Preface

This preface describes the audience, organization, and conventions of the *Cisco Nexus 6000 Series NX-OS System Management Command Reference*. It also provides information on how to obtain related documentation.

This preface includes the following sections:

Audience

This publication is for experienced users who configure and maintain Cisco NX-OS devices.

Document Conventions

Command descriptions use these conventions:

Convention	Description
boldface font	Commands and keywords are in boldface.
italic font	Arguments for which you supply values are in italics.
[ ]	Elements in square brackets are optional.
{x | y | z}	Alternative keywords are grouped in braces and separated by vertical bars.
[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 examples use these conventions:

`screen font`	Terminal sessions and information that the switch displays are in screen font.
`boldface screen font`	Information you must enter is in boldface screen font.
`italic screen font`	Arguments for which you supply values are in italic screen font.
< >	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.

This document uses the following conventions:

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

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

Related Documentation

Documentation for the Cisco Nexus 6000 Series Switch is available at the following URL:

http://www.cisco.com/en/US/products/ps12806/tsd_products_support_series_home.html

The documentation set is divided into the following categories:

Release Notes

The release notes are available at the following URL:

http://www.cisco.com/en/US/products/ps12806/prod_release_notes_list.html

Installation and Upgrade Guides

The installation and upgrade guides are available at the following URL:

http://www.cisco.com/en/US/products/ps12806/prod_installation_guides_list.html

Command References

The command references are available at the following URL:

http://www.cisco.com/en/US/products/ps12806/prod_command_reference_list.html

Technical References

The technical references are available at the following URL:

http://www.cisco.com/en/US/products/ps12806/prod_technical_reference_list.html

Configuration Guides

The configuration guides are available at the following URL:

http://www.cisco.com/en/US/products/ps12806/products_installation_and_configuration_guides_list.html

Error and System Messages

The system message reference guide is available at the following URL:

http://www.cisco.com/en/US/products/ps12806/products_system_message_guides_list.html

Documentation Feedback

To provide technical feedback on this document, or to report an error or omission, please send your comments to nexus6k-docfeedback@cisco.com. We appreciate your feedback.

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, using the Cisco Bug Search Tool (BST), submitting a service request, and gathering additional information, see *What's New in Cisco Product Documentation*.

To receive new and revised Cisco technical content directly to your desktop, you can subscribe to the What's New in Cisco Product Documentation RSS feed. The RSS feeds are a free service.

A Commands

This chapter describes the system management commands that begin with A.

abort (session)

To discard the current configuration session, use the **abort** command.

abort

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Session configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to abort the current configuration session:

```
switch# configure session MySession1
switch(config-s)# abort
switch#
```

Related Commands

Command	Description
commit	Commits a session.
configure session	Creates a configuration session.
show configuration session	Displays the contents of the session.
verify	Verifies a session.

acllog match-log-level

To specify the minimum severity level to log ACL matches, use the **acllog match-log-level** command. To remove the acllog match log level, use the **no** form of this command.

acllog match-log-level *severity-level*

no acllog match-log-level *severity-level*

Syntax Description

severity-level	Number of the desired severity level at which messages should be logged. Messages at or numerically lower than the specified level are logged. Severity levels are as follows*:* • **0**—emergency: System unusable • **1**—alert: Immediate action needed • **2**—critical: Critical condition • **3**—error: Error condition • **4**—warning: Warning condition • **5**—notification: Normal but significant condition—default level • **6**—informational: Informational message only (default) • **7**—debugging: Appears during debugging only

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to set the acllog match-log-level to 6, informational:

```
switch(config)# acllog match-log-level 6
switch(config)#
```

Related Commands

Command	Description
logging level	Enables logging messages from a specified facility and configures the logging severity level.
logging logfile	Configures the name of the log file used to store sytsem messges and sets the minimum severity level to log.

C Commands

This chapter describes the system management commands that begin with C.

clear flow exporter

To clear the statistics for a Flexible NetFlow flow exporter, use the **clear flow exporter** command.

clear flow exporter {**name** *exporter-name* | *exporter-name*}

Syntax Description

name	Specifies the name of a flow exporter.
exporter-name	Name of an existing flow exporter.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

You must have already enabled traffic monitoring with Flexible NetFlow using an exporter before you can use the **clear flow exporter** command.

This command does not require a license.

Examples

This example clears the statistics for the flow exporter named NFC-DC-PHOENIX:

```
switch# clear flow exporter name NFC-DC-PHOENIX
switch#
```

Related Commands

Command	Description
clear flow exporter	Clears the statistics for exporters.
flow exporter	Creates a flow exporter.
show flow exporter	Displays flow exporter status and statistics.

clear logging logfile

To clears the contents of the log file, use the **clear logging logfile** command.

clear logging logfile

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to clear the logging logfile:

```
switch# clear logging logfile
switch#
```

Related Commands

Command	Description
show logging logfile	Displays the messages in the log file.

clear logging nvram

To clear the NVRAM logs, use the **clear logging nvram** command.

clear logging nvram

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to clear the NVRAM logs:

```
switch# clear logging nvram
```

Related Commands

Command	Description
show logging nvram	Displays the NVRAM logs.

clear logging onboard

To clear the onboard failure logging (OBFL) entries in the persistent log, use the **clear logging onboard** command.

clear logging onboard [**environmental-history**] [**exception-log**] [**obfl-log**] [**stack-trace**]

Syntax Description

environmental-history	(Optional) Clears the OBFL environmental history.
exception-log	(Optional) Clears the OBFL exception log entries.
obfl-log	(Optional) Clears the OBFL (boot-uptime/device-version/obfl-history).
stack-trace	(Optional) Clears the OBFL stack trace entries.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to clear the OBFL environmental history entries:

```
switch# clear logging onboard environmental-history
```

This example shows how to clear the OBFL exception-log entries:

```
switch# clear logging onboard exception-log
```

This example shows how to clear the OBFL (boot-uptime/device-version/obfl-history) entries:

```
switch# clear logging onboard obfl-log
```

This example shows how to clear the OBFL stack trace entries:

```
switch# clear logging onboard stack-trace
```

Related Commands

Command	Description
show logging onboard	Displays onboard failure logs.

clear logging session

To clear the current logging session, use the **clear logging session** command.

clear logging session

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to clear the current logging session:

```
switch# clear logging session
```

Related Commands

Command	Description
show logging session	Displays the logging session status.

clear ntp session

To clear the Network Time Protocol (NTP) session, use the **clear ntp session** command.

clear ntp session

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to discard the NTP Cisco Fabric Services (CFS) distribution session in progress:

```
switch# clear ntp session
```

Related Commands

Command	Description
show ntp	Displays NTP information.

clear ntp statistics

To clear the Network Time Protocol (NTP) session, use the **clear ntp statistics** command.

clear ntp statistics {**all-peers** | **io** | **local** | **memory**}

Syntax Description

all-peers	Clears all peer transaction statistics.
io	Clears I/O statistics.
local	Clears local statistics.
memory	Clears memory statistics.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to discard the NTP I/O statistics:

```
switch# clear ntp statistics io
```

Related Commands

Command	Description
show ntp	Displays NTP information.

collect flow

To configure the flow sampler ID number as a nonkey field and collect their values for a Flexible NetFlow flow record, use the **collect flow** command. To disable the use of the flow direction or the flow sampler ID number as a nonkey field for a Flexible NetFlow flow record, use the **no** form of this command.

collect flow sampler id

no collect flow sampler id

Syntax Description

sampler id	Configures the flow sampler ID as a nonkey field and collects the ID of the sampler that is assigned to the flow monitor.

Defaults

This command is not enabled by default.

Command Modes

Flow record configuration

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

The Flexible NetFlow commands that start with **collect** are used to configure nonkey fields for the flow monitor record and to enable capturing the values in the fields for the flow created with the record. The values in nonkey fields are added to flows to provide additional information about the traffic in the flows. A change in the value of a nonkey field does not create a new flow. In most cases, the values for nonkey fields are taken from only the first packet in the flow.

Use the **collect flow sampler id** command to collect the ID of the flow sampler that is used to monitor the flow. Use this command when more than one flow sampler is being used with different sampling rates. The **option sampler-table** command exports option records with mappings of the flow sampler ID to the sampling rate so that the collector can calculate the scaled counters for each flow.

This command does not require a license.

Examples

This example shows how to configure an ID of the flow sampler that is assigned to the flow as a nonkey field and collects the ID of the flow sampler:

```
switch(config)# flow record FLOW-RECORD-1
switch(config-flow-record)# collect flow sampler id
```

Related Commands

Command	Description
collect counter	Configures the counters as a nonkey field and collects the counter values.
collect flow	Configures flow identifying fields as nonkey fields and collects their values.
collect ip	Configures an IPv4 field as a nonkey field and collects the value in it.
collect routing	Configures a routing attribute as a nonkey field and collects the value of the field.
collect timestamp	Configures the times tamp fields as nonkey fields and collects the values.
collect transport	Configures a transport layer field as a nonkey field and collects the values.
flow record	Creates a flow record.
match ip	Configures one or more of the IP fields as a key field.
match ipv4	Configures one or more of the IPv4 fields as a key field.
match ipv6	Configures one or more of the IPv6 fields as a key field.
match transport	Configures one or more of the transport fields as key fields.
show flow record	Displays the flow record status and statistics.

commit (session)

To commit the current configuration session, use the **commit** command.

commit

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Session configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to commit the current session:

```
switch(config-s)# commit
switch(config-s)#
```

Related Commands

Command	Description
configure session	Creates a configuration session.
show configuration session	Displays the contents of the session.
verify	Verifies a session.

configure maintenance profile

To enter a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile, use the **configure maintenance profile** command. To delete the existing maintenance mode profile or normal mode profile, use the **no** form of this command. Starting with Cisco NX-OS Release 7.3(0)N1(1), we recommend not using the **configure profile** [**maintenance-mode | normal-mode**] **type admin** command and we strongly recommend using the **configure maintenance profile** [**maintenance-mode | normal-mode**] command.

configure maintenance profile [maintenance-mode | normal-mode]

no configure maintenance profile [maintenance-mode | normal-mode]

Syntax Description

maintenance-mode	Enters the maintenance profile configuration session for a maintenance mode profile.
normal-mode	Enters the maintenance profile configuration session for a normal mode profile.

Defaults

None

Command Modes

Privileged EXEC (#)

Global configuration mode (config)

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to enter a maintenance profile configuration session for a maintenance mode profile:

```
switch# configure maintenance profile maintenance-mode
Please configure 'system mode maintenance always-use-custom-profile' if you want to use
custom profile always for maintenance mode.
Enter configuration commands, one per line. End with CNTL/Z.
switch(config-mm-profile)#
```

This example shows how to enter a maintenance profile configuration session for a normal mode profile:

```
switch# configure maintenance profile normal-mode
Please configure 'system mode maintenance always-use-custom-profile' if you want to use
custom profile always for maintenance mode.
Enter configuration commands, one per line. End with CNTL/Z.
switch(config-mm-profile)#
```

This example shows how to delete a maintenance profile:

```
switch# no configure maintenance profile maintenance-mode
Maintenance mode profile maintenance-mode successfully deleted
Enter configuration commands, one per line. End with CNTL/Z.
Exit maintenance profile mode.
```

Related Commands

Command	Description
show run mmode	Displays the currently running maintenance profile configuration on a switch.
show system mode	Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.
system mode maintenance always-use-custom-profile	Applies the existing custom maintenance-mode profile and prevents creation of auto-generated maintenance-mode profile.
system mode maintenance on-reload reset-reason	Boots the switch into maintenance-mode automatically in the event of a specified system crash.
system mode maintenance shutdown	Shuts down all protocols and interfaces except the management interface (by using the **shutdown** command and not the default **isolate** command).
system mode maintenance timeout	Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.

D Commands

This chapter describes the system management commands that begin with D.

description (NetFlow exporter)

To add a description to a NetFlow exporter, use the **description** command. To remove the description, use the **no** form of this command.

description *line*

no description [**line**]

Syntax Description

line	Description string. The string can have a maximum of 63 alphanumeric characters.

Defaults

None

Command Modes

NetFlow exporter configuration (config-flow-exporter)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to add a description to a NetFlow exporter:

```
switch(config)# flow export Netflow-Exporter-1
switch(config-flow-exporter)# description Custom-Exporter-1
switch(config-flow-exporter)
```

This example shows how to remove the description:

```
switch(config-flow-exporter)# no description
switch(config-flow-exporter)
```

Related Commands

Command	Description
show flow exporter	Displays information about NetFlow exporters.

description (NetFlow monitor)

To add a description to a NetFlow monitor, use the **description** command. To remove the description, use the **no** form of this command.

description *line*

no description [**line**]

Syntax Description

line	Description string. The string can have a maximum of 63 alphanumeric characters.

Defaults

None

Command Modes

NetFlow monitor configuration (config-flow-monitor)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to add a description to a NetFlow monitor:

```
switch(config)# flow monitor NetFlow-Monitor-1
switch(config-flow-monitor)# description Custom-Monitor-1
switch(config-flow-monitor)#
```

This example shows how to remove the description:

```
switch(config-flow-monitor)# no description
```

Related Commands

Command	Description
show flow record	Displays information about NetFlow records.

description (NetFlow record)

To add a description to a NetFlow record, use the **description** command. To remove the description, use the **no** form of this command.

description *line*

no description [*line*]

Syntax Description

line	Description string. The string can have a maximum of 63 alphanumeric characters.

Defaults

None

Command Modes

NetFlow record configuration (config-flow-record)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to add a description to a NetFlow record:

```
switch(config)# flow record NetFlow-Record-1
switch(config-flow-record)# description Custom-Flow-Record-1
switch(config-flow-record)#
```

This example shows how to remove the description:

```
switch(config-flow-record)# no description
```

Related Commands

Command	Description
show flow record	Displays information about NetFlow records.

description (NetFlow sampler)

To add a description to a NetFlow sampler, use the **description** command. To remove the description, use the **no** form of this command.

description *line*

no description [**line**]

Syntax Description

line	Description string. The string can have a maximum of 63 alphanumeric characters.

Defaults

None

Command Modes

NetFlow sampler configuration (config-flow-sampler)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to add a description to a NetFlow sampler:

```
switch(config)# sampler Netflow-Sampler-1
switch(config-flow-sampler)# description Custom-Sampler-1
switch(config-flow-sampler)#
```

This example shows how to remove the description:

```
switch(config-flow-sampler)# no description
```

Related Commands

Command	Description
show sampler	Displays information about NetFlow samplers.

description (SPAN, ERSPAN)

To add a description to an Ethernet Switched Port Analyzer (SPAN) or an Encapsulated Remote Switched Port Analyzer (ERSPAN) session configuration, use the **description** command. To remove the description, use the **no** form of this command.

description *description*

no description

Syntax Description

description	String description of the SPAN session configuration. This string is limited to 32 characters.

Command Default

No description is added.

Command Modes

SPAN session configuration mode (config-monitor)
ERSPAN source session configuration mode (config-erspan-src)
ERSPAN destination session configuration mode (config-erspan-dst)
SPAN-on-Drop session configuration mode (config-span-on-drop)
SPAN-on-Drop ERSPAN session configuration mode (config-span-on-drop-erspan)
SPAN-on-Latency session configuration mode (config-span-on-latency)
SPAN-on-Latency ERSPAN session configuration mode (config-span-on-latency-erspan)

Command History

Release	Modification
7.0(0)N1(1)	This command was modified. This command was implemented in the following modes: ERSPAN destination session configuration mode, SPAN-on-Drop session configuration mode, SPAN-on-Drop ERSPAN session configuration mode, SPAN-on-Latency session configuration mode, and SPAN-on-Latency ERSPAN session configuration mode.
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

Use the **description** command to provide a reminder in the configuration to describe what certain SPAN and ERSPAN sessions are used for. The description appears in the output of the following commands such as **show monitor session** and **show running-config monitor**.

Examples

This example shows how to add a description for a SPAN session:

```
switch# configure terminal
switch(config)# monitor session 9 type local
switch(config-monitor)# description A Local SPAN session
switch(config-monitor)#
```

This example shows how to add a description for an ERSPAN source session:

```
switch# configure terminal
```

```
switch(config)# monitor session 9 type erspan-source
switch(config-erspan-src)# description ERSPAN-source-session
switch(config-erspan-src)#
```

This example shows how to add a description for an ERSPAN destination session:

```
switch# configure terminal
switch(config)# monitor session 9 type erspan-destination
switch(config-erspan-dst)# description ERSPAN-destination-session
switch(config-erspan-dst)#
```

This example shows how to add a description for an SPAN-on-Drop session:

```
switch# configure terminal
switch(config)# monitor session 9 type span-on-drop
switch(config-span-on-drop)# description span-on-drop-session
switch(config-span-on-drop)#
```

This example shows how to add a description for an ERSPAN SPAN-on-Drop session:

```
switch# configure terminal
switch(config)# monitor session 9 type span-on-drop-erspan
switch(config-span-on-drop-erpsan)# description span-on-drop-erspan-session
switch(config-span-on-drop-erspan)#
```

This example shows how to add a description for an SPAN-on-Latency session:

```
switch# configure terminal
switch(config)# monitor session 9 type span-on-latency
switch(config-span-on-latency# description span-on-latency-session
switch(config-span-on-latency)#
```

This example shows how to add a description for an ERSPAN SPAN-on-Latency session:

```
switch# configure terminal
switch(config)# monitor session 9 type span-on-latency-erspan
switch(config-span-on-latency-erpsan)# description span-on-latency-erspan-session
switch(config-span-on-latency-erspan)#
```

Related Commands

Command	Description
destination (SPAN session)	Configures a destination SPAN port.
monitor session	Creates a new SPAN session configuration.
show monitor session	Displays SPAN session configuration information.
show running-config monitor	Displays the running configuration information of a SPAN session.
source (SPAN session)	Configures a source SPAN port.

destination

To specify the destination for a NetFlow exporter, use the **destination** command. To remove a destination, use the **no** form of this command.

destination {*ipaddr* | *ipv6addr*} [**use-vrf** *vrf_name*]

no destination [{*ipaddr* | *ipv6addr*} [**use-vrf** *vrf_name*]

Syntax Description

ipaddr	Destination IP address for a collector.
ipv6addr	Destination IPv6 address for a collector.
use-vrf *vrf_name*	(Optional) Specifies the Virtual Routing and Forwarding (VRF) label.

Defaults

None

Command Modes

NetFlow exporter configuration (config-flow-exporter)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to specify the destination for a NetFlow exporter:

```
switch(config)# Flow exporter NetFlow-Exporter-1
switch(config-flow-exporter)# destination 192.168.11.2
switch(config-flow-exporter)#
```

This example shows how to remove the destination:

```
switch(config-flow-exporter)# no destination
```

Related Commands

Command	Description
show flow exporter	Displays information about NetFlow exporters.

destination (ERSPAN session)

To configure an Encapsulated Remote Switched Port Analyzer (ERSPAN) session destination IP address, use the **destination** command. To remove the destination ERSPAN IP address, use the **no** form of this command.

destination ip *ip_address*

no destination ip *ip_address*

Syntax Description

ip	Configures the remote IP address.
ip_address	IPv4 address in the format *A.B.C.D*.

Command Default

None

Command Modes

ERSPAN source session configuration mode (config-erspan-src)
SPAN-on-Drop ERSPAN session configuration mode (config-span-on-drop-erspan)
SPAN-on-Latency ERSPAN session configuration mode (config-span-on-latency-erspan)

Command History

Release	Modification
7.0(0)N1(1)	This command was modified. This command was implemented in the following modes: SPAN-on-Drop ERSPAN session configuration mode and SPAN-on-Latency ERSPAN session configuration mode.
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

You can configure only one destination IP address for an ERSPAN.

This command does not require a license.

Examples

This example shows how to configure an ERSPAN source session destination IP address:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# destination ip 192.0.3.1
switch(config-erspan-src)#
```

This example shows how to configure an ERSPAN SPAN-on-Drop session destination IP address:

```
switch# configure terminal
switch(config)# monitor session 9 type span-on-drop-erspan
switch(config-span-on-drop-erpsan)# destination ip 192.0.3.1
switch(config-span-on-drop-erspan)#
```

This example shows how to configure an ERSPAN SPAN-on-Latency session destination IP address:

```
switch# configure terminal
```

```
switch(config)# monitor session 9 type span-on-latency-erspan
switch(config-span-on-latency-erpsan)# destination ip 192.0.3.1
switch(config-span-on-latency-erspan)#
```

Related Commands

Command	Description
monitor session	Creates a new SPAN session configuration.
show monitor session	Displays SPAN session configuration information.
show running-config monitor	Displays the running configuration information of a SPAN session.
source (ERSPAN session)	Configures a source SPAN port.
source (SPAN session)	Configures a source SPAN port.

destination (SPAN session)

To configure a Switched Port Analyzer (SPAN) destination port, use the **destination** command. To remove the destination SPAN port, use the **no** form of this command.

destination interface {**ethernet** *slot*/[*QSFP-module/*]*port*}

no destination interface {**ethernet** *slot*/[*QSFP-module/*]*port*}

Syntax Description

interface	Specifies the interface type to use as the destination SPAN port.
ethernet *slot*/[*QSFP-module/*]*port*	Specifies the Ethernet interface to use as the destination SPAN port. The *slot* number is from 1 to 255. The *QSFP-module* number is from 1 to 199. The *port* number is from 1 to 128.

Command Default

None

Command Modes

SPAN session configuration mode (config-monitor)
SPAN-on-Drop session configuration mode (config-span-on-drop)
SPAN-on-Latency session configuration mode (config-span-on-latency)
ERSPAN destination session configuration mode (config-erspan-dst)

Command History

Release	Modification
7.0(0)N1(1)	This command was modified. This command was implemented in the following modes: ERSPAN destination session configuration mode, SPAN-on-Drop session configuration mode, SPAN-on-Latency session configuration mode.
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

Each local SPAN, SPAN-on-Drop, and ERSPAN destination session must have a destination port (also called a *monitoring port*) that receives a copy of traffic from the source port.

The destination port can be any Ethernet physical port and must reside on the same switch as the source port (for a local SPAN session). The destination port cannot be a source port, a port channel, a VLAN, Host Interface (HIF), or a SAN port channel group.

A destination port receives copies of sent and received traffic for all monitored source ports. If a destination port is oversubscribed, it can become congested. This congestion can affect traffic forwarding on one or more of the source ports.

Examples

This example shows how to configure an Ethernet interface SPAN destination port and activate the SPAN session:

```
switch# configure terminal
switch(config)# interface ethernet 1/5
switch(config-if)# switchport monitor
```

```
switch(config-if)# exit
switch(config)# monitor session 9 type local
switch(config-monitor)# description A Local SPAN session
switch(config-monitor)# source interface ethernet 1/1
switch(config-monitor)# destination interface ethernet 1/5
switch(config-monitor)# no shutdown
switch(config-monitor)#
```

This example shows how to configure an Ethernet interface SPAN destination port and activate the SPAN-on-Drop session :

```
switch# configure terminal
switch(config)# interface ethernet 3/5
switch(config-if)# switchport monitor
switch(config-if)# exit
switch(config)# monitor session 11 type span-on-drop
switch(config-span-on-drop)# source interface ethernet 3/1
switch(config-span-on-drop)# destination interface ethernet 3/5
switch(config-span-on-drop)#
```

This example shows how to configure an Ethernet interface SPAN destination port and activate the SPAN-on-Latency session:

```
switch# configure terminal
switch(config)# interface ethernet 4/5
switch(config-if)# switchport monitor
switch(config-if)# exit
switch(config)# monitor session 12 type span-on-latency
switch(config-span-on-latency)# source interface ethernet 4/1
switch(config-span-on-latency)# destination interface ethernet 4/5
switch(config-span-on-latency)#
```

This example shows how to configure an Ethernet interface SPAN destination port and activate the ERSPAN destination session:

```
switch# configure terminal
switch(config)# interface ethernet 2/5
switch(config-if)# switchport monitor
switch(config-if)# exit
switch(config)# monitor session 10 type erspan-destination
switch(config-erspan-dst)# source ip 10.1.1.1
switch(config-erspan-dst)# destination interface ethernet 2/5
switch(config-erspan-dst)#
```

Related Commands

Command	Description
source (SPAN session)	Configures a source SPAN port.
monitor session	Creates a new SPAN session configuration.
show monitor session	Displays SPAN session configuration information.
show running-config monitor	Displays the running configuration information of a SPAN session.

diagnostic bootup level

To configure the bootup diagnostic level to trigger diagnostics when the device boots, use the **diagnostic bootup level** command. To remove bootup diagnostic level configuration, use the **no** form of this command.

diagnostic bootup level {**bypass** | **complete**}

no diagnostic bootup level {**bypass** | **complete**}

Syntax Description

bypass	Specifies that all bootup tests are skipped.
complete	Specifies that all bootup diagnostics are performed. This is the default value.

Command Default

Complete

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to configure the bootup diagnostics level to trigger the complete diagnostics:

```
switch(config)# diagnostic bootup level complete
switch(config)#
```

This example shows how to remove the bootup diagnostics level configuration:

```
switch(config)# no diagnostic bootup level complete
switch(config)#
```

Related Commands

Command	Description
show diagnostic bootup level	Displays the bootup diagnostics level.
show diagnostic bootup result	Displays the results of the diagnostics tests.

dscp

To specify the differentiated services code point (DSCP) for a NetFlow exporter, use the **dscp** command. To remove the DSCP parameter, use the **no** form of this command.

dscp *dscp*

no dscp [*dscp*]

Syntax Description

dscp	Differentiated services code point value. The range is from 0 to 63.

Defaults

None

Command Modes

NetFlow exporter configuration (config-flow-exporter)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the DSCP parameter:

```
switch(config)# Flow exporter Custom-NetFlow-Exporter-1
switch(config-flow-exporter)# dscp 32
switch(config-flow-exporter)#
```

This example shows how to remove the DSCP parameter:

```
switch(config-flow-exporter)# no dscp
switch(config-flow-exporter)
```

Related Commands

Command	Description
show flow exporter	Displays information about NetFlow exporters.

E Commands

This chapter describes the Cisco NX-OS sysmtem managementcommands that begin with E.

erspan-id

To configure the flow ID for an Encapsulated Remote Switched Port Analyzer (ERSPAN) session, use the **erspan-id** command. To remove the flow ID, use the **no** form of this command.

erspan-id *flow_id*

Syntax Description

flow_id	ERSPAN flow ID. The range is from 1 to 1023.

Command Default

None

Command Modes

ERSPAN source session configuration mode (config-erspan-src)
ERSPAN destination session configuration mode (config-erspan-dst)
SPAN-on-Drop ERSPAN session configuration mode (config-span-on-drop-erspan)
SPAN-on-Latency ERSPAN session configuration mode (config-span-on-latency-erspan)

Command History

Release	Modification
7.0(0)N1(1)	This command was modified. This command was implemented in the following modes: ERSPAN destination session configuration mode, SPAN-on-Drop ERSPAN session configuration mode, and SPAN-on-Drop ERSPAN session configuration mode.
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the flow ID for an ERSPAN source session:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# erspan-id 100
switch(config-erspan-src)#
```

This example shows how to configure the flow ID for an ERSPAN destination session:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-destination
switch(config-erspan-dst)# erspan-id 100
switch(config-erspan-dst)#
```

This example shows how to configure the flow ID for a SPAN-on-Drop ERSPAN session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-drop-erspan
switch(config-span-on-drop-erspan)# erspan-id 100
switch(config-span-on-drop-erspan)#
```

