor protocol auto-learned tcp max-port 100** command to the NAM, the NAM does not learn protocols that have TCP port values of 101 or more.

Examples

This example shows how to set protocol automatic learning:

```
root@localhost.cisco.com# monitor protocol auto-learned tcp
```

```
root@localhost.cisco.com# monitor protocol auto-learned
```

Related Commands

[show monitor protocol auto-learned settings](#)

monitor protocol auto-learned udp exclude

To set the automatically learned protocol feature's UDP port exclusion, use the **monitor protocol auto-learned udp exclude** command. To remove the automatically learned protocol feature's UDP port exclusion, use the **no** form of this command.

```
monitor protocol auto-learned udp exclude begin-port | end-port
```

```
no monitor protocol auto-learned udp exclude
```

Syntax Description

<i>begin-port</i>	Specifies the beginning port for the port exclusion.
<i>end-port</i>	Specifies the ending port for the port exclusion.

Defaults

No UDP port is excluded.

Command Modes

Command mode

Examples

This example shows how to set protocol automatic learning:

```
root@localhost.cisco.com# monitor protocol auto-learned udp exclude 20 50
```

Related Commands

[show monitor protocol auto-learned settings](#)

monitor protocol auto-learned udp max-port

To set the maximum number of UDP port values that the automatically learned protocol feature can learn up to, use the **monitor protocol auto-learned udp max-port** command. To reset the maximum UDP port values for automatically learned protocols to the default value, use the **no** form of this command.

monitor protocol auto-learned udp max-port *max-port*

no monitor protocol auto-learned max-port

Syntax Description

max-port

Sets the maximum number of ports that the automatically learned protocol feature can learn up to. Ports above this setting are not learned. Range is from 1 to 65535.

Defaults

The maximum number of learned ports is 65535.

Command Modes

Command mode

Usage Guidelines

If you apply the **monitor protocol auto-learned udp max-port 100** command to the NAM, the NAM does not learn protocols that have UDP port values of 101 or more.

Examples

This example shows how to set protocol automatic learning:

```
root@localhost.cisco.com# monitor protocol auto-learned udp
```

Related Commands

[show monitor protocol auto-learned settings](#)

monitor rtp-stream enable

To enable RTP stream monitoring, use the **monitor rtp-stream** command. To disable RTP stream monitoring, use the **no** form of this command.

monitor rtp-stream enable

no monitor rtp-stream enable

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to enable RTP stream monitoring:
root@localhost.cisco.com# **monitor rtp-stream enable**

Related Commands [monitor rtp-stream filter](#)
[monitor rtp-stream max-entry](#)
[monitor rtp-stream pkt-loss-alarm](#)

monitor rtp-stream filter

To set a RTP stream filtering entry, use the **monitor rtp-stream filter** command. To remove a RTP stream filtering entry, use the **no** form of the is command..

monitor rtp-stream filter *source-address source-mask dest-address dest-mask*

Syntax Description		
	<i>source-address</i>	Specifies the source address of the RTP stream being filtered.
	<i>source-mask</i>	Specifies the subnet mask of the source address of the RTP stream being filtered.
	<i>dest-address</i>	Specifies the destination address of the RTP stream being filtered.
	<i>dest-mask</i>	Specifies the subnet mask of the RTP stream being filtered.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to enable RTP stream filtering:

```
root@localhost# monitor rtp-stream filter 1.2.3.0 255.255.255.0 4.5.0.0 255.255.0.0
```

Related Commands

- [monitor rtp-stream enable](#)
- [monitor rtp-stream max-entry](#)
- [monitor rtp-stream pkt-loss-alarm](#)

monitor rtp-stream max-entry

To set the number RTP streams for monitoring, use the **monitor rtp-stream max-entry** command. To set the max number of RTP streams for monitoring to manufacturing default value (30), use the **no** form of this command.

```
monitor rtp-stream max-entry [max-entries]
```

```
no monitor rtp-stream max-entry
```

Syntax Description

max-entries

Specifies the maximum number of streams you can monitor. Range is from 1 to 100.

Defaults

This command has no default settings.

Command Modes

Command mode

Examples

This example shows how to enable RTP stream monitoring:

```
root@localhost.cisco.com# monitor rtp-stream max-entry 50
```

Related Commands

[monitor rtp-stream enable](#)
[monitor rtp-stream filter](#)
[monitor rtp-stream pkt-loss-alarm](#)

monitor rtp-stream pkt-loss-alarm

To enable alarm for RTP stream packet loss, use the **monitor rtp-stream pkt-loss-alarm** command. To disable alarm on RTP stream packet loss, use the **no** form of this command.

monitor rtp-stream pkt-loss-alarm enable threshold

no monitor rtp-stream pkt-loss-alarm

Syntax Description	enable	threshold
	Enables packet lost monitoring.	Specifies one of two thresholds in the command. The first threshold is the number of consecutive RTP losses. The second threshold is the packet loss rate in 10 ⁶ units.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to enable an alarm for RTP stream monitoring of lost packets:

```
root@localhost.cisco.com# monitor rtp-stream pkt-loss-alarm 23 44
```

Related Commands [monitor rtp-stream enable](#)
[monitor rtp-stream max-entry](#)

monitor urlcollection

To enter the URL collection submode and configure URL collections, use the **monitor urlcollection** command. To disable the URL collection, use the **no** form of this command.

monitor urlcollection

no monitor urlcollection

Syntax Description This command has no keywords or arguments.

Defaults This command has no default settings.

Command Modes Command mode

Usage Guidelines When you enter the URL collections submode, the following commands are available:

- **? or help**—Displays help; see the “[help](#)” command section.
- **cancel**—Discards changes and exits from the subcommand mode; see the “[cdp enable](#)” command section.
- **data-source** *nam-data-source-name*—Specifies the NAM data source name.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **ignore**—(Optional) Sets the host, path, and the URL matching argument.
 - **ignore** *host*—Specifies that you ignore or do not ignore the URL’s host part when collecting URL collection data.
 - **ignore** *path*—Specifies that you ignore or do not ignore the URL’s path part when collecting URL collection data.
 - **ignore** *url-arg*—Specifies that you ignore or do not ignore the URL’s arguments when collecting URL collection data.
 - **ignore** *enable | disable*—Enables or disables this command.
- **match-only** *string*—(Optional) Specifies collecting only the URL data that matches the string in the URL.
- **max-entry** *100 | 50 | 1000*—(Optional) Specifies the maximum of URL collection entries.
- **recycle** *enable | disable*—Enables or disables aging of the URL collection data entries.

There is only one URL collection in the NAM. The collection owner is always LocalMgr. The index is always one.

This command is supported by the NAM-1, NAM-2, and NM-NAM.

Examples

This example shows how to configure URL collections:

```
root@localhost# monitor urlcollections  
root@localhost#
```

Related Commands

[clear access log](#)
[show monitor urlcollection](#)

monitor urlfilter

To enter the URL filter collection configuration subcommand mode, and then configure URL filters, use the **monitor urlfilter** command. To remove the URL filters from the configuration, use the **no** form of this command.

monitor urlfilter

no monitor urlfilter *control-index*

Syntax Description

control-index Specifies the collection control index. Range is from 1 to 65535.

Defaults

The control index is random.

Command Modes

Command mode

Usage Guidelines

When you enter the monitor URL filter subcommand mode, the following commands are available:

- **?**—Displays help.
- **cancel**—Discards changes and exits from the subcommand mode.
- **control-index** *control-index*—Specifies the URL entry's control index. Range is from 1 to 65535. Default is random.
- **description** *string*—(Optional) Specifies the URL filter's description string.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **help**—Displays help.
- **host-regexp**—Specifies the regular expression for the URL's host.
- **path-regexp**—Specifies the regular expression of the URL's path.
- **protocol-encap**—(Optional) Specifies the protocol encapsulation of the HTTP packet.

The **clear configuration** command removes the URL filters from the configuration. There is no SNMP support for configuring the URL filters.

Examples

This example shows how to configure URL filters:

```
root@nam# monitor urlfilter
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@nam(sub-monitor-url-filter)# control-index 2
root@nam(sub-monitor-url-filter)# description urlfilter example
root@nam(sub-monitor-url-filter)# host-regexp www.example.com
root@nam(sub-monitor-url-filter)# protocol-encap ipv4
root@nam(sub-monitor-url-filter)# exit
Sucessfully created urlfilter entry.
root@nam# show monitor urlfilter
```

```
Description: urlfilter example
Control index:      2
Protocol encapsulation: IPv4
URL's host string:  www.example.com
URL's path string:  (not-set)
```

To remove this URL filter entry, use the **no** form of the command:

```
root@nam# no monitor urlfilter 2
Successfully delete urlfilter entry.
```

Related Commands

[clear access log](#)
[show monitor urlfilter](#)

monitor vlanstats

To enter the VLAN statistics collection configuration subcommand mode, and then configure VLAN statistics collections, use the **monitor vlanstats** command. To remove the VLAN statistics collections, use the **no** form of this command.

monitor vlanstats

no monitor vlanstats *control-index*

Syntax Description This command has no arguments or keywords.

Defaults The control index is random.

Command Modes Command mode

Usage Guidelines When you enter the monitor VLAN statistics collection subcommand mode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **control-index** *control-index*—(Optional) Specifies the collection control index. Range is from 1 to 65535. Default is random.
- **data-source** *string*—Specifies the collection data source.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **owner** *owner-string*—(Optional) Specifies the collection owner. Default is monitor.



Note The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”

Examples This example shows how to configure VLAN statistics collections:

```
root@localhost.cisco.com# monitor vlanstats
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-vlanstats)#
root@localhost.cisco.com(sub-monitor-vlanstats)# data-source vlan1002
root@localhost.cisco.com(sub-monitor-vlanstats)# exit
Successfully created a vlan stats collection.
root@localhost.cisco.com# show monitor vlanstats
Control index:          35955
Data source:           vlan1002
Owner is               monitor
Status:                1
```

■ monitor vlanstats

```
root@localhost.cisco.com# no monitor vlanstats 35955  
Successfully removed the vlan stats collection.
```

Related Commands [show monitor urlcollection](#)

monitor vlanstats on-switch

To configure supervisor engine VLAN statistics collections, use the **monitor vlanstats on-switch** command. To disable the VLAN statistics collections, use the **no** form of this command.

monitor vlanstats on-switch

no monitor vlanstats on-switch

Syntax Description This command has no arguments or keywords.

Defaults This command has not default settings.

Command Modes Command mode

Usage Guidelines This command is supported only on the NAM-1 and NAM-2 only.

Examples This example shows how to configure supervisor engine VLAN statistics collections:

```
root@localhost.cisco.com# monitor vlanstats on-switch  
Successfully enable supervisor vlanstats on-switch.
```

This example shows how to display supervisor engine VLAN statistics collections:

```
root@localhost.cisco.com# show monitor vlanstats on-switch  
Supervisor vlanstats collection is enabled.
```

This example shows how to disable supervisor engine VLAN statistics collections:

```
root@localhost.cisco.com# no monitor vlanstats on-switch  
Successfully disable supervisor vlanstats on-switch.
```

Related Commands [show monitor vlanstats on-switch](#)

monitor voice h.323

To enter the H.323 voice collection configuration subcommand mode, and then configure H.323 voice collections, use the **monitor voice h.323** command. To disable the H.323 voice collections, use **disable** in the **monitor voice h.323** subcommand mode.

monitor voice h.323

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the monitor voice H.323 statistics collection subcommand mode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **disable**—Disables H.323 voice collections.
- **enable**—Enables H.323 voice collections.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **max-calls**—Specifies the number of call table rows. Range is from 10 to 1000. Default is 200.
- **max-phones**—Specifies the number of phone table rows. Range is from 10 to 1000. Default is 200.
- **top-jitter-rows**—Specifies the number of top jitter rows. Range is from 1 to 20. Default is 5.
- **top-loss-rows**—Specifies the number of top loss rows. Range is from 1 to 20. Default is 5.

Examples

This example shows how to configure H.323 voice collections:

```
root@localhost.cisco.com# monitor voice h.323
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-voice-h.323)# disable
root@localhost.cisco.com(sub-monitor-voice-h.323)# exit
Successfully disabled the h.323 voice collection with changes.
root@localhost.cisco.com# show monitor voice h.323
H.323 voice monitoring:           Disabled
Number of phone table rows:      200
Number of call table rows:       1000
Number of top packet jitter rows: 5
Number of top packet loss rows:  5
```

Related Commands

[monitor voice h.323](#)
[show monitor vlanstats](#)

monitor voice mgcp

To enter the Media Gateway Control Protocol (MGCP) collection configuration subcommand mode, and then configure MGCP collections, use the **monitor voice mgcp** command. To disable MGCP collections, use **disable** in the **monitor voice mgcp** subcommand mode.

monitor voice mgcp

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the monitor voice MGCP statistics collection subcommand mode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **disable**—Disables MGCP collections.
- **enable**—Enables MGCP collections.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **max-calls**—Specifies the number of call table rows. Range is from 10 to 1000. Default is 200.
- **max-phones**—Specifies the number of phone table rows. Range is from 10 to 1000. Default is 200.
- **top-jitter-rows**—Specifies the number of top jitter rows. Range is from 1 to 20. Default is 5.
- **top-loss-rows**—Specifies the number of top loss rows. Range is from 1 to 20. Default is 5.

