Cisco Nexus 5600 Series NX-OS System Management Command Reference

First Published: 2016-05-19
Last Modified: --

Americas Headquarters
Cisco Systems, Inc.
170 West Tasman Drive
San Jose, CA 95134-1706
USA
http://www.cisco.com
Tel: 408 526-4000
  800 553-NETS (6387)
Fax: 408 527-0883
CONTENTS

CHAPTER 1  Preface  1

Preface  1

Audience  1

Document Conventions  1

Related Documentation  4

Documentation Feedback  5

Obtaining Documentation and Submitting a Service Request  5

CHAPTER 2  A Commands  7

abort (Call Home)  8

abort (Call Home)  9

abort (session)  10

acllog match-log-level  11

alert-group (Call Home)  13

CHAPTER 3  C Commands  15

callhome  16

callhome send diagnostic  17

callhome test  18

clear flow exporter  19

clear logging logfile  20

clear logging nvram  21

clear logging onboard  22

clear logging session  24

clear ntp session  25

clear ntp statistics  26

collect flow  27

commit (Call Home)  29
commit (session) 30
configure maintenance profile 31
contract-id (Call Home) 33
customer-id (Call Home) 34

CHAPTER 4 D Commands 35
description (NetFlow exporter) 36
description (NetFlow monitor) 37
description (NetFlow record) 38
description (NetFlow sampler) 39
description (SPAN, ERSPAN) 40
destination 43
destination (ERSPAN session) 44
destination (SPAN session) 46
destination-profile (Call Home) 49
diagnostic bootup level 53
dscp 54

CHAPTER 5 E Commands 55
e-mail-contact (Call Home) 56
enable (Call Home) 57
erspan-id 59
exporter 61

CHAPTER 6 F Commands 63
feature netflow 64
feature ptp 65
fex-group 66
filter access-group 68
flow monitor 70
flow monitor (interface) 73
flow record 76
flow timeout 78

CHAPTER 7 H Commands 79
Hardware pq-drain 80
Hardware random-detect 82

CHAPTER 8

I Commands 85
ip access-list (session) 86
ip dns source-interface 87
ip domain-list 89
ip domain-lookup 91
ip domain-name 92
ip dscp (ERSSPAN) 94
ip host 96
ip name-server 97
ip port access-group (session) 99
ip ttl (ERSSPAN) 101

CHAPTER 9

L Commands 103
layer2-switched flow monitor 104
logging abort 106
logging commit 107
logging console 108
logging distribute 110
logging event 111
logging event port 112
logging ip access-list cache 113
logging level 115
logging logfile 117
logging module 119
logging monitor 121
logging server 123
logging timestamp 125

CHAPTER 10

M Commands 127
match datalink 128
match ip 130
match ipv4 131
match transport 133
mode 134
monitor erspan origin ip-address 136
monitor session 138
mtu 142

CHAPTER 11

N Commands 145

ntp 146
ntp abort 148
ntp authenticate 149
ntp commit 150
ntp distribute 151
ntp sync-retry 152

CHAPTER 12

O Commands 153

option exporter-stats timeout 154
option interface-table timeout 155
option sampler-table timeout 156

CHAPTER 13

P Commands 157

packet latency threshold 158
periodic-inventory (Call Home) 159
phone-contact (Call Home) 161
poweroff module 162
ptp announce 163
ptp delay request minimum interval 165
ptp domain 167
ptp priority1 168
ptp priority2 169
ptp source 171
ptp sync interval 173
ptp vlan 175

CHAPTER 14

R Commands 177

rmon alarm 178
CHAPTER 15

S Commands 187

sampler 189
snapshot create 191
snapshot delete 192
snapshot section 193
snmp trap link-status 195
snmp-server community 197
snmp-server aaa-user cache-timeout 199
snmp-server contact 200
snmp-server context 201
snmp-server enable traps 203
snmp-server enable traps link 207
snmp-server globalEnforcePriv 209
snmp-server host 210
snmp-server location 213
snmp-server mib community-map 214
snmp-server tcp-session 216
snmp-server user 217
source 219
source interface (SPAN, ERSPAN) 221
source ip 224
switchport monitor rate-limit 225
switch-profile 227
system fex-group shutdown 230
system mode maintenance 232
system mode maintenance always-use-custom-profile 234
system mode maintenance dont-generate-profile 236
system mode maintenance on-reload reset-reason 238
system mode maintenance shutdown 240
system mode maintenance timeout 242
system soft-reload enable 244
shut (SPAN, ERSPAN) 246
site-id (Call Home) 248
sleep instance 249
soft-reload 251