This example shows how to configure the flow ID for a SPAN-on-Latency ERSPAN session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-latency-erspan
switch(config-span-on-latency-erspan)# erspan-id 100
switch(config-span-on-latency-erspan)#
```

Related Commands

Command	Description
ip dscp	Configures the DSCP value of the packets in the ERSPAN traffic.
ip ttl	Configures the IP time-to-live (TTL) value of the ERSPAN traffic.
vrf	Configures the VRF for ERSPAN traffic forwarding.
monitor-session	Enters the monitor configuration mode for configuring an ERSPAN or SPAN session for analyzing traffic between ports.

exporter

To specify a NetFlow exporter to use for a NetFlow monitor, use the **exporter** command. To remove a NetFlow exporter, use the **no** form of this command.

exporter *name*

no exporter *name*

Syntax Description

name	Name of the exporter.

Defaults

None

Command Modes

NetFlow monitor configuration (config-flow-monitor)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure a NetFlow exporter for a NetFlow monitor:

```
switch(config)# flow monitor Custom-Flow-Monitor-1
switch(config-flow-monitor)# exporter Custom-Flow-Exporter-1
switch(config-flow-monitor)#
```

This example shows how to remove a NetFlow exporter:

```
switch(config-flow-monitor)# no exporter
```

Related Commands

Command	Description
show flow record	Displays information about NetFlow records.

F Commands

This chapter describes the system management commands that begin with F.

feature netflow

To globally enable the NetFlow feature, use the **feature netflow** command. To disable NetFlow, use the **no** form of this command.

feature netflow

no feature netflow

Syntax Description

This command does not have any arguments or keywords.

Defaults

Disabled

Command Modes

Global configuration mode

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to enable NetFlow on a Cisco NX-OS device:

```
switch(config)# configure terminal
switch(config)# feature netflow
switch(config)#
```

This example shows how to disable NetFlow on a Cisco NX-OS device:

```
switch(config)# no feature netflow
switch(config)#
```

Related Commands

Command	Description
flow record	Creates a flow record and enters flow record configuration mode.
show flow record	Displays information about NetFlow flow records.

feature ptp

To enable the PTP feature, use the **feature ptp** command. To unconfigure the PTP feature, use the **no** form of this command.

feature ptp

no feature ptp

Syntax Description

There are no arguments or keywords for this command.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to enable PTP on the device:

```
switch# configure terminal
switch(config)# feature ptp
```

Related Commands

Command	Description
feature ptp	Enables or disables PTP on the device.
ptp source	Configures the source IP address for all PTP packets.
ptp domain	Configures the domain number to use for this clock.
ptp priority1	Configures the priority 1 value to use when advertising this clock.
ptp priority2	Configures the priority 1 value to use when advertising this clock.
show ptp brief	Displays the PTP status.
show ptp clock	Displays the properties of the local clock.

fex-group

To create a Fabric Extender (FEX) group, use the **fex-group** command. To delete a FEX group., use the **no** form of this command.

fex-group *name*

no fex-group *name*

Syntax Description

name	Specifies the name of the FEX group.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to create a FEX group “fg1”:

```
switch# fex-group fg1
```

This example shows how to delete a FEX group “fg1”:

```
switch# no fex-group fg1
```

Related Commands

Command	Description
configure maintenance profile	Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.
show run mmode	Displays the currently running maintenance profile configuration on a switch.
show system mode	Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.
system mode maintenance on-reload reset-reason	Boots the switch into maintenance mode automatically in the event of a specified system crash.

Command	Description
system mode maintenance shutdown	Shuts down all protocols and interfaces except the management interface (by using the **shutdown** command and not the default **isolate** command).
system mode maintenance timeout	Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.
Command	**Description**

filter access-group

To apply an access group to an Encapsulated Remote Switched Port Analyzer (ERSPAN) or Switched Port Analyzer (SPAN) source session, use the **filter access-group** command. To remove an access group, use the **no** form of this command.

filter access-group *acl-filter*

no filter access-group *acl-filter*

Syntax Description

acl-filter	Access control list (ACL) name. An ACL associates the access list with the SPAN session.

Command Default

None

Command Modes

SPAN session configuration mode (config-monitor)
ERSPAN source session configuration mode (config-erspan-src)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

ACL filtering allows you to filter SPAN and ERSPAN traffic so that you can reduce bandwidth congestion. An ACL is a list of permissions associated to any entity in the system; in the context of a monitoring session, an ACL is a list of rules which results in the spanning of traffic that matches the ACL criteria, saving bandwidth for more meaningful data. The filter applies to all sources in the session.

Note If the ACL has rules with a log option configured, the log option is ignored but the rule is implemented.

Examples

This example shows how to enable an ACL filter for a SPAN session:

```
switch# configure terminal
switch(config)# monitor session 3
switch(config-monitor)# filter access-group acl_span_ses_3
```

This example shows how to enable an ACL filter for a ERSPAN session:

```
switch# configure terminal
switch(config)# monitor session 4 type erspan-source
switch(config-erspan-src)# filter access-group acl_erspan_ses_3
```

Related Commands

Command	Description
monitor session	Creates a new SPAN or ERSPAN session.

flow monitor

To create a Flexible NetFlow flow monitor or to modify an existing Flexible NetFlow flow monitor and enter flow monitor configuration mode, use the **flow monitor** command. To remove a Flexible NetFlow flow monitor, use the **no** form of this command.

flow monitor *monitor-name*

no flow monitor *monitor-name*

Syntax Description

monitor-name	Name of the flow monitor that is created or modified.

Defaults

Flow monitors are not present in the configuration until you create them.

Command Modes

Global configuration mode

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

Flow monitors are the Flexible NetFlow component that is applied to interfaces to perform network traffic monitoring. Flow monitors consist of a record that you add to the flow monitor after you create the flow monitor and a cache that is automatically created at the time that the flow monitor is applied to the first interface. Flow data is collected from the network traffic during the monitoring process based on the key and nonkey fields in record that is configured for the flow monitor and stored in the flow monitor cache.

Once you enter the flow monitor configuration mode, the prompt changes to the following:

```
switch(config-flow-monitor)#
```

Within the flow monitor configuration mode, the following keywords and arguments are available to configure the flow monitor:

- **description** *description*—Provides a description for this flow monitor; you use a maximum of 63 characters.
- **exit**—Exits from the current configuration mode.
- **exporter** *name*—Specifies the name of an exporter to export records.
- **no**—Negates a command or sets its defaults.
- **record** {*record-name* | **netflow ipv4** *collection-type* | **netflow-original**}—Specifies a flow record to use as follows:
  - *record-name*—Name of a record.
  - **netflow ipv4** *collection-type*—Specifies the traditional IPv4 NetFlow collection schemes as follows:

    original-input—Specifies the traditional IPv4 input NetFlow.

original-output—Specifies the traditional IPv4 output NetFlow.

protocol-port—Specifies the protocol and ports aggregation scheme.

– **netflow-original**—Specifies the traditional IPv4 input NetFlow with origin autonomous systems.

The **netflow-original** and **original-input** keywords are the same and are equivalent to the following commands:

- **match ipv4 source address**
- **match ipv4 destination address**
- **match ip tos**
- **match ip protocol**
- **match transport source-port**
- **match transport destination-port**
- **match interface input**
- **collect counter bytes**
- **collect counter packet**
- **collect timestamp sys-uptime first**
- **collect timestamp sys-uptime last**
- **collect interface output**
- **collect transport tcp flags**
- **collect routing next-hop address ipv4**
- **collect routing source as**
- **collect routing destination as**

The **original-output** keywords are the same as the **original-input** keywords except for the following:

- **match interface output** (instead of **match interface** input)
- **collect interface input** (instead of **collect interface** output)

This command does not require a license.

Examples

This example shows how to create and configure a flow monitor named FLOW-MONITOR-1:

```
switch(config)# flow monitor FLOW-MONITOR-1
switch(config-flow-monitor)# description monitor location las vegas, NV
switch(config-flow-monitor)# exporter exporter-name1
switch(config-flow-monitor)# record test-record
switch(config-flow-monitor)# netflow ipv4 original-input
```

Related Commands

Command	Description
feature netflow	Enables the NetFlow feature.

flow monitor (interface)

To enable a Flexible NetFlow flow monitor for traffic that the router is receiving or forwarding, use the **flow monitor (interface)** command. To disable a Flexible NetFlow flow monitor, use the **no** form of this command.

{**ip** | **ipv6**} **flow monitor** *monitor-name* **input sampler** *sampler-name*

no {**ip** | **ipv6**} **flow monitor** *monitor-name* **input sampler** *sampler-name*

Syntax Description

ip	Configures IP Flexible NetFlow flow monitoring.
ipv6	Configures IPv6 Flexible NetFlow flow monitoring.
monitor-name	Name of a flow monitor that you previously configured.
input	Monitors traffic that the routers are receiving on the interface.
sampler	Specifies the name of a flow sampler for the flow monitor.
sampler-name	Flow sampler for this flow monitor using the name of a sampler that you previously configured.

Defaults

Disabled

Command Modes

Interface configuration (config-if)
VLAN feature configuration (config-vlan-config)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

You must have already created a flow monitor by using the **flow monitor** command before you can apply the flow monitor to an interface with the **ip flow monitor** or **ipv6 flow monitor** command to enable traffic monitoring with Flexible NetFlow.

You must have already created a sampler by using the **sampler** command before you can enable a flow sampler for this flow monitor with the **ip flow monitor** or **ipv6 flow monitor** command.

When adding a sampler to a flow monitor, only packets that are selected by the named sampler are entered into the cache to form flows. Each use of a sampler results in separate statistics being stored for that usage.

You cannot add a sampler to a flow monitor after the flow monitor has been enabled on an interface. You must remove the flow monitor from the interface before you enable the same flow monitor with a sampler. See the “Examples” section for more information.

Note The statistics for each flow needs to be scaled to give the expected true usage. For example, if you are using a 1 in 16 sampler, you must multiply the packet and byte counters by 16.

This command does not require a license.

Examples

This example shows how to enable an IPv6 flow monitor for monitoring input traffic on a VLAN:

```
switch(config)# vlan  configuration 2
switch(config-vlan-config)# ip flow monitor FLOW-MONITOR-1 input sampler vlan-sampler
```

Note

- VLAN configuration mode enables you to configure VLANs independently of their creation, which is required for VTP client support.
- Egress NetFlow on VLAN is not supported

This example shows how to enable a flow monitor for monitoring input traffic:

```
switch(config)# interface ethernet1/1
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input sampler sampler-1
```

This example shows how to enable two different flow monitors on two different interfaces for monitoring input traffic:

```
switch(config)# interface ethernet1/1
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input sampler sampler-2
switch(config)# interface ethernet1/2
switch(config-if)# ip flow monitor FLOW-MONITOR-2 input sampler sampler-3
```

This example shows how to enable a flow monitor for monitoring input traffic with a sampler to limit the input packets that are sampled:

```
switch(config)# interface ethernet1/1
switch(config-if)# ip flow monitor FLOW-MONITOR-1 input sampler SAMPLER-1
```

This example shows how to remove the flow monitor and sampler from an IPv6 interface:

```
switch(config)# interface Ethernet1/1
switch(config-if)# no ipv6 flow monitor FLOW-MONITOR-1 input sampler SAMPLER-1
```

Related Commands

Command	Description
flow exporter	Creates a flow exporter.
flow monitor	Creates a flow monitor.
flow record	Creates a flow record.
sampler	Creates a flow sampler.

flow record

To create a Flexible NetFlow flow record or to modify an existing Flexible NetFlow flow record and enter flow record configuration mode, use the **flow record** command. To remove a Flexible NetFlow flow record, use the **no** form of this command.

flow record *record-name*

no flow record *record-name*

Syntax Description

record-name	Name of the flow record that is created or modified.

Defaults

Flow records are not present in the configuration until you create them.

Command Modes

Global configuration mode

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

Flexible NetFlow uses key and nonkey fields just as original NetFlow does to create and populate flows in a cache. In Flexible NetFlow, a combination of key and nonkey fields is called a record. Original NetFlow and Flexible NetFlow both use the values in key fields in IP datagrams, such as the IP source or destination address and the source or destination transport protocol port, as the criteria for determining when a new flow must be created in the cache while network traffic is being monitored. A flow is defined as a stream of packets between a given source and a given destination. New flows are created whenever NetFlow analyzes a packet that has a unique value in one of the key fields.

Once you enter the flow record configuration mode, the prompt changes to the following:

```
switch(config-flow-record)#
```

Within the flow record configuration mode, the following keywords and arguments are available to configure the flow record:

- **collect**—Specifies a nonkey field. See the **collect** command for additional information.
- **description** *description*—Provides a description for this flow record; you use a maximum of 63 characters.
- **exit**—Exits from the current configuration mode.
- **match**—Specifies a key field. See the **match** command for additional information.
- **no**—Negates a command or sets its defaults.

Cisco NX-OS enables the following match fields by default when you create a flow record:

- **match interface input**
- **match interface output**

- **match flow direction**

This command does not require a license.

Examples

This example shows how to create a flow record and enter flow record configuration mode:

```
switch(config)# flow record FLOW-RECORD-1
switch(config-flow-record)#
```

Related Commands

Command	Description
flow monitor	Creates a flow monitor.

flow timeout

To create a Flexible NetFlow flow timeout or to modify an existing Flexible NetFlow flow timeout, use the **flow timeout** command. To remove a Flexible NetFlow flow timeout, use the **no** form of this command.

flow timeout [*seconds*]

no flow timeout [*seconds*]

Syntax Description

seconds	Flow timeout value in seconds. The range is from 5 to 60 seconds.

Defaults

The default settings is 15 seconds.

Command Modes

Global configuration mode

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

Cisco NX-OS exports data to the remote collector, using UDP frames, whenever a timeout occurs. By default, the flow timeout value is set to 15 seconds.

This command does not require a license.

Examples

This example shows how to specify the flow timeout in seconds:

```
switch(config)# flow timeout 45
switch(config)#
```

Related Commands

Command	Description
flow record	Creates a flow exporter.
flow monitor	Creates a flow monitor.

H Commands

This chapter describes the Cisco NX-OS system management commands that begin with H.

hardware pq-drain

To configure the proxy-queue drain rate settings, use the **hardware pq-drain** command in global confiiguration mode. To disable proxy-queue drain settings, use the **no** form of this command.

hardware pq-drain 10g *10g-drain-rate* **40g** *40g-drain-rate*

no hardware pq-drain

Syntax Description

10g *10g-drain-rate*	Proxy Queue drain rate for the 10 G interface. The range is from 1 Mbps to 20000 Mbps.
40g *40g-drain-rate*	Proxy Queue drain rate for the 10 G interface. The range is from 1 Mbps to 80000 Mbps.

Command Default

Disabled

Command Modes

Global configuration mode

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

Note This command is applicable to only Cisco Nexus 6000 switches.

When the proxy queue reaches a threshold that indicates congestion, Explicit Congestion Notification (ECN) marking is performed so that the receiver of the packet echoes the congestion indication to the sender. The proxy-queue drain rate is configured to ensure that during congestion at egress ports only a certain amount of packets are drained.

Examples

This example shows how to configure proxy-queue settings to drain 9900 Mbps of traffic from 10 Gigabait interfaces and 39900 Mpbs of traffic from 40 Gigabit interfaces:

```
switch(config)# hardware pq-drain 10g 9900 40g 39900
```

Related Commands

Command	Description
hardware random-detect	Configures ECN for a QoS group.

hardware random-detect

To configure Explicit Congestion Notification (ECN) for a Quality of Service (QoS) group, use the **hardware random-detect** command in global configuration mode. To disable ECN, use the **no** form of this command.

hardware random-detect min-thresh 10g *10g-min-theshold* **40g** *40g-min-threshold* **max-thresh 10g** *10g-max-threshold* **40g** *40g-max-threshold* **ecn qos-group** *group-number*

no hardware randon-detect

Syntax Description

min-thresh	Minimum threshold.
10g *10g-min-theshold*	Minimum threshold for 10 Gigabit interfaces. The range is from 1 to 67108863 bytes.
40g *40g-min-threshold*	Minimum threshold for 40 Gigabit interfaces. The range is from 1 to 67108863 bytes.
max-thresh	Maximum threshold.
10g *10g-max-threshold*	Maximum threshold for 10 Gigabit interfaces. The range is from 1 to 67108863 bytes.
40g *40g-max-threshold*	Maximum threshold for 40 Gigabit interfaces. The range is from 1 to 67108863 bytes.
ecn	Enables ECN for the specified QoS group.
qos-group *group-number*	Specifies the QoS group that isdeing configured.

Command Default

Disabled

Command Modes

Global configuration mode

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

Note This command is applicable to only Cisco Nexus 6000 switches.

To implement Weighted Random Early Detection (WRED) Explicit Congestion Notification (ECN) on proxy queues you use the **hardware random-detect** command to configure minimum and maximum threshold values per QoS group. Then you use the **hardware pq-drain** command to configure the proxy-queue drain rate.

Examples

This example shows how to enable ECN threshold values for the class-default QoS group:

```
switch(config)# hardware random-detect min-thresh 10g 64000 40g 4000 max-thresh 10g 128000
40g 246000 ecn qos-group 0
```

Related Commands

Command	Description
hardware pq-drain	Configures proxy queue drain rate.

I Commands

This chapter describes the system management commands that begin with I.

ip access-list (session)

To create an IPv4 access control list (ACL) within a configuration session, use the **ip access-list** command. To remove an ACL from a configuration session, use the **no** form of this command.

ip access-list *ACL-name*

no ip access-list *ACL-name*

Syntax Description

ACL-name	Name of the IPv4 ACL. The name can be up to 64 alphanumeric characters and cannot contain a space or quotation mark.

Command Default

No IPv4 ACLs are defined by default.

Command Modes

Global session configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to create an IPv4 ACL for a configuration session:

```
switch# configure session MySession1
switch(config-s)# ip access-list myACL
switch(config-s-acl)#
```

Related Commands

Command	Description
configure session	Creates a configuration session.
deny	Configures a deny rule in an IPv4 ACL.
permit	Configures a permit rule in an IPv4 ACL.
show configuration session	Displays the contents of the session.

ip dns source-interface

To configure the source interface for the Domain Name Server (DNS) domain lookup, use the **ip dns source-interface** command. To revert to the default settings, use the **no** form of this command.

ip dns source-interface {**ethernet** *slot*/[*QSFP-module*/]*port* | **loopback** *intf-num*} [**vrf** {*vrf-name* | **default** | **management**}]

no ip dns source-interface {**ethernet** *slot*/[*QSFP-module*/]*port* | **loopback** *intf-num*} [**vrf** {*vrf-name* | **default** | **management**}]

Syntax Description

ethernet *slot*/[*QSFP-module*/]*port*	Specifies the Ethernet interface to use as the destination SPAN port. The *slot* number is from 1 to 255. The *QSFP-module* number is from 1 to 199. The *port* number is from 1 to 128.
loopback *intf-num*	Specifies the loopback interface to use as the source interface. The range of values is from 0 to 1023.
vrf	(Optional) Specifies the virtual routing and forwarding (VRF) instance.
vrf-name	(Optional) VRF name. The name is case sensitive and can be a maximum of 32 characters.
default	(Optional) Specifies the default VRF.
management	(Optional) Specifies the management VRF.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure an Ethernet interface as the source interface for a DNS lookup:

```
switch# configure terminal
switch(config)# ip dns source-interface ethernet 1/5
switch(config)#
```

Related Commands

Command	Description
ip domain-lookup	Enables the DNS lookup feature.
show ip dns source-interface	Displays information about the DNS source interfaces.

ip domain-list

To configure the IP domain list, use the **ip domain-list** command. To disable the IP domain list, use the **no** form of the command.

ip domain-list *domain-name* [**use-vrf** *name*]

no ip domain-list *domain-name* [**use-vrf** *name*]

Syntax Description

domain-list	Specifies the domain name for the IP domain list. The name can be any case-sensitive, alphanumeric string up to 63 characters.
use-vrf *name*	(Optional) Specifies the virtual routing and forwarding (VRF) to use to resolve the domain domain name for the IP domain list. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default

None

Command Modes

Global configuration mode
VRF context configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

Use the **ip domain-list** command to configure additional domain names for the device. Use the **vrf context** command to enter the VRF context mode to configure additional domain names for a particular VRF.

Examples

This example shows how to configure the IP domain list for the default VRF:

```
switch# config terminal
switch(config)# ip domain-list Mysite.com
```

This example shows how to configure the IP domain list for the management VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# ip domain-list Mysite.com
```

This example shows how to configure the IP domain list for the default VRF to use the management VRF as a backup if the domain name cannot be resolved through the default VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# exit
switch(config)# ip domain-name Mysite.com use-vrf management
switch(config)# ip name-server 192.0.2.1
switch(config)# ip domain-list Mysite2.com
```

Related Commands

Command	Description
show hosts	Displays information about the IP domain name configuration.

ip domain-lookup

To enable the Domain Name Server (DNS) lookup feature, use the **ip domain-lookup** command. Use the **no** form of this command to disable this feature.

ip domain-lookup

no ip domain-lookup

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

Use the **ip domain-lookup** command to enable DNS.

Examples

This example shows how to configure the DNS server lookup feature:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# exit
switch(config)# ip domain-name Mysite.com use-vrf management
switch(config)# ip name-server 192.0.2.1
switch(config)# ip domain-lookup
switch(config)#
```

Related Commands

Command	Description
show hosts	Displays information about the DNS.

ip domain-name

To configure a domain name, use the **ip domain-name** command. To delete a domain name, use the **no** form of the command.

ip domain-name *domain-name* [**use-vrf** *name*]

no ip domain-name *domain-name* [**use-vrf** *name*]

Syntax Description

domain-name	Domain name. The name can be any case-sensitive, alphanumeric string up to 63 characters.
use-vrf *name*	(Optional) Specifies the virtual routing and forwarding (VRF) to use to resolve the domain name. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default

None

Command Modes

Global configuration mode
VRF context configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

Use the **ip domain-name** command to configure the domain name for the device. Use the **vrf context** command to enter the VRF context mode to configure the domain monastery for a particular VRF.

Examples

This example shows how to configure the IP domain name for the default VRF:

```
switch# config terminal
switch(config)# ip domain-name Mysite.com
switch(config)#
```

This example shows how to configure the IP domain name for the management VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# ip domain-name Mysite.com
switch(config-vrf)#
```

This example shows how to configure the IP domain name for the default VRF to use the management VRF as a backup if the domain name cannot be resolved through the default VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# exit
switch(config)# ip domain-name Mysite.com use-vrf management
```

Related Commands

Command	Description
ip domain-list	Configures the IP domain list.
ip domain-lookup	Enables the Domain Name Server (DNS) lookup feature.
show hosts	Displays information about the IP domain name configuration.

ip dscp (ERSPAN)

To configure the differentiated dervices code point (DSCP) value of the packets in the Encapsulated Remote Switched Port Analyzer (ERSPAN) traffic, use the **ip dscp** command. To revert to the default value, use the **no** form of this command.

ip dscp *dscp_value*

no ip dscp *dscp_value*

Syntax Description

dscp_value	DSCP value of the packets in the ERSPAN traffic. The range is from 0 to 63.

Command Default

0

Command Modes

ERSPAN source session configuration mode (config-erspan-src)
SPAN-on-Drop ERSPAN session configuration mode (config-span-on-drop-erspan)
SPAN-on-Latency ERSPAN session configuration mode (config-span-on-latency-erspan)

Command History

Release	Modification
7.0(0)N1(1)	This command was modified. This command was implemented in the following modes: SPAN-on-Drop ERSPAN session configuration mode, and SPAN-on-Latency ERSPAN session configuration mode.
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the DSCP value of the packets in the ESRSPAN traffic for an ERSPAN source session:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# ip dscp 10
switch(config-erspan-src)#
```

This example shows how to configure the DSCP value of the packets in the ESRSPAN traffic for a SPAN-on-Drop ERSPAN session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-dropn-erspan
switch(config-span-on-drop-erspan)# ip dscp 20
switch(config-span-on-drop-erspan)#
```

This example shows how to configure the DSCP value of the packets in the ESRSPAN traffic for a SPAN-on-Latency ERSPAN session:

```
switch# configure terminal
```

```
switch(config)# monitor session 1 type span-on-latency-erspan
switch(config-span-on-latency-erspan)# ip dscp 30
switch(config-span-on-latency-erspan)#
```

Related Commands

Command	Description
ip prec	Configures the IP precedence value of the ERSPAN traffic.
ip ttl	Configures the IP time-to-live (TTL) value of the ERSPAN traffic.
monitor-session	Enters the monitor configuration mode for configuring an ERSPAN session for analyzing traffic between ports.

ip host

To define static hostname-to-address mappings in the Domain Name System (DNS) hostname cache, use the **ip host** command. To remove a hostname-to-address mapping, use the **no** form of this command.

ip host *name address1* [*address2... address6*]

no ip host *name address1* [*address2... address6*]

Syntax Description

name	Hostname. The *name* can be any case-sensitive, alphanumeric string up to 80 characters.
address1	IPv4 address in the x.x.x.x format.
address2 ...address6	(Optional) Up to five additional IPv4 addresses in the x.x.x.x format.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

Use the **ip host** command to add a static hostname to DNS.

Examples

This example shows how to configure a static hostname:

```
switch(config)# ip host mycompany.com 192.0.2.1
```

Related Commands

Command	Description
show hosts	Displays information about the IP domain name configuration.

ip name-server

To configure a name server, use the **ip name-server** command. To disable this feature, use the **no** form of the command.

ip name-server *ip-address* [**use-vrf** *name*]

no ip name-server *ip-address* [**use-vrf** *name*]

Syntax Description

ip-address	IP address for the name server.
use-vrf *name*	(Optional) Specifies the virtual routing and forwarding (VRF) to use to reach the name-server. The name can be any case-sensitive, alphanumeric string up to 32 characters.

Command Default

None

Command Modes

Global configuration mode
VRF context configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

Use the **ip name-server** command to configure the name server for the device. Use the **vrf context** command to enter the VRF context mode to configure the domain names for a particular VRF.

Examples

This example shows how to configure the IP name server for the default VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# exit
switch(config)# ip domain-name Mysite.com use-vrf management
switch(config)# ip name-server 192.0.2.1
```

This example shows how to configure the IP name server for the management VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# ip name-server 192.0.2.1
```

This example shows how to configure the IP name server for the default VRF to use the management VRF as a backup if the IP name server cannot be reached through the default VRF:

```
switch# config terminal
switch(config)# vrf context management
switch(config-vrf)# exit
switch(config)# ip domain-name Mysite.com use-vrf management
switch(config)# ip name-server 192.0.2.1 use-vrf management
```

Related Commands

Command	Description
ip domain-list	Defines a list of domains.
ip domain lookup	Enables DNS-based host name-to-address translation.
show hosts	Displays information about the IP domain name configuration.
vrf context	Creates a virtual routing and forwarding (VRF) instance.

ip port access-group (session)

To apply an IPv4 access control list (ACL) to an interface as a port ACL, use the **ip port access-group** command. To remove an IPv4 ACL from an interface, use the **no** form of this command.

ip port access-group *access-list-name* {**in** | **out**}

no ip port access-group *access-list-name* {**in** | **out**}

Syntax Description

access-list-name	Name of the IPv4 ACL. The name can be up to 64 alphanumeric, case-sensitive characters long.
in	Specifies that the ACL applies to inbound traffic.
out	Specifies that the ACL applies to outbound traffic.