Examples

This example shows how to configure MGCP collections:

```

root@localhost.cisco.com# monitor voice mgcp
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-voice-mgcp)# disable
root@localhost.cisco.com(sub-monitor-voice-mgcp)# exit
Successfully disabled the MGCP collection with changes.
Root@localhost# show monitor voice mgcp
MGCP voice monitoring:           Disabled
Number of phone table rows:      150
Number of call table rows:       150
Number of top packet jitter rows: 7
Number of top packet loss rows:  7

```

Related Commands

[monitor voice h.323](#)
[show monitor vlanstats](#)

monitor voice sccp

To enter the Skinny Client Control Protocol (SCCP) voice statistics collection configuration subcommand mode, and then configure SCCP voice collection, use the **monitor voice sccp** command. To disable SCCP voice collection, use **disable** in the **monitor voice sccp** subcommand mode.

monitor voice sccp

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the monitor voice SCCP statistics collection subcommand mode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **disable**—Disables SCCP voice collections.
- **enable**—Enables SCCP voice collections.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **max-calls**—Specifies the number of call table rows. Range is from 10 to 1000. Default is 300.
- **max-phones**—Specifies the number of phone table rows. Range is from 10 to 1000. Default is 300.
- **top-jitter-rows**—Specifies the number of top jitter rows. Range is from 1 to 20. Default is 5.
- **top-loss-rows**—Specifies the number of top loss rows. Range is from 1 to 20. Default is 5.

Examples

This example shows how to configure voice SCCP statistics collections:

```

root@localhost.cisco.com# monitor voice sccp
Entering into sub-command mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-monitor-voice-sccp)# top-loss-rows 500
ERROR:You have specified a number of loss rows which is not valid.
The number of loss rows must be between 1 and 20.
root@localhost.cisco.com(sub-monitor-voice-sccp)# top-loss-rows 20
root@localhost.cisco.com(sub-monitor-voice-sccp)# top-jitter-rows 20
root@localhost.cisco.com(sub-monitor-voice-sccp)# exit
Successfully enabled the sccp voice collection with changes.

root@localhost.cisco.com# show monitor voice sccp
SCCP voice monitoring:           Enabled
Number of phone table rows:     300
Number of call table rows:      100
Number of top packet jitter rows: 20
Number of top packet loss rows: 20

```


Related Commands

[monitor voice h.323](#)
[show monitor vlanstats](#)

monitor voice sip

To enter the Session Initiation Protocol (SIP) voice statistics collection configuration subcommand mode, and then configure SIP voice collection, use the **monitor sip** command. To disable SIP voice collection, use **disable** in the **monitor sip** subcommand mode.

monitor voice sip

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the monitor voice SIP statistics collection subcommand mode, the following commands are available:

- **? or help**—Displays help; see the “[help](#)” command section.
- **cancel**—Discards changes and exits from the subcommand mode.
- **disable**—Disables SIP voice collections.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **enable**—Enables SIP voice collections.
- **max-calls**—Specifies the maximum number of rows in the call table. Range is from 10 to 1000. Default is 200.
- **max-phones**—Specifies the maximum number of rows in the phone table. Range is from 10 to 1000. Default is 200.
- **top-jitter-rows**—Specifies the maximum number of rows in the top jitter table. Range is from 1 to 20. Default is 5.
- **top-loss-rows**—Specifies the maximum number of rows in the top percent packet loss table. Range is from 1 to 20. Default is 5.

Examples

This example shows how to configure SIP collections:

```
root@namlab-kom6.cisco.com# monitor voice sip
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@namlab-kom6.cisco.com(sub-monitor-voice-sip)# enable
root@namlab-kom6.cisco.com(sub-monitor-voice-sip)# max-calls 250
root@namlab-kom6.cisco.com(sub-monitor-voice-sip)# max-phones 500
root@namlab-kom6.cisco.com(sub-monitor-voice-sip)# top-jitter-rows 20
root@namlab-kom6.cisco.com(sub-monitor-voice-sip)# top-loss-rows 20
root@namlab-kom6.cisco.com(sub-monitor-voice-sip)# exit
Successfully enabled the sip voice collection with changes.
root@namlab-kom6.cisco.com# show monitor voice sip
```

```
SIP voice monitoring:           Enabled
Number of phone table rows:     500
Number of call table rows:      250
Number of top packet jitter rows: 20
Number of top packet loss rows: 20
```

```
root@namlab-kom6.cisco.com#
```

Related Commands [show monitor voice](#)

mpls data-source label

To create a NAM MPLS data source specifically interested in a local MPLS label, use this command. (optionally provide a user-meaningful data source name. , use the **mpls data-source label** command. To remove the MPLS data source, use the **no** form of this command.

mpls data-source label *data-source-value*

no mpls data-source label *data-source-value*

Syntax Description	<i>data-source-value</i>	Specifies a user-meaningful data source value. Range is from 16 to 1048575.
---------------------------	--------------------------	---

Defaults	LABEL: <i>label</i> in the data source name.
-----------------	--

Command Modes	Command mode
----------------------	--------------

Usage Guidelines

Examples	This example shows how to parse set up an MPLS data source on the NAM collect RMON statistics:
-----------------	--

```
root@localhost# mpls data-source label XXXYYY12345
root@localhost#
```

Related Commands	mpls data-source vc mpls data-source vrf show nam data-source
-------------------------	---

mpls data-source vc

To create a NAM MPLS data source based on an MPLS virtual circuit ID, use the **mpls data-source vc** command. To remove the MPLS data source, use the **no** form of this command.

```
mpls data-source vc vc-id
```

```
no mpls data-source vc-id
```

Syntax Description

vc	Specifies an MPLS data source based on a virtual circuit ID.
<i>vc-id</i>	Specifies the virtual circuit ID. Range is from 1 to 65535.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

Examples

This example shows how to parse set up an MPLS data source on the NAM collect RMON statistics:

```
root@localhost# mpls data-source vc 12345
root@localhost#
```

Related Commands

[mpls data-source vrf](#)
[mpls data-source label](#)
[show nam data-source](#)

mpls data-source vrf

To create a NAM MPLS data source based on an MPLS VRF name string, use the **mpls data-source vrf** command. To remove the MPLS data source, use the **no** form of this command.

mpls data-source vrf *vrf-name-string*

no mpls data-source *vrf-name-string*

Syntax Description

vrf	Specifies an MPLS data source based on a virtual rf ID.
<i>vrf-name-string</i>	Specifies the virtual rf ID.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

Examples

This example shows how to parse set up an MPLS data source on the NAM collect RMON statistics:

```
root@localhost# mpls data-source vrf netflow
root@localhost#
```

Related Commands

[mpls data-source vc](#)
[mpls data-source label](#)
[show nam data-source](#)

netflow data-source

To enter the NetFlow data source configuration subcommand mode, and then create or edit a custom data source, use the **netflow data-source** command. To remove a NetFlow custom data source, use the **no** form of this command.

netflow data-source

no netflow data-source *data-source-name*

Syntax Description

<i>data-source-name</i>	Specifies the custom NetFlow data source name.
-------------------------	--

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the NetFlow data source configuration subcommand mode, the following commands are available:

- **both** (* * * ...)—Specifies a list of ifIndices separated by a space for both input and output data flow directions.
- **cancel**—Discards changes and exits from the subcommand mode; see the “[cdp enable](#)” command section.
- **device** (* * * ...)—Specifies the NetFlow device’s IPv4 address.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **index** (* * * ...)—Specifies the ifIndex of the NetFlow data source. Use 0 when creating a new ifIndex.
- **input direction** (* * * ...)—Specifies a list of ifIndices separated by a space for the input data flow direction.
- **name**—Specifies the NetFlow data source name.
- **output direction** (* * * ...)—Specifies a list of ifIndices separated by a space for the output data flow direction.

To create a new NetFlow custom data source, you must not provide an index value in the subcommand mode. If an index value is provided, it is an edit of an existing NetFlow custom data source.

The NetFlow custom data source name is prepended with `nde-`. For example, `nde-exampleNetFlow`.

You must give NetFlow device information.

All the if-indices values are provided by the NetFlow device. You do not need to provide all three directions (input, output, and both) but there must be at least one of the three.

Examples

This example shows how to configure a remote NetFlow device:

```
root@localhost# netflow device 10.0.0.2
Successfully created a NetFlow device.
root@localhost#
root@localhost# netflow data-source
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.

root@localhost(sub-netflow-data-source)# device 10.0.0.2
root@localhost(sub-netflow-data-source)# name exampleNetFlow
root@localhost(sub-netflow-data-source)# input 1 2
root@localhost(sub-netflow-data-source)# output 3 4 5
root@localhost(sub-netflow-data-source)# both 22 29
root@localhost(sub-netflow-data-source)# exit
```

Related Commands [netflow device](#)

netflow device

To configure remote NetFlow devices and create a default data source for the NetFlow device, use the **netflow device** command. To remove a remote NetFlow device, use the **no** form of this command.

netflow device *device-address* [*community-string*]

no netflow device *address*

Syntax Description

<i>device-address</i>	Specifies the remote NetFlow device address.
<i>community-string</i>	(Optional) Specifies the remote NetFlow device community string.

Defaults

This command has no default settings.

Command Modes

Command mode

Examples

This example shows how to configure a remote NetFlow device:

```
root@localhost# netflow device 10.0.0.1 public
Successfully created a netflow device.
root@localhost# show nam data-source
allspan
nde-10.0.0.1

root@localhost# no netflow device 10.0.0.1
Successfully removed the netflow device.
```

nslookup

To configure name server queries, use the **nslookup** command.

nslookup hostname [server]

Syntax Description	hostname	Specifies the name server query host.
	server	(Optional) Specifies the name server to query.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to configure name server queries:

```
root@localhost.cisco.com# nslookup www.yahoo.com
Server:          127.0.0.1
Address:         127.0.0.1#53

Non-authoritative answer:
www.yahoo.com   canonical name = www.yahoo.akadns.net.
Name:   www.yahoo.akadns.net
Address:66.218.71.80
```

password

To set a new password, use the **password** command.

```
password username
```

Syntax Description	<i>username</i> Sets the user login name whose password will be changed.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Usage Guidelines	There are only two valid users, root and guest.
-------------------------	---

Examples	<p>This example shows how to set a password:</p> <pre>root@localhost.cisco.com# password root Changing password for user root New UNIX password: Retype new UNIX password: passwd:all authentication tokens updated successfully root@localhost.cisco.com#</pre>
-----------------	---

patch

To download and install a software patch, use the **patch** command.

```
patch ftp://user:passwd@host/full-path/filename
```

Syntax Description	<i>ftp://user:passwd@host/full-path/filename</i> Sets the path to download the patch.
---------------------------	---

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to download and install a patch:
-----------------	---

```
root@localhost.cisco.com# patch
ftp://hostname/fullpath/c6nam-3.1-strong-cryptoK9-patch-1-0.bin

Proceeding with installation. Please do not interrupt.
If installation is interrupted, please try again.

Downloading c6nam-3.1-strong-cryptoK9-patch-1-0.bin. Please wait...
ftp://hostname/fullpath/c6nam-3.1-strong-cryptoK9-patch-1-0.bin (1K)
- [#####] 1K | 1886.33K/s
1891 bytes transferred in 0.00 sec (1569.00k/sec)

Verifying c6nam-3.1-strong-cryptoK9-patch-1-0.bin. Please wait...
Patch c6nam-3.1-strong-cryptoK9-patch-1-0.bin verified.

Applying /usr/local/nam/patch/workdir/c6nam-3.1-strong-cryptoK9-patch-1-0.bin. Please
wait...
##### [100%]
##### [100%]

Patch applied successfully.
root@localhost.cisco.com#
```

Related Commands	show patches show version
-------------------------	--

ping

To check connectivity to a network device, use the **ping** command.

```
ping [-n | -v] [-c count] [-i wait] [-p pattern] [-s packetsize] hostname | IP address
```

Syntax Description		
-n	(Optional)	Displays the network addresses as numbers.
-v	(Optional)	Specifies verbose output.
-c count	(Optional)	Stops the ping after sending the count of ECHO_REQUEST packets.
-i wait	(Optional)	Specifies the time interval in seconds between sending each packet.
-p pattern	(Optional)	Specifies the pad bytes to fill out packets sent in the ping. You may specify up to 16 pad bytes to fill out packets being sent.
-s packetsize	(Optional)	Sets the 8 bytes of ICMP header data.
hostname		Sets the hostname of the network device to ping.
IP address		Specifies the IP address of the network device to ping.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to check the connectivity of a network device with ping:

```
root@localhost# ping -n -v ralph 100.20.19.23
root@localhost#
```

preferences

To enter the preferences subcommand mode, and then configure how your screen displays information, use the **preferences** command.

preferences

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Usage Guidelines When you enter the preferences subcommand mode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **csv-export all | current-screen**— Sets the comma-separated values export monitor data options.
- **data-displayed bits | bytes**—Specifies how the data is displayed in bits or bytes.
- **entries-per-screen 1-100**—(Optional) Sets the number of rows to display in tabular screens. Default is 15.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **format-large-number enable | disable**—Displays the GUI counters in large numbers: K(kilo), M(mega), or G(giga).
- **graph-bars 1-15**— (Optional) Sets the number of bars on a displayed graph. Default is 10.
- **help**—Displays help; see the “[help](#)” command section.
- **number-notation commas-dot | dots-comma | spaces-comma**—Sets the number notation to commas or dot and so forth. For example: 1,000 or 1.000 or 300, 10.
- **refresh-interval 15-3600**—(Optional) Sets the screen refresh interval in seconds. Default is 60.
- **resolve-hostname enable | disable**—(Optional) Enables or disables hostname resolution. Default is enable.