CHAPTER 16
Show Commands 253
show snmp host 256
show snmp sessions 257
show snmp trap 258
show snmp user 260
show system mode 261
show tech-support mmode 263
show diagnostic bootup level 265
show diagnostic result 266
show flow exporter 268
show flow interface 270
show flow record 272
show flow timeout 275
show hosts 276
show ip dns source-interface 277
show logging console 279
show logging info 280
show logging last 281
show logging level 282
show logging logfile 284
show logging module 285
show logging monitor 286
show logging nvram 287
show logging onboard 288
show logging pending 293
show logging pending-diff 294
show logging server 295
show logging session status 296
show logging status 297
show logging timestamp 298
show monitor session 299
show ntp authentication-status 301
show ntp peers 302
show ntp peer-status 303
show ntp statistics 304
show ntp timestamp-status 306
show ptp brief 307
show ptp clock 308
show ptp clocks foreign-masters-record 309
show ptp corrections 311
show ptp parent 312
show ptp port interface 313
show ptp time-property 315
show rmon 316
show run mmode 318
show running-config callhome 320
show running-config interface vethernet 322
show running-config monitor 324
show running-config poe 326
show running-config port-security 327
show sampler 328
show snapshots 329
show snapshots compare 331
show snapshots dump 334
show snapshots sections 336
show snmp community 338
show snmp context 339
show snmp engineID 340
show snmp group 341
show system soft-reload status 343

CHAPTER 17  T Commands 345
template data timeout 346

CHAPTER 18  V Commands 347
verify (session) 348
version 5 349
version 9 351
vrf (ERSSPAN) 353
Preface

This preface describes the audience, organization, and conventions of the Book Title. It also provides information on how to obtain related documentation.

This chapter includes the following topics:

Audience

This publication is for experienced network administrators who configure and maintain Cisco NX-OS on Cisco Nexus 5000 Series Platform switches.

Document Conventions

- As part of our constant endeavor to remodel our documents to meet our customers' requirements, we have modified the manner in which we document configuration tasks. As a result of this, you may find a deviation in the style used to describe these tasks, with the newly included sections of the document following the new format.

- The Guidelines and Limitations section contains general guidelines and limitations that are applicable to all the features, and the feature-specific guidelines and limitations that are applicable only to the corresponding feature.

Command descriptions use the following conventions:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bold</td>
<td>Bold text indicates the commands and keywords that you enter literally as shown.</td>
</tr>
</tbody>
</table>
### Document Conventions

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>Italic</em></td>
<td>Italic text indicates arguments for which the user supplies the values.</td>
</tr>
<tr>
<td>[x]</td>
<td>Square brackets enclose an optional element (keyword or argument).</td>
</tr>
<tr>
<td>[x</td>
<td>y]</td>
</tr>
<tr>
<td>{x</td>
<td>y}</td>
</tr>
<tr>
<td>[x {y</td>
<td>z}]</td>
</tr>
<tr>
<td>variable</td>
<td>Indicates a variable for which you supply values, in context where italics cannot be used.</td>
</tr>
<tr>
<td>string</td>
<td>A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.</td>
</tr>
</tbody>
</table>

Examples use the following conventions:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><em>screen font</em></td>
<td>Terminal sessions and information the switch displays are in screen font.</td>
</tr>
<tr>
<td><em>boldface screen font</em></td>
<td>Information you must enter is in boldface screen font.</td>
</tr>
<tr>
<td><em>italic screen font</em></td>
<td>Arguments for which you supply values are in italic screen font.</td>
</tr>
<tr>
<td>&lt;&gt;</td>
<td>Nonprinting characters, such as passwords, are in angle brackets.</td>
</tr>
<tr>
<td>[ ]</td>
<td>Default responses to system prompts are in square brackets.</td>
</tr>
<tr>
<td>!, #</td>
<td>An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.</td>
</tr>
</tbody>
</table>

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 Cisco Nexus 5000 Series Switches is available at:

- Configuration Guides
- Command Reference Guides
- Release Notes
- Install and Upgrade Guides
- Licensing Guide

Documentation for Cisco Nexus 5000 Series Switches and Cisco Nexus 2000 Series Fabric Extenders is available at:

Documentation 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. RSS feeds are a free service.
A Commands

- abort (Call Home), page 8
- abort (Call Home), page 9
- abort (session), page 10
- acllog match-log-level, page 11
- alert-group (Call Home), page 13
abort (Call Home)

To discard Call Home configuration changes and release the Cisco Fabric Services (CFS) lock, use the abort command.

```
abort
```

**Syntax Description**

This command has no arguments or keywords.

**Command Default**

None

**Command Modes**

Callhome configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

Use this command if you are the CFS lock owner or if you are logged into the device that holds the CFS lock.

**Examples**

This example shows how to discard Call Home configuration changes:

```
switch(config-callhome)# abort
switch(config-callhome)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show callhome</td>
<td>Displays Call Home configuration information.</td>
</tr>
<tr>
<td>show running-config callhome</td>
<td>Displays the running configuration information for Call Home.</td>
</tr>
</tbody>
</table>
abort (Call Home)

To discard Call Home configuration changes and release the Cisco Fabric Services (CFS) lock, use the `abort` command.