Command Default

None

Command Modes

Session interface configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to apply an IPv4 ACL named ip-acl-01 to the Ethernet interface 1/2 as a port ACL:

```
switch# configure session MySession1
switch(config-s)# interface ethernet 1/2
switch(config-s-if)# ip port access-group ip-acl-01 in
switch(config-s-if)#
```

This example shows how to remove an IPv4 ACL named ip-acl-01 from Ethernet interface 1/2:

```
switch(config-s)# interface ethernet 1/2
switch(config-s-if)# no ip port access-group ip-acl-01 in
switch(config-s-if)#
```

Related Commands

Command	Description
show access-lists	Displays all ACLs.
show configuration session	Displays the contents of the session.

ip ttl (ERSPAN)

To configure the IP time-to-live (TTL) value of the Encapsulated Remote Switched Port Analyzer (ERSPAN) traffic, use the **ip ttl** command. To revert to the default configuration, use the **no** form of this command.

ip ttl *ttl_value*

no ip ttl *ttl_value*

Syntax Description

ttl_value	IP TTL value of the ERSPAN traffic. The range is from 1 to 255.

Command Default

255

Command Modes

ERSPAN source session configuration mode (config-erspan-src)
SPAN-on-Drop ERSPAN session configuration mode (config-span-on-drop-erspan)
SPAN-on-Latency ERSPAN session configuration mode (config-span-on-latency-erspan)

Command History

Release	Modification
7.0(0)N1(1)	This command was modified. This command was implemented in the following modes: SPAN-on-Drop ERSPAN session configuration mode, and SPAN-on-Latency ERSPAN session configuration mode.
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the IP TTL value of the ESRSPAN source:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# ip ttl 30
switch(config-erspan-src)#
```

This example shows how to remove the IP TTL value from the ESRSPAN source:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# no ip ttl 30
switch(config-erspan-src)#
```

This example shows how to configure the IP TTL value in a SPAN-on-Drop ESRSPAN session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-drop-erspan
switch(config-span-on-drop-erspan)# ip ttl 30
switch(config-span-on-drop-erspan)#
```

This example shows how to remove the IP TTL value in a SPAN-on-Latency ESRSPAN session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-latency-erspan
switch(config-span-on-drop-latency)# no ip ttl 30
switch(config-span-on-drop-latency)#
```

Related Commands

Command	Description
ip dscp	Configures the DSCP value of the packets in the ERSPAN traffic.
monitor-session	Enters the monitor configuration mode for configuring an ERSPAN session for analyzing traffic between ports.

L Commands

This chapter describes the system management commands that begin with L.

layer2-switched flow monitor

To associate a flow monitor and a sampler to the switch port input packets, use the **later2-switched flow monitor** command. To remove the association, use the **no** form of this command.

layer2-switched flow monitor *flow-name* **input sampler** *sampler-name*

no layer2-switched flow monitor *flow-name* **input sampler** *sampler-name*

Syntax Description

flow-name	Name of the flow monitor to associate with the input packets.
input	Specifies that this association applies to input packets only.
sampler *sampler-name*	The sampler to associate with the input packets.

Defaults

none.

Command Modes

Interface configuration mode (config-if)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

You must have already created a flow monitor by using the **flow monitor** command before you can associate a flow monitor to the switch port input packets.

You must have already created a sampler by using the **sampler** command before you can associate a sampler to the switch port input packets

Examples

This example shows how to associate a flow monitor and a sampler to the switch port input packets:

```
switch(config)# interface ethernet 1/3
switch(config-if)# layer2-switched flow monitor test-flow-monitor input sampler
test-sampler
```

Related Commands

Command	Description
flow monitor	Createa a Flexible NetFlow flow monitor.
sampler	Defines a sampler and enters the sampler configuration mode.

locator-led

To turn on the locator LED of a Fabric Extender, use the **locator-led** command. To turn off the locator LED, use the **no** form of this command.

locator-led {chassis pattern {long| medium | short} | fex *fex_number***}**

no locator-led {chassis pattern {long| medium | short} | fex *fex_number***}**

Syntax Description

chassis	Specifies the Blink chassis LED.
pattern	Specifies the LED blink pattern.
long	Specifies a long LED blink.
medium	Specifies a medium LED blink.
short	Specifies a short LED blink.
fex_number	Fabric Extender number. The range is from 100 to 199.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
5.0(2)N1(1)	This command was introduced.

Usage Guidelines

Use the **locator-led** command to toggle the locator LED of a Fabric Extender, which allows you to easily identify the machine in a busy data center.

Examples

This example shows how to turn on the locator LED for a specific Fabric Extender chassis:

```
switch# locator-led fex 100
switch#
```

This example shows how to turn off the locator beacon LED for a specific Fabric Extender chassis:

```
switch# no locator-led fex 100
switch#
```

Related Commands

Command	Description
show fex	Displays all configured Fabric Extender chassis connected to the switch.
show locator-led	Displays the status of the locator LED in Fabric Extender modules.

logging abort

To discard the pending changes to the syslog server configuration, use the **logging abort** command.

logging abort

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to discard the changes made to the syslog server configuration:

```
switch(config)# logging distribute
switch(config)# logging abort
switch(config)#
```

Related Commands

Command	Description
logging distribute	Enables the distribution of the syslog server configuration to network switches using the CFS infrastructure.
show logging pending	Displays the pending changes to the syslog server configuration.
show logging status	Displays the logging status.

logging commit

To commit the pending changes to the syslog server configuration for distribution to the switches in the fabric, use the **logging commit** command.

logging commit

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to commit the distribution of the syslog server configuration:

```
switch(config)# logging distribute
switch(config)# commit
switch(config)#
```

Related Commands

Command	Description
logging distribute	Enables the distribution of the syslog server configuration to network switches using the CFS infrastructure.
show logging status	Displays the logging status.

logging console

To enable logging messages to the console session, use the **logging console** command. To disable logging messages to the console session, use the **no** form of this command.

logging console [*severity-level*]

no logging console

Syntax Description

severity-level	(Optional) Number of the desired severity level at which messages should be logged. Messages at or numerically lower than the specified level are logged. Severity levels are as follows: • **0**—emergency: System unusable • **1**—alert: Immediate action needed • **2**—critical: Critical condition—default level • **3**—error: Error condition • **4**—warning: Warning condition • **5**—notification: Normal but significant condition • **6**—informational: Informational message only • **7**—debugging: Appears during debugging only

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to enable logging messages with a severity level of 4 (warning) or higher to the console session:

```
switch# configure terminal
switch(config)# logging console 4
```

Related Commands

Command	Description
show logging console	Displays the console logging configuration.

logging distribute

To enable the distribution of the syslog server configuration to network switches using the Cisco Fabric Services (CFS) infrastructure, use the **logging distribute** command. To disable the distribution, use the **no** form of this command.

logging distribute

no logging distribute

Syntax Description

This command has no arguments or keywords.

Command Default

Distribution is disabled.

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to enable the distribution of the syslog server configuration:

```
switch(config)# logging distribute
switch(config)#
```

This example shows how to disable the distribution of the syslog server configuration:

```
switch(config)# no logging distribute
switch(config)#
```

Related Commands

Command	Description
logging abort	Cancels the pending changes to the syslog server configuration.
logging commit	Commits the changes to the syslog server configuration for distribution to the switches in the fabric.
show logging status	Displays the logging status.

logging event

To log interface events, use the **logging event** command. To disable logging of interface events, use the **no** form of this command.

logging event port {**link-status** | **trunk-status**} {**default** | **enable**}

no logging event port {**link-status** | **trunk-status**} {**default** | **enable**}

Syntax Description

link-status	Specifies to log all UP/DOWN and CHANGE messages.
trunk-status	Specifies to log all TRUNK status messages.
default	Specifies to the default logging configuration is used by interfaces not explicitly configured.
enable	Enables the logging to override the port level configuration.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to log interface events:

```
switch# configure terminal
switch(config)# logging event link-status default
```

Related Commands

Command	Description
show logging	Displays the logging status.

logging event port

To log events on an interface, use the **logging event port** command. To disable logging of interface events, use the **no** form of this command.

logging event port {**link-status** | **trunk-status**} [**default**]

no logging event port {**link-status** | **trunk-status**}

Syntax Description

link-status	Specifies to log all UP/DOWN and CHANGE messages.
trunk-status	Specifies to log all TRUNK status messages.
default	(Optional) Specifies the default logging configuration that is used by interfaces not explicitly configured.

Command Default

None

Command Modes

Interface configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to log interface events:

```
switch# configure terminal
switch(config)# interface ethernet 1/1
switch(config-if)# logging event port link-status default
```

Related Commands

Command	Description
show interface	Displays the interface configuration information.
show logging	Displays the logging status.

logging ip access-list cache

To configure the Optimized ACL Logging (OAL) parameters, use the **logging ip access-list cache** command. To reset to the default settings, use the **no** form of this command.

logging ip access-list cache {{**entries** *num_entries*} | {**interval** *seconds*} | {**threshold** *num_packets*}}

no logging ip access-list cache {{**entries** *num_entries*} | {**interval** *seconds*} | {**threshold** *num_packets*}}

Syntax Description

entries *num_entries*	Specifies the maximum number of log entries that are cached in the software. The range is from 0 to 1048576. The default value is 8000 entries.
interval *seconds*	Specifies the maximum time interval before an entry is sent to a syslog. The range is from 5 to 86400. The default value is 300 seconds.
threshold *num_packets*	Specifies the number of packet matches (hits) before an entry is sent to a syslog. The range is from 0 to 1000000. The default value is 0 packets—rate limiting is off; the system log is not triggered by the number of packet matches.

Defaults

None

Command Modes

Global configuration

SupportedUserRoles

network-admin

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to to specify the maximum number of log entries that are cached in the software:

```
switch# configure terminal
switch(config)# logging ip access-list cache entries 200
switch(config)#
```

This example shows how to specify the maximum time interval before an entry is sent to the system log:

```
switch# configure terminal
switch(config)# logging ip access-list cache interval 350
switch(config)#
```

This example shows how to specify the number of packet matches before an entry is sent to the system log:

```
switch# configure terminal
switch(config)# logging ip access-list cache threshold 125
switch(config)#
```

Related Commands

Command	Description
show logging ip access-list	Displays the status of IP access list logging.

logging level

To enable logging messages from a defined facility that have the specified severity level or higher, use the **logging level** command. To disable logging messages from a defined facility, use the **no** form of this command.

logging level *facility severity-level*

no logging level *facility severity-level*

Syntax Description

facility	Facility. The facilities are listed in Table 1-1 of Appendix 1, "System Message Logging Facilities." To apply the same severity level to all facilities, use the **all** facility.
severity-level	Number of the desired severity level at which messages should be logged. Messages at or numerically lower than the specified level are logged. Severity levels are as follows: • **0**—emergency: System unusable • **1**—alert: Immediate action needed • **2**—critical: Critical condition—default level • **3**—error: Error condition • **4**—warning: Warning condition • **5**—notification: Normal but significant condition • **6**—informational: Informational message only • **7**—debugging: Appears during debugging only

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to enable logging messages from the AAA facility that have a severity level of 2 or higher:

```
switch(config)# logging level aaa 2
```

Related Commands

Command	Description
show logging level	Displays the facility logging level configuration.

logging logfile

To configure the name of the log file used to store system messages and the minimum severity level to log, use the **logging logfile** command. To disable logging to the log file, use the **no** form of this command.

logging logfile *logfile-name severity-level* [**size** *bytes*]

no logging logfile [*logfile-name severity-level* [**size** *bytes*]]]

Syntax Description

logfile-name	Name of the log file to be used to store system messages.
severity-level	Number of the desired severity level at which messages should be logged. Messages at or numerically lower than the specified level are logged. Severity levels are as follows: • **0**—emergency: System unusable • **1**—alert: Immediate action needed • **2**—critical: Critical condition—default level • **3**—error: Error condition • **4**—warning: Warning condition • **5**—notification: Normal but significant condition • **6**—informational: Informational message only • **7**—debugging: Appears during debugging only
size *bytes*	(Optional) Specifies a maximum file size. The default file size is 4194304 bytes and can be configured from 4096 to 4194304 bytes.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to configure a log file called logfile to store system messages and set its severity level to 4:

```
switch(config)# logging logfile logfile 4
```

Related Commands

Command	Description
show logging logfile	Displays the log file.

logging module

To enable module log messages, use the **logging module** command. To disable module log messages, use the **no** form of this command.

logging module [*severity-level*]

no logging module

Syntax Description

severity-level	(Optional) Number of the desired severity level at which messages should be logged. Messages at or numerically lower than the specified level are logged. Severity levels are as follows*:* • **0**—emergency: System unusable • **1**—alert: Immediate action needed • **2**—critical: Critical condition • **3**—error: Error condition • **4**—warning: Warning condition • **5**—notification: Normal but significant condition—default level • **6**—informational: Informational message only • **7**—debugging: Appears during debugging only

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

Set a specified severity level or use the default.

Examples

This example shows how to enable module log messages:

```
switch(config)# logging module
```

Related Commands

Command	Description
show logging module	Displays the module logging status.

logging monitor

To enable the device to log messages to the monitor (terminal line), use the **logging monitor** command. To disable monitor log messages, use the **no** form of this command.

logging monitor [*severity-level*]

no logging monitor

Syntax Description

severity-level	(Optional) Number of the desired severity level at which messages should be logged. Messages at or numerically lower than the specified level are logged. Severity levels are as follows: • **0**—emergency: System unusable • **1**—alert: Immediate action needed • **2**—critical: Critical condition—default level • **3**—error: Error condition • **4**—warning: Warning condition • **5**—notification: Normal but significant condition • **6**—informational: Informational message only • **7**—debugging: Appears during debugging only

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This configuration applies to Telnet and Secure Shell (SSH) sessions.

Examples

This example shows how to enable monitor log messages:

```
switch(config)# logging monitor
```

Related Commands

Command	Description
show logging monitor	Displays the status of monitor logging.

logging server

To configure a remote syslog server at the specified hostname or IPv4/IPv6 address, use the **logging server** command. To disable the remote syslog server, use the **no** form of this command.

logging server *host* [*severity-level*] [**facility** {**auth** | **authpriv** | **cron** | **daemon** | **ftp** | **kernel** | **local0** | **local1** | **local2** | **local3** | **local4** | **local5** | **local6** | **local7** | **lpr** | **mail** | **news** | **syslog** | **user** | **uucp**}| **use-vrf** {*vrf_name* | **management**}]

no logging server *host* [*severity-level*] [**facility** {**auth** | **authpriv** | **cron** | **daemon** | **ftp** | **kernel** | **local0** | **local1** | **local2** | **local3** | **local4** | **local5** | **local6** | **local7** | **lpr** | **mail** | **news** | **syslog** | **user** | **uucp**}| **use-vrf** {*vrf_name* | **management**}]

Syntax Description

host	Hostname or IPv4/IPv6 address of the remote syslog server.
severity-level	(Optional) Number of the desired severity level at which messages should be logged. Messages at or numerically lower than the specified level are logged. Severity levels are as follows: • **0**—emergency: System unusable • **1**—alert: Immediate action needed • **2**—critical: Critical condition—default level • **3**—error: Error condition • **4**—warning: Warning condition • **5**—notification: Normal but significant condition • **6**—informational: Informational message only • **7**—debugging: Appears during debugging only
facility *facility*	(Optional) Specifies the outgoing *facility*. The facilities are listed in Table 1-1 of Appendix 1, "System Message Logging Facilities." The default outgoing facility is **local7**.
vrf *vrf_name*	(Optional) Specifies the virtual routing and forwarding (VRF) to be used in the remote server. The name can be a maximum of 32 alphanumeric characters.
management	Specifies the management VRF. This is the default VRF.

Command Default

The default outgoing facility is **local7**.
The default VRF is **management**.

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to configure a remote syslog server at a specified IPv4 address, using the default outgoing facility:

```
switch(config)# logging server 192.168.2.253
```

This example shows how to configure a remote syslog server at a specified hostname with severity level 5 or higher:

```
switch(config)# logging server syslogA 5
```

Related Commands

Command	Description
show logging server	Displays the configured syslog servers.

logging timestamp

To set the logging time-stamp units, use the **logging timestamp** command. To reset the logging time-stamp units to the default, use the **no** form of this command.

logging timestamp {**microseconds** | **milliseconds** | **seconds**}

no logging timestamp {**microseconds** | **milliseconds** | **seconds**}

Syntax Description

microseconds	Specifies the units to use for logging timestamps in microseconds. The default units are **seconds**.
milliseconds	Specifies the units to use for logging timestamps in milliseconds.
seconds	Specifies the units to use for logging timestamps in seconds. The default units are **seconds**.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

By default, the units are seconds.

Examples

This example shows how to set the logging time-stamp units to microseconds:

```
switch(config)# logging timestamp microseconds
```

Related Commands

Command	Description
show logging timestamp	Displays the logging time-stamp configuration.

M Commands

This chapter describes the system management commands that begin with M.

match datalink

To configure the match data link (or Layer 2) attributes option in a flow record, use the **match datalink** command. To remove the data link configuration, use the **no** form of this command.

match datalink {**mac source-address** | **mac destination-address** | **ethertype** | **vlan**}

no match datalink {**mac source-address** | **mac destination-address** | **ethertype** | **vlan**}

Syntax Description

mac	Specifies the MAC address.
source-address	Specifies the source MAC address.
destination-address	Specifies the destination MAC address.
ethertype	Specifies the EtherType.
vlan	Specifies the VLAN ID.

Defaults

None

Command Modes

NetFlow record configuration (config-flow-record)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the match data link attributes option in a flow record:

```
switch(config)# flow record NetFlow1
switch(config-flow-record)# match datalink mac source-address
switch(config-flow-record)#
```

This example shows how to remove the data link match option from a flow record:

```
switch(config-flow-record)# no match datalink mac source-address
switch(config-flow-record)#
```

Related Commands

Command	Description
match ip	Configures the match IP option for defining a NetFlow record map.
match ipv4	Configures the match IPv4 option for defining a NetFlow record map.

match ip

To configure the match IP option for defining a NetFlow record map, use the **match ip** command. To remove this option, use the **no** form of this command.

match ip {**protocol** | **tos**}

no match ip {**protocol** | **tos**}

Syntax Description

protocol	Specifies the protocol.
tos	Specifies the type of service (ToS).

Defaults

None

Command Modes

NetFlow record configuration (config-flow-record)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the match IP option for defining a NetFlow record map:

```
switch(config)# flow record Custom-NetFlow-Record-1
switch(config-flow-record)# match ip protocol
switch(config-flow-record)# match ip tos
switch(config-flow-record)#
```

This example shows how to remove the match option:

```
switch(config-flow-record)# no match ip protocol
switch(config-flow-record)# no match ip tos
switch(config-flow-record)#
```

Related Commands

Command	Description
show flow record	Displays information about NetFlow records.

match ipv4

To configure the match IPv4 option for defining a NetFlow record map, use the **match ipv4** command. To remove this option, use the **no** form of this command.

match ipv4 {**source** | **destination**} **address**

no match ipv4 {**source** | **destination**} **address**

Syntax Description

source	Specifies the source address.
destination	Specifies the destination address.
address	Specifies the address.

Defaults

None

Command Modes

NetFlow record configuration (config-flow-record)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the match IPv4 option for defining a NetFlow record map:

```
switch(config)# flow record Custom-NetFlow-Record-1
switch(config-flow-record)# match ipv4 source address
switch(config-flow-record)# match ipv4 destination address
switch(config-flow-record)#
```

This example shows how to remove the match IPv4 configuration:

```
switch(config-flow-record)# no match ipv4 source address
switch(config-flow-record)# no match ipv4 destination address
switch(config-flow-record)#
```

Related Commands

Command	Description
show flow record	Displays information about NetFlow records.

match transport

To configure the match transport option for defining a NetFlow record map, use the **match transport** command. To remove the match transport option, use the **no** form of this command.

match transport {**destination-port** | **source-port**}

no match transport {**destination-port** | **source-port**}

Syntax Description

destination-port	Specifies the transport destination port.
source-port	Specifies the transport source port.

Defaults

None

Command Modes

NetFlow record configuration (config-flow-record)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the match transport option for defining a NetFlow record map:

```
switch(config)# flow record Custom-NetFlow-Record-1
switch(config-flow-record)# match transport source-port
```

This example shows how to remove the configuration:

```
switch(config-flow-record)# no match transport source-port
switch(config-flow-record)
```

Related Commands

Command	Description
show flow record	Displays information about NetFlow records.

mode

To specify the mode in a NetFlow sampler, use the **mode** command. To remove the mode, use the **no** form of this command.

mode *samples* **out-of** *packets*

no mode [*samples* **out-of** *packets*]

Syntax Description

samples	Number of samples per sampling. The range is from 1 to 64.
out-of	M out of N packets.
packets	Number of packets in each sampling. The range is from 1 to 65536, and must be a power of 2.

Defaults

None

Command Modes

NetFlow sampler configuration (config-flow-sampler)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to specify the mode in a NetFlow sampler:

```
switch(config)# sampler Custom-NetFlow-Sampler-1
switch(config-flow-sampler)# mode 1 out-of 1024
switch(config-flow-sampler)#
```

This example shows how to remove the mode configuration:

```
switch(config-flow-sampler)# no mode
```

Related Commands

Command	Description
show sampler	Displays information about NetFlow samplers.

monitor erspan origin ip-address

To configure the Encapsulated Remote Switched Port Analyzer (ERSPAN) origin IP address, use the **monitor espan origin ip-address** command. To remove the ERSPAN origin IP address configuration, use the **no** form of this command.

monitor erspan origin ip-address *ip-address* [**global**]

no monitor erspan origin ip-address *ip-address* [**global**]

Syntax Description

ip-address	IP address.
global	(Optional) Specifies the default virtual device context (VDC) configuration across all VDCs.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

When you change the origin IP address in the default VDC, it impacts all the sessions.

This command does not require a license.

Examples

This example shows how to configure the ERSPAN origin IP address:

```
switch# configure terminal
switch(config)# monitor erspan origin ip-address 10.1.1.1 global
switch(config)#
```

This example shows how to remove the ERSPAN IP address:

```
switch# configure terminal
switch(config)# no monitor erspan origin ip-address 10.1.1.1 global
switch(config)#
```

Related Commands

Command	Description
monitor session	Configures a SPAN or an ERSPAN session.

monitor session

To create a new Ethernet Switched Port Analyzer (SPAN) or an Encapsulated Remote Switched Port Analyzer (ERSPAN) session configuration for analyzing traffic between ports or add to an existing session configuration, use the **monitor session** command. To clear SPAN or ERSPAN sessions, use the **no** form of this command.

monitor session {*session-number* [**shut** | **type** {**local** | **erspan-destination** | **erspan-source** | **span-on-drop** | **span-on-drop-erspan** | **span-on-latency** | **span-on-latency-erspan**} | **all shut**}

no monitor session {*session-number* | **all**} [**shut**]

Syntax Description

session-number	SPAN session to create or configure. The range is from 1 to 48.
all	Specifies to apply configuration information to all SPAN sessions.
shut	(Optional) Specifies that the selected session will be shut down for monitoring.
type	(Optional) Specifies the type of session to configure.
local	Specifies the session type to be local.
erspan-destination	Creates an ERSPAN destination session.
erspan-source	Creates an ERSPAN source session.
span-on-drop	Creates a SPAN on drop session.
span-on-drop-erspan	Creates a SPAN on drop ERSPAN session.
span-on-latency	Creates a SPAN on latency session
span-on-latency-erspan	Creates a SPAN on latency ERSPAN session

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
7.0(0)N1(1)	This command was modified. Support was added for the **erspan-destination, span-on-drop, span-on-drop-erspan, span-on-latency, span-on-latency-erspan** keywords, and the session-number range was increased from 18 to 48.
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

To ensure that you are working with a completely new session, you can clear the desired session number or all SPAN sessions.

Note The limit on the number of egress (TX) sources in a monitor session has been lifted. Port-channel interfaces can be configured as egress sources.

After you create an ERSPAN session, you can describe the session and add interfaces and VLANs as sources and destinations.