Examples This example shows how to configure preferences for your screen display:

```
root@localhost.cisco.com# preferences
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-preferences)# entries-per-screen 15
root@localhost.cisco.com(sub-preferences)# refresh-interval 60
root@localhost.cisco.com(sub-preferences)# graph-bars 10
root@localhost.cisco.com(sub-preferences)# hostname-resolution disable
root@localhost.cisco.com(sub-preferences)# data-displayed bytes
root@localhost.cisco.com(sub-preferences)# format-large-number enable
root@localhost.cisco.com(sub-preferences)# number-notation comma-dot
```

```
root@localhost.cisco.com(sub-preferences)# exit  
NAM web interface preferences updated successfully.data
```

This example shows how to display the configured preferences:

```
root@localhost.cisco.com# show preferences  
Entries per screen: 15  
Refresh interval: 60 secs  
Number of graph bars: 10  
Hostname resolution: Disabled  
Data displayed in: Bytes  
Format large number: No  
Number notation: Commas-dot  
root@localhost.cisco.com#
```

Related Commands [show preferences](#)

reboot

To shut down and then restart the NAM, use the **reboot** command.

reboot

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to reboot the NAM:

```
root@localhost# reboot
Reboot the NAM? (Y/N) [N]:
root@localhost#
```


remote-storage nfs

To set an NFS remote storage for capturing data and enter the configuration command mode, use the **remote-storage nfs** command. To remove a NFS remote storage for captured data, use the **no remote-storage name** command.

remote-storage nfs

no remote-storage name

Syntax Description

name Specifies the name for the NFS remote storage being removed.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the web user subcommand mode, the following commands are available:

- **?** or **help**—Displays help; see the “[help](#)” command section.
- **cancel**—Discards changes and exits from the subcommand mode.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **server WORD**—NFS server dns hostname or ip address.
- **dir WORD**—An absolute directory with read write permission at the nfs server.
- **name WORD**—Name of the nfs remote storage entry.

Examples

This example shows how to configure NFS remote storage for capturing data:

```
root@hostname.cisco.com# remote-storage nfs
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@hostname.cisco.com(sub-remote-storage_nfs)# ?

root@hostname.cisco.com#
```

Related Commands

[remote-storage iscsi](#)
[show remote-storage](#)

remote-storage iscsi

To set an iSCSI remote storage for capture data and enter the configuration command mode, use the **remote-storage iscsi** command. To remove an iSCSI remote storage entry for capture data, use the **no remote-storage name** command.

remote-storage iscsi

no remote-storage name

Syntax Description

name Specifies the name for the NFS remote storage being removed.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the web user subcommand mode, the following commands are available:

- **? or help**—Displays help; see the “[help](#)” command section.
- **cancel**—Discards changes and exits from the subcommand mode.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **name WORD**—Name of the iSCSI remote storage entry.
- **server WORD**—SCSI server dns hostname or ip address.
- **target WORD**—iSCSI target name provided by the iSCSI server admin.
- **format none partition-number**—Untouch the remote iSCSI target partition table and make the NAM use "partition-number" for storing its capture data.
- **format one-linux**—Format the remote iSCSI target with one linux ext2 partition before using it to store NAM capture data.

Examples

This example shows how to configure a remote storage for capturing iSCSI data:

```
root@hostname.cisco.com# remote-storage iscsi
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@hostname.cisco.com(sub-remote-storage_iscsi)# ?

root@hostname.cisco.com#
```

Related Commands

[remote-storage nfs](#)
[show remote-storage](#)

rmon buffer

To enter the RMON buffer configuration subcommand mode, and then configure RMON buffers, use the **rmon buffer** command. To remove RMON buffer configurations, use the **no** form of this command.

rmon buffer

no rmon buffer *1-65535*

Syntax Description

1-65535 RMON buffer OID.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the RMON buffer configuration subcommand mode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **capture-slice** *bytes*—(Optional) Sets the capture slice size. Default is 500 bytes.
- **channel-index** *1-65535*—Sets the channel index. Range is from 1 to 65535.
- **download-offset** *offset-number*—(Optional) Sets the download offset. Default is 0.
- **download-slice** *bytes*—(Optional) Sets the download slice size. Default is 500 bytes.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **full-action lock | wrap**—(Optional) Sets full action type to lock or wrap. Default is lock when full (lock).
- **Index**—(Optional) Sets the index.
- **owner** *string*—(Optional) Specifies the collection owner. Default is monitor.



Note The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”

- **size** *bytes*—(Optional) Sets the buffer size.

Examples

This example shows how to configure RMON buffers:

```
root@localhost.cisco.com# rmon buffer
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-rmon-buffer)# channel-index 10
root@localhost.cisco.com(sub-rmon-buffer)# full-action lock
```

```
root@localhost.cisco.com(sub-rmon-buffer)# capture-slice 500
root@localhost.cisco.com(sub-rmon-buffer)# download-slice 500
root@localhost.cisco.com(sub-rmon-buffer)# download-offset 0
root@localhost.cisco.com(sub-rmon-buffer)# size 5120000
root@localhost.cisco.com(sub-rmon-buffer)# owner monitor
root@localhost.cisco.com(sub-rmon-buffer)# exit
Successfully created the RMON buffer control entry.
root@localhost.cisco.com#

root@localhost.cisco.com# show rmon buffer
Index:                50485
Channel index:        10
Full action:          Lock when full
Capture slice size:   500 bytes
Download slice size:  500 bytes
Download offset:      0
Max octets requested:5120000 bytes
Owner:                monitor

root@localhost.cisco.com#
```

Related Commands [show rmon buffer](#)

rmon channel

To enter the RMON channel subcommand mode, and then configure RMON channel collections, use the **rmon channel** command. To remove RMON channel configurations use the **no** form of this command.

rmon channel

no rmon channel *1-65535*

Syntax Description

1-65535 RMON channel OID.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the RMON channel configuration subcommand mode, the following commands are available:

- **accept-type failed | matched**—(Optional) Sets the accept type to either failed or matched. Default is matched.
- **cancel**—Discards changes and exits from the subcommand mode.
- **data-control off | on**—(Optional) Turns the capture channel off or on. Default is on.
- **data-source** *data-source-string*—Sets the channel data source.
- **description** *string*—(Optional) Sets the channel description.
- **event-status always | ready**—(Optional) Sets the event status to either always or ready.
- **exit**—Saves changes and exits from the subcommand mode; see the “**exit**” command section.
- **index** *1-65535*—(Optional) Sets the channel index. Range is from 1 to 65535.
- **off-event** *0-65535*—(Optional) Sets the off event index. Default is 0.
- **on-event** *0-65535*—(Optional) Sets the on event index. Default is 0.
- **owner** *string*—(Optional) Sets the owner string. Default is monitor.



Note

The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”

Examples

This example shows how to configure RMON channels:

```
root@localhost.cisco.com# rmon channel
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-rmon-channel)# ?
```

```

? - display help
accept-type - set accept type
cancel - discard changes and exit from subcommand mode
data-control - set capture channel mode
data-source - set data source (*)
description - set description
event-status - set event status
exit - exit from subcommand mode
help - display help
index - set index
match-event - set match-event index
off-event - set off-event index
on-event - set on-event index
owner - set owner string

```

(*) - denotes a mandatory field for this configuration.

```

root@localhost.cisco.com(sub-rmon-channel)# data-source vlan1
root@localhost.cisco.com(sub-rmon-channel)# accept-type matched
root@localhost.cisco.com(sub-rmon-channel)# data-control on
root@localhost.cisco.com(sub-rmon-channel)# description test
root@localhost.cisco.com(sub-rmon-channel)# event-status ready
root@localhost.cisco.com(sub-rmon-channel)# on-event 10
root@localhost.cisco.com(sub-rmon-channel)# off-event 10
root@localhost.cisco.com(sub-rmon-channel)# match-event 10
root@localhost.cisco.com(sub-rmon-channel)# owner monitor
root@localhost.cisco.com(sub-rmon-channel)# exit

```

Successfully created the RMON channel.

```

root@localhost.cisco.com# show rmon channels
Index:                24614
Data source:          vlan1 (5)
Accept type:          Matched (Inclusive)
Data control:         ON
Turn-On event index: 10
Turn-Off event index:10
Event index:          10
Event status:         Ready
Description:          test
Owner:                monitor

```

```

root@localhost.cisco.com#

```

Related Commands [show rmon channels](#)

rmon filter

To enter the RMON filter subcommand mode, and then configure RMON filters, use the **rmon filter** command. To remove RMON filter configurations use the **no** form of this command.

rmon filter

no rmon filter *1-65535*

Syntax Description

1-65535 RMON filter OID.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the RMON filter configuration subcommand mode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **channel-index** *1-65535*—Sets the channel index. Range is from 1 to 65535.
- **data** *hex-string*—(Optional) Sets data.
- **data-mask** *hex-string*—(Optional) Sets the data mask.
- **data-not-mask** *hex-string*—(Optional) Sets the data-not-mask.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **index** *1-65535*—(Optional) Sets the filter index. Range is from 1 to 65535.
- **offset** *number*—(Optional) Sets the offset. Default is 0.
- **owner** *string*—(Optional) Sets the owner string. Default is monitor.



Note The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”

- **pd-data-index** *number*—(Optional) Sets the protocol directory data local index. Default is 0.
- **pd-index** *number*—(Optional) Sets the protocol directory local index. Default is 0.
- **status** *number*—(Optional) Sets the packet status. Default is 0.
- **status-mask** *number*—(Optional) Sets the packet status mask. Default is 0.
- **status-not-mask** *number*—(Optional) Sets the packet status not mask. Default is 0.

Examples

This example shows how to configure RMON filters:

```

root@localhost.cisco.com# rmon filter
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost.cisco.com(sub-rmon-filter)# ?
?                - display help
cancel           - discard changes and exit from subcommand mode
channel-index    - set channel index (*)
data-mask        - set data mask
data-not-mask    - set data not mask
data             - set data (*)
exit            - exit from subcommand mode
help            - display help
index           - set filter index
offset          - set offset
owner           - set owner string
pd-data-index   - set protocol directory data local index
pd-index        - set protocol directory local index
status-mask     - set packet status mask
status-not-mask - set packet status not mask
status         - set packet status

(*) - denotes a mandatory field for this configuration.
root@localhost.cisco.com(sub-rmon-filter)# channel-index 10
root@localhost.cisco.com(sub-rmon-filter)# data "ab bc cd 2f"
root@localhost.cisco.com(sub-rmon-filter)# offset 0
root@localhost.cisco.com(sub-rmon-filter)# owner monitor
root@localhost.cisco.com(sub-rmon-filter)# exit
Successfully created the RMON filter.
root@localhost.cisco.com# show rmon filters
Index:          11089
Channel index:  10
Data offset:    0
Data:           ab bc cd 2f
Data mask:
Data not mask:
Status:         0
Status mask:    0
Status not mask:0
PD index:       0
PD data index:  0
Owner:          monitor

root@localhost.cisco.com#

```

Related Commands

[show rmon buffer](#)

rmwebusers

To remove all web users from the local web user database, use the **rmwebusers** command.

rmwebusers

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to remove web users from the local web user database:

```
root@localhost.cisco.com# rmwebusers

WARNING:Doing this will stop the web server and remove
all locally defined web users from web user database.

Are you sure you want to continue (y/n) [n]? y

Disabling HTTP server...
Successfully disabled HTTP server.

All locally defined web users have been
removed from web user database.
root@localhost.cisco.com#
```

Related Commands [show web-users](#)

show access-log

To display the web access log, use the **show access-log** command.

show access-log

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the web access log:

```
Root@localhost# show access-log
11 Mar 2003, 12:23:38 152.20.27.182 - Access denied (no login session)
/error.php
11 Mar 2003, 12:23:39 152.20.27.182 - Access denied (no login session)
/error.php
11 Mar 2003, 12:23:39 152.20.27.182 - Access denied (no login session)
/error.php
11 Mar 2003, 12:23:39 152.20.27.182 - Access denied (no login session)
/error.php
```

show alarm event

To display NAM event alarms, use the **show alarm event** command.

```
show alarm event [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Specifies the event control index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the NAM system event alarms:
-----------------	--

```
root@nam# show alarm event 58874
Index:          58874
Description:    Capture Stop
Type:           None
Community:
Owner:          LocalMgr

root@nam# no alarm event 58874
Successfully deleted the event.
root@nam#
```

Related Commands	alarm event alarm mib alarm voice
-------------------------	---

show alarm mib

To display NAM MIB alarms, use the **show alarm event mib** command.

```
show alarm mib [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Specifies the event control index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the NAM system event alarms:
-----------------	--

```
root@nam# show alarm mib 4800
Index: 4800
Polling interval: 60 secs
Variable: nlHostInPkts.1.0.1.4.172.20.98.129
Sample type: Absolute
Startup: Rising & falling
Rising threshold: 50 Pkts
Falling threshold: 40 Pkts
Rising event index: 3816
Falling event index: 3816
Owner: LocalMgr
```

```
root@nam# no alarm mib 4800
Successfully deleted the alarm.
root@nam#
```

Related Commands	alarm event alarm mib alarm voice
-------------------------	---

show alarm voice

To display NAM voice alarms, use the **show alarm voice** command.

show alarm voice

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the NAM system event alarms:

```
root@nam# show alarm voice
SCCP:
    Jitter alarm:           Disabled
    Packet lost alarm:      Disabled
    Jitter threshold:       30 msec
    Packet lost threshold:  5%

H.323:
    Jitter alarm:           Disabled
    Packet lost alarm:      Disabled
    Jitter threshold:       150 msec
    Packet lost threshold:  5%

MGCP:
    Jitter alarm:           Disabled
    Packet lost alarm:      Disabled
    Jitter threshold:       30 msec
    Packet lost threshold:  5%

root@nam#
```

Related Commands

- [alarm event](#)
- [alarm mib](#)
- [alarm voice](#)

show application group

To display application groups, use the **show application group** command.

```
show application group [group-name]
```

Syntax Description	<i>group-name</i>	(Optional) Specifies the application group name.
--------------------	-------------------	--

Defaults	This command has no default settings.
----------	---------------------------------------

Command Modes	Command mode
---------------	--------------

Examples	This example shows how to display application groups:
----------	---

```
root@namlab-kom10.cisco.com# show application group
Application Group: File-Transfer
Number of Protocols: 5
- ftp
  16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.0.21.4.0.1.0.0
- ftp-data
  16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.0.20.4.0.1.0.0
- ftps
  16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.3.222.4.0.1.0.0
- ftps-data
  16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.3.221.4.0.1.0.0
- tftp
  16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.0.69.4.0.1.0.2

Application Group: Peer-to-Peer
Number of Protocols: 12
- gnutella(6346)
  16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.24.202.4.0.1.0.0
- gnutella(6347)
  16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.24.203.4.0.1.0.0
- fasttrack(udp)
  16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.4.190.4.0.1.0.0
- fasttrack(tcp)
  16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.4.190.4.0.1.0.0
- winmx(udp)
  16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.24.113.4.0.1.0.0
- winmx(tcp)
  16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.26.43.4.0.1.0.0
- edonkey(udp)
  16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.18.57.4.0.1.0.0
- edonkey(tcp)
  16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.18.53.4.0.1.0.0
- hotline
  16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.21.124.4.0.1.0.0
- soulseek
  16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.8.186.4.0.1.0.0
- directconnect
  16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.1.155.4.0.1.0.0
- bittorrent
  16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.26.225.4.0.1.0.0
```

```

Application Group: Web
  Number of Protocols: 2
    - http
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.0.80.4.0.1.0.0
    - https
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.0.1.187.4.0.1.0.0

Application Group: Database
  Number of Protocols: 9
    - sql*net
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.0.66.4.0.1.0.0
    - sqlserv(udp)
      16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.0.118.4.0.1.0.0
    - sqlserv(tcp)
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.0.118.4.0.1.0.0
    - ms-sql-mon(udp)
      16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.5.154.4.0.1.0.0
    - ms-sql-mon(tcp)
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.5.154.4.0.1.0.0
    - ms-sql-ser(udp)
      16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.5.153.4.0.1.0.0
    - ms-sql-ser(tcp)
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.5.153.4.0.1.0.0
    - oracle-server(udp)
      16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.5.245.4.0.1.0.0
    - oracle-server(tcp)
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.5.245.4.0.1.0.0

Application Group: email
  Number of Protocols: 7
    - smtp
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.0.25.4.0.1.0.0
    - smtps
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.1.209.4.0.1.0.0
    - pop3(udp)
      16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.0.110.4.0.1.0.0
    - pop3(tcp)
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.0.110.4.0.1.0.0
    - pop3s
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.3.227.4.0.1.0.0
    - imap2
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.0.143.4.0.1.0.0
    - imaps
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.3.225.4.0.1.0.0

Application Group: Multi-Media
  Number of Protocols: 9
    - h225
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.6.184.4.0.1.0.0
    - h245
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.6.182.4.0.1.0.0
    - h323-gatekeeper
      16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.6.183.4.0.1.0.0
    - rtp
      16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.125.0.4.0.1.0.0
    - rtcp
      16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.125.1.4.0.1.0.0
    - sip(udp)
      16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.19.196.4.0.1.0.0
    - sip(tcp)
      16.1.0.0.1.0.0.8.0.0.0.0.6.0.0.19.196.4.0.1.0.0
    - mgcp
      16.1.0.0.1.0.0.8.0.0.0.0.17.0.0.9.123.4.0.1.0.0

```

■ show application group

```
- sccp  
16.1.0.0.1.0.0.8.0.0.0.6.0.0.7.208.4.0.1.0.0
```

Related Commands [application group](#)

show audit-trail

To display the audit trail configuration, use the **show audit-trail** command.

show audit-trail

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the audit trail configuration:

```
root@hostname.cisco.com# show audit-trail
Audit trail is enabled.
root@hostname.cisco.com#
```

Related Commands [audit-trail enable](#)

show autostart

To display autostart collections, use the **show autostart** command.

show autostart

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the autostart collections:

```
Root@localhost# show autostart
etherstats disable
addressmap disable
priostats disable
vlanstats disable
art disable
```

Related Commands [autostart](#)

show bios

To display BIOS information, use the **show bios** command.

show bios

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the module's BIOS information:

```
Root@localhost# show bios
BIOS Information:
  Vendor: Phoenix Technologies Ltd.
  BIOS Version: 4.0-Rel 6.0.4
  BIOS Start Addr Seg: 0xe9d2
  BIOS Release Date: 05/28/2002
  BIOS ROM Size: 512K

System Info
  Manufacturer: Cisco Systems, Inc
  Product Name: Catalyst LineCard
  Version: 2 Processors
  Serial Number: 000000000
  UUID: 00000000000000000000000000000000

System Enclosure Info
  Manufacturer: Cisco Systems, Inc.
  Version:
  Serial Number: 000000000
  Asset Tag: No Asset Tag
```

show cdp settings

To display the current Cisco Discovery Protocol (CDP) settings, use the **show cdp settings** command.

show cdp settings

Syntax Description This command has no arguments or keywords

Defaults This command has no default settings.

Command Modes Command mode

Examples To display the current CDP settings:

```
root@nam# show cdp settings
CDP is disabled
  Message Interval: 60
  Message Hold Time: 180

root@nam#
```

Related Commands [cdp enable](#)
[cdp hold-time](#)
[cdp interval](#)

show certificate

To display the installed certificate, use the **show certificate** command.

show certificate

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display certificate information:

```
Root@localhost# show certificate
-----BEGIN CERTIFICATE-----
MIIDgzCAuygAwIBAgIBADANBgkqhkiG9w0BAQQFADCBjJELMAkGA1UEBhMCVVmMx
CzAJBgNVBAGTAkNBMQswCQYDVQQHEwJTSjEjEjEBAkGA1UEChMSQ21zY28gU3lzdGVt
cywgSW5jMSswKQYDVQQLEyJDYXRhbH1zdCA2MDAwIE5BTSBUZXN0IENlcnRpZmlj
YXR1MRswGQYDVQQDExJDaXNjbyBTeXN0ZW1zLCBjb210MDIwMDIwMDIwMDIwMDIw
WhcNMdYxMTI2MTI0MDIwMDIwMDIwMDIwMDIwMDIwMDIwMDIwMDIwMDIwMDIwMDIw
CQYDVQQHEwJTSjEjEjEBAkGA1UEChMSQ21zY28gU3lzdGVtcywgSW5jMSswKQYDVQQQ
LEyJDYXRhbH1zdCA2MDAwIE5BTSBUZXN0IENlcnRpZmljYXR1MRswGQYDVQQDExJD
aXNjbyBTeXN0ZW1zLCBjb210MDIwMDIwMDIwMDIwMDIwMDIwMDIwMDIwMDIwMDIw
NQJunHkjduRGMc7B978Bgh4xlEixRCPQ9K74PNzmXbZlIayRUXvLHA3xCM8GamFt
SlLgJj05R3q0cHwNurluknHeI1UfZMQMiL0IqL255Jxx6NbvCUzGpTxNMkywDXDc3
VevqmPezWrHAFxx3hoXtgTnj6j6BMxyOkbYDwAFXAgMBAAGjge4wgeswHQYDVRO0
BBYEFPCoN6ndQG9nCMgnzP+Y3VxOSP3MIG7BgNVHSMEgbMwgbCAFPNCn6ndQG9
nCMgnzP+Y3VxOSP3oYGUpIGRMIGOMQswCQYDVQQGEwJVUzELMAkGA1UEC BMCQ0Ex
CzAJBgNVBAC TA1NKMRswGQYDVQQKExJDaXNjbyBTeXN0ZW1zLCBjb210MDIwMDIw
BAStIkNhGFseXN0IDYwMDAgTkFNIFRlc3QgQ2VydG1maWNhdGUxGzAZBgNVBAMT
EkNpc2NvIFN5c3R1bXMsIEluY4IBADAMBGNVHRMEBTADAQH/MA0GCSqGS Ib3DQEB
BAUAA4GBAD95psLs1tneBsIuUWQvIdv6D7QYBfewsDzNW101FvvdZBQdIu7QeRtL
tjMNYGDUIG7tz7/9iZyA90rfrkM410qJrJysoKBZgmZtg6ilpaIzPnoJnN4DyJ5C
qNGuOM0OKqtpqCFMKq87UXUuvTgc3hhQKSY5LkOXhJyhtCupJ669
-----END CERTIFICATE-----
```

Related Commands [show certificate-request](#)

show certificate-request

To display the certificate-signing requests, use the **show certificate-request** command.

show certificate-request

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the certificate-signing requests:

```
Root@localhost# show certificate-request
```

Related Commands [show certificate](#)

show configuration

To display the NAM running configuration, use the **show configuration** command.

show configuration

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Usage Guidelines The following configurations are not included in the generated configuration file:

- Reports
- CLI users
- Supervisor engine community strings

Examples This example shows how to display the NAM running configuration:

```
Root@localhost# show configuration
!
! NAM running configuration
!
! Date: Thu Jan  9 09:23:31 2003
!
ip http tacacs+ disable
!
custom-filter capture
  filter-name "cli_origin_capture"
  description "came from the cli"
  protocol "6 1000001 800 2f 800 6 50 0 1 0 0 0 0"
  exit
!
custom-filter decode
  filter-name "cli_origin"
  protocol http
  exit
!
web-user
  user-name admin
  account-mgmt enable
  system-config enable
  capture enable
  alarm-config enable
  collection-config enable
  en-password "YWRtaW4K"
  exit
!
preferences
  entries-per-screen 25
```

```

refresh-interval 15
graph-bars 10
resolve-hostname enable
exit
!
syslog
mib local enable
mib remote disable
voice local enable
voice remote disable
system debug enable
system local enable
system remote disable
exit
!
alarm voice
protocol H.323
jitter-alarm disable
pkt-loss-alarm disable
jitter-threshold 150
pkt-loss-threshold 5
exit
!
alarm event
index 7763
description Capture Start
cancel
!
alarm mib
index 63547
variable nlHostInPkts.9939.0.1.4.10.0.0.1
interval 60
sample-type absolute
startup-alarm rising
rising-threshold 10
falling-threshold 20
rising-event 63547
falling-event 63547
owner LocalMgr
exit
!
rmon buffer
index 47654
channel-index 22838
full-action lock
capture-slice 1500
download-slice 1500
download-offset 0
size 51200000
owner LocalMgr
exit
!
end

```

Related Commands [config clear](#)

show custom-filter capture

To display the capture filters, use the **show custom-filter capture** command.

```
show custom-filter capture [filter-name]
```

Syntax Description	<i>filter-name</i> (Optional) Sets the capture filter name.
---------------------------	---

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the capture filters: Root@localhost# show custom-filter capture cli_origin_capture
-----------------	--

Related Commands	custom-filter capture
-------------------------	---------------------------------------

show custom-filter decode

To display the decode filters, use the **show custom-filter decode** command.

```
show custom-filter decode [filter-name]
```

Syntax Description	<i>filter-name</i> (Optional) Sets the decode filter name.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the decode filters: Root@localhost# show custom-filter decode cli_origin
-----------------	--

Related Commands	custom-filter decode
-------------------------	--------------------------------------

show date

To display the current date and time, use the **show date** command.