Examples

This example shows how to create a SPAN session:

```
switch# configure terminal
switch(config)# monitor session 2
switch(config)#
```

This example shows how to enter the monitor configuration mode for configuring SPAN session number 9 for analyzing traffic between ports:

```
switch(config)# monitor session 9 type local
switch(config-monitor)# description A Local SPAN session
switch(config-monitor)# source interface ethernet 1/1
switch(config-monitor)# destination interface ethernet 1/2
switch(config-monitor)# no shutdown
```

This example shows how to configure any SPAN destination interfaces as Layer 2 SPAN monitor ports before activating the SPAN session:

```
switch(config)# interface ethernet 1/2
switch(config-if)# switchport
switch(config-if)# switchport monitor
switch(config-if)# no shutdown
```

This example shows how to configure a typical SPAN destination trunk interface:

```
switch(config)# interface Ethernet1/2
switch(config-if)# switchport
switch(config-if)# switchport mode trunk
switch(config-if)# switchport monitor
switch(config-if)# switchport trunk allowed vlan 10-12
switch(config-if)# no shutdown
```

This example shows how to create an ERSPAN source session:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# description ERSPAN-source-session
switch(config-erspan-src)# source interface ethernet 1/5 rx
switch(config-erspan-src)# destination ip 192.0.3.1
switch(config-erspan-src)# erspan-id 100
switch(config-erspan-src)# filter access-group acl_erspan_ses_3
switch(config-erspan-src)# ip dscp 10
switch(config-erspan-src)#
```

This example shows how to create an ERSPAN destination session:

```
switch(config)# interface ethernet 2/5
switch(config-if)# switchport monitor
switch(config-if)# no monitor session 3
switch(config-if)# monitor session 3 type erspan-destination
switch(config-erspan-dst)# description erspan_dst_session_3
switch(config-erspan-dst)# source ip 10.1.1.1
switch(config-erspan-dst)# destination interface ethernet 2/5
switch(config-erspan-dst)# erspan-id 5
```

```
switch(config)# no shut
```

This example shows how to create a SPAN-on-Latency session:

```
switch(config)# interface Ethernet 1/2
switch(config-if)# switchport monitor
switch(config-if)# packet latency threshold 530000000
switch(config)# monitor session 9 type span-on-latency
switch(config-span-on-latency# description span-on-latency-session
switch(config-span-on-latency)# source interface ethernet 4/1
switch(config-span-on-latency)# destination interface ethernet 4/5
```

This example shows how to create an ERSPAN SPAN-on-Latency session:

```
switch(config)# interface Ethernet 1/1
switch(config-if)# switchport monitor
switch(config-if)# packet latency threshold 530000000
switch(config)# monitor session 10 type span-on-drop-latency-erspan
switch(config-span-on-latency-erpsan)# description span-on-latency-erspan-session
switch(config-span-on-latency-erpsan)# destination ip 192.0.3.1
switch(config-span-on-latency-erspan)#
```

Related Commands

Command	Description
description (SPAN, ERSPAN)	Adds a description to identify the SPAN session.
destination (ERSPAN)	Configures the destination IP port for an ERSPAN packet.
erspan-id (ERSPAN)	Sets the flow ID for an ERSPAN session.
ip dscp (ERSPAN)	Sets the DSCP value for an ERSPAN packet.
ip prec (ERSPAN)	Sets the IP precedence value for an ERSPAN packet.
ip ttl (ERSPAN)	Sets the time-to-live (TTL) value for an ERSPAN packet.
mtu (ERSPAN)	Sets the maximum transmission value (MTU) for ERSPAN packets.
packet latency threshold	Configures the latency threshold value on an interface.
show monitor session	Displays SPAN session configuration information.
source (SPAN, ERSPAN)	Adds a SPAN source port.

mtu

To configure the maximum transmission unit (MTU) truncation size for packets in the specified Ethernet Switched Port Analyzer (SPAN) session, use the **mtu** command. To remove the MTU truncation size configuration, use the **no** form of this command.

mtu *mtu-size*

no mtu

Syntax Description

mtu-size	MTU truncation size. The range is from 64 to 1518.

Command Default

Disabled

Command Modes

SPAN session configuration mode (config-monitor)
ERSPAN source session configuration mode (config-erspan-src)
SPAN-on-Latency session configuration mode (config-span-on-latency)
SPAN-on-Latency ERSPAN session configuration mode (config-span-on-latency-erspan)

SupportedUserRoles

network-admin
vdc-admin

Command History

Release	Modification
7.0(0)N1(1)	This command was modified. This command was implemented in the following modes: ERSPAN source session configuration mode, SPAN-on-Latency session configuration mode, and SPAN-on-Latency ERSPAN session configuration mode. The upper limit of the range was changed from 1500 to 1518.
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the MTU truncation size for packets in the specified SPAN session:

```
switch# configure terminal
switch(config)# monitor session 5
switch(config-monitor)# mtu 128
switch(config-monitor)#
```

This example shows how to remove the MTU truncation size configuration for packets in the specified SPAN session:

```
switch# configure terminal
switch(config)# monitor session 5
switch(config-monitor)# no mtu
```

Related Commands

Command	Description
monitor session	Places you in the monitor configuration mode for configuring a SPAN session.
show monitor session	Displays the status of the SPAN session.

N Commands

This chapter describes the system management commands that begin with N.

ntp

To configure the Network Time Protocol (NTP) peers and servers for the switch, use the **ntp** command. To remove configured peers and servers, use the **no** form of this command.

ntp {**peer** *hostname* | **server** *hostname*} [**prefer**] [**use-vrf** *vrf-name*]

no ntp {**peer** *hostname* | **server** *hostname*}

Syntax Description

peer *hostname*	Specifies the hostname or IP address of an NTP peer.
server *hostname*	Specifies the hostname or IP address of the NTP server.
prefer	(Optional) Specifies this peer/server as the preferred peer/server.
use-vrf *vrf-name*	(Optional) Specifies the virtual routing and forwarding (VRF) used to reach this peer/server.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

You can specify multiple peer associations.

Examples

This example shows how to form a server association with a server:

```
switch(config)# ntp server ntp.cisco.com
```

This example shows how to form a peer association with a peer:

```
switch(config)# ntp peer 192.168.10.0
```

This example shows how to delete an association with a peer:

```
switch(config)# no ntp peer 192.168.10.0
```

Related Commands

Command	Description
ntp distribute	Enables CFS distribution for NTP.
show ntp	Displays NTP information.

ntp abort

To discard the Network Time Protocol (NTP) Cisco Fabric Services (CFS) distribution session in progress, use the **ntp abort** command.

ntp abort

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to discard the NTP CFS distribution session in progress:

```
switch(config)# ntp abort
```

Related Commands

Command	Description
ntp distribute	Enables CFS distribution for NTP.
show ntp	Displays NTP information.

ntp authenticate

To prevent the system from synchronizing with unauthenticated, unconfigured network peers, use the **ntp authenticate** command. Use the **no** form of this commend to allow synchronization with unauthenticated, unconfirmed network peers.

ntp authenticate

no ntp authenticate

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

If the system has been configured with the **ntp passive**, **ntp broadcast client**, or **ntp multicast client** commands, when NTP receives an incoming symmetric active, broadcast, or multicast packet, it can set up an ephemeral peer association in order to synchronize with the sender.

If **ntp authenticate** is specified, when a symmetric active, broadcast, or multicast packet is received, the system will not synchronize to the peer unless the packet carries one of the authentication keys specified in the **ntp trusted-key** global configuration command.

To prevent synchronization with unauthorized network hosts, **ntp authenticate** should be specified any time **ntp passive**, **ntp broadcast client**, or **ntp multicast client** has been specified unless other measures, such as the **ntp access-group** command, have been taken to prevent unauthorized hosts from communicating with the NTP service on the device.

Note This command does not authenticate peer associations configured via the **ntp server** and **ntp peer** commands. To authenticate ntp server and ntp peer associations, specify the **key** keyword.

Examples

This example shows how to enable NTP authentication:

```
switch# config terminal
switch(config)# ntp authenticate
```

Related Commands

Command	Description
ntp authentication-key	Configures an NTP authentication key.
ntp trusted-key	Specifies one or more keys that a time source must provide in its NTP packets in order for the device to synchronize to it.
show ntp authentication-status	Displays the status of NTP authentication.

ntp commit

To apply the pending configuration pertaining to the Network Time Protocol (NTP) Cisco Fabric Services (CFS) distribution session in progress in the fabric, use the **ntp commit** command.

ntp commit

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to commit changes to the active NTP configuration:

```
switch(config)# ntp commit
```

Related Commands

Command	Description
ntp distribute	Enables CFS distribution for NTP.
show ntp	Displays NTP information.

ntp distribute

To enable Cisco Fabric Services (CFS) distribution for Network Time Protocol (NTP), use the **ntp distribute** command. To disable this feature, use the **no** form of this command.

ntp distribute

no ntp distribute

Syntax Description

This command has no arguments or keywords.

Command Default

Disabled

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

Before distributing the Fibre Channel timer changes to the fabric, the temporary changes to the configuration must be committed to the active configuration using the **ntp commit** command.

Examples

This example shows how to distribute the active NTP configuration to the fabric:

```
switch(config)# ntp distribute
```

Related Commands

Command	Description
ntp commit	Commits the NTP configuration changes to the active configuration.
show ntp	Displays NTP information.

ntp sync-retry

To retry synchronization with the configured Network Time Protocol (NTP) servers, use the **ntp sync-retry** command.

ntp sync-retry

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to retry synchronization with the configured NTP servers:

```
switch# ntp sync-retry
```

Related Commands

Command	Description
ntp distribute	Enables CFS distribution for NTP.
show ntp	Displays NTP information.

O Commands

This chapter describes the system management commands available that begin with O.

option exporter-stats timeout

To configure the NetFlow exporter resend timer, use the **option exporter-stats timeout** command. To remove the NetFlow exporter resend timer, use the **no** form of this command.

option exporter-stats timeout *time*

no option exporter-stats timeout

Syntax Description

time	Time in seconds. The range is from 1 to 86400.

Defaults

None

Command Modes

NetFlow exporter version 9 configuration (config-flow-exporter-version-9)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the NetFlow exporter resend timer:

```
switch(config)# flow exporter Custom-Flow-Exporter-1
switch(config-flow-exporter)# version 9
switch(config-flow-exporter-version-9)# option exporter-stats timeout 1200
switch(config-flow-exporter-version-9)#
```

This example shows how to remove the NetFlow exporter resend timer configuration:

```
switch(config-flow-exporter-version-9)# no option exporter-stats timeout
switch(config-flow-exporter-version-9)#
```

Related Commands

Command	Description
show flow exporter	Displays information about NetFlow exporters.

option interface-table timeout

To configure the NetFlow exporter interface-table timer, use the **option interface-table timeout** command. To remove the interface-table timer, use the **no** form of this command.

option interface-table timeout *time*

no option interface-table timeout [*time*]

Syntax Description

time	Time in seconds. The range is from 1 to 86400.

Defaults

None

Command Modes

NetFlow exporter version 9 configuration (config-flow-exporter-version-9)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the NetFlow exporter interface-table timer:

```
switch(config)# flow exporter Custom-Flow-Exporter-1
switch(config-flow-exporter)# version 9
switch(config-flow-exporter-version-9)# option interface-table timeout 1200
switch(config-flow-exporter-version-9)#
```

This example shows how to remove the NetFlow exporter interface-table timer configuration:

```
switch(config-flow-exporter-version-9)# no option interface-table timeout
```

Related Commands

Command	Description
show flow exporter	Displays information about the NetFlow exporters.

option sampler-table timeout

To configure the NetFlow exporter sampler-table timer, use the **option sampler-table timeout** command. To remove the sampler-table timer, use the **no** form of this command.

option sampler-table timeout *time*

no option sampler-table timeout [*time*]

Syntax Description

time	Time in seconds. The range is from 1 to 86400.

Defaults

None

Command Modes

NetFlow exporter version 9 configuration (config-flow-exporter-version-9)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the NetFlow exporter sampler-table timer:

```
switch(config)# flow exporter Custom-Flow-Exporter-1
switch(config-flow-exporter)# version 9
switch(config-flow-exporter-version-9)# option sampler-table timeout 1200
switch(config-flow-exporter-version-9)#
```

This example shows how to remove the sampler-table timer configuration:

```
switch(config)# no option sampler-table timeout
switch(config)#
```

Related Commands

Command	Description
show flow exporter	Displays information about NetFlow exporters.

P Commands

This chapter describes the system management commands that begin with P.

packet latency threshold

To configure the latency threshold value on an interface, use the **packet latency threshold** command. To remove the threshold value, use the **no** form of this command.

packet latency threshold *threshold-value*

no packet latency threshold

Syntax Description

threshold-value	Module number. The range is from 8 to 536870904 nano seconds.

Defaults

None

Command Default

Interface configuration (config-if)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

You apply this command to egress interfaces where SPAN-on-Latency functioanlity is needed. When latency on the egress interface exceeds the configured threshold, packets are spanned on the interface configured as the destination port for the SPAN-on-Latency session. Only one SPAN-on-Latency session is supported at a time.

Examples

This example shows how to set the latency threshold value to 530000000 nano seconds:

```
switch(config)# interface ethernet 1/1
switch(config-if)# packet latency threshold 530000000
```

Related Commands

Command	Description
monitor session	Creates a SPAN or an ERSPAN session.

poweroff module

To power off a module, use the **poweroff module** command. To return power to the module, use the **no** form of this command.

poweroff module *module*

no poweroff module *module*

Syntax Description

module	Module number. The range is from 1 to 18.

Defaults

None

Command Default

Global configuration (config)

SupportedUserRoles

network-admin

vdc-admin

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to power off module 2:

```
switch# poweroff module 2
```

Related Commands

Command	Description
show module	Displays information about modules.

ptp announce

To configure the interval between PTP announcement messages on an interface or the number of PTP intervals before a timeout occurs on an interface, use the **ptp announce** command. To disable this feature, use the **no** form of this command.

ptp announce {**interval** *log-seconds* | **timeout** *count*}

no ptp announce

Syntax Description

interval *log-seconds*	The number of log seconds between PTP announcement messages. The range is from 0 to 4 seconds.
timeout *count*	The number of PTP intervals before a timeout occurs on the interface. The range is from 2 to 10.

Command Default

The default interval is 1 log second.

The default timeout is 3 announce intervals.

Command Modes

Interfaces configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to set the announcement interval on interface 5/1 to 1:

```
switch# configure terminal
switch(config) # interface ethernet 5/1
switch(config-if)# ptp announce interval 1
switch(config-if)
```

Related Commands

Command	Description
feature ptp	Enables or disables PTP on the device.
ptp delay request minimum interval	Configures the minimum interval allowed between PTP delay-request messages when the port is in the master state.
ptp sync interval	Configures the interval between PTP synchronization messages on an interface.
ptp vlan	Configures the VLAN for the interface where PTP is being enabled.
show ptp brief	Displays the PTP status.
show ptp port interface ethernet	Displays the status of the PTP port on the switch.

ptp delay request minimum interval

To configure the minimum interval allowed between PTP delay request messages when the port is in the master state, use the **ptp delay request minimum interval** command. To disable this feature, use the **no** form of this command.

ptp delay request minimum interval *log-seconds*

no ptp delay request minimum interval

Syntax Description

log-seconds	The number of log seconds between PTP delay request messages. The range is from -1 to 6 seconds.

Command Default

0 log seconds

Command Modes

Interface configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to set the minimum delay request interval to 3:

```
switch# configure terminal
switch(config) # interface ethernet 5/1
switch(config-if) # ptp delay request minimum interval 3
```

Related Commands

Command	Description
feature ptp	Enables or disables PTP on the device.
ptp announce	Configures the interval between PTP announce messages on an interface or the number of PTP intervals before a timeout occurs on an interface.
ptp sync interval	Configures the interval between PTP synchronization messages on an interface.
ptp vlan	Configures the VLAN for the interface where PTP is being enabled.
show ptp brief	Displays the PTP status.
show ptp port interface ethernet	Displays the status of the PTP port on the switch.

ptp domain

To configure the domain number to use for this clock, use the **ptp domain** command. PTP domains allow you touse multiple independent PTP clocking subdomains on a single network.

ptp domain *number*

no ptp domain *number*

Syntax Description

number	Configures the domain number to use for this clock. The range is from 0 to 128.

Command Default

0

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to configure the domain number for use with a clock:

```
switch(config)# ptp domain 1
```

Related Commands

Command	Description
feature ptp	Enables or disables PTP on the device.
ptp source	Configures the source IP address for all PTP packets.
ptp priority1	Configures the priority 1 value to use when advertising this clock.
ptp priority2	Configures the priority 1 value to use when advertising this clock.
show ptp brief	Displays the PTP status.
show ptp clock	Displays the properties of the local clock.

ptp priority1

To configure the priority1 value to use when advertising this clock, use the **ptp priority1** command.

ptp priority1 *value*

no ptp priority1 *value*

Syntax Description

value	The configured value overrides the default criteria (clock quality, clock class, etc.) for best master clock selection. Lower values take precedence. The range is from 0 to 255.

Command Default

255 when advertising the clock

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to set the priority1 value used to advertise this clock:

```
switch(config)# ptp priority1 10
```

Related Commands

Command	Description
feature ptp	Enables or disables PTP on the device.
ptp source	Configures the source IP address for all PTP packets.
ptp domain	Configures the domain number to use for this clock.
ptp priority2	Configures the priority2 value to use when advertising this clock.
show ptp brief	Displays the PTP status.
show ptp clock	Displays the properties of the local clock.

ptp priority2

To configure the priority2 value to use when advertising this clock, use the **ptp priority2** command.

ptp priority2 *value*

no ptp priority2 *value*

Syntax Description

value	The configured value is used to decide between two devices that are otherwise equally matched in the default criteria. For example, you can use the priority2 value to give a specific switch priority over other identical switches. The range is from 0 to 255.

Command Default

255 when advertising the clock

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to set the priority2 value used to advertise this clock:

```
switch(config)# ptp priority2 20
```

Related Commands

Command	Description
feature ptp	Enables or disables PTP on the device.
ptp source	Configures the source IP address for all PTP packets.
ptp domain	Configures the domain number to use for this clock.
ptp priority1	Configures the priority1 value to use when advertising this clock.
show ptp brief	Displays the PTP status.
show ptp clock	Displays the properties of the local clock.

ptp source

To configure the source IP address for all PTP packets, use the **ptp source** command. To unconfigure the source IP address for all PTP packets, use the **no** form of this command.

ptp source *ip-address* [**vrf** *vrf*]

no ptp source *ip-address* [**vrf** *vrf*]

Syntax Description

ip-address	Specifies the source IP address for all PTP packets. The IP address can be in IPv4 or IPv6 format.
vrf *vrf*	Specifies the VRF.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to configure the source IP address for all PTP packets:

```
switch(config)# ptp source 192.0.2.1
```

Related Commands

Command	Description
feature ptp	Enables or disables PTP on the device.
ptp domain	Configures the domain number to use for this clock.
ptp priority1	Configures the priority 1 value to use when advertising this clock.
ptp priority2	Configures the priority 1 value to use when advertising this clock.
show ptp brief	Displays the PTP status.
show ptp clock	Displays the properties of the local clock.

ptp sync interval

To configure the interval between PTP synchronization messages, use the **ptp sync interval** command. To disable this feature, use the **no** form of this command.

ptp sync interval *log-seconds*

no ptp sync interval

Syntax Description

log-seconds	The number of log seconds between PTP synchronization messages on an interface. The range is from -3 seconds to 1 second.

Command Default

None

Command Modes

Interface configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to set the PTP synchronization interval to -3:

```
switch# configure terminal
switch(config) # interface ethernet 5/1
switch(config-if) # ptp sync interval -3
```

Related Commands

Command	Description
feature ptp	Enables or disables PTP on the device.
ptp announce	Configures the interval between PTP announce messages on an interface or the number of PTP intervals before a timeout occurs on an interface.
ptp delay request minimum interval	Configures the minimum interval allowed between PTP delay-request messages when the port is in the master state.
ptp vlan	Configures the VLAN for the interface where PTP is being enabled.
show ptp brief	Displays the PTP status.
show ptp port interface ethernet	Displays the status of the PTP port on the switch.

ptp vlan

To specify the VLAN for the interface where PTP is being enabled, use the **ptp vlan** command. To disable this feature, use the **no** form of this command.

ptp vlan *vlan-id*

no ptp vlan

Syntax Description

vlan-id	The VLAN ID for the interface where PTP is being enabled. The range is from 1 to 4094.

Command Default

1

Command Modes

Interface configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

PTP can only be enabled on one VLAN on an interface.

Examples

This example shows how to specify VLAN 10 as the interface where PTP is being enabled:

```
switch# configure terminal
switch(config) # interface ethernet 5/1
switch(config-if) # ptp vlan 10
```

Related Commands

Command	Description
feature ptp	Enables or disables PTP on the device.
ptp announce	Configures the interval between PTP announce messages on an interface or the number of PTP intervals before a timeout occurs on an interface.
ptp delay request minimum interval	Configures the minimum interval allowed between PTP delay-request messages when the port is in the master state.
ptp sync interval	Configures the interval between PTP synchronization messages on an interface.
show ptp brief	Displays the PTP status.
show ptp port interface ethernet	Displays the status of the PTP port on the switch.

S Commands

This chapter describes the system management commands that begin with S.

sampler

To define a sampler and enter the sampler configuration mode, use the **sampler** command. To remove the sampler definition, use the **no** form of this command.

sampler *name*

no sampler *name*

Syntax Description

name	Name of the sampler. The name can have a maximum of 63 alphanumeric characters.

Defaults

No samplers are defined.

Command Modes

Global configuration mode

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

NetFlow sampling means that M out of N packets are sampled. When a packet is sampled and there is a NetFlow cache miss, a NetFlow cache entry is created for this flow. The first packet timestamp is updated and the statistics for the first packet are initialized (for example, the bytes are set to the number of bytes in the packet and the packet count is set to one). If there is a NetFlow cache hit when the packet is sampled, the cache for this flow is updated, which includes adding the number of bytes in the packet to the byte counter and incrementing the packet count by one.

Once you enter the **sampler** *name* command, you enter the sampler configuration mode, and the prompt changes to the following:

```
switch(config-flow-sampler)#
```

Within the sampler configuration mode, the following keywords and arguments are available to configure the flow monitor:

- **description** *description*—Provides a description for this sampler; you can add a maximum of 63 characters.
- **exit**—Exits from the current configuration mode.
- **mode** *sample-num* **out-of** *packets*—Configures the sampler mode. The valid values are as follows:
  - *sample-num*—Number of samples per sampling. The range is from 1 to 64.
  - **out-of**—Specifies the samples per packet ratio.
  - *packets*—Number of packets in each sampling. The range is from 1 to 65536, and must be a power of 2.
- **no**—Negates a command or sets its defaults.

This command does not require a license.

Examples

This example shows how to define a sampler and enter the sampler configuration mode:

```
switch(config)# sampler testsampler
switch(config-flow-sampler)#
```

This example shows how to configure the sampler mode:

```
switch(config)# sampler testsampler
switch(config-flow-sampler)# mode 24 out-of 1024
```

This example shows how to remove a sampler definition:

```
switch(config)# no sampler testsampler
switch(config-flow)#
```

Related Commands

Command	Description
flow exporter	Creates a flow exporter.
flow monitor	Creates a flow monitor.
flow record	Creates a flow record.

shut (SPAN, ERSPAN)

To shut down an Ethernet Switched Port Analyzer (SPAN)or an Encapsulated Remote Switched Port Analyzer (ERSPAN) session, use the **shut** command. To enable a SPAN or an ERSPAN session, use the **no** form of this command.

shut

no shut

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

SPAN session configuration mode (config-monitor)
ERSPAN source session configuration mode (config-erspan-src)
ERSPAN destination session configuration mode (config-erspan-dst)
SPAN-on-Drop session configuration mode (config-span-on-drop)
SPAN-on-Drop ERSPAN session configuration mode (config-span-on-drop-erspan)
SPAN-on-Latency session configuration mode (config-span-on-latency)
SPAN-on-Latency ERSPAN session configuration mode (config-span-on-latency-erspan)

Command History

Release	Modification
7.0(0)N1(1)	This command was modified. This command was implemented in the following modes: SPAN session configuration mode, ERSPAN destination session configuration mode, SPAN-on-Drop session configuration mode, SPAN-on-Drop ERSPAN session configuration mode, SPAN-on-Latency session configuration mode, and SPAN-on-Latency ERSPAN session configuration mode.
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to shut down an ERSPAN source session:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# shut
switch(config-erspan-src)#
```

This example shows how to enable an ERSPAN destination session:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-destination
switch(config-erspan-dst)# no shut
switch(config-erspan-dst#
```

This example shows how to shut down a SPAN-on-Drop ERSPAN session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-drop-erspan
switch(config-span-on-drop-erspan)# shut
switch(config-span-on-drop-erspan)#
```

This example shows how to enable a SPAN-on-Latency ERSPAN session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-latency-erspan
switch(config-span-on-latency-erspan)# no shut
switch(config-span-on-latency-erspan)#
```

This example shows how to shut down a SPAN session:

```
switch# configure terminal
switch(config)# monitor session 1 type local
switch(config-monitor)# shut
switch(config-monitor)#
```

This example shows how to shut down a SPAN-on-Drop session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-drop
switch(config-span-on-drop)# shut
switch(config-span-on-drop)#
```

This example shows how to enable a SPAN-on-Latency session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-latency
switch(config-span-on-latency)# no shut
switch(config-span-on-latency)#
```

Related Commands

Command	Description
monitor session	Enters the monitor configuration mode.
show monitor session	Displays the virtual SPAN or ERSPAN configuration.

sleep instance

To delay the execution of a command by a specified number of seconds in the maintenance profile, use the **sleep instance** command. You can delay multiple instances of a command. To remove the delay, use the **no** form of this command.

sleep instance *instance-number seconds*

no sleep instance *instance-number seconds*

Syntax Description

instance-number	Provides a label for the configuration by specifying a particular instance number. The range is from 0 to 2177483647.
seconds	Specifies the number of seconds by which the execution of the command has to be delayed. The range is from 0 to 2177483647.

Defaults

None

Command Modes

maintenance profile configuration (config-mm-profile)

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Examples

This example shows how to delay the execution of one command by 20 seconds and another command by 10 seconds:

```
switch# configure maintenance profile normal-mode
Please configure 'system mode maintenance always-use-custom-profile' if you want to use
custom profile always for maintenance mode.
Enter configuration commands, one per line. End with CNTL/Z.
switch(config-mm-profile)# interface ethernet 1/1
switch(config-mm-profile-if-verify)# no shutdown
switch(config-mm-profile-if-verify)# exit
switch(config-mm-profile)# sleep instance 1 20
switch(config-mm-profile)# router bgp 200
switch(config-mm-profile-router)# address-family ipv4 unicast
switch(config-mm-profile-router-af)# redistribute direct route-map my-rmap-deny
switch(config-mm-profile-router-af)# exit
switch(config-mm-profile-router)# exit
switch(config-mm-profile)# sleep instance 1 10
```

Related Commands

Command	Description
configure maintenance profile	Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.
show run mmode	Displays the currently running maintenance profile configuration on a switch.
show system mode	Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.

snapshot create

To create a snapshot, use the **snapshot create** command.

snapshot create *name description*

Syntax Description

name	The *name* variable can be 64 characters in length.
description	The *description* variable can be 256 characters in length.

Defaults

None.

Command History

Release	Modification
7.1.0	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to create a snapshot:

```
switch# snapshot create snap1 For documentation purposes.
Executing show interface... Done
Executing show bgp sessions vrf all... Done
Executing show ip eigrp topology summary... Done
Executing show ipv6 eigrp topology summary... Done
Executing show vpc... Done
Executing show ip ospf vrf all... Done
Feature 'ospfv3' not enabled, skipping...
Executing show isis vrf all... Done
Snapshot 'snap1' created
switch#
```

Related Commands

Command	Description
show snapshots *before-maintenance-mode description*	Displays snapshots present on the switch.
snapshot delete	Deletes the snapshot.
show snapshot compare	Compares snapshots and showing the summary and details of each feature.

snapshot delete

To delete a single snapshot or to delete all the snapshots in a system, use the **snapshot delete** command.

snapshot delete {**all** | *snapshot-name*}

Syntax Description

all	Deletes all the snapshots in the system.
snapshot-name	Deletes the specified snapshot.

Defaults

None

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to delete all the snapshots in a system:

```
switch# snapshot delete all
```

This example shows how to delete a specific snapshot:

```
switch # snapshot delete snapshot1
```

Related Commands

Command	Description
show snapshots	Displays snapshots present on the switch.
snapshot create	Generates a snapshot.
snapshot section	Adds or deletes a snapshot section.

snapshot section

To add or delete a snapshot section, use the **snapshot section** command.

snapshot section {**add** *section "show-command" row-id element-key1* [*element-key2*] | **delete** *section*}

Syntax Description

add	Adds the specified snapshot section to the snapshot.
section	Names the snapshot section that is added to the snapshot to display the show command output.
"show command"	Specifies the **show** command. The output of this **show** command is displayed in the new snapshot section created. This **show** command has to be specified within quotation marks ("show").
row-id	The row-id argument specifies the tag of each row entry of the **show** command's XML output.
element-key1	Specifies the tag used to distinguish among row entries in the show command snapshot section output.
element-key2	(Optional) Specifies another tag used to distinguish among row entries in the show command snapshot section output.
delete	Deletes the specified snapshot section from the snapshot.

Defaults

None.

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to add a snapshot section that displays the output of the **show ip route detail vrf all** command to the snapshot:

```
switch# snapshot section add v4route show "show ip route detail vrf all" ROW_prefix
ipprefix
```

This example shows how to delete a snapshot section from the snapshot:

```
switch# snapshot section delete v4route
```

snmp-server aaa-user cache-timeout

To configure the Simple Network Management Protocol (SNMP) time-out value for synchronized AAA users, use the **snmp-server aaa-user cache-timeout** command. To revert to the default settings, use the **no** form of this command.

snmp-server aaa-user cache-timeout *seconds*

no snmp-server aaa-user cache-timeout *seconds*

Syntax Description

seconds	Timeout value, in seconds. The range is from 1 to 86400. The default value is 3600 seconds.

Command Default

3600 seconds

Command Modes

Global configuration mode

Command History

Release	Modification
7.3(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the AAA user synchronization timeout value:

```
switch(config)# snmp-server aaa-user cache-timeout 6000
```

Related Commands

Command	Description
show snmp	Displays information about SNMP.

snmp-server community

To create Simple Network Management Protocol (SNMP) communities for SNMPv1 or SNMPv2c, use the **snmp-server community** command. To revert to the defaults, sue the **no** form of this command.

snmp-server community *com-name* [**group** *grp-name* | **ro** | **rw** | **use-acl** *acl-name*]

no snmp-server community *com-name* [**group** *grp-name* | **ro** | **rw** | **use-acl** *acl-name*]

Syntax Description

com-name	SNMP community string. The name can be any alphanumeric string up to 32 characters.
group *grp-name*	(Optional) Specifies the group to which the community belongs. The name can be a maximum of 32 characters.
ro	(Optional) Specifies read-only access with this community string.
rw	(Optional) Specifies read-write access with this community string.
use-acl *acl-name*	(Optional) Specifies the access control list (ACL) to filter SNMP requests. The name can be a maximum of 32 characters.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

You can assign an access list (ACL) to a community to filter incoming SNMP requests. If the assigned ACL allows the incoming request packet, SNMP processes the request. If the ACL denies the request, SNMP drops the request and sends a system message.

See the *Security Configuration Guide* for your platform for more information on creating ACLs. The ACL applies to both IPv4 and IPv6 over UDP and TCP. After creating the ACL, assign the ACL to the SNMP community.

Examples

This example shows how to create an SNMP community string and assign an ACL to the community to filter SNMP requests:

```
switch(config)# snmp-server community public use-acl my_acl_for_public
switch(config)#
```

Related Commands

Command	Description
show snmp community	Displays the SNMP community strings.

snmp-server contact

To configure the Simple Network Management Protocol (SNMP) contact (sysContact) information, use the **snmp-server contact** command. To remove the contact information, use the **no** form of this command.

snmp-server contact [*text*]

no snmp-server contact [*text*]

Syntax Description

text	(Optional) String that describes the system contact information. The text can be any alphanumeric string up to 32 characters and cannot contain spaces.

Command Default

No system contact (sysContact) string is set.

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to set an SNMP contact:

```
switch(config)# snmp-server contact DialSystemOperatorAtBeeper#1235
switch(config)#
```

This example shows how to remove an SNMP contact:

```
switch(config)# no snmp-server contact DialSystemOperatorAtBeeper#1235
switch(config)#
```

Related Commands

Command	Description
show snmp	Displays information about SNMP.
snmp-server location	Sets the system location string.

snmp-server context

To configure the Simple Network Management Protocol (SNMP) context to logical network entity mapping, use the **snmp-server context** command. To remove the context, use the **no** form of this command.

snmp-server context *context-name* [**instance** *instance-name*] [**vrf** {*vrf-name* | **default** | **management**}] [**topology** *topology-name*]

no snmp-server context *context-name* [**instance** *instance-name*] [**vrf** {*vrf-name* | **default** | **management**}] [**topology** *topology-name*]

Syntax Description

context-name	SNMP context. The name can be any alphanumeric string up to 32 characters.
instance *instance-name*	(Optional) Specifies a protocol instance. The name can be any alphanumeric string up to 32 characters.
vrf *vrf-name*	(Optional) Specifies the virtual routing and forwarding (VRF) instance. The name is case sensitive, and can be a maximum of 32 alphanumeric characters.
default	Specifies the default VRF.
management	Specifies the management VRF.
topology *topology-name*	(Optional) Specifies the topology. The name can be any alphanumeric string up to 32 characters.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

Use the **snmp-server context** command to map between SNMP contexts and logical network entities, such as protocol instances or VRFs.

Examples

This example shows how to map the public1 context to the default VRF:

```
switch(config)# snmp-server context public1 vrf default
switch(config)#
```

Related Commands

Command	Description
show snmp	Displays the SNMP status.
show snmp context	Displays information about SNMP contexts.

snmp-server enable traps

To enable the Simple Network Management Protocol (SNMP) notifications, use the **snmp-server enable traps** command. To disable SNMP notifications, use the **no** form of this command.

snmp-server enable traps
[**aaa** [**server-state-change**] |
callhome [**event-notify** | **smtp-send-fail**] |
entity {**entity_fan_status_change** | **entity_mib_change** | **entity_module_inserted** |
entity_module_removed | **entity_module_status_change** | **entity_power_out_change** |
entity_power_status_change | **entity_unrecognised_module**} |
fcdomain |
fcns |
fcs |
fctrace |
fspf |
license [**notify-license-expiry** | **notify-license-expiry-warning** | **notify-licensefile-missing** |
notify-no-license-for-feature] |
link |
rf [**redundancy_framework**] |
rmon [**fallingAlarm** | **hcFallingAlarm** | **hcRisingAlarm** | **risingAlarm**] |
rscn |
snmp [**authentication**] |
vsan | **vtp** |
zone [**default-zone-behavior-change** | **merge-failure** | **merge-success** | **request-reject1** |
unsupp-mem]]

no snmp-server enable traps
[**aaa** [**server-state-change**] |
callhome [**event-notify** | **smtp-send-fail**] |
entity {**entity_fan_status_change** | **entity_mib_change** | **entity_module_inserted** |
entity_module_removed | **entity_module_status_change** | **entity_power_out_change** |
entity_power_status_change | **entity_unrecognised_module**} |
fcdomain |
fcns |
fcs |
fctrace |
fspf |
license [**notify-license-expiry** | **notify-license-expiry-warning** | **notify-licensefile-missing** |
notify-no-license-for-feature] |
link |
rf [**redundancy_framework**] |
rmon [**fallingAlarm** | **hcFallingAlarm** | **hcRisingAlarm** | **risingAlarm**] |
rscn |
snmp [**authentication**] |
vsan | **vtp** |
zone [**default-zone-behavior-change** | **merge-failure** | **merge-success** | **request-reject1** |
unsupp-mem]]

Syntax Description

aaa	(Optional) Enables notifications for a AAA server state change.
server-state-change	(Optional) Specifies the AAA server state change.

callhome	(Optional) Enables Cisco Call Home notifications.
event-notify	(Optional) Specifies the Cisco Call Home external event notification.
smtp-send-fail	(Optional) Specifies the SMTP message send fail notification.
entity	(Optional) Enables notifications for a change in the module status, fan status, or power status.
entity_fan_status_ change	(Optional) Specifies the entity fan status change.
entity_mib_change	(Optional) Specifies the entity MIB change.
entity_module_ inserted	(Optional) Specifies the entity module inserted.
entity_module_ removed	(Optional) Specifies the entity module removed.
entity_module_status_ change	(Optional) Specifies the entity module status change.
entity_power_out_ change	(Optional) Specifies the entity power out change.
entity_power_status_ change	(Optional) Specifies the entity power status change.
entity_unrecognised_ module	(Optional) Specifies the entity unrecognized module.
fcdomain	(Optional) Enables notifications for the Fibre Channel domain.
fcns	(Optional) Enables notifications for the name server.
fcs	(Optional) Enables notifications for the fabric configuration server.
fctrace	(Optional) Enables notifications for the route to an N port.
fspf	(Optional) Enables notifications for the Fabric Shortest Path First (FSPF).
license	(Optional) Enables notifications for the license manager.
notify-license-expiry	(Optional) Specifies the license expiry notification.
notify-license-expiry-warning	(Optional) Specifies the license expiry warning notification.
notify-licensefile-missing	(Optional) Specifies the license file missing notification.
notify-no-license-for-feature	(Optional) Specifies that a notification is sent when no license needs to be installed for the feature.
link	(Optional) Enables notifications for uplink and downlink interfaces.
rf	(Optional) Enables notifications for the redundancy framework.
redundancy_ framework	(Optional) Specifies the Redundancy_Framework (RF) supervisor switchover MIB.
rmon	(Optional) Enables notifications for rising, falling, and high-capacity alarms.
fallingAlarm	(Optional) Specifies the RMON falling alarm.
hcFallingAlarm	(Optional) Specifies the high-capacity RMON falling alarm.
hcRisingAlarm	(Optional) Specifies the high-capacity RMON rising alarm.
risingAlarm	(Optional) Specifies the RMON rising alarm.
rscn	(Optional) Enables RSCN notifications.

snmp	(Optional) Enables SNMP authentication notifications.
authentication	(Optional) Specifies the SNMP authentication trap.
vsan	(Optional) Enables notifications for VSANs.
vtp	(Optional) Enables notifications for a VLAN Trunking Protocol (VTP) domain.
zone	(Optional) Enables zone notifications.
default-zone-behavior-change	(Optional) Specifies the default zone behavior change notification.
merge-failure	(Optional) Specifies the merge failure notification.
merge-success	(Optional) Specifies the merge success notification.
request-reject1	(Optional) Specifies the request reject notification.
unsupp-mem	(Optional) Specifies the unsupported member notification.

Command Default

All notifications

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

The **snmp-server enable traps** command enables both traps and informs, depending on the configured notification host receivers.

Examples

This example shows how to enable SNMP notifications for the server state change:

```
switch(config)# snmp-server enable traps aaa
switch(config)#
```

This example shows how to disable all SNMP notifications:

```
switch(config)# no snmp-server enable traps
switch(config)#
```

Related Commands

Command	Description
snmp-server enable traps link	Enables the Simple Network Management Protocol (SNMP) notifications on link traps.
show snmp trap	Displays the SNMP notifications enabled or disabled.

snmp-server enable traps link

To enable the Simple Network Management Protocol (SNMP) notifications on link traps, use the **snmp-server enable traps link** command. To disable SNMP notifications on link traps, use the **no** form of this command.

snmp-server enable traps link [*notification-type*]

no snmp-server enable traps link [*notification-type*]

Syntax Description

notification-type	(Optional) Type of notification to enable. If no type is specified, all notifications available on your device are sent. The notification type can be one of the following keywords: • **IETF-extended-linkDown**—Enables the Internet Engineering Task Force (IETF) extended link state down notification. • **IETF-extended-linkUp**—Enables the IETF extended link state up notification. • **cisco-extended-linkDown**—Enables the Cisco extended link state down notification. • **cisco-extended-linkUp**—Enables the Cisco extended link state up notification. • **connUnitPortStatusChange**—Enables the overall status of the connectivity unit Notification. • **delayed-link-state-change**—Enables the delayed link state change. • **fcTrunkIfDownNotify**—Enables the Fibre Channel Fabric Element (FCFE) link state down notification. • **fcTrunkIfUpNotify**—Enables the FCFE link state up notification. • **fcot-inserted**—Specifies that the Fibre Channel optical transmitter (FCOT) hardware has been inserted. • **fcot-removed**—Specifies that the FCOT has been removed. • **linkDown**—Enables the IETF Link state down notification. • **linkUp**—Enables the IETF Link state up notification.

Command Default

Disabled

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This command is disabled by default. Most notification types are disabled.

If you enter this command with no *notification-type* arguments, the default is to enable all notification types controlled by this command

Examples

This example shows how to enable the SNMP link trap notification on the switch:

```
switch(config)# snmp-server enable traps link
switch(config)#
```

This example shows how to disable the SNMP link trap notification on the switch:

```
switch(config)# no snmp-server enable traps link
switch(config)#
```

Related Commands

Command	Description
show snmp trap	Displays the SNMP notifications enabled or disabled.

snmp-server globalEnforcePriv

To configure Simple Network Management Protocol (SNMP) message encryption for all users, use the **snmp-server globalEnforcePriv** command. To remove the encryption, use the **no** form of this command.

snmp-server globalEnforcePriv

no snmp-server globalEnforcePriv

Syntax Description

This command has no arguments or keywords.

Command Default

The SNMP agent accepts SNMPv3 messages without authentication and encryption.

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to configure SNMP message encryption for all users:

```
switch(config)# snmp-server globalEnforcePriv
switch(config)#
```

This example shows how to remove SNMP message encryption for all users:

```
switch(config)# no snmp-server globalEnforcePriv
switch(config)#
```

Related Commands

Command	Description
snmp-server user	Configures a new user to an SNMP group.
show snmp sessions	Displays the current SNMP sessions.

snmp-server host

To specify the recipient of a Simple Network Management Protocol (SNMP) notification operation, use the **snmp-server host** command. To remove the specified host, use the **no** form of this command.

snmp-server host *host-address* {*community-string*
| filter-vrf {*vrf-name* | **default** | **management**}
| {**informs** | **traps**} {*community-string* | **version** {**1** | **2c** | **3** {**auth** | **noauth** | **priv**}}
community-string [**udp-port** *port*]}
| version {**1** | **2c** | **3** {**auth** | **noauth** | **priv**}} *community-string* [**udp-port** *port*]}

no snmp-server host *host-address* {*community-string*
| filter-vrf {*vrf-name* | **default** | **management**}
| {**informs** | **traps**} {*community-string* | **version** {**1** | **2c** | **3** {**auth** | **noauth** | **priv**}}
community-string [**udp-port** *port*]}
| version {**1** | **2c** | **3** {**auth** | **noauth** | **priv**}} *community-string* [**udp-port** *port*]}

Syntax Description

host-address	IPv4 or IPv6 address or DNS name of the SNMP notification host.
community-string	String sent with the notification operation. The string can be a maximum of 32 alphanumeric characters. We recommend that you define this string using the **snmp-server community** command prior to using the **snmp-server host** command.
filter-vrf *vrf-name*	Specifies the virtual routing and forwarding (VRF) instance. The name is case sensitive and can be a maximum of 32 alphanumeric characters.
default	Specifies the default VRF.
management	Specifies the management VRF.
informs	Sends SNMP informs to this host.
traps	Sends SNMP traps to this host.
version	Specifies the version of the SNMP used to send the traps. Version 3 is the most secure model, because it allows packet encryption with the **priv** keyword. If you use the **version** keyword, one of the following must be specified: • **1**—SNMPv1. • **2c**—SNMPv2C. • **3**—SNMPv3. The following three optional keywords can follow the **version 3** keyword: – **auth**—Enables Message Digest 5 (MD5) and Secure Hash Algorithm (SHA) packet authentication – **noauth** (Default)—The noAuthNoPriv security level. This is the default if the **auth**, **noauth**, or **priv** keyword is not specified. – **priv**—Enables Data Encryption Standard (DES) packet encryption (also called “privacy”)
udp-port *port*	(Optional) Specifies the UDP port of the host to use. The port range is from 0 to 65535.

Command Default Disabled

Command Modes Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines SNMP notifications can be sent as traps or inform requests. Traps are unreliable because the receiver does not send acknowledgments when it receives traps. The sender cannot determine if the traps were received. However, an SNMP entity that receives an inform request acknowledges the message with an SNMP response PDU. If the sender never receives the response, the inform request can be sent again. Therefore, informs are more likely to reach their intended destination.

Examples This example shows how to sends the SNMP traps to the host specified by the IPv4 address 192.168.0.10. The community string is defined as my_acl_for_public.:

```
switch(config)# snmp-server community public use-acl my_acl_for_public
switch(config)# snmp-server host 192.168.0.10 my_acl_for_public
switch(config)#
```

This example shows how to send all inform requests to the host myhost.cisco.com using the community string my_acl_for_public:

```
switch(config)# snmp-server enable traps
switch(config)# snmp-server host myhost.cisco.com informs version 2c my_acl_for_public
switch(config)#
```

Related Commands

Command	Description
show snmp host	Displays information about the SNMP host.

snmp-server location

To set the Simple Network Management Protocol (SNMP) system location string, use the **snmp-server location** command. To remove the location string, use the **no** form of this command.

snmp-server location [*text*]

no snmp-server location [*text*]

Syntax Description

text	(Optional) String that describes the system location information.

Command Default

No system location string is set.

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to set a system location string:

```
switch(config)# snmp-server location Building 3/Room 21
switch(config)#
```

This example shows how to remove the system location string:

```
switch(config)# no snmp-server location Building 3/Room 21
switch(config)#
```

Related Commands

Command	Description
snmp-server contact	Sets the SNMP system contact (sysContact) string.

snmp-server mib community-map

To configure a Simple Network Management Protocol (SNMP) context to map to a logical network entity, such as a protocol instance or VRF, use the **snmp-server mib community-map** command. To remove the mapping, use the **no** form of this command.

snmp-server mib community-map *community-string* **context** *context-name*

no snmp-server mib community-map *community-string* **context** *context-name*

Syntax Description

community-string	String sent with the notification operation. The string can be a maximum of 32 alphanumeric characters. We recommend that you define this string using the **snmp-server community** command prior to using the **snmp-server mib community-map** command.
context	Specifies the SNMP context to be mapped to the logical network entity.
context-name	SNMP context. The name can be any alphanumeric string up to 32 characters.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to map an SNMPv2c community named my_acl_for_public to an SNMP context public1:

```
switch(config)# snmp-server mib community-map my_acl_for_public context public1
switch(config)#
```

This example shows how to remove the mapping of an SNMPv2c community to an SNMP context:

```
switch(config)# no snmp-server mib community-map my_acl_for_public context public1
switch(config)#
```

Related Commands

Command	Description
snmp-server community	Configures an SNMP community.
snmp-server context	Configures an SNMP context.
show snmp	Displays the SNMP status.

snmp-server tcp-session

To enable a one-time authentication for Simple Network Management Protocol (SNMP) over a TCP session, use the **snmp-server tcp-session** command. To disable the one-time authentication, use the **no** form of this command.

snmp-server tcp-session [**auth**]

no snmp-server tcp-session [**auth**]

Syntax Description

auth	(Optional) Specifies that one-time authentication for SNMP be enabled over the TCP session.

Command Default

Disabled

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to enable one-time authentication for SNMP over a TCP session:

```
switch(config)# snmp-server tcp-session auth
switch(config)#
```

This example shows how to disable one-time authentication for SNMP over a TCP session:

```
switch(config)# no snmp-server tcp-session auth
switch(config)#
```

Related Commands

Command	Description
show snmp	Displays the SNMP status.

snmp-server user

To configure a new user to a Simple Network Management Protocol (SNMP) group, use the **snmp-server user** command. To remove a user from an SNMP group, use the **no** form of this command.

snmp-server user *username* [*groupname*] [**auth** {**md5** | **sha**} *auth-password* [{**engineID** *engine-ID* | **localizedkey** | **priv** {*priv-password* | **aes-128**}}]]

no snmp-server user

Syntax Description

username	Name of the user on the host that connects to the agent. The name can be a maximum of 32 alphanumeric characters.
groupname	(Optional) Name of the group to which the user is associated. The name can be a maximum of 32 alphanumeric characters.
auth	(Optional) Specifies that an authentication level setting will be initiated for the session.
md5	(Optional) Specifies that the HMAC-MD5-96 authentication level be used for the session.
sha	(Optional) Specifies that the HMAC-SHA-96 authentication level be used for the session.
auth-password	(Optional) Authentication password for the user that enables the agent to receive packets from the host. The password can be a maximum of 130 characters.
engineID *engine-ID*	(Optional) Specifies the SNMP engine ID.
localizedkey	(Optional) Specifies whether the passwords are in localized key format.
priv	(Optional) The option that initiates a privacy authentication level setting session.
priv-password	(Optional) Privacy password for the user that enables the host to encrypt the content of the message that it sends to the agent. The password can be a maximum of 130 characters.
aes-128	(Optional) Specifies that a 128-bit AES algorithm for privacy be used for the session.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to configure an SNMP user named authuser with authentication and privacy parameters:

```
switch(config)# snmp-server user authuser publicsecurity auth sha shapwd priv aes-128
switch(config)#
```

This example shows how to delete an SNMP user:

```
switch(config)# no snmp-server user authuser
switch(config)#
```

Related Commands

Command	Description
show snmp user	Displays information about one or more SNMP users.

snmp trap link-status

To enable Simple Network Management Protocol (SNMP) link trap generation on an interface, use the **snmp trap link-status** command. To disable SNMP link traps, use the **no** form of this command.

snmp trap link-status

no snmp trap link-status

Syntax Description

This command has no arguments or keywords.

Command Default

Enabled

Command Modes

Interface configuration mode
Virtual Ethernet interface configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

By default, SNMP link traps are sent when a Layer 2 interface goes up or down. You can disable SNMP link trap notifications on an individual interface. You can use these limit notifications on a flapping interface (an interface that transitions between up and down repeatedly).

You can use this command on the following interfaces:

- Layer 2 interface
- Layer 3 interface

Note Use the **no switchport** command to configure an interface as a Layer 3 interface.

- Virtual Ethernet interface

Examples

This example shows how to disable SNMP link-state traps for a specific Layer 2 interface:

```
switch(config)# interface ethernet 1/1
switch(config-if)# no snmp trap link-status
switch(config-if)#
```

This example shows how to enable SNMP link-state traps for a specific Layer 3 interface:

```
switch(config)# interface ethernet 1/5
switch(config-if)# no switchport
switch(config-if)# snmp trap link-status
switch(config-if)#
```

This example shows how to enable SNMP link-state traps for a specific Layer 2 interface:

```
switch(config)# interface ethernet 1/1
switch(config-if)# snmp trap link-status
switch(config-if)#
```

This example shows how to enable SNMP link-state traps for a specific virtual Ethernet interface:

```
switch(config)# interface vethernet 1
switch(config-if)# snmp trap link-status
switch(config-if)#
```

Related Commands

Command	Description
interface vethernet	Configures a virtual Ethernet interface.
no switchport	Configures an interface as a Layer 3 routed interface.
show snmp trap	Displays the SNMP notifications, enabled or disabled.

soft-reload

To perform a manual soft reload of the switch, use the **soft-reload** command.

soft-reload

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Privileged EXEC mode

Command History

Release	Modification
7.3(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

If a soft reload that has been triggered by using the **soft-reload** command fails, the switch will not be reloaded. Soft reload can then be attempted again by using the **soft-reload** command after the failures shown have been corrected.

Examples

This example shows how to perform a manual soft reload of the switch:

```
switch# soft-reload
```

Related Commands

Command	Description
show system soft-reload status	Displays the status of the soft reload.
system soft-reload enable	Enables the switch to perform a soft reload after a process crash.

source

To configure the NetFlow exporter interface to use to reach the NetFlow collector for the configured destination, use the **source** command. To remove the source, use the **no** form of this command.

source *if-type if-number*

no source [*if-type if-number*]

Syntax Description

if-type	Interface type. For more information, use the question mark (?) online help function.
if-number	Interface or subinterface number. For more information about the numbering syntax for your networking device, use the question mark (?) online help function.

Defaults

None

Command Modes

NetFlow exporter configuration (config-flow-exporter)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the NetFlow exporter source interface:

```
switch(config)# flow exporter Netflow-Exporter-1
switch(config-flow-exporter)# source Ethernet3/11
switch(config-flow-exporter)#
```

This example shows how to remove the Netflow exporter source interface configuration:

```
switch(config-flow-exporter)# no source Ethernet3/11
switch(config-flow-exporter)#
```

Related Commands

Command	Description
show flow exporter	Displays information about NetFlow exporters.

source interface (SPAN, ERSPAN)

To add an Ethernet Switched Port Analyzer (SPAN) or an Encapsulated Remote Switched Port Analyzer (ERSPAN) source port, use the **source** command. To remove the source SPAN or ERSPAN port, use the **no** form of this command.

source {**interface** {**ethernet** *slot*/[*QSFP-module/*]*port* | **port-channel** *channel-num* | **vethernet** *veth-num*} [{**both** | **rx** | **tx**}] | **vlan** *vlan-num* | **vsan** *vsan-num*}

no source {**interface** {**ethernet** *slot*/[*QSFP-module/*]*port* | **port-channel** *channel-num* | **vethernet** *veth-num*} [{**both** | **rx** | **tx**}] | **vlan** *vlan-num* | **vsan** *vsan-num*}

Syntax Description

interface	Specifies the interface type to use as the source SPAN port.
ethernet *slot*/[*QSFP-module/*]*port*	Specifies the Ethernet interface to use as the source SPAN port. The *slot* number is from 1 to 255. The *QSFP-module* number is from 1 to 199. The *port* number is from 1 to 128.
port-channel *channel-num*	Specifies the EtherChannel interface to use as the source SPAN port. The EtherChannel number is from 1 to 4096.
vethernet *veth-num*	Specifies the virtual Ethernet interface to use as the source SPAN or ERSPAN port. The virtual Ethernet interface number is from 1 to 1048575.
both	(Optional) Specifies both ingress and egress traffic on the source port.
rx	(Optional)Specifies only ingress traffic on the source port.
tx	(Optional) Specifies only egress traffic on the source port.
vlan *vlan-num*	Specifies the VLAN inteface to use as the source SPAN port. Valid values are from 1 to 3967 and 4048 to 4093. For VLAN span sources only ingress traffic is spanned.
vsan *vsan-num*	Specifies the virtual storage area network (VSAN) to use as the source SPAN port. The range is from 1 to 4093. For VSAN span sources only ingress traffic is spanned.

Command Default

None

Command Modes

SPAN session configuration mode (config-monitor)
ERSPAN source session configuration mode (config-erspan-src)
SPAN-on-Drop session configuration mode (config-span-on-drop)
SPAN-on-Drop ERSPAN session configuration mode (config-span-on-drop-erspan)
SPAN-on-Latency session configuration mode (config-span-on-latency)
SPAN-on-Latency ERSPAN session configuration mode (config-span-on-latency-erspan)

Command History

Release	Modification
7.0(0)N1(1)	This command was modified. This command was implemented in the following modes: SPAN session configuration mode, ERSPAN destination session configuration mode, SPAN-on-Drop session configuration mode, SPAN-on-Drop ERSPAN session configuration mode, SPAN-on-Latency session configuration mode, and SPAN-on-Latency ERSPAN session configuration mode.
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

A source port (also called a *monitored port*) is a switched port that you monitor for network traffic analysis. In a single local SPAN session, you can monitor source port traffic such as received (Rx), transmitted (Tx), or bidirectional (both).

A source port can be an Ethernet port, port channel, SAN port channel, VLAN, or a VSAN port. It cannot be a destination port.

Note For VLAN and VSAN span sources only ingress traffic is spanned.

There is no limit to the number of egress SPAN source ports.

SAN Port Channel interfaces can be configured as ingress or egress source ports.

The limit on the number of egress (TX) sources in a monitor session has been lifted.

Port-channel interfaces can be configured as both ingress and egress sources.

For local SPAN and ERSPAN, if you do not specify **both**, **rx**, or **tx**, the source traffic is analyzed for both directions.

SPAN on Latency sessions analyze source traffic on TX only, and SPAN on Drop sessions analyze source traffic on RX only. .

Examples

This example shows how to configure an Ethernet SPAN source port:

```
switch# configure terminal
switch(config)# monitor session 9 type local
switch(config-monitor)# description A Local SPAN session
switch(config-monitor)# source interface ethernet 1/1
switch(config-monitor)#
```

This example shows how to configure a port channel SPAN source:

```
switch# configure terminal
switch(config)# monitor session 2
switch(config-monitor)# source interface port-channel 5
switch(config-monitor)#
```

This example shows how to configure an ERSPAN source port:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# source interface ethernet 1/5 rx
switch(config-erspan-src)#
```

Related Commands

Command	Description
destination (SPAN, ERSPAN)	Configures a destination SPAN port.
monitor session	Creates a new SPAN session configuration.
show monitor session	Displays SPAN session configuration information.
show running-config monitor	Displays the running configuration information of a SPAN session.

source ip

To add a source port to an Encapsulated Remote Switched Port Analyzer (ERSPAN) destination session use the **source ip** command, in ERSPAN destination session configuration mode. To remove the source port, use the **no** form of this command.

source ip *ip-address*

no source *ip-address*

Syntax Description

ip-address	Specifies the IP address of the source port.

Command Default

None

Command Modes

ERSPAN destination session configuration mode (config-erspan-dst)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced..

Usage Guidelines

A source port (also called a *monitored port*) is a switched port that you monitor for network traffic analysis.

Examples

This example shows how to configure an ERSPAN destination session source port:

```
switch# configure terminal
switch(config)# monitor session 11 type erspan-destination
switch(config-erspan-dst)# source ip 10.1.1.1
switch(config-erspan-dst)#
```

Related Commands

Command	Description
destination (SPAN, ERSPAN)	Configures a destination SPAN port.
monitor session	Creates a new SPAN session configuration.
show monitor session	Displays SPAN session configuration information.
show running-config monitor	Displays the running configuration information of a SPAN session.

switchport monitor rate-limit

To configure a rate limit to monitor traffic on an interface, use the **switchport monitor rate-limit** command. To remove a rate limit, use the **no** form of this command.

switchport monitor rate-limit 1G

no switchport monitor rate-limit [**1G**]

Syntax Description

1G	(Optional) Specifies that the rate limit is 1 GB.