show date

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the current date and time:

```
Root@localhost# show date
Thu Jan 09 09:38:01 2003
```

Related Commands [show time](#)
[time](#)

show diffserv aggregate

To display all of the differentiated services aggregate configurations for all the data sources and profiles, use the **show diffserv aggregate** command.

```
show diffserv aggregate [control-index]
```

Syntax Description	<i>control-index</i>	(Optional) Aggregate ID.
--------------------	----------------------	--------------------------

Defaults	This command has no default settings.
----------	---------------------------------------

Command Modes	Command mode
---------------	--------------

Examples	This example shows how to display the differentiated service configurations:
----------	--

```
Root@localhost# show diffserv aggregate
Control index:      23723
Description:       VoIP-TEst
Owner:             LocalMgr
Status:            1

Control index:      31645
Description:       VoIP
Owner:             LocalMgr
Status:            1

Control index:      41657
Description:       DragonBallZ
Owner:             LocalMgr
Status:            1

Control index:      47739
Description:       NoAggAllTech
Owner:             LocalMgr
Status:            1
```

show diffserv profile

To display all of the differentiated services profiles and their descriptions, use the **show diffserv profile** command.

```
show diffserv profile [profile-index]
```

Syntax Description	<i>profile-index</i> (Optional) Profile ID.
---------------------------	---

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the profiles and their descriptions:
-----------------	--

```
Root@localhost# show diffserv profile 31645  
Aggregate Profile Index: 31645  
DSCP Value      Description
```

show email

To display email settings that are used for e-mailing alarm messages or scheduled reports, use the **email** command.

show email

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display email values:

```
root@localhost# show email
Email
  Server: example-email.domain.com
  Mail Alarm: enabled
  Alarm Recipients: admin@domain.com another_admin@domain.com
root@localhost#
```

Related Commands [email](#)

show entity

To display the serial number and the values of the entity MIB entPhysicalAlias and entPhysicalAssetID, use the **show entity** command.

show entity

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display entity values:

```
root@localhost# show entity
Serial Number : SAD061506JU
Alias        :
Asset ID     :
```

Related Commands [entity alias](#)
[entity assetid](#)

show ftp

To display the FTP server and directory for storing scheduled reports configuration, use the **show ftp** command.

show ftp

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the FTP server configuration:

```
root@localhost# show ftp
FTP settings:
  Server:      my.ftp-server.com
  Directory:   /my/directory
  User:        myUserName
```

Related Commands [ftp](#)

show hosts

To display the hosts entries, use the **show hosts** command.

show hosts

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the hosts entries:

```
Root@localhost# show hosts
# $Id: hosts,v 1.4 2002/04/04 01:47:51 pwildi Exp $
#
127.0.0.1          localhost localhost.localdomain

127.0.0.11        slot1
127.0.0.21        slot2
127.0.0.31        slot3
127.0.0.41        slot4
127.0.0.51        slot5
127.0.0.61        slot6
127.0.0.71        slot7
127.0.0.81        slot8

111.10.9.18      switch1 lab
```

show ip

To display the NAM IP parameters, use the **show ip** command.

show ip

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the NAM IP parameters:

```
Root@localhost# show ip
IP address:          101.10.11.189
Subnet mask:         255.255.255.255
IP Broadcast:       111.20.255.255
DNS Name:           namlab-kom9.cisco.com
Default Gateway:    111.20.98.125
Nameserver(s):      111.69.2.135
HTTP server:        Enabled
HTTP secure server: Disabled
HTTP port:          80
HTTP secure port:   443
TACACS+ configured: No
Telnet:             Enabled
SSH:                Disabled
```

Related Commands

- [ip address](#)
- [ip broadcast](#)
- [ip gateway](#)
- [ip host](#)
- [ip hosts add](#)
- [ip hosts delete](#)
- [ip http port](#)
- [ip http secure generate](#)
- [ip http server](#)
- [ip http tacacs+](#)
- [ip interface](#)

show log config

To display the maintenance image configuration import log entries, use the **show log config** command.

show log config

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the maintenance image import log entries:

```
Root@localhost# show log config
```

Related Commands

- [config clear](#)
- [show log upgrade](#)
- [upgrade](#)

show log patch

To display the patch log entries, use the **show log patch** command.

show log patch

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the maintenance image import log entries:

```
Root@localhost# show log patch
2005/01/17 21:11 Sucessfully downloaded ftp://guest@namlab-pc1//home/guest/patch
_rpms/nam-app.3-4.cryptoK9.patch.1-0.bin.
2005/01/17 21:11 Patch nam-app.3-4.cryptoK9.patch.1-0.bin signature verified.
2005/01/17 21:11 Successfully applied patch /usr/local/nam/patch/workdir/nam-app
.3-4.cryptoK9.patch.1-0.bin.
```

Related Commands [config clear](#)
[show log upgrade](#)
[upgrade](#)

show log upgrade

To display the maintenance image upgrade log entries, use the **show log upgrade** command.

show log upgrade

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the maintenance image upgrade entries:

```
Root@localhost# show log upgrade
Fri Aug 23 10:32:27 2002 : path: ftp://namlab-pc1/pub/rmon/MP-KPLUS
Fri Aug 23 10:32:27 2002 : file: mp-dev.1-2-0-5.bin
Fri Aug 23 10:32:27 2002 : extn: .gz
Fri Aug 23 10:32:27 2002 : Downloading the image...
Fri Aug 23 10:32:28 2002 : Successfully downloaded the image...
Fri Aug 23 10:32:28 2002 : Uncompressing the image...
Fri Aug 23 10:32:29 2002 : Finished uncompressing the file /tmp/mp-dev.1-2-0-5. bin.gz.
Fri Aug 23 10:32:29 2002 : Successfully uncompressed the image.
Fri Aug 23 10:32:29 2002 : Verifying the image...
Fri Aug 23 10:32:29 2002 : opening file /tmp/mp-dev.1-2-0-5.bin.ver
Fri Aug 23 10:32:30 2002 : Successfully verified the image.
Fri Aug 23 10:32:30 2002 : Partition '/dev/hda1' unmounted.
Fri Aug 23 10:32:30 2002 : Applying the Maintenance image.
Fri Aug 23 10:32:30 2002 : This process may take several minutes...
Fri Aug 23 10:32:30 2002 : Writing mbr...
Fri Aug 23 10:32:30 2002 : Successfully wrote mbr.
Fri Aug 23 10:32:30 2002 : Number of Sectors: 31
Fri Aug 23 10:32:30 2002 : Writing grub and maint image.
Fri Aug 23 10:33:18 2002 : Successfully wrote the maint image.
Fri Aug 23 10:33:18 2002 : Partition '/dev/hda1' mounted.
Fri Aug 23 10:33:18 2002 : Performing post install...
Fri Aug 23 10:33:18 2002 : File /usr/local/nam/falcon_version copied to /mnt/mp
/boot/appl/daughter_card.info.
Fri Aug 23 10:33:18 2002 : Maintenance image upgrade completed successfully.
```

Related Commands [upgrade](#)

show memory

To display the installed memory, available memory, and the memory being used by the system, use the **show memory** command.

show memory

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the NAM memory:

```
Root@localhost# show memory
Installed:      858 MB
Available:     240 MB
System Usage:  617 MB
```

Related Commands [show bios](#)

show monitor addrmap

To display the address map collection configuration, use the **show monitor addrmap** command.

```
show monitor addrmap [control-index]
```

Syntax Description	<i>control-index</i>	(Optional) Specifies the address map control index. Range is 1-65535.
---------------------------	----------------------	---

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the address map collection configuration:

```
Root@localhost# show monitor addrmap
Control Index:          40042
Data Source:            dataport1
Owner:                  LocalMgr
Status:                 1
```

Related Commands [monitor addrmap](#)

show monitor art

To display all of the ART collection configurations, use the **show monitor art** command.

show monitor art [*control-index*]

Syntax Description	<i>control-index</i> (Optional) Specifies the collection control index.
---------------------------	---

Defaults	The control index variable range is 1 through 65535.
-----------------	--

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display all of the ART collections:
-----------------	---

```

Console> show monitor art
Control Index:          18880
Data Source:           dataport1
Owner:                 LocalMgr
Status:                1
Time Remaining:       2197
Response Time 1:       5
Response Time 2:       15
Response Time 3:       50
Response Time 4:       100
Response Time 5:       200
Response Time 6:       500
Response Timeout:     3000
Maximum Entries:      500

```

Related Commands	monitor art
-------------------------	-----------------------------

show monitor diffserv host

To display all of the differentiated services host collections, use the **show monitor diffserv host** command.

```
show monitor diffserv host [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays collections by specified control index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the differential service host collection:
-----------------	---

```
root@nam# show monitor diffserv host
Control index:          17600
Data source:           nde-fa0/0
Owner:                 LocalMgr
Status:                1
Max entries:           100
Profile index:         24600
IPv4 prefix length:    32
IPv6 prefix length:    128

Control index:          23917
Data source:           nde-fa0/0
Owner:                 LocalMgr
Status:                1
Max entries:           100
Profile index:         16917
IPv4 prefix length:    32
IPv6 prefix length:    128

root@nam#
```

Related Commands	monitor diffserv host monitor diffserv matrix monitor diffserv pdist monitor diffserv stats
-------------------------	--

show monitor diffserv matrix

To display all of the differentiated services matrix collections, use the **show monitor diffserv matrix** command.

```
show monitor diffserv matrix [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays collections by specified control index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the differential service matrix collection:
-----------------	---

```
root@nam# show monitor diffserv matrix 5493
Control index:          5493
Data source:           nde-fa0/0
Owner:                 LocalMgr
Status:                1
Max entries:           3000
Profile index:         24600
```

Related Commands	monitor diffserv host monitor diffserv matrix monitor diffserv pdist monitor diffserv stats
-------------------------	--

show monitor diffserv pdist

To display all of the differentiated services protocol distribution collections, use the **show monitor diffserv pdist** command.

```
show monitor diffserv pdist [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays collections by specified control index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the differential service protocol distribution collection:
-----------------	--

```
root@nam# show monitor diffserv pdist 35198
Control index:          35198
Data source:           nde-fa0/0
Owner:                 LocalMgr
Status:                1
Max entries:           100
Profile index:         16917
```

Related Commands	monitor diffserv host monitor diffserv matrix monitor diffserv pdist monitor diffserv stats
-------------------------	--

show monitor diffserv stats

To display all of the differentiated services statistics collections, use the **show monitor diffserv stats** command.

```
show monitor diffserv stats [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays collections by specified control index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the statistics collection:
-----------------	--

```
root@nam# show monitor diffserv stats 6169
Control index:          6169
Data source:           nde-fa0/0
Owner:                 LocalMgr
Status:                1
Profile index:         24600
```

Related Commands	monitor diffserv host monitor diffserv matrix monitor diffserv pdist monitor diffserv stats
-------------------------	--

show monitor etherstats

To display all of the Ethernet statistics collection configurations, use the **show monitor etherstats** command.

```
show monitor etherstats [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays Ethernet statistics collections by specified control index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display all of the Ethernet statistics collection configurations:
-----------------	---

```
Root@localhost# show monitor etherstats  
Control index:          53750  
Data source:           allspan  
Owner:                 LocalMgr  
Status:                1
```

Related Commands	monitor etherstats
-------------------------	------------------------------------

show monitor etherstats on-switch

To display the supervisor engine mini-RMON statistics polling on the NAM, use the **show monitor etherstats on-switch** command.

show monitor etherstats on-switch

Syntax Description This command has no arguments or keywords.

Defaults The control index is random.

Command Modes Command mode

Usage Guidelines This command is supported only on the NAM-1 and NAM-2. This command is not supported on the NM-NAM.

Examples This example shows how to display the supervisor engine mini-RMON statistics polling on the NAM:

```
root@localhost.cisco.com# show monitor etherstats on-switch  
Supervisor mini-rmon statistics collection is enabled.
```

Related Commands [show monitor etherstats](#)

show monitor history

To display all of the history collection configurations, use the **show monitor history** command.

```
show monitor history [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays history collections by specified control index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display all of the history collection configurations:
-----------------	---

```
Root@localhost# show monitor history  
Control index:          9900  
Data source:            allspan  
Owner:                  LocalMgr  
Status:                 1  
Buckets:                50  
Interval:               1800
```

Related Commands	monitor history
-------------------------	---------------------------------

show monitor hlhost

To display all of the host layer host collection configurations, use the **show monitor hlhost** command.

```
show monitor hlhost [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays host layer host collections by specified control index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display all of the host layer host collection configurations:
-----------------	---

```
Root@localhost# show monitor hlhost
Control Index:          7434
Data Source:            dataport1
Owner:                  LocalMgr
Status:                 1
Network Layer Max Entries: Max Possible
Application Layer Max Entries: Max Possible
```

Related Commands	monitor hlhost
-------------------------	--------------------------------

show monitor hlmatrix

To display all of the host layer matrix collection configurations, use the **show monitor hlmatrix** command.