Command Default

None

Command Modes

Interface configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This command is applicable to the following Cisco Nexus 5000 Series switches:

- Cisco Nexus 5010 Series
- Cisco Nexus 5020 Series

This command does not require a license.

Examples

This example shows how to limit the bandwidth on Ethernet interface 1/2 to 1 GB:

```
switch(config)# interface ethernet 1/2
switch(config-if)# switchport monitor rate-limit 1G
switch(config-if)#
```

Related Commands

Command	Description
show interface switchport	Displays information on all interfaces configured as switch ports.
switchport private-vlan association trunk	Associates the isolated trunk port with the primary and secondary VLANs of a private VLAN.

switch-profile

To create or configure a switch profile, use the **switch-profile** command. To delete a switch profile, use the **no** form of this command.

switch-profile *sw-profile-name*

no switch-profile *sw-profile-name* {**all-config | local-config | profile-only**}

Syntax Description

sw-profile-name	Name of the switch profile. The name is case sensitive, can be a maximum of 64 alphanumeric characters and can include an underscore and hyphen. The name cannot contain spaces or special characters.
all-config	Specifies that the switch profile be deleted with all local and peer configurations.
local-config	Specifies that the switch profile and all local configurations be deleted.
profile-only	Specifies that the switch profile only is to be deleted and no other configurations.

Command Default

None

Command Modes

Configuration synchronization mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

Use this command to create a switch profile on each of the peer switches. You must use the same profile name on both the switches in the Cisco Fabric Services (CFS) peer configuration.

Note In this release of Cisco NX-OS, only a pair of switches can be configured as a peer.

You can configure only one active switch profile on each peer switch. If you create or configure a second switch profile, you see the following error message:

```
Error: Another switch profile already exists. Cannot configure more than one
switch-profile.
```

The configuration that is made locally on the switch is synchronized and made available on the peer switch only after the connectivity is established between the peer switches and the configuration is verified and committed on the local switch.

You can configure a switch profile to include the interface configuration, quality of service (QoS), and virtual port channel (vPC) commands. FCoE commands are not supported on a switch profile.

When you delete a switch profile, you can choose to delete the local switch profile with the local configurations on the switch, delete the switch profile with the local configurations and configuration information in the peer, or delete the switch profile only while saving all other configuraiton information. The peer becomes unreachable.

Examples

This example shows how to create a switch profile named s6000a on switch 1 of the peer:

Peer A

```
switch# configure terminal
switch(config)# cfs ipv4 distribute
switch(config)# exit
switch# config sync
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config-sync)# switch-profile s6000a
Switch-Profile started, Profile ID is 1
switch(config-sync-sp)#
```

This example shows how to create a switch profile named s6000a on switch 2 of the peer:

Peer B

```
switch# configure terminal
switch(config)# cfs ipv4 distribute
switch(config)# exit
switch# config sync
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config-sync)# switch-profile s6000a
Switch-Profile started, Profile ID is 1
switch(config-sync-sp)#
```

This example shows how to delete a switch profile named s6000a and its local configuration on switch 1 of the peer:

Peer A

```
switch# config sync
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config-sync)# no switch-profile s6000a local-config
switch(config-sync)#
```

Related Commands

Command	Description
config sync	Enters configuration synchronization mode.
show switch-profile	Displays the switch profile created on the switch and its configuration revision.
sync-peers destination	Configures the peer switch for configuration synchronization.

system fex-group shutdown

To shutdown a Fabric Extender (FEX) group, use the **system fex-group shutdown** command. To bring up a FEX group, use the **no** form of this command.

system fex-group *name* **shutdown**

no system fex-group *name* **shutdown**

Syntax Description

name	Specifies the name of the FEX group.

Command Default

None

Command Modes

Maintenance profile configuration (config-mm-mode)

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to shutdown a FEX group:

```
switch# configure terminal
switch(config)# configure maintenance profile maintenance-mode
switch(config-mm-profile)# system fex-group fg1 shutdown
```

This example shows how to bring up a FEX group:

```
switch# configure terminal
switch(config)# configure maintenance profile maintenance-mode
switch(config-mm-profile)# no system fex-group fg1 shutdown
```

Related Commands

Command	Description
configure maintenance profile	Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.
show run mmode	Displays the currently running maintenance profile configuration on a switch.
show system mode	Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.

system mode maintenance

To put the switch in maintenance mode, use the **system mode maintenance** command. To exit the maintenance mode and return to normal mode, use the **no** form of the command.

system mode maintenance

no system mode maintenance

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Global configuration (config)

Command History

Release	Modification
7.3(0)N1(1)	This command was modified. The default mode for Graceful Insertion and Removal (GIR) is “isolate”.
7.1(0)N1(1)	This command was introduced. The default mode for GIR is “shutdown”.

Usage Guidelines

In Cisco NX-OS Release 7.1(0)N1(1), the default mode for Graceful Insertion and Removal (GIR) is "shutdown". The switch will use the **shutdown** command to bring down the protocols and shut down the physical ports.

Beginning from Cisco NX-OS Release 7.3(0)N1(1),the default mode for GIR is ïsolate". The switch will use the **isolate** command to isolate the protocols from the network. The switch will then be isolated from the network but is not shut down.

This command does not require a license.

Examples

This example shows how to put the switch in maintenance mode:

```
switch# configure terminal
switch(config)# system mode maintenance
Following configuration will be applied:

router bgp 100
  isolate
router ospf 100
  isolate
router isis 100
  isolate

Do you want to continue (y/n)? [no] y

Generating a snapshot before going into maintenance mode
```

```
Starting to apply commands...

Applying : router bgp 100
Applying :   isolate
Applying : router ospf 100
Applying :   isolate
Applying : router isis 100
Applying :   isolate

Maintenance mode operation successful.
```

This example shows how to exit the maintenance mode and return to normal mode:

```
switch# configure terminal
switch(config)# no system mode maintenance

Following configuration will be applied:

router isis 100
  no isolate
router ospf 100
  no isolate
router bgp 100
  no isolate

Do you want to continue (y/n)? [no] y

Starting to apply commands...

Applying : router isis 100
Applying :   no isolate
Applying : router ospf 100
Applying :   no isolate
Applying : router bgp 100
Applying :   no isolate

Maintenance mode operation successful.

Generating Current Snapshot

Please use 'show snapshots compare before_maintenance after_maintenance' to check the
health of the system
```

Related Commands

Command	Description
configure maintenance profile	Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.
show system mode	Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.
system mode maintenance always-use-custom-profile	Applies the existing custom maintenance mode profile and prevents creation of auto-generated maintenance mode profile.

Command	Description
system mode maintenance on-reload reset-reason	Boots the switch into maintenance mode automatically in the event of a specified system crash.
system mode maintenance shutdown	Shuts down all protocols and interfaces except the management interface (by using the **shutdown** command and not the default **isolate** command).
system mode maintenance timeout	Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.

system mode maintenance always-use-custom-profile

To apply the existing custom maintenance-mode profile and prevent creation of auto-generated maintenance-mode profile, use the **system mode maintenance always-use-custom-profile** command.

system mode maintenance always-use-custom-profile

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Global configuration mode (config)

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines

The **always-use-custom-profile** option forces the **dont-generate-profile** option to be used even if it has not been specified using the **system mode maintenance** command. You cannot use the "shutdown" option when the **always-use-custom-profile** option is being used.

This command does not require a license.

Examples

This example shows how to always apply the existing custom maintenance mode profile and prevent creation of auto-generated maintenance mode profile:

```
switch(config)# system mode maintenance always-use-custom-profile
```

Related Commands

Command	Description
configure maintenance profile	Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.
show run mmode	Displays the currently running maintenance profile configuration on a switch.
show system mode	Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.
system mode maintenance on-reload reset-reason	Boots the switch into maintenance mode automatically in the event of a specified system crash.

Command	Description
system mode maintenance shutdown	Shuts down all protocols and interfaces except the management interface (by using the **shutdown** command and not the default **isolate** command).
system mode maintenance timeout	Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.

system mode maintenance dont-generate-profile

To prevent the dynamic searching of enabled protocols and put the switch in maintenance mode by executing commands configured in a custom maintenance mode profile, use the **system mode maintenance dont-generate-profile** command. To exit maintenance mode and return to normal mode, use the **no** form of this command.

system mode maintenance dont-generate-profile

no system mode maintenance dont-generate-profile

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Global configuration (config)

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines.

This command does not require a license.

Examples

This example shows how to prevent the dynamic searching of enabled protocols and put the switch in maintenance mode by executing commands configured in a custom maintenance mode profile:

```
switch(config)# system mode maintenance dont-generate-profile

Following configuration will be applied:

router bgp 100
  isolate
sleep instance 1 10
interface Ethernet1/1
  shutdown

Do you want to continue (y/n)? [no] y

Generating a snapshot before going into maintenance mode

Starting to apply commands...

Applying : router bgp 100
Applying :   isolate
Applying : sleep instance 1 10
Applying : interface Ethernet1/1
Applying :   shutdown

Maintenance mode operation successful.
```

Related Commands

Command	Description
configure maintenance profile	Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.
show run mmode	Displays the currently running maintenance profile configuration on a switch.
show system mode	Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.
system mode maintenance on-reload reset-reason	Boots the switch into maintenance mode automatically in the event of a specified system crash.
system mode maintenance shutdown	Shuts down all protocols and interfaces except the management interface (by using the **shutdown** command and not the default **isolate** command).
system mode maintenance timeout	Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.

system mode maintenance on-reload reset-reason

To boot the switch into maintenance-mode automatically in the event of a specified system crash, use the **system mode maintenance on-reload reset-reason** command. To prevent the switch from being brought up in maintenance mode in the event of a system crash, use the **no** form of this command.

system mode maintenance on-reload reset-reason *reason*

no system mode maintenance on-reload reset-reason *reason*

Syntax Description

reason	Specifies the reset reason. The reset reasons are as follows: • HW_ERROR—Hardware error • SVC_FAILURE—Critical service failure • KERN_FAILURE—Kernel panic • WDOG_TIMEOUT—Watchdog timeout • FATAL_ERROR—Fatal error • MANUAL_RELOAD---Manual reload • MAINTENANCE—Reloads the switch in maintenance mode if the switch was already in maintenance mode before reload. • MATCH_ANY—Any of the above reasons • ANY_OTHER—Any reload reason not specified above

Defaults

None

Command Modes

Global configuration (config)

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines

We recommend configuring the reset reason and saving it to the startup configuration. This enables the switch to go into the maintenance mode after a switch reloads due to any reason.

This command does not require a license.

Examples

This example shows how to automatically boot the switch into maintenance mode if a fatal error or a hardware error occurs

```
switch(config)# system mode maintenance on-reload reset-reason fatal_error
switch(config)#  system mode maintenance on-reload reset-reason hw_error
```

Related Commands

Command	Description
configure maintenance profile	Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.
show run mmode	Displays the currently running maintenance profile configuration on a switch.
show system mode	Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.
system mode maintenance shutdown	Shuts down all protocols and interfaces except the management interface (by using the **shutdown** command and not the default **isolate** command).
system mode maintenance timeout	Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.

system mode maintenance shutdown

To shut down all protocols and interfaces except the management interface (by using the **shutdown** command and not the default **isolate** command), use the **system mode maintenance shutdown** command.

system mode maintenance shutdown

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Global configuration (config)

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines.

This command does not require a license.

Examples

This example shows how to shut down all protocol and interfaces on the switch except the management interface:

```
switch# configure terminal
switch(config)# system mode maintenance shutdown

Following configuration will be applied:

router bgp 100
  shutdown
router ospf 100
  shutdown
router isis 100
  shutdown
system interface shutdown

Do you want to continue (y/n)? [no] y

Generating a snapshot before going into maintenance mode

Starting to apply commands...

Applying : router bgp 100
Applying :   shutdown
Applying : router ospf 100
Applying :   shutdown
Applying : router isis 100
Applying :   shutdown
Applying : system interface shutdown
```

```
Maintenance mode operation successful.
```

Related Commands

Command	Description
configure maintenance profile	Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.
show run mmode	Displays the currently running maintenance profile configuration on a switch.
show system mode	Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.
system mode maintenance on-reload reset-reason	Boots the switch into maintenance mode automatically in the event of a specified system crash.
system mode maintenance timeout	Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.

system mode maintenance timeout

To configure the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes, use the **system mode maintenance timeout** command. To remove the configured timer, use the **no** form of this command.

system mode maintenance timeout *value*

no system mode maintenance timeout *value*

Syntax Description

value	Specifies the number of minutes for which the switch will be in maintenance mode. Range is from 5 to 65535 minutes.

Defaults

None

Command Modes

Global configuration (config)

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines

We recommend setting the timeout value to at least 30 minutes. Once the configured time elapses, the switch returns to normal mode automatically.

This command does not require a license.

Examples

This example shows how to keep the switch in maintenance mode for a specific number of minutes:

```
switch# configure terminal
switch(config)# system mode maintenance timeout 30
```

Related Commands

Command	Description
configure maintenance profile	Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.
show run mmode	Displays the currently running maintenance profile configuration on a switch.
show system mode	Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.
system mode maintenance on-reload reset-reason	Boots the switch into maintenance mode automatically in the event of a specified system crash.

system soft-reload enable

To enable the switch to perform a soft reload after a process crash, use the **system soft-reload enable** command. To disable soft reload, use the **no** form of this command.

system soft-reload enable

no system soft-reload enable

Syntax Description

This command has no arguments or keywords.

Command Default

Soft reload is disabled.

Command Modes

Global configuration mode (config)

Command History

Release	Modification
7.3(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

A normal switch reload is attempted if a soft reload due to a process crash fails. A soft reload is not triggered when the following scenarios occur:

- If Layer 3 licenses (LAN_BASE_SERVICES_PKG and LAN_ENTERPRISE_SERVICES_PKG) are installed.
- Kernel panic/crash
- Sysmgr crash
- Crashing of the following processes: mmode, provision, xmlma, res, evms, evmc, securityd, aaa, snmpd, callhome, cts, m2rib, stp, ntp, ntpd, bigsurusd, carmelusd, pfma, sensor, pacifica, bootvar, ipqosmgr, vms, sh, libvirtd, init, sysmgr, pfma, vshd, licmgr and sysinfo.

Examples

This example shows how to perform a soft reload after a process crash:

```
switch# configure terminal
switch(config)# system soft-reload enable
```

This example shows how to disable soft reload:

```
switch# configure terminal
switch(config)# no system soft-reload enable
```

Related Commands

Command	Description
show system soft-reload status	Displays the status of the soft reload.
soft-reload	Performs a manual soft reload of the switch.

T Commands

This chapter describes the system management commands available that begin with T.

template data timeout

To configure the template data timeout parameter for the NetFlow exporter, use the **template data timeout** command. To remove the template data timeout parameter, use the **no** form of this command.

template data timeout *time*

no template data timeout [*time*]

Syntax Description

time	(Optional) Time in seconds. The range is from 1 to 86400.

Defaults

None

Command Modes

NetFlow exporter version 9 configuration (config-flow-exporter-version-9)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure the template data timeout parameter:

```
switch(config)# flow exporter Netflow-Exporter-1
switch(config-flow-exporter)# version 9
switch(config-flow-exporter-version-9)# template data timeout 120
```

This example shows how to remove the template data timeout parameter configuration:

```
switch(config-flow-exporter)# version 9
switch(config-flow-exporter-version-9)# no template data timeout 120
```

Related Commands

Command	Description
show flow exporter	Displays information about NetFlow exporters.

Show Commands

This chapter describes the system management **show** commands.

show diagnostic bootup level

To display the current bootup diagnostic level on the switch, use the **show diagnostic bootup level** command.

show diagnostic bootup level

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the current bootup diagnostic level:

```
switch# show diagnostic bootup level

        Current bootup diagnostic level: complete

switch#
```

Related Commands

Command	Description
diagnostic bootup level	Configures the bootup diagnostic level for a faster module bootup time.
show diagnostic result	Displays the results of the diagnostics tests.

show diagnostic result

To display the results of the diagnostic tests, use the **show diagnostic result** command.

show diagnostic result module {*module-no* | **all**}

Syntax Description

module	Specifies the module for which diagnostic results are displayed.
module-no	Module number. Valid values are 1 to 3.
all	Displays the diagnostic results for all modules.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the diagnostic results for a specific module:

```
switch# show diagnostic result module 1

Current bootup diagnostic level: complete

Module 1: 48X10GE/Supervisor  SerialNo : JAF1339ANGH

  Overall Diagnostic Result for Module 1 : PASS
  Diagnostic level at card bootup: complete

  Test results: (. = Pass, F = Fail, I = Incomplete,
                 U = Untested, A = Abort)

     1) TestUSBFlash ----------------------> .
     2) TestSPROM -------------------------> .
     3) TestPCIe --------------------------> .
     4) TestLED ---------------------------> .
     5) TestOBFL --------------------------> .
     6) TestNVRAM -------------------------> .
     7) TestPowerSupply -------------------> F
     8) TestTemperatureSensor ---------------> .
     9) TestFan ---------------------------> .
    10) TestVoltage ------------------------> .
    11) TestGPIO ---------------------------> .
    12) TestInbandPort ---------------------> .
    13) TestManagementPort -----------------> .
    14) TestMemory -------------------------> .
    15) TestFabricEngine :

   Eth    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   Port ------------------------------------------------------------------------
          .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .
```

```
   Eth   25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
   Port ------------------------------------------------------------------------
          .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .


    16) TestFabricPort :

   Eth    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   Port ------------------------------------------------------------------------
          .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .

   Eth   25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
   Port ------------------------------------------------------------------------
          .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .


    17) TestForwardingEngine :

   Eth    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   Port ------------------------------------------------------------------------
          .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .

   Eth   25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
   Port ------------------------------------------------------------------------
          .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .


    18) TestForwardingEnginePort :

   Eth    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   Port ------------------------------------------------------------------------
          .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .

   Eth   25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
   Port ------------------------------------------------------------------------
          .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .


    19) TestFrontPort :

   Eth    1  2  3  4  5  6  7  8  9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24
   Port ------------------------------------------------------------------------
          .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .

   Eth   25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48
   Port ------------------------------------------------------------------------
          .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .  .

switch#
```

Related Commands

Command	Description
diagnostic bootup level	Configures the bootup diagnostic level for a faster module bootup time.
show diagnostic bootup level	Displays the bootup diagnostics level.

show flow exporter

To display the Flexible NetFlow flow exporter status and statistics, use the **show flow exporter** command.

show flow exporter [**name** *exporter-name*]

Syntax Description

name *exporter-name*	(Optional) Specifies the name of a flow exporter. The name can be any case-sensitive, alphanumeric string up to 64 characters.

Defaults

Information for all flow exporters configured on the router is displayed.

Command Modes

Any command mode

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

You must have already enabled traffic monitoring with Flexible NetFlow using an exporter before you can use the **show flow exporter** command.

This command does not require a license.

Examples

This example shows how to display the status and statistics for all of the flow exporters configured on the router:

```
switch# show flow exporter
Flow Exporter NFC-DC-PHOENIX:
Export Version 5
Exporter Statistics
    Number of Flow Records Exported 0
    Number of Export Packets Sent 0
    Number of Export Bytes Sent 0
    Number of Destination Unreachable Events 0
    Number of No Buffer Events 0
    Number of Packets Dropped (No Route to Host) 0
    Number of Packets Dropped (other) 0
    Number of Packets Dropped (LC to RP Error) 0
    Number of Packets Dropped (Output Drops) 0
    Time statistics were last cleared: Never
Flow exporter timeout:
    Export Version 5
    Exporter Statistics
        Number of Flow Records Exported 0
        Number of Export Packets Sent 0
        Number of Export Bytes Sent 0
        Number of Destination Unreachable Events 0
        Number of No Buffer Events 0
        Number of Packets Dropped (No Route to Host) 0
```

```
        Number of Packets Dropped (other) 0
        Number of Packets Dropped (LC to RP Error) 0
        Number of Packets Dropped (Output Drops) 0
        Time statistics were last cleared: Never
Flow exporter test-exporter:
    Description: test server in San Jose CA
    Export Version 5
    Exporter Statistics
        Number of Flow Records Exported 0
        Number of Export Packets Sent 0
        Number of Export Bytes Sent 0
        Number of Destination Unreachable Events 0
        Number of No Buffer Events 0
        Number of Packets Dropped (No Route to Host) 0
        Number of Packets Dropped (other) 0
        Number of Packets Dropped (LC to RP Error) 0
        Number of Packets Dropped (Output Drops) 0
        Time statistics were last cleared: Never
```

Related Commands

Command	Description
clear flow exporter	Clears the statistics for exporters.
destination	Configures an export destination for flow exporters.
dscp	Configures optional differentiated services code point (DSCP) parameters for flow exporters.
flow exporter	Creates a flow exporter.
option	Configure options for flow exporters.
show flow exporter	Displays flow exporter status and statistics.
source	Configures the source IP address interface for flow exporters.
template	Configures the template resend timeout for flow exporters.
transport	Configures the transport protocol for flow exporters.

show flow interface

To display the Flexible NetFlow configuration and status for an interface, use the **show flow interface** command.

show flow interface [*interface-type number*]

Syntax Description

interface-type number	(Optional) Type of interface that you want to view Flexible NetFlow accounting configuration information on.

Defaults

Information for the Flexible NetFlow accounting configuration on the interface is displayed.

Command Modes

Any command mode

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

You must have already enabled traffic monitoring with Flexible NetFlow before you can use the **show flow interface** command.

This command does not require a license.

Examples

This example shows how to display the Flexible NetFlow accounting configuration on interface Ethernet 1/30:

```
switch# show flow interface ethernet 1/30
Interface Ethernet1/30
        Monitor:         m1
        Direction: Input
        Traffic(IPv4): sampler SAMPLER-2#
```

Table 1 describes the significant fields shown in the display.

Table 1 show flow interface Field Descriptions

Field	Description
Interface	The interface that information is applicable to.
monitor	The name of the flow monitor that is configured on the interface.

Table 1 show flow interface Field Descriptions (continued)

Field	Description
direction:	The direction of traffic the flow monitor is monitoring.
traffic (ip)	Indicates if the flow monitor is in normal mode or sampler mode. The possible values are as follows: • On—The flow monitor is in normal mode. • Sampler— The flow monitor is in sampler mode (the name of the sampler is included in the display).

Related Commands

Command	Description
show flow sampler	Displays flow sampler status and statistics.

show flow record

To display the status and statistics of a Flexible NetFlow flow record, use the **show flow record** command.

show flow record [[**name** *record-name*] **[netflow {ipv4 | ipv6 }** *record* **| layer2-switched input | protocol-port] | netflow-original**]

Syntax Description

name *record-name*	(Optional) Specifies the name of a flow record that you previously configured.
netflow *record*	(Optional) Configures the flow monitor to use one of the predefined records. See Table 2 for a listing of the available records and their definitions.
layer2-switched input	(Optional) Configures the flow monitor to use the Layer 2 switched collection scheme records.
protocol-port	(Optional) Configures the flow monitor to use protocol and ports aggregation records.
netflow-original	(Optional) Specifies the Flexible NetFlow implementation of original NetFlow with origin autonomous systems.

Defaults

Information for all flow exporters configured on the router is displayed.

Command Modes

Any command mode

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

You must have already enabled traffic monitoring with Flexible NetFlow using an exporter before you can use the **show flow exporter** command.

Table 2 describes the keywords and descriptions for the *record* argument.

Table 2 Keywords and Descriptions for the record Argument

original-input	Traditional IPv4 input NetFlow.
original-output	Traditional IPv4 output NetFlow.

This command does not require a license.

Examples

This example shows how to display the status and statistics of the original input NetFlow record:

```
switch# show flow record netflow ipv4 original-input
Flow record ipv4 original-input:
    Description: Traditional IPv4 input NetFlow
```

```
    No. of users: 0
    Template ID: 0
    Fields:
        match ipv4 source address
        match ipv4 destination address
        match ip protocol
        match ip tos
        match transport source-port
        match transport destination-port
        match interface input
        collect routing source as
        collect routing destination as
        collect routing next-hop address ipv4
        collect transport tcp flags
        collect counter bytes
        collect counter packets
        collect timestamp sys-uptime first
        collect timestamp sys-uptime last
        collect interface output
switch#
```

Table 3 describes the significant fields shown in the display.

Table 3 show flow record netflow-original Field Descriptions

Field	Description
Description	The description that you configured for the record or the default description–User defined.
No. of users	The number of references to this record in the configuration.
Fields	The fields that are included in this record. For more information on the fields, refer to the **match** and **collect** commands.

Related Commands

Command	Description
exporter	Specifies a flow exporter for flow monitors.
flow monitor	Creates a flow monitor.
record	Configures a flow record for the flow monitor.
record	Configures a flow record a for flow monitor.

show flow timeout

To display the Flexible NetFlow flow cache timeout values, use the **show flow timeout** command.

show flow timeout

Syntax Description

This command has no arguments or keywords.

Defaults

Information for the Flexible NetFlow accounting configuration on the interface is displayed.

Command Modes

Any command mode

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

You must have already enabled traffic monitoring with Flexible NetFlow before you can use the **show flow timeout** command.

This command does not require a license.

Examples

This example shows how to display the Flexible NetFlow flow cache timeout values:

```
switch# show flow timeout
Flow timeout values
    Active timeout:           1800 seconds
    Inactive timeout:      15 seconds
    Flush Cache timeout    15 seconds
    Fast timeout:             Disabled
    Session aging timeout:    Disabled
    Aggressive aging timeout: Disabled
switch#
```

Related Commands

Command	Description
flow timeout	Creates a flow timeout.

show hosts

To display the Domain Name Server (DNS) name servers and domain names, use the **show hosts** command.

show hosts

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the IP addresses of the DNS servers that are used to resolve host names:

```
switch# show hosts
DNS lookup enabled
Default domain for vrf:default is mysite.com
Name/address lookup uses domain service
Name servers are 255.255.255.255


Vrf                 Use-vrf             Token           Config

default             management          domain          mysite.com
default             management          add. domain(s)  mysite2.com

Host                    Address
switch#
```

Related Commands

Command	Description
ip domain-list	Defines a list of domains.
ip domain lookup	Enables DNS-based host name-to-address translation.
ip domain-name	Configures a name server.

show ip dns source-interface

To display the source interfaces configured for Domain Name Server (DNS) domain lookup, use the **show ip dns source-interface** command.

show ip dns source-interface [**vrf** {*vrf-name* | **all** | **default** | **management**}]

Syntax Description

vrf	(Optional) Displays information about the virtual routing and forwarding (VRF) instance.
vrf-name	(Optional) VRF name. The name is case sensitive and can be a maximum of 32 characters.
all	(Optional) Displays all VRF instances.
default	(Optional) Displays the default VRF information.
management	(Optional) Displays the management VRF information.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the source interfaces configured for DNS domain lookup:

```
switch# show ip dns source-interface
VRF Name                                Interface
default                                 Ethernet1/5
switch#
```

Related Commands

Command	Description
ip domain-lookup	Enables the DNS lookup feature.
ip dns source-interface	Configures interfaces for DNS domain lookup.

show logging console

To display the console logging configuration, use the **show logging console** command.

show logging console

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the console logging configuration:

```
switch# show logging console
```

Related Commands

Command	Description
logging console	Configures logging to the console.

show logging info

To display the logging configuration, use the **show logging info** command.

show logging info

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the logging configuration:

```
switch# show logging info
```

Related Commands

Command	Description
logging level	Enables logging messages from a defined facility.

show logging last

To display the last number of lines of the logfile, use the **show logging last** command.

show logging last *number*

Syntax Description		
	number	Enters the number of lines to display from 1 to 9999.