```
show monitor hlmatrix [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays host layer matrix collections by specified control index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display all of the host layer matrix collection configurations:
-----------------	---

```
Root@localhost# show monitor hlmatrix  
Control Index:          20990  
Data Source:            dataport1  
Owner:                  LocalMgr  
Status:                 1  
Network Layer Max Entries: Max Possible  
Application Layer Max Entries: Max Possible
```

Related Commands	monitor hlmatrix
-------------------------	----------------------------------

show monitor host

To display all of the host collection configurations, use the **show monitor host** command.

```
show monitor host [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays host collections by specified control index.
---------------------------	---

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display all of the host collection configurations:
-----------------	--

```
Root@localhost# show monitor host  
Control Index:      38426  
Data Source:        dataport1  
Owner:              LocalMgr  
Status:             1
```

Related Commands	monitor host
-------------------------	------------------------------

show monitor ifstats

To display the interface statistics collection status, use the **show monitor ifstats** command.

show monitor ifstats

Syntax Description This command has no arguments or keywords.

Defaults The control index is random.

Command Modes Command mode

Usage Guidelines This command is supported only on the NM-NAM.

Examples This example shows how to display the interface statistics collection status:

```
root@localhost.cisco.com# show monitor ifstats
Supervisor ifstats collection is enabled.
```

Related Commands [monitor ifstats](#)

show monitor matrix

To display all of the matrix collection configurations, use the **show monitor matrix** command.

show monitor matrix [*control-index*]

Syntax Description	<i>control-index</i> (Optional) Displays matrix collections by specified control index.
---------------------------	---

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display all of the matrix collection configurations:
-----------------	--

```
Root@localhost# show monitor matrix
Control Index:      37030
Data Source:       dataport1
Owner:             LocalMgr
Status:            1
Root@localhost#
```

Related Commands	monitor matrix
-------------------------	--------------------------------

show monitor nbar

To display the NBAR collection configuration status, use the **show monitor nbar** command.

show monitor nbar

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the NBAR collection configuration status:

```
Root@localhost# show monitor nbar
nbar collection is enabled
Root@localhost#
```

Related Commands [monitor nbar](#)

show monitor pdist

To display all of the protocol distribution collection configurations, use the **show monitor pdist** command.

```
show monitor pdist [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays protocol distribution collections by specified control index.
Defaults	This command has no default settings.
Command Modes	Command mode
Examples	<p>This example shows how to display all of the protocol distribution collection configurations:</p> <pre> Root@localhost# show monitor pdist Control Index: 46451 Data Source: dataport1 Owner: LocalMgr Status: 1 Control Index: 56899 Data Source: dataport3 Owner: LocalMgr Status: 1 Root@localhost# </pre>
Related Commands	monitor pdist

show monitor priostats

To display all of the priority statistics collection configurations, use the **show monitor priostats** command.

```
show monitor priostats [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays priority statistics collections by specified control index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display all of the priority statistics collection configurations:
-----------------	---

```
Root@localhost# show monitor priostats  
Control Index:          9572  
Data Source:            dataport1  
Owner:                  LocalMgr  
Status:                 1  
Root@localhost#
```

Related Commands	monitor priostats
-------------------------	-----------------------------------

show monitor protocol

To display all user-modified and user-defined protocols, use the **show monitor protocol** command.

show monitor protocol

show monitor protocol *prot-specifiers*

Syntax Description	<i>prot-specifiers</i>	Displays a specific protocol with the protocol specifier set in the monitor protocol command.
---------------------------	------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display all of the protocol configurations:
-----------------	---

```
Root@localhost# show monitor protocol
No modified protocol directory entries exist.
Root@localhost#
```

Related Commands	monitor protocol
-------------------------	----------------------------------

show monitor protocol all

To display all of the protocols in the protocol directory, use the **show monitor protocol all** command.

show monitor protocol all

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display all of the protocol configurations:

```
Root@localhost# show monitor protocol all
Control Index:          46232
Data Source:            dataport1
Owner:                  LocalMgr
Status:                 1
Root@localhost#
```

Related Commands [monitor protocol](#)

show monitor protocol auto-learned settings

To display the automatically learned protocol settings, use the **show monitor protocol auto-learned settings** command.

show monitor protocol auto-learned settings

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display all of the auto-learned protocol settings:

```
Root@localhost# show monitor protocol auto-learned settings
Protocol auto-learn:      Enabled
Max number of entries:   100
Max tcp port:            6553
Exclude tcp port range:  (Not Configured)
Max udp port:            6553
Exclude udp port range:  (Not Configured)
Root@localhost#
```

Related Commands [monitor protocol](#)

show monitor urlcollection

To display the URL collection configuration, use the **show monitor urlcollection** command.

show monitor urlcollection

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the URL collection statistics:

```
root@localhost# show monitor urlcollection
root@localhost#
```

Related Commands [monitor urlcollection](#)

show monitor urlfilter

To display the URL filter configuration, use the **show monitor urlfilter** command.

```
show monitor urlfilter [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Specifies the URL filter control index.
---------------------------	---

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the URL filter configuration:
-----------------	---

```
root@localhost# show monitor urlfilter  
root@localhost#
```

Related Commands	monitor urlfilter
-------------------------	-----------------------------------

show monitor vlanstats

To display all of the VLAN statistics collection configurations, use the **show monitor vlanstats** command.

```
show monitor vlanstats [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays VLAN statistics collections by specified control index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display all of the VLAN statistics collection configurations:
-----------------	---

```
Root@localhost# show monitor vlanstats  
Control Index:          46232  
Data Source:            dataport1  
Owner:                  LocalMgr  
Status:                  1  
Root@localhost#
```

Related Commands	monitor vlanstats
-------------------------	-----------------------------------

show monitor vlanstats on-switch

To display the supervisor engine VLAN statistics collection configuration status, use the **show monitor vlanstats on-switch** command.

show monitor vlanstats on-switch

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the VLAN statistics collection configuration status:

```
Root@localhost# show monitor vlanstats on-switch
Supervisor vlanstats collection is enabled.
Root@localhost#
```

Related Commands [monitor vlanstats on-switch](#)

show monitor voice

To display the voice configurations, use the **show monitor voice** command.

show monitor voice [*protocol*]

Syntax Description	<i>protocol</i>	(Optional) Displays voice collections by the specified protocol, either H323, SCCP, SIP, or MGCP.
---------------------------	-----------------	---

Defaults This command has no default settings.

Command Modes Command mode

Usage Guidelines The Media Gateway Control Protocol (MGCP) option is specific to the Network Analysis Module (NAM) software release running on network modules in the Cisco 2600, 3600, 3700 routers.

Examples This example shows how to display the voice configurations:

```

Root@localhost# show monitor voice
H.323 Voice Monitoring:           Enabled
Number of phone table rows:      200
Number of call table rows:       200
Number of top packet jitter rows: 5
Number of top packet loss rows:  5

SCCP Voice Monitoring:           Disabled
Number of phone table rows:      300
Number of call table rows:       300
Number of top packet jitter rows: 5
Number of top packet loss rows:  5Console>

MGCP voice monitoring:           Disabled
Number of phone table rows:      150
Number of call table rows:       150
Number of top packet jitter rows: 7
Number of top packet loss rows:  7

```

This example shows how to only display information about the MGCP configuration:

```

Root@localhost# show monitor voice mgcp
MGCP voice monitoring:           Disabled
Number of phone table rows:      150
Number of call table rows:       150
Number of top packet jitter rows: 7
Number of top packet loss rows:  7

```

■ show monitor voice

Related Commands

[monitor voice h.323](#)
[monitor voice mgcp](#)
[monitor voice sccp](#)
[monitor voice sip](#)

show nam data-source

To display all of the NAM data sources, use the **show nam data-source** command.

show nam data-source

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the NAM data sources:

```
root@localhost# show nam data-source
external
internal
netflow
nde-10.10.10.10
nde-if-fa0/0
nde-if-fa0/1
nde-if-atm0/2/0.0-aal5_layer
nde-if-atm0/2/0-aal5_layer
nde-if-atm0/2/1.0-aal5_layer
nde-if-atm0/2/1-aal5_layer
nde-if-atm0/3/1.0-aal5_layer
nde-if-atm0/3/1-aal5_layer
root@localhost#
```

Related Commands [mpls data-source vc](#)
[mpls data-source vrf](#)
[mpls data-source label](#)

show patches

To display all of the installed patches, use the **show patches** command.

show patches

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display all of the installed patches:

```
Root@localhost# show patches
```

Related Commands [patch](#)

show preferences

To display the configured preferences for your screen, use the **show preferences** command.

show preferences

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the configured screen preferences:

```
root@localhost.cisco.com# show preferences
Entries per screen: 15
Refresh interval: 60 secs
Number of graph bars: 10
Hostname resolution: Disabled
Data displayed in: Bytes
Format large number: No
Number notation: Commas-dot
root@localhost.cisco.com#
```

Related Commands [preferences](#)

show remote-storage

To display the network storage target for report and capture date, use the **show remote-storage** command.

show remote-storage

Syntax Description This command has no keywords or arguments.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the web user information:

```

root@localhost.cisco.com# show remote-storage
Description:    iscsi-2
Type:          iscsi
Server:        172.20.103.60
IQN Name:      iqn.2000-05.com.wasabisystems.storagebuilder:cxr1-2|1
Status:        Mounted

Description:    iscsi-3
Type:          iscsi
Server:        172.20.103.60
IQN Name:      iqn.2000-05.com.wasabisystems.storagebuilder:cxr1-3|1
Status:        Mounted

Description:    namlab-pc8
Type:          nfs
Server:        namlab-pc8.cisco.com
Directory:     /home/kluu
Status:        Mounted

root@localhose.cisco.com#

```

Related Commands [remote-storage nfs](#)

show rmon buffer

To display the RMON buffers, use the **show rmon buffer** command.

```
show rmon buffer [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays the buffer collections by specified control index.
---------------------------	---

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the RMON channels and buffers:
-----------------	--

```
Root@localhost# show rmon buffer  
Index:                9791  
Channel index:        21054  
Full action:          Lock when full  
Capture slice size:   1500 bytes  
Download slice size:  1500 bytes  
Download offset:      0  
Max octets requested: 51200000 bytes  
Owner:                LocalMgr
```

Related Commands	rmon buffer rmon channel rmon filter
-------------------------	--

show rmon channels

To display the RMON channels, use the **show rmon channels** command.

```
show rmon channels [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays the channels collections by specified control index.
---------------------------	---

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the RMON channels:
-----------------	--

```
Root@localhost# show rmon channels  
46303
```

Related Commands	rmon buffer rmon channel rmon filter
-------------------------	--

show rmon filters

To display the RMON filters, use the **show rmon filters** command.

```
show rmon filters [control-index]
```

Syntax Description	<i>control-index</i> (Optional) Displays the filters collections by specified control index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the RMON filters:
-----------------	---

```
Root@localhost# show rmon filters  
46303
```

Related Commands	rmon buffer rmon channel rmon filter
-------------------------	--

show rxcounters

To display the RX data counters, use the **show rxcounters** command.

show rxcounters

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the RX data counters:

```
Root@localhost# show rxcounters
data port 1 rx pkt count: 1524112
data port 2 rx pkt count: 1115
```


show snmp

To display the SNMP parameters, use the **show snmp** command.

show snmp

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the SNMP parameters:

```
Root@localhost# show snmp
SNMP Agent:   mynam.cisco.com   112.10.14.73

SNMPv1:   Enabled
SNMPv2C:  Enabled
SNMPv3:   Disabled

community   private   write
community   public    read

trap community   public   112.10.17.237
trap community   public   112.10.17.244

sysDescr           Network Analysis Module (WS-SVC-NAM-2), Version 3.1(0.12)
Copyright (c) 1999-2003 by cisco Systems, Inc.

sysObjectID        enterprises.9.5.1.3.1.1.2.291
sysContact          engineer
sysName             mynam
sysLocation         top floor
```

Related Commands [snmp](#)

show syslog-settings

To display the NAM system log settings, use the **show syslog-settings** command.

show syslog-settings

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the NAM system log settings:

```
Root@localhost# show syslog-settings
MIB threshold events: Local
Voice threshold events: Local
System alerts (debug): Local
```

Related Commands [syslog](#)

show system-alerts

To display NAM failures or problems, use the **show system-alerts** command.

show system-alerts

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the NAM system alerts:

```
Root@localhost# show system-alerts
Jan  1 15:07:31 mynam scpd: scpd: 0x10/44 -> 0x15/0, len 18, op 0x14a, len
 2, flags 0(), seq 65443, ver 0
Jan  1 15:07:31 mynam scpd: scpd: SCP PC Blade REQ from 0x10/44.
Jan  1 15:07:31 mynam scpd: scpd: sub-opcode 6, status 45.
Jan  1 15:07:31 mynam scpd: scpd: SCP PC Shutdown.
Jan  1 15:07:33 mynam scpd: scpd: shutdown of NAM!
Jan  1 15:07:35 mynam rmond[595]: rmond: received QUIT signal! Exiting!
Jan  1 15:07:38 mynam polld: Terminating polld.
Jan  1 15:07:42 mynam configd: SIGTERM recieved.
Jan  1 15:07:42 mynam configd: Terminating with success.
Jan  1 00:02:43 mynam scpd: scpd: 0x10/1 -> 0x15/0, len 18, op 0x14a, len
```

Related Commands [syslog remote-server](#)

show tech-support

To display technical support information, use the **show tech-support** command.

show tech-support

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the NAM technical support information:

```
Root@localhost# show tech-support
PID  TY  STAT  TIME  COMMAND
  1  ?   S      0:08  init
  2  ?   SW     0:00  [keventd]
  3  ?   SWN    0:00  [ksoftirqd_CPU0]
  4  ?   SWN    0:00  [ksoftirqd_CPU1]
  5  ?   SW     0:00  [kswapd]
  6  ?   SW     0:00  [bdflush]
  7  ?   SW     0:05  [kupdated]
238  ?   S      0:00  /usr/local/nam/bin/scpd -l -d/var/log/scpd
246  ?   SW     0:10  [kjournald]
474  ?   S      0:01  syslogd -m 0
477  ?   S      0:00  klogd -2
501  ?   S      0:00  /usr/sbin/atd
```

show time

To display NAM time zone or time synchronization settings, use the **show time** command.

show time

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the NAM time settings:

```
Root@localhost# show time
NAM synchronize time to:      Switch
Timezone configured on the switch: PDT
Current system time:         Thu May  1 09:29:49 GMT+8 2003
```

Related Commands [time](#)

show trap-dest

To display all of the NAM trap destinations, use the **show trap-dest** command.

```
show trap-dest [trap-index]
```

Syntax Description	<i>trap-index</i> (Optional) Displays the trap destinations by the specified trap index.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the NAM trap destinations:
-----------------	--

```
Root@localhost# show trap-dest
Trap index: 23370
Community: public
Address: 172.20.98.136
UDP port: 162 (00a2)
Owner: LocalMgr
Root@localhost#
```

Related Commands	trap-dest
-------------------------	---------------------------

show version

To display the NAM version information, use the **show version** command.

show version

Syntax Description This command has no keywords or arguments.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the NAM version information:

```
Root@localhost# show version
NAM application image version: 3.1(0.12)
Maintenance image version: 1.1(1)
NAM Daughter Card Micro code version: 1.29.1.27 (NAM)
BIOS Version: 4.0-Rel 6.0.4
Console
```

Related Commands [config clear](#)

show web-publication

To display the web publication hosts configuration information, use the **show web-publication** command.

show web-publication

Syntax Description This command has no keywords or arguments.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to display the web user information:

```
Root@localhost# show web-publication
Web publication:      enabled
Allowed hosts:
Access code:
Alarm screens:       disabled
Report screens:      enabled
Voice screens:       enabled
RMON screens:        enabled
```

Related Commands [web-publication](#)

show web-users

To display the web user information, use the **show web-users** command.

```
show web-users [user-name]
```

Syntax Description	<i>user-name</i> (Optional) Displays the specified user name information.
---------------------------	---

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Examples	This example shows how to display the web user information:
-----------------	---

```
Root@localhost# show web-users admin
User: admin
-----
Account management: Enabled
System config:      Enabled
Capture:            Enabled
Alarm config:       Enabled
Collection config:  Enabled
Collection view:    Enabled
Console
```

Related Commands	web-user
-------------------------	--------------------------

shutdown

To shut down the NAM, use the **shutdown** command.

shutdown

Syntax Description This command has no arguments or keywords.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to shut down the NAM:

```
Root@localhost# shutdown  
Shut down the NAM? (y/n) [n]: n
```

Related Commands [logout](#)
[preferences](#)
[exit](#)

snmp

To configure NAM system MIB objects, use the **snmp** command.

snmp community *community-string* { **ro** | **rw** }

snmp delete community *community-string*

snmp contact *contact-string*

snmp location *location-string*

snmp name *name-string*

Syntax Description		
community <i>community-string</i>	ro rw	Sets the device community string.
delete <i>community-string</i>		Deletes the device community string.
contact <i>contact-string</i>		Sets the device contact string.
location <i>location-string</i>		Sets the device location.
name <i>name-string</i>		Sets the device name.

Defaults

This command has no default settings.

Command Modes

Command mode

Examples

This example shows how to configure NAM system MIB objects:

```
Root@localhost# snmp community askdfhtj1ks.01' contact george location frisco, name al
```

Related Commands

[show snmp](#)

supervisor address

To set the local supervisor engine address to the NAM, use **supervisor address** command. To return the NAM back to the default where the NAM learns the supervisor engine address during the NAM bootup process, use the **no supervisor address** command.

supervisor address *string*

no supervisor address

Syntax Description	<i>string</i> Specifies the supervisor engine address.
---------------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Usage Guidelines	<p>The local supervisor engine address is sent to the NAM by the supervisor engine during the NAM bootup process. In some specific network configurations, the supervisor engine address that the NAM expected to receive may not exist or cannot be reached by the NAM. This command allows you to set a NAM-reachable supervisor address.</p>
-------------------------	---

This command is supported in NAM-1 and NAM-2 only.

Examples	<p>This example shows how to set the local supervisor engine address to the NAM as 123.54.106.12:</p> <pre>root@localhost.cisco.com# supervisor address 123.54.106.12</pre>
-----------------	--

syslog

To enter the system log subcommand mode, and then configure system logging for the NAM, use the **syslog** command.

syslog

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the system log subcommand mode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **mib**—(Optional) Configures the system log for NAM MIB threshold events, see the “[syslog mib](#)” command section.
- **remote-server**—(Optional) Configures the system log for remote logging, see the “[syslog remote-server](#)” command section.
- **system**—(Optional) Configures the system log for NAM system alerts, see the “[syslog system](#)” command section.
- **voice**—(Optional) Configures the system log for voice threshold events.

Examples

This example shows how to configure system logging for the NAM:

```
Root@localhost# syslog  
root@localhost.cisco.com(sub-syslog) #
```

Related Commands

[show syslog-settings](#)

syslog mib

To capture NAM MIB alarms and send them to the system log, use the **syslog mib** command from the syslog subcommand mode.

syslog mib [local enable | disable] [remote enable | disable]

Syntax Description	local enable disable	(Optional) Enables or disables local MIB alarms.
	remote enable disable	(Optional) Enables or disables remote MIB alarms.

Defaults This command has no default settings.

Command Modes Syslog subcommand mode

Examples This example shows how to configure the NAM to capture MIB alarms:

```
root@localhost# syslog
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@localhost(sub-syslog)# mib local enable
root@localhost(sub-syslog)# exit
NAM syslog settings updated successfully.
root@localhost# show syslog
MIB threshold events: Local
Voice threshold events: Local
System alerts (info): Local
```

Related Commands

- [alarm mib](#)
- [alarm voice](#)
- [show alarm event](#)
- [show autostart](#)
- [show syslog-settings](#)
- [syslog](#)
- [syslog remote-server](#)
- [web-user](#)

syslog remote-server

To capture NAM remote server alarms, use the **syslog remote-server** command from the syslog subcommand mode.

```
syslog remote-server disable | [server1 [server2] [server3] [server4] [server5]
```

Syntax Description	disable	Disables remote server event logging.
	server1 server2 server3 server4 server5	(Optional) Specifies the remote server.

Defaults This command has no default settings.

Command Modes Syslog subcommand mode

Examples This example shows how to configure the NAM to capture remote server alarms:

```
Root@localhost<sub-syslog># syslog
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
Root@localhost<sub-syslog># voice remote enable
Root@localhost<sub-syslog># syslog remote-server 172.20.98.136
Root@localhost<sub-syslog># exit
NAM syslog settings updated successfully.
```

Related Commands

- [alarm mib](#)
- [alarm voice](#)
- [show alarm event](#)
- [show autostart](#)
- [show syslog-settings](#)
- [syslog](#)
- [web-user](#)

syslog system

To capture NAM system alarms, use the **syslog system** command from the syslog subcommand mode.

syslog system debug enable | disable local enable | disable remote enable | disable

Syntax Description	debug enable disable	Enables or disables system debug alarms.
	local enable disable	Enables or disables local system alarms.
	remote enable disable	Enables or disables remote server system alarms.

Defaults This command has no default settings.

Command Modes Syslog subcommand mode

Examples This example shows how to configure the NAM to capture system alarms:

```
Root@localhost# syslog system local enable
```

Related Commands

- [alarm mib](#)
- [alarm voice](#)
- [show alarm event](#)
- [show autostart](#)
- [show syslog-settings](#)
- [syslog](#)
- [syslog remote-server](#)
- [web-user](#)

syslog voice

To configure system logging for voice threshold events from the syslog subcommand mode, use the **syslog voice** command.

syslog voice local enable | disable remote enable | disable

Syntax Description	local enable disable	remote enable disable
	Enables or disables local voice alarms.	Enables or disables remote voice alarms.

Defaults This command has no default settings.

Command Modes Syslog subcommand mode

Examples This example shows how to configure the NAM to capture voice alarms:

```
root@hostname.cisco.com<sub-syslog># syslog voice local enable
root@hostname.cisco.com# show options
ART mib: Enabled
Voice monitoring:Enabled
root@hostname.cisco.com#
```

Related Commands

- [alarm mib](#)
- [alarm voice](#)
- [show alarm event](#)
- [show autostart](#)
- [show patches](#)
- [show syslog-settings](#)
- [syslog remote-server](#)

terminal

To set the number of lines on a screen for this session, use the **terminal** command.

terminal editor [enable | disable]

terminal length *length*

terminal mode { 0 | 1 }

Syntax Description	
editor [enable disable]	(Optional) Enables or disables the NAM CLI command editing.
length <i>length</i>	Sets the number of lines per screen for a session.
mode { 0 1 }	Sets the terminal mode.

Defaults This command has no default settings.

Command Modes Command mode

Examples This example shows how to set the number of lines on a session's screen:

```
root@localhost# terminal length 24
Terminal length for this session set to 24.
```

Related Commands [config clear](#)

time

To enter the time configuration subcommand mode, and then configure NAM system time settings, use the **time** command.

time

Syntax Description

This command has no arguments or keywords.

Defaults

This command has no default settings.

Command Types

Switch command

Command Modes

Privileged

Usage Guidelines

When you enter the time configuration subcommand mode, the following commands are available:

- **cancel**—Discards changes and exits from the subcommand mode.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **sync ntp | switch**—(Optional) Synchronizes the NAM system time with the Network Time Protocol (NTP) or with the switch.
- **zone**—*region-name* [**zone-name**]—Synchronizes the time zone with the NAM for use with NTP.
- **sync router**—Synchronizes the NAM time with the router.

This command is specific to the NAM software release running on network modules in the Cisco 2600, 3600, and 3700 routers.

Examples

This example shows how to configure system time settings on the NAM to synchronizes the time with the switch:

```
root@hostname.cisco.com# time
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@hostname.cisco.com(sub-time)# ?
?
- display help
cancel
- discard changes and exit from subcommand mode
exit
- exit from subcommand mode
help
- display help
sync
- synchronize NAM system time with switch or ntp
root@hostname.cisco.com(sub-time)# sync switch
root@hostname.cisco.com(sub-time)# exit
Successfully updated NAM system time settings.
NOTE:You have configured the NAM synchronize time to the switch.
For this change to take effect, set the time from the switch or
reset the NAM.
```

```
root@hostname.cisco.com# show time
NAM synchronize time to:      Switch
Timezone configured on the switch:PST
Switch time offset to UTC:    0
Current system time:         Thu Mar 20 09:23:14 GMT 2003
```

This example shows how to configure system time settings on the NAM to synchronize the time with the NTP:

```
root@hostname.cisco.com# time
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@hostname.cisco.com(sub-time)# sync ntp ntp01.cisco.com ntp02.cisco.com
root@hostname.cisco.com(sub-time)# exit
Successfully updated NAM system time settings.
root@hostname.cisco.com# show time
NAM synchronize time to:      NTP
NTP server1:                  ntp01.cisco.com
NTP server2:                  ntp02.cisco.com
Current system time:         Thu Mar 20 09:23:36 GMT 2003
root@hostname.cisco.com#
```

Related Commands [show time](#)

traceroute

To trace the route to a network device, use the **traceroute** command.