Command Default None

Command Modes EXEC mode

Command History	Release	Modification
	6.0(2)N1(1)	This command was introduced.

Examples This example shows how to display the last 42 lines of the log file:

```
switch# show logging last 42
```

Related Commands	Command	Description
	logging level	Enables logging messages from a defined facility.

show logging level

To display the facility logging severity level configuration, use the **show logging level** command.

show logging level [*facility*]

Syntax Description

facility	(Optional) Logging facility. The facilities are listed in Table 1-1 of Appendix 1, "System Message Logging Facilities."

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the EtherChannel logging severity level configuration:

```
switch# show logging level port-channel
```

This example shows how to display the Flex Links logging severity level configuration:

```
switch# show logging level flexlink
Facility        Default Severity        Current Session Severity
--------        ----------------        ------------------------
Flexlink                2                       5

0(emergencies)          1(alerts)       2(critical)
3(errors)               4(warnings)     5(notifications)
6(information)          7(debugging)

switch#
```

This example shows how to display the FCoE NPV logging severity level configuration:

```
switch# show logging level fcoe_mgr
Facility        Default Severity        Current Session Severity
--------        ----------------        ------------------------
fcoe_mgr                2                       3

0(emergencies)          1(alerts)       2(critical)
3(errors)               4(warnings)     5(notifications)
6(information)          7(debugging)

switch#
```

Related Commands

Command	Description
logging level	Configures the facility logging level.

show logging logfile

To display the messages in the log file that were timestamped within the span entered, use the **show logging logfile** command.

show logging logfile [**start-time** *yyyy mmm dd hh:mm:ss*] [**end-time** *yyyy mmm dd hh:mm:ss*]

Syntax Description

start-time *yyyy mmm dd hh:mm:ss*	(Optional) Specifies a start time in the format *yyyy mmm dd hh:mm:ss*. Use three characters for the month (*mmm*) field, digits for the year (*yyyy*) and day (*dd*) fields, and digits separated by colons for the time (*hh:mm:ss*) field.
end-time *yyyy mmm dd hh:mm:ss*	(Optional) Specifies an end time in the format *yyyy mmm dd hh:mm:ss*. Use three characters for the month (*mmm*) field, digits for the year (*yyyy*) and day (*dd*) fields, and digits separated by colons for the time (*hh:mm:ss*) field.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

If you do not enter an end time, the current time is used.

Examples

This example shows how to display the messages in the log file that were timestamped within the span shown:

```
switch# show logging logfile start-time 2008 mar 11 12:10:00
```

Related Commands

Command	Description
logging logfile	Configures logging to a log file.

show logging module

To display the module logging configuration, use the **show logging module** command.

show logging module

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the module logging configuration:

```
switch# show logging module
```

Related Commands

Command	Description
logging module	Configures module logging.

show logging monitor

To display the monitor logging configuration, use the **show logging monitor** command.

show logging monitor

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the monitor logging configuration:

```
switch# show logging monitor
```

Related Commands

Command	Description
logging monitor	Configures logging on the monitor.

show logging nvram

To display the messages in the nonvolatile random access memory (NVRAM) log, use the **show logging nvram** command.

show logging nvram [**last** *number-lines*]

Syntax Description

last *number-lines*	(Optional) Specifies the number of lines to display. The number of lines is from 1 to 100.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the last 20 messages in the NVRAM log:

```
switch# show logging nvram last 20
```

Related Commands

Command	Description
logging level	Enables logging messages from a defined facility.

show logging onboard

To display the onboard logging information based on the error type, use the **show logging onboard** command.

show logging onboard {**boot-uptime** | **device-version** | **endtime** | **environmental-history** | **exception-log** | **kernel-trace** | **obfl-history** | **obfl-logs** | **stack-trace** | **starttime** | **status**} [**>** *file* | **|** *type*]

Syntax Description

boot-uptime	Displays the onboard failure logging (OBFL) boot and uptime information.
device-version	Displays the OBFL device version information.
endtime	Displays the OBFL logs until the specified end time in the following format: *mm*/*dd*/*yy*-*HH*:*MM*:*SS*
environmental-history	Displays the OBFL environmental history.
exception-log	Displays the OBFL exception log.
kernel-trace	Displays the OBFL kernel trace information.
obfl-history	Displays the OBFL history information.
obfl-logs	Displays the OBFL technical support log information.
stack-trace	Displays the OBFL kernel stack trace information.
starttime	Displays the OBFL logs from the specified start time in the following format: *mm*/*dd*/*yy*-*HH*:*MM*:*SS*
status	Displays the OBFL status enable or disable.
> *file*	(Optional) Redirects the output to a file. See the "Usage Guidelines" section for additional information.
| ***type***	(Optional) Filters the output. See the "Usage Guidelines" section for additional information.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

The date and time arguments for the **starttime** and **endtime** keywords are entered as the date month/day/year (*mm*/*dd*/*yy*), followed by a hyphen, and the time in 24-hour format in hours:minutes:seconds (*HH:MM:SS*). For example:

- **starttime** 01/30/13-15:01:57
- **endtime** 01/30/13-15:04:57

The valid values for *file* are as follows:

- **bootflash:**
- **ftp:**
- **scp:**
- **sftp:**
- **tftp:**
- **volatile:**

The valid values for *type* are as follows:

- **begin** [**-i**] [**-x**] [*word*]—Begin with the line that matches the text.
  - **-i**—Ignores the case difference when comparing the strings.
  - **-x**—Prints only the lines where the match is a whole line.
  - *word*—Specifies for the expression.
- **count** [**>** *file* | **|** *type*]—Counts number of lines.
- **egrep | grep** *print-match*—Egrep or Grep. Egrep searches for lines of text that match more sophisticated regular expression syntax than grep. Grep searches for lines of text that match one or many regular expressions, and outputs only the matching lines.
  - **-A** *num*—Prints the specifies number of lines of context after every matching line. Range: 1 to 999.
  - **-B** *num*—Prints the specifies number of lines of context before every matching line. Range: 1 to 999.
  - **-c**—Prints a total count of matching lines only.
  - **-i**—Ignores the case difference when comparing the strings.
  - **-n**—Prints each match preceded by its line number.
  - **-v**—Prints only the lines that contain no matches for the *word* argument.
  - **-w**—Prints only lines where the match is a complete word.
  - **-x**—Prints only the lines where the match is a whole line.
  - *word*—Specifies for the expression.
- **exclude** [**-i**] [**-x**] [*word*]—Excludes the lines that match.
  - **-i**—Ignores the case difference when comparing the strings.
  - **-x**—Prints only the lines where the match is a whole line.
  - *word*—Specifies for the expression.
- **head** [**-n** *num*]—Stream Editor. The optional **-n** *num* keyword and argument allow you to specify the number of lines to print. Range: 0 to 2147483647.
- **include** [**-i**] [**-x**] [*word*]—Include the lines that match.
  - **-i**—Ignores the case difference when comparing the strings.
  - **-x**—Prints only the lines where the match is a whole line.
  - *word*—Specifies for the expression.
- **last** [*num*]—Displays the last lines to print. The optional *num* specifies the number of lines to print. Range: 0 to 9999.
- **less [-E | -d**]—Quits at the end of the file.

  - **-E**—(Optional) Quits at the end of the file.
  - **-d**—(Optional) Specifies a dumb terminal.
- **no-more**—Turns-off pagination for command output.
- **sed** *command*—Stream Editor
- **wc**—Counts words, lines, and characters.
  - **-c**—(Optional) Specifies the output character count.
  - **-l**—(Optional) Specifies the output line count.
  - **-w**—(Optional) Specifies the output word count.
  - **>**—Redirects it to a file.
  - **|**—Pipes command output to filter.

Use this command to view OBFL data from the system hardware. The OBFL feature is enabled by default and records operating temperatures, hardware uptime, interrupts, and other important events and messages that can assist with diagnosing problems with hardware cards or modules installed in a Cisco router or switch. Data is logged to files stored in nonvolatile memory. When the onboard hardware is started up, a first record is made for each area monitored and becomes a base value for subsequent records.

The OBFL feature provides a circular updating scheme for collecting continuous records and archiving older (historical) records, ensuring accurate data about the system. Data is recorded in one of two formats: continuous information that displays a snapshot of measurements and samples in a continuous file, and summary information that provides details about the data being collected. The message “No historical data to display” is seen when historical data is not available.

Examples

This example shows how to display the OBFL boot and uptime information:

```
switch# show logging onboard boot-uptime
Wed Jan 30 06:11:59 2013:  Boot Record
--------------------------------------------------------------------------------
Boot Time..........: Wed Jan 30 06:11:59 2013
Slot Number........:  1
Serial Number......:  FLC12345678
Bios Version.......:    v1.2.0(06/19/08)
Firmware Version...:  6.0(2)N1(1) [build 6.0(2)N1(1)]
```

Table 4 describes the significant fields shown in the display.

Table 4 show logging onboard boot-uptime Command Output

Field	Description
Boot Time	Time boot occurred.
Slot Number	Slot number.
Serial Number	Serial number of the module.
Bios Version	Primary binary input and output system (BIOS) version.
Firmware Version	Firmware version.

This example shows how to display the OBFL logging device information:

```
switch# show logging onboard device-version
---------------------------
OBFL Data for
    Module:  1
---------------------------

Device Version Record
-------------------------------------------------------------------------
Timestamp                  Device Name      Instance Hardware Software
                                                Num  Version  Version
-------------------------------------------------------------------------
Wed  Jan 30 07:07:00 2013   GATOS                 2        2        0
Wed  Jan 30 07:07:00 2013   GATOS                 3        2        0
Wed  Jan 30 07:07:00 2013   GATOS                 4        2        0
Wed  Jan 30 07:07:00 2013   GATOS                 5        2        0
Wed  Jan 30 07:07:00 2013   GATOS                 6        2        0
Wed  Jan 30 07:07:00 2013   GATOS                 7        2        0
Wed  Jan 30 07:07:00 2013   GATOS                 8        2        0
Wed  Jan 30 07:07:00 2013   GATOS                 9        2        0
Wed  Jan 30 07:07:00 2013   GATOS                10        2        0
Wed  Jan 30 07:07:00 2013   GATOS                11        2        0
Wed  Jan 30 07:07:00 2013   GATOS                12        2        0
Wed  Jan 30 07:07:00 2013   GATOS                13        2        0
Wed  Jan 30 07:07:00 2013   ALTOS                 0        2        0
Wed  Jan 30 07:07:00 2013   GATOS                 0        2        0
Wed  Jan 30 07:07:00 2013   GATOS                 1        2        0
Wed  Jan 30 07:07:00 2013   GATOS                 2        2        0
```

Table 5 describes the significant fields shown in the display.

Table 5 show logging onboard device-version Command Output

Field	Description
Timestamp	Day, date, and time.
Device Name	Device name.
Instance Num	Number of instances.
Hardware Version	Hardware device version.
Software Version	Software device version.

This example shows how to display the OBFL history information:

```
switch# show logging onboard obfl-history
```

The **show logging onboard obfl-history** command displays the following information:

- Timestamp when OBFL is manually disabled.
- Timestamp when OBFL is manually enabled.
- Timestamp when OBFL data is manually cleared.

This example shows how to display the OBFL kernel stack trace information:

```
switch# show logging onboard stack-trace
```

The **show logging onboard stack-trace** command displays the following information:

- Time in seconds

- Time in microseconds
- Error description string
- Current process name and identification
- Kernel jiffies
- Stack trace

Related Commands

Command	Description
clear logging onboard	Clears the OBFL entries in the persistent log.
hw-module logging onboard	Enables or disabled OBFL entries based on the error type.

show logging pending

To display the pending changes to the syslog server configuration, use the **show logging pending** command.

show logging pending

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the pending changes to the syslog server configuration:

```
switch# show logging pending
switch#
```

Related Commands

Command	Description
logging abort	Cancels the pending changes to the syslog server configuration.

show logging pending-diff

To display the differences from the current syslog server configuration to the pending changes of the syslog server configuration, use the **show logging pending-diff** command.

show logging pending-diff

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the pending differences of the syslog server configuration:

```
switch# show logging pending-diff
switch#
```

Related Commands

Command	Description
logging abort	Cancels the pending changes to the syslog server configuration.

show logging session status

To display the logging session status, use the **show logging session status** command.

show logging session status

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the logging session status:

```
switch# show logging session status
```

Related Commands

Command	Description
logging level	Enables logging messages from a defined facility.

show logging server

To display the syslog server configuration, use the **show logging server** command.

show logging server

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the syslog server configuration:

```
switch# show logging server
```

Related Commands

Command	Description
logging server	Configures a remote syslog server.

show logging status

To display the logging status, use the **show logging status** command.

show logging status

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the logging status:

```
switch# show logging status
Fabric Distribute     : Enabled
Session State         : IDLE
switch#
```

Related Commands

Command	Description
logging distribute	Enables the distribution of the syslog server configuration to network switches using the Cisco Fabric Services (CFS) infrastructure.

show logging timestamp

To display the logging time-stamp configuration, use the **show logging timestamp** command.

show logging timestamp

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the logging time-stamp configuration:

```
switch# show logging timestamp
```

Related Commands

Command	Description
logging timestamp	Configures the logging time stamp granularity.

show monitor session

To display information about the Switched Port Analyzer (SPAN) or Encapsulated Remote Switched Port Analyzer (ERSPAN) sessions, use the **show monitor session** command.

show monitor session [*session* | **all** [**brief**] | **range** *range* [**brief**] | **status**]

Syntax Description

session	(Optional) Number of the session. The range is from 1 to 18.
all	(Optional) Displays all sessions.
brief	(Optional) Displays a brief summary of the information.
range *range*	(Optional) Displays a range of sessions. The range is from 1 to 18.
status	(Optional) Displays the operational state of all sessions. **Note** This keyword applies only to SPAN sessions.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display information about SPAN session 1:

```
switch# show monitor session 1
session 1
---------------
description       : A Local SPAN session
type              : local
state             : down (No operational src/dst)
source intf       :
    rx            : Eth1/5
    tx            : Eth1/5
    both          : Eth1/5
source VLANs      :
    rx            :
source VSANs      :
    rx            :
destination ports : Eth1/21

Legend: f = forwarding enabled, l = learning enabled

switch#
```

This example shows how to display a brief information about a SPAN session:

```
switch# show monitor session range 1 brief
session 1
---------------
```

```
description       : A Local SPAN session
type              : local
state             : down (No operational src/dst)
source intf       :
    rx            : Eth1/5
    tx            : Eth1/5
    both          : Eth1/5
source VSANs      :
destination ports : Eth1/21

Legend: f = forwarding enabled, l = learning enabled

switch#
```

This example shows how to display the information about an ERSPAN session on a switch:

```
switch# show monitor session 1
session 1
---------------
description       : ERSPAN Source configuration
type              : erspan-source
state             : down (No valid global IP Address)
flow-id           : 1
vrf-name          : default
destination-ip    : 192.0.2.1
ip-ttl            : 255
ip-dscp            : 0
origin-ip         : origin-ip not specified
source intf       :
    rx            : Eth1/5
    tx            : Eth1/5
    both          : Eth1/5
source VLANs      :
    rx            : 5

switch#
```

Related Commands

Command	Description
monitor session	Creates a new Switched Port Analyzer (SPAN) session configuration.
show running-config monitor	Displays the running configuration information about SPAN sessions.

show ntp authentication-status

To display the status of the Network Time Protocol (NTP) authentication, use the **show ntp authentication-status** command.

show ntp authentication-status

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Any command mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the authentication status for NTP:

```
switch(config)# show ntp authentication-status
```

Related Commands

Command	Description
[**no**] **ntp authenticate**	Displays information about NTP peers.

show ntp peer-status

To display the status of the Network Time Protocol (NTP) peers, use the **show ntp peer-status** command.

show ntp peer-status

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the peer status for NTP:

```
switch(config)# show ntp peer-status
```

Related Commands

Command	Description
show ntp peers	Displays information about NTP peers.

show ntp peers

To display information about Network Time Protocol (NTP) peers, use the **show ntp peers** command.

show ntp peers

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display information about NTP peers:

```
switch(config)# show ntp peers
```

Related Commands

Command	Description
show ntp peer-status	Displays status information about NTP peers.

show ntp statistics

To display Network Time Protocol (NTP) statistics, use the **show ntp statistics** command.

show ntp statistics {**io** | **local** | **memory** | **peer** {**ipaddr** *address* | **name** *name1* [*..nameN*]}

Syntax Description

io	Displays the input-output statistics.
local	Displays the counters maintained by the local NTP.
memory	Displays the statistics counters related to the memory code.
peer	Displays the per-peer statistics counter of a peer.
ipaddr *address*	Displays statistics for the peer with the configured IPv4 or IPv6 address. The IPv4 address format is dotted decimal, x.x.x.x. The IPv6 address format is hexadecimal A:B::C:D.
name *name1*	Displays statistics for a named peer.
..nameN	(Optional) Displays statistics for one or more named peers.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the statistics for NTP:

```
switch(config)# show ntp statistics local
```

Related Commands

Command	Description
clear ntp statistics	Clears NTP statistics

show ntp timestamp-status

To display the Network Time Protocol (NTP) time-stamp information, use the **show ntp timestamp-status** command.

show ntp timestamp-status

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the NTP time-stamp status:

```
switch(config)# show ntp timestamp-status
```

Related Commands

Command	Description
clear ntp statistics	Clears NTP statistics
ntp	Configures NTP peers and servers on the switch.

show ptp brief

To display the PTP information, use the **show ptp brief** command.

show ptp brief

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the PTP status:

```
switch(config)# show ptp brief
```

Related Commands

Command	Description
show ptp clock	Displays the properties of the local clock.
show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.
show ptp corrections	Displays the last few PTP corrections.
show ptp parent	Displays the properties of the PTP parent and grandmaster clock.
show ptp port interface	Displays the status of the PTP port.
show ptp time-property	Displays the PTP clock time properties.

show ptp clock

To display the properties of the local PTP clock including clock identity, use the **show ptp clock** command.

show ptp clock

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the properties of the local clock:

```
switch(config)# show ptp clock
```

Related Commands

Command	Description
show ptp brief	Displays the PTP status.
show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.
show ptp corrections	Displays the last few PTP corrections.
show ptp parent	Displays the properties of the PTP parent and grandmaster clock.
show ptp port interface	Displays the status of the PTP port.
show ptp time-property	Displays the PTP clock time properties.

show ptp clocks foreign-masters-record

To display the state of the foreign masters known to the PTP process, use the **show ptp clocks foreign-masters-record** command.

show ptp clocks foreign-masters-record [**ethernet** *slot*/[*QSFP-module/*]*port*]

Syntax Description

ethernet	Specifies an Ethernet interface.
slot/[*QSFP-module/*]*port*	The *slot* number is from 1 to 255. The *QSFP-module* number is from 1 to 199. The *port* number is from 1 to 128.

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

For each foreign master, the output displays the clock identity, basic clock properties, and whether the clock is being used as a grandmaster.

Examples

This example shows how to display the foreign masters known to the PTP process:

```
switch(config)# show ptp foreign-masters-record
```

Related Commands

Command	Description
show ptp brief	Displays the PTP status.
show ptp clock	Displays the properties of the local clock.
show ptp corrections	Displays the last few PTP corrections.
show ptp port interface	Displays the status of the PTP port.
show ptp parent	Displays the properties of the PTP parent and grandmaster clock.
show ptp time-property	Displays the PTP clock time properties.

show ptp corrections

To display the last few PTP corrections, use the **show ptp corrections** command.

show ptp corrections

Syntax Description

There are no arguments or keywords for this command.

Command Default

None

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the most recent PTP corrections on the switch:

```
switch(config)# show ptp corrections
```

Related Commands

Command	Description
show ptp brief	Displays the PTP status.
show ptp clock	Displays the properties of the local clock.
show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.
show ptp port interface	Displays the status of the PTP port.
show ptp parent	Displays the properties of the PTP parent and grandmaster clock.
show ptp time-property	Displays the PTP clock time properties.

show ptp parent

To display the properties of the PTP parent and grandmaster clock, use the **show ptp parent** command.

show ptp parent

Syntax Description

There are no arguments or keywords for this command.

Command Default

None

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the properties of the PTP parent and grandmaster clock:

```
switch(config)# show ptp parent
```

Related Commands

Command	Description
show ptp brief	Displays the PTP status.
show ptp clock	Displays the properties of the local clock.
show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.
show ptp corrections	Displays the last few PTP corrections.
show ptp port interface	Displays the status of the PTP port.
show ptp time-property	Displays the PTP clock time properties.

show ptp port interface

To display the status of the PTP port, use the **show ptp port interface ethernet** command.

show ptp port interface [**ethernet** *slot*/[*QSFP-module/*]*port*]

Syntax Description

ethernet	Specifies an Ethernet interface.
slot/[*QSFP-module/*]*port*	The *slot* number is from 1 to 255. The *QSFP-module* number is from 1 to 199. The *port* number is from 1 to 128.

Command Default

None

Command Modes

Global configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the status of the PTP port on the switch:

```
switch(config)# show ptp port interface ethernet 5/1
```

Related Commands

Command	Description
show ptp brief	Displays the PTP status.
show ptp clock	Displays the properties of the local clock.
show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.
show ptp corrections	Displays the last few PTP corrections.
show ptp port interface	Displays the status of the PTP port.
show ptp parent	Displays the properties of the PTP parent and grandmaster clock.
show ptp time-property	Displays the PTP clock time properties.

show ptp time-property

To display the PTP clock time properties, use the **show ptp time-property** command.

show ptp time-property

Syntax Description

There are no arguments or keywords for this command.

Command Default

None

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the PTP clock time properties:

```
switch(config)# show ptp time-property
```

Related Commands

Command	Description
show ptp brief	Displays the PTP status.
show ptp clock	Displays the properties of the local clock.
show ptp clocks foreign-masters-record	Displays the state of foreign masters known to the PTP process.
show ptp corrections	Displays the last few PTP corrections.
show ptp parent	Displays the properties of the PTP parent and grandmaster clock.
show ptp port interface	Displays the status of the PTP port.

show run mmode

To display the currently running maintenance profile configuration on a switch, use the **show run mmode** command.

show run mmode [all]

Syntax Description

all	Displays the currently running maintenance profile configuration along with the defaults.

Defaults

None

Command Modes

Privileged EXEC

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the currently running maintenance profile configuration on a switch:

```
switch(config)# show run mmode

!Command: show running-config mmode
!Time: Wed May 13 22:37:02 1970

version 7.3(0)N1(1)
configure maintenance profile normal-mode
  router isis 100
    no isolate
  router ospf 100
    no isolate
  router bgp 100
    no isolate
configure maintenance profile maintenance-mode
  router bgp 100
    isolate
  router ospf 100
    isolate
  router isis 100
    isolate
configure terminal
```

Related Commands

Command	Description
configure maintenance profile	Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.
show system mode	Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.
system mode maintenance always-use-custom-profile	Applies the existing custom maintenance mode profile and prevents creation of auto-generated maintenance mode profile.
system mode maintenance on-reload reset-reason	Boots the switch into maintenance mode automatically in the event of a specified system crash.
system mode maintenance shutdown	Shuts down all protocols and interfaces except the management interface (by using the **shutdown** command and not the default **isolate** command).
system mode maintenance timeout	Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.

show running-config monitor

To display the running configuration for the Switched Port Analyzer (SPAN) or Encapsulated Remote Switched Port Analyzer (ERSPAN) session, use the **show running-config monitor** command.

show running-config monitor [**all**]

Syntax Description

all	(Optional) Displays current SPAN configuration information including default settings.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display information on the running SPAN configuration:

```
switch# show running-config monitor

!Command: show running-config monitor
!Time: Wed  Jan 30 07:07:00 2013

version 6.0(2)N1(1)
monitor session 1
  description A Local SPAN session
  source interface Ethernet1/5 both
  destination interface Ethernet1/21
  no shut

switch#
```

This example shows how to display detailed information on the running SPAN configuration:

```
switch# show running-config monitor all

!Command: show running-config monitor all
!Time: Wed  Jan 30 07:07:00 2013

version 6.0(2)N1(1)
monitor session 1 type local
  description A Local SPAN session
  source interface Ethernet1/5 both
  destination interface Ethernet1/21
  no shut

switch#
```

Related Commands

Command	Description
monitor session	Configures SPAN or ERSPAN sessions.
show monitor session	Displays information about SPAN or ERSPAN sessions.

show running-config port-security

To display the running system configuration information about secure ports, use the **show running-config port-security** command.

show running-config port-security [**all**]

Syntax Description

all	(Optional) Displays detailed information about secure ports, including default settings.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the running system configuration of all secure ports on an interface:

```
switch# show running-config port-security

!Command: show running-config port-security
!Time: Wed  Jan 30 07:07:00 2013

version 5.1(3)N1(1)
feature port-security


interface Ethernet1/5
  switchport port-security
  switchport port-security aging time 3
  switchport port-security maximum 10
  switchport port-security mac-address sticky

switch#
```

Related Commands

Command	Description
clear port-security dynamic	Clears the dynamically secured addresses on a port.
show startup-config port-security	Displays the configuration information in the startup file.

show sampler

To display a NetFlow sampler, use the **show sampler** command.

show sampler [**name**] [*sampler-name*]

Syntax Description

name	(Optional) Specifies a sampler.
sampler-name	(Optional) Sampler name. The maximum number of characters is 63.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

You can create a sampler to define the NetFlow sampling rate for a flow.

This command does not require a license.

Examples

This example shows how to display a NetFlow sampler:

```
switch(config)# show sampler
Sampler Netflow-Sampler-1:
    mode 1 out-of 1024
switch(config)#
```

Related Commands

Command	Description
sampler	Configures a sampler to collect data for a user selected packet ratio to preserve hardware resources.

show snapshots

To display the snapshots present on the switch, use the **show snapshots** command.

show snapshots

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Privileged EXEC

Command History

Release	Modification
7.1.0	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the snapshots present on the switch:

```
switch# show snapshots
Snapshot Name           Time                            Description
--------------------------------------------------------------------------------
before_maintenance      Wed May 13 13:21:16 1970   system-internal-snapshot
new                     Mon May 11 15:51:27 1970       after if down
```

Note In the above output example, “before_Maintenance” is the system-generated snapshot and “new” is the user-generated snapshot.

Related Commands

Command	Description
snapshot create *name description*	Creates a snapshot. The name variable can be 64 characters in length. The description variable can be 256 characters in length.
snapshot delete	Deletes a snapshot.
show snapshots compare	Displays the comparison between two snapshots.
show snapshots dump	Displays content of the various sections in a generated snapshot.
snapshot section	Adds or deletes a snapshot section.

show snapshots compare

To display the comparison between the two snapshots on a switch, use the **show snapshots compare** command.

show snapshots *snapshot-1 snapshot-2* [**ipv4routes | ipv6routes | summary**]

Syntax Description

snapshot-1 snapshot-2	Displays the comparison between the two snapshots.
ipv4routes	Displays a comparison of the IPv4 routes between the two snapshots.
ipv6routes	Displays a comparison of the IPv6 routes between the two snapshots.
summary	Displays a summary of the comparison between the two snapshots.