```
traceroute [-I | n | v] [-f first_ttl] [-m max_ttl] [-p port] [-s src_addr] [-t tos] [-w waittime]
destination host name | IP address [packetlen]
```

Syntax Description	
-I	(Optional) Specifies that ICMP ECHO is used instead of UDP datagrams.
-n	(Optional) Prints hop addresses numerically.
-v	(Optional) Sets the output to verbose.
-f first_ttl	(Optional) Sets the initial time-to-live used in the first outgoing packet.
-m max_ttl	(Optional) Sets the maximum time-to-live (max number of hops) used.
-p port	(Optional) Sets the base UDP port number used in probes.
-s src_addr	(Optional) Forces the source address to be an address other than the IP address of the interface the packet is sent on.
-t tos	(Optional) Sets the type-of-service in packets to the following value.
-w waittime	(Optional) Sets the time (in seconds) to wait for a response to a probe.
destination	Sets the packet destination.
host	Sets the host.
name	Sets the hostname.
IP address	Sets the IP address
packetlen	(Optional) Set the length of the packet.

Defaults

This command has no default settings.

Command Modes

Command mode

Examples

This example shows how to trace a route to a network device named aragon:

```
root@localhost.cisco.com# traceroute -I -n -v -f first_ttl -p 5 -w 10 aragon 123.34.54.12
root@localhost.cisco.com#
```

trap-dest

To enter the trap destination subcommand mode and create or edit trap destinations on the NAM, use the **trap-dest** command. To remove a trap destination entry, use the **no** form of this command.

trap-dest

no trap-dest [*control-index*]

Syntax Description	<i>control-index</i>	(Optional) Specifies the collection control index. Range is from 1 to 65535.
---------------------------	----------------------	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode
----------------------	--------------

Usage Guidelines	When you enter the trap destination subcommand mode, the following commands are available:
-------------------------	--

- **address**—Sets the trap destination IP address.
- **cancel**—Discards changes and exits from the subcommand mode; see the “[cdp enable](#)” command section.
- **community** *community_string*—Sets the community string.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **index** *index*—(Optional) Sets the trap index. Range is from 1 to 65535. Default is random.
- **owner** *string*—(Optional) Specifies the collection owner. Default is monitor.



Note	The collections that are configured in the CLI will not be visible in the GUI. For collections that use a GUI screen, you can make them visible in the GUI by using the owner string “LocalMgr.”
-------------	--

- **port**—(Optional) Sets the UDP port. Default is 162.

Examples	This example shows how to configure traps on the NAM:
-----------------	---

```

root@hostname.cisco.com# trap-dest
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@hostname.cisco.com(sub-trap-dest)# ?
?                               - display help
address                          - set IP address (*)
cancel                          - discard changes and exit from subcommand mode
community                       - set community string (*)
exit                            - exit from subcommand mode
help                            - display help

```

```
index                - set trap index
owner                - set owner string
port                 - set UDP port

(*) - denotes a mandatory field for this configuration.
root@hostname.cisco.com(sub-trap-dest)# address 10.0.0.1
root@hostname.cisco.com(sub-trap-dest)# community public
root@hostname.cisco.com(sub-trap-dest)# exit
Trap created successfully.
root@hostname.cisco.com# show trap-dest
Trap index:48981
Community: public
Address: 10.0.0.1
UDP port: 162 (00a2)
Owner: monitor

root@hostname.cisco.com#
```

Related Commands

[alarm event](#)
[alarm mib](#)
[alarm voice](#)
[show alarm event](#)
[show autostart](#)
[show trap-dest](#)

upgrade

To download and install a new maintenance image on the NAM, use the **upgrade** command.

```
upgrade ftp://user:passwd@host/full-path/filename
```

Syntax Description	<i>ftp://user:passwd@host/full-path/filename</i>	Path to the location of the upgrade maintenance image.
---------------------------	--	--

Defaults	This command has no default settings.
-----------------	---------------------------------------

Command Modes	Command mode.
----------------------	---------------

Examples	This example shows how to download and install a new maintenance image:
-----------------	---

```
Root@localhost# upgrade ftp://alamo:lj1jsdf@milton/dir65/abracadabr/dir65/upgrade_now
Root@localhost#
```

Related Commands	show patches show version
-------------------------	--

web-publication

To enable and set up a list of hosts that can view the NAM GUI monitoring displays without logging into the NAM, use the **web-publication** command. To remove web publishing from your configuration, use the **no** form of this command.

```
web-publication user-name
```

```
no web-publication
```

Syntax Description

<i>user-name</i>	Sets the username.
------------------	--------------------

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the web user subcommand mode, the following commands are available:

- **?** or **help**—Displays help; see the “[help](#)” command section.
- **cancel**—Discards changes and exits from the subcommand mode.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **alarm** *enable* | *disable*—(Optional) Enables or disables web publishing of alarm displays.
- **allow-hosts** *WORD*—Sets the hosts which are allowed to view web published monitoring displays.
- **code** *WORD*—Sets the code which allows hosts to view web published monitoring displays.
- **report** *enable* | *disable*—(Optional) Enables or disables web publishing report displays.
- **rmon** *enable* | *disable*—(Optional) Enables or disables web publishing RMON monitoring displays.
- **voice** *enable* | *disable*—(Optional) Enables or disables web publishing voice monitoring displays.

Examples

This example shows how to configure a host to receive web published reports from the NAM:

```
root@hostname.cisco.com# web-publication
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@hostname.cisco.com(sub-web-publication)# ?

root@hostname.cisco.com#
```

Related Commands

[show web-publication](#)

web-user

To enter the web user configuration subcommand mode, and then configure local web users on the NAM, use the **web-user** command. To remove a web user from your configuration, use the **no** form of this command.

web-user

no web-user *user-name*

Syntax Description

<i>user-name</i>	Sets the username.
------------------	--------------------

Defaults

This command has no default settings.

Command Modes

Command mode

Usage Guidelines

When you enter the web user subcommand mode, the following commands are available:

- **account-mgmt enable | disable**—(Optional) Enables or disables the account management privilege.
- **alarm-config enable | disable**—(Optional) Enables or disables the alarm configuration privilege.
- **cancel**—Discards changes and exits from the subcommand mode.
- **capture enable | disable**—(Optional) Enables or disables the packet capture and decode privilege.
- **collection-config enable | disable**—(Optional) Enables or disables the collection configuration privilege.
- **exit**—Saves changes and exits from the subcommand mode; see the “[exit](#)” command section.
- **system-config enable | disable**—(Optional) Enables or disables the system configuration privilege.
- **user-name** *user-name*—Sets the user name.

Examples

This example shows how to configure a NAM web user:

```

root@hostname.cisco.com# web-user
Entering into subcommand mode for this command.
Type 'exit' to come out of this mode.
Type 'cancel' to discard changes and to come out of this mode.
root@hostname.cisco.com(sub-web-user)# ?
?                - display help
account-mgmt     - enable/disable account management privilege
alarm-config     - enable/disable alarm configuration privilege
cancel          - discard changes and exit from subcommand mode
capture         - enable/disable packet capture/decode privilege
collection-config - enable/disable collection configuration privilege
exit            - exit from subcommand mode
help            - display help
system-config   - enable/disable system configuration privilege
user-name       - set username (*)

```

```
(*) - denotes a mandatory field for this configuration.
root@hostname.cisco.com(sub-web-user)# user-name foo
root@hostname.cisco.com(sub-web-user)# account-mgmt enable
root@hostname.cisco.com(sub-web-user)# exit
No password specified.
Do you want specify password now (y/n) [n] y
Enter password:
Confirm password:
User 'foo' created successfully.
root@hostname.cisco.com# show web-users foo
User name:          foo
Account management: Enabled
System config:     Disabled
Capture:           Disabled
Alarm config:      Disabled
Collection config: Disabled
Collection view:   Enabled

root@hostname.cisco.com#
```

Related Commands

[show web-users](#)



NAM Maintenance Partition CLI

Table A-1 lists the Network Analysis Module maintenance partition commands.

Table A-1 Catalyst 6500 Series NAM Maintenance Image CLI

Command	Usage
ip address <i>address mask</i>	Sets the NAM IP address.
ip broadcast <i>broadcast-address</i>	Sets the NAM broadcast address.
ip gateway <i>gateway-address</i>	Sets the NAM gateway address.
ip nameserver <i>DNS-server-address1</i> [<i>DNS-server-address2</i> [<i>DNS-server-address3</i>]]	Sets up to three DNS server addresses.
ip host <i>host-name</i>	Sets the NAM device host name.
ip domain <i>domain</i>	Sets the NAM device domain.
show ip	Shows the NAM IP parameters.
show images	Shows images located on the NAM application partition.
show version	Shows the NAM system parameters.
show log upgrade	Shows the upgrade log file.
passwd	Sets the password for the current user.
upgrade <i>ftp-url</i> [--install]	Upgrades the NAM application image.
ping <i>address</i>	Sends echo messages.
clear ip	Removes the NAM network configuration.
clear log upgrade	Clears the log file for the upgrade operation.
logout	Exits the current session.
exit	Exits the current session.
passwd-guest	Sets the password for the guest account.
enable-guest	Enables the guest account.
disable-guest	Disables the guest account.
reset	Reboots the NAM (available in guest account only).
upgrade-bios	Installs a new BIOS image (available in guest account only).



Acronyms

Table B-1 defines the acronyms used in this publication.

Table B-1 List of Acronyms

Acronym	Expansion
ARP	Address Resolution Protocol
ART	Application Response Time
BGP	Border Gateway Protocol
BPDU	bridge protocol data unit
BSTUN	Block Serial Tunnel
BVI	bridge-group virtual interface
CDP	Cisco Discovery Protocol
CHAP	Challenge Handshake Authentication Protocol
CIR	committed information rate
CLI	command-line interface
CMNS	Connection-Mode Network Service
COPS	Common Open Policy Server
CoS	class of service
CRC	cyclic redundancy check
DIFFSERV	differentiated services
DISL	Dynamic Inter-Switch Link
DLC	Data Link Control
DLSw	Data Link Switching
DNS	Domain Name System
DoD	Department of Defense
DoS	denial of service
dot1q	802.1Q
dot1x	802.1x
DRAM	dynamic RAM
DSAP	destination service access point

Table B-1 List of Acronyms (continued)

Acronym	Expansion
DSCP	differentiated services code point
DSMON	Differentiated Services Monitoring
DTR	data terminal ready
EEPROM	electrically erasable programmable read-only memory
EIA	Electronic Industries Association
ELAN	Emulated Local Area Network
EOBC	Ethernet out-of-band channel
EOF	end of file
FAT	File Allocation Table
fsck	file system consistency check
FTP	File Transfer Protocol
GARP	General Attribute Registration Protocol
HSRP	Hot Standby Routing Protocol
HTTP	HyperText Transfer Protocol
IGMP	Internet Group Management Protocol
IGRP	Interior Gateway Routing Protocol
IP	Internet Protocol
IPC	interprocessor communication
IPX	Internetwork Packet Exchange
ISL	Inter-Switch Link
ISL VLANs	Inter-Switch Link VLANs
ISO	International Organization of Standardization
LAN	local area network
LANE	LAN Emulation
LLC	Logical Link Control
MAC	Media Access Control
MD5	message digest 5
MFD	multicast fast drop
MGCP	Media Gateway Control Protocol
MSFC	Multilayer Switch Feature Card
MIB	Management Information Base
MII	media-independent interface
MLS	Multilayer Switching
MPLS	Multiprotocol Label Switching
MRM	multicast routing monitor
MSDP	Multicast Source Discovery Protocol

Table B-1 List of Acronyms (continued)

Acronym	Expansion
MSFC	Multilayer Switching Feature Card
MTU	maximum transmission unit
NAM	Network Analysis Module
NBP	Name Binding Protocol
NDE	NetFlow Data Export
NetBIOS	Network Basic Input/Output System
NFFC	NetFlow Feature Card
NSAP	network service access point
NTP	Network Time Protocol
NVRAM	nonvolatile RAM
OAM	Operation, Administration, and Maintenance
OID	object identifier variable
OSPF	open shortest path first
PBD	packet buffer daughterboard
PBR	policy-based routing
PC	Personal Computer (formerly PCMCIA)
PDU	protocol data unit
PFC	Policy Feature Card
PHY	physical sublayer
PIM	protocol independent multicast
PPP	Point-to-Point Protocol
PVLANs	private VLANs
QoS	quality of service
RACL	router interface access control list
RADIUS	Remote Access Dial-In User Service
RAM	random-access memory
RCP	Remote Copy Protocol
RIF	Routing Information Field
RMON	remote network monitor
ROM	read-only memory
ROMMON	ROM monitor
RP	route processor or rendezvous point
RPC	remote procedure call
RSPAN	remote SPAN
RSVP	ReSerVation Protocol
SAP	service access point

Table B-1 List of Acronyms (continued)

Acronym	Expansion
SCP	Switch-Module Configuration Protocol
SCCP	Skinny Client Control Protocol
SDLC	Synchronous Data Link Control
SLCP	Supervisor Line-Card Processor
SLIP	Serial Line Internet Protocol
SNAP	Subnetwork Access Protocol
SNMP	Simple Network Management Protocol
SPAN	Switched Port Analyzer
SSL	Secure Sockets Layer
STP	Spanning Tree Protocol
SVC	switched virtual circuit
TACACS+	Terminal Access Controller Access Control System Plus
TCP/IP	Transmission Control Protocol/Internet Protocol
TFTP	Trivial File Transfer Protocol
TIA	Telecommunications Industry Association
TopN	Utility that allows the user to analyze port traffic by reports
TOS	type of service
TLV	type-length-value
TTL	Time To Live
UDP	User Datagram Protocol
UTC	Coordinated Universal Time
VACL	VLAN access control list
VINES	Virtual Network System
VLAN	virtual LAN
VMPS	VLAN Membership Policy Server
VPN	virtual private network
VTP	VLAN Trunking Protocol
WAN	wide area network
WCCP	Web Cache Coprocessor Protocol
WFQ	weighted fair queueing
WRED	weighted random early detection
XNS	Xerox Network System



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