Defaults

None

Command Modes

Privileged EXEC

Command History

Release	Modification
7.1.0	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display a comparison between two snapshots:

```
switch# show snapshots compare before_maint during_maint

================================================================================
Feature              Tag                  before_maint       during_maint
================================================================================

[bgp]
--------------------------------------------------------------------------------

[eigrp]
--------------------------------------------------------------------------------

[eigrpv6]
--------------------------------------------------------------------------------

[interface]
--------------------------------------------------------------------------------

… <snip> …

[v4route]
--------------------------------------------------------------------------------

       [ipprefix:0.0.0.0/32]
                     uptime               PT24M32S           **PT58M37S**

       [ipprefix:127.0.0.0/8]
                     uptime               PT24M32S           **PT58M37S**
```

This example shows how to display a summary of the comparison between two snapshots:

```
switch# show snapshots compare before_maintenance after_maintenance summary

================================================================================
Feature                        before_maintenance after_maintenance
changed
================================================================================
basic summary
   # of interfaces                           50              50
   # of vlans                                0               0
   # of ipv4 routes  vrf default             13              13
   # of ipv4 paths   vrf default             13              13
   # of ipv4 routes  vrf management          14              14
   # of ipv4 paths   vrf management          14              14
   # of ipv6 routes  vrf default             3               3
   # of ipv6 paths   vrf default             3               3

interfaces
   # of eth interfaces                       48              48
   # of eth interfaces up                    1               1
   # of eth interfaces down                  47              47
   # of eth interfaces other                 0               0

   # of vlan interfaces                      0               0
   # of vlan interfaces up                   0               0
   # of vlan interfaces down                 0               0
   # of vlan interfaces other                0               0
```

This example shows how to display a comparison of the IPv4 routes between the two snapshots:

```
switch# show snapshots compare snapshot1 snapshot2 ipv4routes
```

Related Commands

Command	Description
show snapshots	Displays snapshots on a switch.
show snapshots dump	Display content of the various sections in a generated snapshot.
show snapshots sections	Displays content of the various sections in a generated snapshot.
snapshot create *name description*	Creates a snapshot. The name variable can be 64 characters in length. The description variable can be 256 characters in length.
snapshot delete	Deletes a snapshot.
show snapshots dump	Displays content of the various sections in a generated snapshot.
snapshot section	Adds or deletes a snapshot section.

show snapshots dump

To display content of the various sections in a generated snapshot, use the **show snapshots dump** command.

show snapshots dump *snapshot-name*

Syntax Description

snapshot-name	Name of the snapshot.

Defaults

None

Command Modes

Privileged EXEC

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

The following example shows how to display content of the various sections in a generated snapshot:

```
switch# show snapshots dump new

File:  interface.xml        Snapshot:  new
================================================================================
<?xml version="1.0" encoding="ISO-8859-1"?>
<nf:rpc-reply xmlns:nf="urn:ietf:params:xml:ns:netconf:base:1.0" xmlns="http://w
ww.cisco.com/nxos:7.3.0.N1.1.:if_manager">
 <nf:data>
  <show>
   <interface>
    <__readonly__>
     <TABLE_interface>
      <ROW_interface>
       <interface>mgmt0</interface>
       <state>up</state>
       <admin_state>up</admin_state>
       <eth_hw_desc>GigabitEthernet</eth_hw_desc>
       <eth_hw_addr>5cfc.666d.3b34</eth_hw_addr>
       <eth_bia_addr>5cfc.666d.3b34</eth_bia_addr>
       <eth_ip_addr>5.24.100.101</eth_ip_addr>
       <eth_ip_mask>16</eth_ip_mask>
       <eth_ip_prefix>5.24.0.0</eth_ip_prefix>
       <eth_mtu>1500</eth_mtu>
```

Related Commands

Command	Description
show snapshots	Displays snapshots on a switch.
show snapshots sections	Displays content of the various sections in a generated snapshot.
snapshot create *name description*	Creates a snapshot. The name variable can be 64 characters in length. The description variable can be 256 characters in length.
snapshot delete	Deletes a snapshot.
show snapshots dump	Displays content of the various sections in a generated snapshot.
snapshot section	Adds or deletes a snapshot section.

show snapshots sections

To display the user-specified sections in a snapshot, use the **show snapshots sections** command.

show snapshots sections

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Privileged EXEC

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the user-specified sections in a snapshot:

```
switch# show snapshots sections
user-specified snapshot sections
--------------------------------
[v4route]
show command: show ip route detail vrf all
row id: ROW_prefix
key1: ipprefix
key2: -
```

Related Commands

Command	Description
show snapshots compare	Displays the comparison between two snapshots.
show snapshots dump	Displays content of the various sections in a generated snapshot.
snapshot create *name description*	Creates a snapshot. The name variable can be 64 characters in length. The description variable can be 256 characters in length.
snapshot delete	Deletes a snapshot.
snapshot section	Adds or deletes a snapshot section.

show snmp community

To display the Simple Network Management Protocol (SNMP) community strings configured on the switch, use the **show snmp community** command.

show snmp community

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the SNMP community strings:

```
switch# show snmp community
Community            Group / Access      context    acl_filter
---------            --------------      -------    ----------
public                network-admin
switch#
```

Related Commands

Command	Description
snmp-server community	Configures the community access string to permit access to the SNMP protocol.

show snmp context

To display the Simple Network Management Protocol (SNMP) contexts configured on the switch, use the **show snmp context** command.

show snmp context

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the SNMP contexts:

```
switch# show snmp context
```

Related Commands

Command	Description
snmp-server context	Configures an SNMP context.

show snmp engineID

To display the identification of the local Simple Network Management Protocol (SNMP) engine, use the **show snmp engineID** command.

show snmp engineID

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

An SNMP engine is a copy of SNMP that can reside on a local or remote device. SNMP passwords are localized using the SNMP engine ID of the authoritative SNMP engine.

Examples

This example shows how to display the SNMP engine ID:

```
switch# show snmp engineID
Local SNMP engineID: [Hex] 8000000903000DECB230C0
                     [Dec] 128:000:000:009:003:000:013:236:178:048:192
switch#
```

Related Commands

Command	Description
show running-config snmp	Displays the running configuration information about SNMP.

show snmp group

To display the names of the Simple Network Management Protocol (SNMP) groups configured on the switch, use the **show snmp group** command.

show snmp group

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the SNMP groups:

```
switch# show snmp group

Role: network-admin
  Description: Predefined network admin role has access to all commands
  on the switch
  ------------------------------------------------------------------
  Rule    Perm    Type        Scope               Entity
  ------------------------------------------------------------------
  1       permit  read-write

Role: network-operator
  Description: Predefined network operator role has access to all read
  commands on the switch
  ------------------------------------------------------------------
  Rule    Perm    Type        Scope               Entity
  ------------------------------------------------------------------
  1       permit  read

Role: vdc-admin
  Description: Predefined vdc admin role has access to all commands within
  a VDC instance
  ------------------------------------------------------------------
  Rule    Perm    Type        Scope               Entity
  ------------------------------------------------------------------
  1       permit  read-write

Role: vdc-operator
  Description: Predefined vdc operator role has access to all read commands
  within a VDC instance
  ------------------------------------------------------------------
  Rule    Perm    Type        Scope               Entity
  ------------------------------------------------------------------
  1       permit  read
```

```
Role: priv-3
  Description: This is a system defined privilege role.
  vsan policy: permit (default)
  Vlan policy: permit (default)
  Interface policy: permit (default)
  Vrf policy: permit (default)

Role: priv-2
  Description: This is a system defined privilege role.
  vsan policy: permit (default)
  Vlan policy: permit (default)
  Interface policy: permit (default)
  Vrf policy: permit (default)

Role: priv-1
  Description: This is a system defined privilege role.
  vsan policy: permit (default)
  Vlan policy: permit (default)
  Interface policy: permit (default)
  Vrf policy: permit (default)

Role: priv-0
  Description: This is a system defined privilege role.
  vsan policy: permit (default)
  Vlan policy: permit (default)
  Interface policy: permit (default)
  Vrf policy: permit (default)
  ----------------------------------------------------------------------
  Rule    Perm    Type        Scope               Entity
  ----------------------------------------------------------------------
  10      permit  command                         traceroute6 *
  9       permit  command                         traceroute *
  8       permit  command                         telnet6 *
  7       permit  command                         telnet *
  6       permit  command                         ping6 *
  5       permit  command                         ping *
  4       permit  command                         ssh6 *
  3       permit  command                         ssh *
  2       permit  command                         enable *
  1       permit  read

Role: priv-15
  Description: This is a system defined privilege role.
  vsan policy: permit (default)
  Vlan policy: permit (default)
  Interface policy: permit (default)
  Vrf policy: permit (default)
  ----------------------------------------------------------------------
  Rule    Perm    Type        Scope               Entity
  ----------------------------------------------------------------------
  1       permit  read-write
switch#
```

Related Commands

Command	Description
show running-config snmp	Displays the running configuration information about SNMP.

show snmp host

To display the Simple Network Management Protocol (SNMP) host information, use the **show snmp host** command.

show snmp host

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the SNMP host:

```
switch# show snmp host
```

Related Commands

Command	Description
snmp-server host	Configures an SNMP host.

show snmp sessions

To display the current Simple Network Management Protocol (SNMP) sessions, use the **show snmp sessions** command.

show snmp sessions

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the SNMP sessions:

```
switch# show snmp sessions
```

Related Commands

Command	Description
show running-config snmp	Displays the running configuration information about SNMP.

show snmp trap

To display the Simple Network Management Protocol (SNMP) link trap generation information, use the **show snmp trap** command.

show snmp trap

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the SNMP traps:

```
switch# show snmp trap
--------------------------------------------------------------------------------
Trap type                         Description                    Enabled
--------------------------------------------------------------------------------
entity               : entity_mib_change                              Yes
entity               : entity_module_status_change                    Yes
entity               : entity_power_status_change                     Yes
entity               : entity_module_inserted                         Yes
entity               : entity_module_removed                          Yes
entity               : entity_unrecognised_module                     Yes
entity               : entity_fan_status_change                       Yes
link                 : linkDown                                       Yes
link                 : linkUp                                         Yes
link                 : IETF-extended-linkDown                         Yes
link                 : IETF-extended-linkUp                           Yes
link                 : cisco-extended-linkDown                        Yes
link                 : cisco-extended-linkUp                          Yes
callhome             : event-notify                                   No
callhome             : smtp-send-fail                                 No
cfs                  : state-change-notif                             No
cfs                  : merge-failure                                  No
rf                   : redundancy_framework                           Yes
aaa                  : server-state-change                            No
license              : notify-license-expiry                          Yes
license              : notify-no-license-for-feature                  Yes
license              : notify-licensefile-missing                     Yes
license              : notify-license-expiry-warning                  Yes
zone                 : unsupp-mem                                     No
upgrade              : UpgradeOpNotifyOnCompletion                    Yes
upgrade              : UpgradeJobStatusNotify                         Yes
feature-control      : FeatureOpStatusChange                          No
sysmgr               : cseFailSwCoreNotifyExtended                    No
rmon                 : risingAlarm                                    No
```

```
rmon                : fallingAlarm                          No
rmon                : hcRisingAlarm                         No
rmon                : hcFallingAlarm                        No
config              : ccmCLIRunningConfigChanged            No
snmp                : authentication                        No
bridge              : topologychange                        No
bridge              : newroot                               No
stp                 : inconsistency                         No
stpx                : loop-inconsistency                    No
stpx                : root-inconsistency                    No
switch#
```

Related Commands

Command	Description
snmp trap link-status	Enables SNMP link trap generation.

show snmp user

To display information on each Simple Network Management Protocol (SNMP) user, use the **show snmp user** command.

show snmp user

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to display the SNMP users configured on the switch:

```
switch# show snmp user
_____________________________________________________________
                   SNMP USERS
_____________________________________________________________

User                           Auth  Priv(enforce) Groups
____                           ____  ______________ ______
admin                          md5   des(no)       network-admin
_____________________________________________________________
 NOTIFICATION TARGET USERS (configured  for sending V3 Inform)
_____________________________________________________________

User                           Auth  Priv
____                           ____  ____
switch#
```

This example shows how to display information about a specific SNMP user:

```
switch# show snmp user admin
switch#
```

Related Commands

Command	Description
snmp-server user	Configures a new user to an SNMP group.

show system mode

To display the current system mode, use the **show system mode** command. Starting with Cisco NX-OS Release 7.3(0)N1(1), you can use the **show system mode** command to also display the current state of the maintenance mode timer when the switch is in maintenance mode

show system mode

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Any command mode

Command History

Release	Modification
7.3(0)N1(1)	Supports display of current state of the maintenance mode timer when the switch is in maintenance mode.
7.1.0	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the current system mode:

```
switch# show system mode
System Mode : Normal
```

This example shows how to display the current system mode and the state of the maintenance mode timer when the switch is in maintenance mode:

```
switch# show system mode
System Mode: Maintenance
Maintenance Mode Timer: 24 minutes 55 seconds remaining
```

This example shows that the switch is in maintenance mode and that the maintenance mode timer is not running:

```
switch#  show   system   mode
System Mode: Maintenance
Maintenance Mode Timer: not running
```

Related Commands

Command	Description
show run mmode	Displays the currently running maintenance profile configuration on a switch.
system mode maintenance always-use-custom-profile	Applies the existing custom maintenance-mode profile and prevents creation of auto-generated maintenance-mode profile.
system mode maintenance on-reload reset-reason	Boots the switch into maintenance-mode automatically in the event of a specified system crash.
system mode maintenance shutdown	Shuts down all protocols and interfaces except the management interface (by using the **shutdown** command and not the default **isolate** command).
system mode maintenance timeout	Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.

show system soft-reload status

To display the status of the soft reload, use the **show system soft-reload status** command.

show system soft-reload status

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Privileged EXEC mode

Command History

Release	Modification
7.3(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display the status of the soft reload:

```
switch# show system soft-reload status
Soft-reload is disabled
```

Related Commands

Command	Description
soft-reload	Performs a manual soft reload of the switch.
system soft-reload enable	Enables the switch to perform a soft reload after a process crash.

show tech-support mmode

To display information for maintenance profile troubleshooting, use the **show tech-support mmode** command.

show tech-support mmode

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

Privileged EXEC

Command History

Release	Modification
7.3(0)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to display information for maintenance profile troubleshooting:

```
switch# show tech-support mmode
`show system mode`
System Mode: Normal
`show maintenance profile`
[Normal Mode]
router bgp 100
  no isolate

[Maintenance Mode]
router bgp 100
  isolate

`show maintenance on-reload reset-reasons`
Reset reasons for on-reload maintenance mode:
-----------------------------------------
(not configured)

bitmap = 0x0
`show maintenance timeout`
Maintenance mode timeout value: 0 minutes
`show system internal mmode mem-stats`
Num blocks     User size     Total size    Library
--------------------------------------------------------------------------------
      16              560           800  mmode
     265            51818         55824  ld-2.8.so
       1               20            32  libdl-2.8.so
       1               38            56  libpthread-2.8.so
      12             2860          3056  libsviifdb.so.0.0.0
```

Related Commands

Command	Description
system mode maintenance always-use-custom-profile	Applies the existing custom maintenance-mode profile and prevents creation of auto-generated maintenance-mode profile.
system mode maintenance on-reload reset-reason	Boots the switch into maintenance-mode automatically in the event of a specified system crash.
system mode maintenance shutdown	Shuts down all protocols and interfaces except the management interface (by using the **shutdown** command and not the default **isolate** command).
system mode maintenance timeout	Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.

V Commands

This chapter describes the system management commands available that begin with V.

verify (session)

To verify the current configuration session, use the **verify** command.

verify

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

Session configuration mode

Command History

Release	Modification
6.0(2)N1(1)	This command was introduced.

Examples

This example shows how to verify a session:

```
switch(config-s)# verify
Failed to start Verification: Session Database already locked, Verify/Commit in
Progress.
switch(config-s)#
```

Related Commands

Command	Description
commit	Commits a session.
configure session	Creates a configuration session.
show configuration session	Displays the contents of the session.

vrf (ERSPAN)

To configure a virtual routing and forwarding (VRF) instance for Encapsulated Remote Switched Port Analyzer (ERSPAN) traffic forwarding in the source, use the **vrf** command. To revert to the defaults, use the **no** form of this command.

vrf {*vrf_name* | **default** | **management**}

no vrf {*vrf_name* | **default** | **management**}

Syntax Description

vrf_name	Name of the VRF. The VRF name can be any case-sensitive, alphanumeric string up to 32 characters.
default	Specifies the default VRF instance.
management	Specifies the management VRF instance.

Command Default

None

Command Modes

ERSPAN source session configuration mode (config-erspan-src)
SPAN-on-Drop ERSPAN session configuration mode (config-span-on-drop-erspan)
SPAN-on-Latency ERSPAN session configuration mode (config-span-on-latency-erspan)

Command History

Release	Modification
7.0(0)N1(1)	This command was modified. This command was implemented in the following modes: SPAN-on-Drop ERSPAN session configuration mode and SPAN-on-Latency ERSPAN session configuration mode.
6.0(2)N1(1)	This command was introduced.

Usage Guidelines

This command does not require a license.

Examples

This example shows how to configure a VRF instance for the ESRSPAN source session:

```
switch# configure terminal
switch(config)# monitor session 1 type erspan-source
switch(config-erspan-src)# vrf default
switch(config-erspan-src)#
```

This example shows how to configure a VRF instance for the SPAN-on-Drop ESRSPAN source session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-drop-erspan
switch(config-span-on-drop-erspan)# vrf default
switch(config-span-on-drop-erspan)#
```

This example shows how to configure a VRF instance for the SPAN-on-Latency ESRSPAN source session:

```
switch# configure terminal
switch(config)# monitor session 1 type span-on-latency-erspan
switch(config-span-on-latency-erspan)# vrf default
switch(config-span-on-latency-erspan)#
```

Related Commands

Command	Description
monitor-session	Enters the monitor configuration mode for configuring an ERSPAN session for analyzing traffic between ports.
show monitor session	Displays information about the Ethernet switched port analyzer (SPAN) or ERSPAN monitor session.

version 5

To configure version 5 for the NetFlow exporter, use the **version 5** command. To remove the version 5 configuration, use the **no** form of this command

version 5

no version 5

Syntax Description

This command has no arguments or keywords.

Defaults

None

Command Modes

NetFlow exporter configuration (config-flow-exporter)

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

The default NetFlow exporter version is 5.

If you remove the version 5 configuration, the NetFlow exporter defaults to version 9.

This command does not require a license.

Examples

This example shows how to configure the NetFlow exporter version to version 5:

```
switch(config)# flow exporter Netflow-Exporter-1
switch(config-flow-exporter)# version 5
switch(config-flow-exporter-version-5)#
```

This example shows how to remove the version 5 configuration, which causes the NetFlow exporter to default to version 9:

```
switch(config-flow-exporter-version-5)# no version 5
switch(config-flow-exporter)#
```

Related Commands

Command	Description
show flow exporter	Displays information about NetFlow exporters.
version 9	Configures the NetFlow exporter to version 9.

version 9

To specify the export version 9 and enter the export version configuration mode, use the **version 9** command.

version 9

no version 9

Syntax Description

This command has no arguments or keywords.

Defaults

Flow exporters are not present in the configuration until you create them.

Command Modes

Flow export configuration

Command History

Release	Modification
7.0(0)N1(1)	This command was introduced.

Usage Guidelines

Flow exporters export the data in the flow monitor cache to a remote system, such as a server running NetFlow collector, for analysis and storage. Flow exporters are created as separate entities in the configuration. Flow exporters are assigned to flow monitors to provide data export capability for the flow monitors. You can create several flow exporters and assign them to one or more flow monitors to provide several export destinations. You can create one flow exporter and apply it to several flow monitors.

Once you enter the flow exporter configuration mode, the prompt changes to the following:

```
switch(config-flow-exporter)#
```

Within the flow exporter configuration mode, you can enter the version 9 keywords. Once you enter the **version 9** keywords, the prompt changes to the following:

```
switch(config-flow-exporter-version-9)#
```

When entering the **no** form of this command, the *seconds* argument is optional.

This command does not require a license.

Examples

This example shows how to specify the name of the flow exporter that is created or modified.

```
switch(config)# flow exporter flow-export-test
switch(config-flow-exporter)# version 9
switch(config-flow-exporter-version-9)#
```

This example shows how to specify the version 9 exporter statistics option templates and data:

```
switch(config)# flow exporter flow-export-test
switch(config-flow-exporter)# version 9
```

```
switch(config-flow-exporter-version-9)# exporter-stats
```

This example shows how to specify the version 9 interface table option templates and data:

```
switch(config)# flow exporter flow-export-test
switch(config-flow-exporter)# version 9
switch(config-flow-exporter-version-9)# interface-table
```

This example shows how to specify the version 9 interface table option templates and data:

```
switch(config)# flow exporter flow-export-test
switch(config-flow-exporter)# version 9
switch(config-flow-exporter-version-9)# sampler-table
```

This example shows how to specify the option resend time in seconds:

```
switch(config)# flow exporter flow-export-test
switch(config-flow-exporter)# version 9
switch(config-flow-exporter-version-9)# timeout 32
```

This example shows how to specify the data template:

```
switch(config)# flow exporter flow-export-test
switch(config-flow-exporter)# version 9
switch(config-flow-exporter-version-9)# template data
```

Related Commands

Command	Description
flow exporter	Creates a flow exporter.
flow monitor	Creates a flow monitor.
flow record	Creates a flow record.
sampler	Creates a flow sampler.

APPENDIX 1

System Message Logging Facilities

This appendix contains the system message logging information. Table 1-1 lists the facilities that you can use in system message logging configuration.

Table 1-1 System Message Logging Facilities

Facility	Description
aaa	Sets level for aaa syslog messages.
aclmgr	Sets level for aclmgr syslog messages.
adjmgr	Sets syslog filter level for Adjacency Manager.
afm	Sets level for afm syslog messages.
all	Sets level for all facilities.
altos	Altos syslog level.
arp	Sets syslog filter level for ARP.
ascii-cfg	Sets the logging level for ascii-cfg.
auth	Sets level for Authorization System.
authpriv	Sets level for Authorization (Private) system.
backup	Sets level for switchport backup syslog messages.
bootvar	Sets level for bootvar.
callhome	Callhome syslog level.
capability	Sets syslog level for mig utils daemon.
cdp	Sets logging level for CDP.
cert-enroll	Cert-enroll syslog level.
cfs	Sets logging level for CFS.
clis	Sets syslog filter level for CLIS.
core	Core daemon syslog level.
cron	Sets level for Cron/at facility.
daemon	Sets level for System daemons.
dcbx	Sets level for dcx syslog messages.
device-alias	Sets syslog level for Device Alias Distribution Service.
dhcp_snoop	Sets the level for DHCP snooping syslog messages.

Table 1-1 System Message Logging Facilities (continued)

Facility	Description
dstats	Delta statistics syslog level.
epp	Sets level for EPP syslog messages.
ethpc	Sets level for ethpc syslog messages.
ethpm	Sets level for Ethernet Port Manager (ethpm) syslog messages.
evmc	Sets level for evmc syslog messages.
fabric_start_cfg_mgr	Sets the syslog filter level for FabricPath configuration manager.
fc2d	Sets level for fc2d syslog messages.
fcdomain	Sets level for fcdomain syslog messages.
fcns	Sets syslog filter level for name server.
fcoe_mgr	Sets the level for Fibre Channel over Ethernet (FCoE) manager syslog messages.
fcpc	Sets level for fcpc syslog messages.
fcs	Sets syslog filter level for FCS.
fdmi	Sets logging level for fdmi.
feature-mgr	Feature manager syslog level.
fex	Sets the level for Cisco Nexus 2000 Series Fabric Extender syslog messages.
flexlink	Sets level for switchport backup syslog messages.
flogi	Configure level for flogi syslog messages.
fs-daemon	FS daemon syslog level.
fspf	FSPF syslog level.
ftp	Sets level for File Transfer System.
fwm	Sets level for fwm syslog messages.
gatos	Gatos syslog level.
im	Sets level for im syslog messages.
interface-vlan	Sets level for interface VLAN syslog messages.
ip	Sets level for IP syslog messages.
ipconf	Sets level for ipconf syslog messages.
ipqos	Sets level for ipqosmgr syslog messages.
kernel	Sets level for kernel.
l3vm	Sets syslog filter level for L3VM.
lacp	Sets level for LACP syslog messages.
license	Licensing syslog level. **Note** This facility was deprecated and replaced with the licmgr facility in Cisco NX-OS 5.0(2)N1(1). For backwards compatibility, it will be maintained for a number of releases.
licmgr	Licensing syslog level.

Table 1-1 System Message Logging Facilities (continued)

Facility	Description
lldp	Sets level for LLDP syslog messages.
local0	Sets level for Local use daemons.
local1	Sets level for Local use daemons.
local2	Sets level for Local use daemons.
local3	Sets level for Local use daemons.
local4	Sets level for Local use daemons.
local5	Sets level for Local use daemons.
local6	Sets level for Local use daemons.
local7	Sets level for Local use daemons.
lpr	Sets level for Line Printer System.
m2rib	Sets level for Multicast Routing Information Base (MRIB) logging messages.
mail	Sets level for Mail system.
mfdm	Sets level for multicast Forwarding Information Base (FIB) distribution (MFDM) syslog messages.
mfwd	Sets level for multicast forwarding system messages.
monitor	Sets level for ethernet Switched Port Analyzer (SPAN) syslog messages.
news	Sets level for USENET news.
nohms	Sets level for nohms syslog messages.
nqosm	Sets level for nqosm syslog messages.
ntp	Sets syslog filter level for NTP.
pfm	Sets level for pfm syslog messages.
pktmgr	Sets syslog filter level for Packet Manager.
plugin	Sets level for plugin syslog messages.
port	Sets level for port syslog messages.
port-channel	Sets level for EtherChannel syslog messages.
port-profile	Sets level for port profile syslog messages.
port-resources	Sets level for prm syslog messages.
provision	Sets level for provision syslog messages.
qd	Sets level for qd syslog messages.
radius	RADIUS syslog level.
rdl	Sets logging level for RDL.
res_mgr	Set slevel for res_mgr syslog messages.
rib	Sets level for rib.
rlir	Sets level for RLIR.
routing	Sets level for routing information.

Table 1-1 System Message Logging Facilities (continued)

Facility	Description
rscn	Sets level for RSCN.
san-port-channel	Sets level for san-port-channel syslog messages.
scsi-target	SCSI target daemon syslog level.
security	Security syslog level.
session	Sets level for session-manager syslog messages. **Note** This facility was deprecated and replaced with the session-mgr facility in Cisco NX-OS 5.0(2)N1(1). For backward compatibility, it will be maintained for a number of releases.
session-mgr	Sets level for session-manager syslog messages.
smm	Sets logging level for Shared Memory Manager.
snmpd	Sets level for SNMP syslog messages.
sifmgr	Sets level for sifmgr syslog messages.
spanning-tree	Sets level for stp syslog messages.
stp	Sets level for stp syslog messages.
syslog	Sets level for Internal Syslog Messages.
sysmgr	System Manager syslog level.
tacacs	TACACS+ syslog level.
track	Sets level for object tracking messages.
tcpudp	Sets syslog filter level for TCPUDP.
track	Sets level for track syslog messages.
udld	Sets level for UDLD syslog messages.
ufdm	Sets level for unicast Forwarding Information Base (FIB) distribution (UFDM) syslog messages.
urib	Sets syslog filter level for Unicast Routing Information Base (URIB).
user	Sets level for User Process.
uucp	Sets level for Unix-to-Unix copy system.
vlan_mgr	Sets level for VLAN syslog messages.
vmm	Sets level for vmm syslog messages.
vpc	Sets level for vPC syslog messages.
vsan	VSAN syslog level.
vshd	Sets logging level for vshd.
vtp	Sets level for interface vlan syslog messages.
wwnm	Sets WWN Manager syslog level.
xml	XML agent syslog level.
zone	Sets syslog filter level for zone server.
zschk	Sets level for zschk syslog messages.