```
abort
```

### Syntax Description

This command has no arguments or keywords.

### Command Default

None

### Command Modes

Callhome configuration mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Usage Guidelines

Use this command if you are the CFS lock owner or if you are logged into the device that holds the CFS lock.

### Examples

This example shows how to discard Call Home configuration changes:

```
switch(config-callhome)# abort
switch(config-callhome)#
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show callhome</code></td>
<td>Displays Call Home configuration information.</td>
</tr>
<tr>
<td><code>show running-config callhome</code></td>
<td>Displays the running configuration information for Call Home.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**
This example shows how to abort the current configuration session:

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>commit</td>
<td>Commits a session.</td>
</tr>
<tr>
<td>configure session</td>
<td>Creates a configuration session.</td>
</tr>
<tr>
<td>show configuration session</td>
<td>Displays the contents of the session.</td>
</tr>
<tr>
<td>verify</td>
<td>Verifies a session.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
</table>
| `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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>logging level</td>
<td>Enables logging messages from a specified facility and configures the logging severity level.</td>
</tr>
<tr>
<td>logging logfile</td>
<td>Configures the name of the log file used to store system messages and sets the minimum severity level to log.</td>
</tr>
</tbody>
</table>
alert-group (Call Home)

To configure a CLI show command for an alert group, use the `alert-group` command. To remove a CLI command from an alert group, use the `no` form of this command.

```
alert-group alert user-def-cmd CLI-command
no alert-group alert user-def-cmd CLI-command
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><code>alert</code></td>
<td>Alert group. The <code>alert</code> group can be one of the following:</td>
</tr>
<tr>
<td></td>
<td>• All—All alert groups</td>
</tr>
<tr>
<td></td>
<td>• Cisco-TAC—Cisco TAC events</td>
</tr>
<tr>
<td></td>
<td>• Configuration—Configuration events</td>
</tr>
<tr>
<td></td>
<td>• Diagnostic—Diagnostic events</td>
</tr>
<tr>
<td></td>
<td>• EEM—EEM events</td>
</tr>
<tr>
<td></td>
<td>• Environmental—Power, fan, temperature-related events</td>
</tr>
<tr>
<td></td>
<td>• Inventory—Inventory status events</td>
</tr>
<tr>
<td></td>
<td>• License—Licensing events</td>
</tr>
<tr>
<td></td>
<td>• Linecard-Hardware—Linecard-related events</td>
</tr>
<tr>
<td></td>
<td>• Supervisor-Hardware—Supervisor-related events</td>
</tr>
<tr>
<td></td>
<td>• Syslog-group-port—Syslog message events filed by port manager</td>
</tr>
<tr>
<td></td>
<td>• System—Software-related events</td>
</tr>
<tr>
<td></td>
<td>• Test—User-generated test events</td>
</tr>
<tr>
<td><code>user-def-cmd</code></td>
<td>Specifies a CLI command for an alert group.</td>
</tr>
<tr>
<td><code>CLI-command</code></td>
<td>CLI show command. The command can be a maximum of 512 characters.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Callhome configuration mode
Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

Usage Guidelines

You can customize predefined alert groups to execute additional CLI `show` commands when specific events occur and send that `show` output with the Call Home message. You can assign a maximum of five user-defined CLI `show` commands to an alert group.

You must enclose the `show` command in double quotes. Only valid `show` commands are accepted.

Note

You cannot add user-defined CLI `show` commands to the CiscoTAC-1 destination profile.

You can add `show` commands only to full text and XML destination profiles. Short text destination profiles do not support additional `show` commands because they only allow 128 bytes of text.

Examples

This example shows how to add a `show` command output to a Call Home message sent for an alert group:

```
switch(config-callhome)# alert-group configuration user-def-cmd "show running-config"
switch(config-callhome)#
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>copy running-config startup-config</code></td>
<td>Saves this configuration change.</td>
</tr>
<tr>
<td><code>show callhome user-def-cmd</code></td>
<td>Displays information about all user-defined <code>show</code> commands added to alert groups.</td>
</tr>
</tbody>
</table>
C Commands

- callhome, page 16
- callhome send diagnostic, page 17
- callhome test, page 18
- clear flow exporter, page 19
- clear logging logfile, page 20
- clear logging nvram, page 21
- clear logging onboard, page 22
- clear logging session, page 24
- clear ntp session, page 25
- clear ntp statistics, page 26
- collect flow, page 27
- commit (Call Home), page 29
- commit (session), page 30
- configure maintenance profile, page 31
- contract-id (Call Home), page 33
- customer-id (Call Home), page 34
callhome

To configure the Cisco Smart Call Home service and enter the callhome configuration mode, use the `callhome` command.

```plaintext
switch(config)# callhome
switch(config-callhome)#
```

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
None

**Command Modes**
Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**
You must configure the e-mail, phone, and street address information for Call Home. You can optionally configure the contract ID, customer ID, site ID, and switch priority information.

**Examples**
This example shows how to enter callhome configuration mode:

```plaintext
switch(config)# callhome
switch(config-callhome)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>email-contact</code></td>
<td>Configures the e-mail address.</td>
</tr>
<tr>
<td><code>show callhome</code></td>
<td>Displays a summary of the Call Home configuration.</td>
</tr>
<tr>
<td><code>snmp-server contact</code></td>
<td>Configures the SNMP contact (sysContact).</td>
</tr>
</tbody>
</table>
callhome send diagnostic

To send a specified Call Home test message to all configured destinations, use the callhome send diagnostic command.

callhome send diagnostic

Syntax Description
This command has no arguments or keywords.

Command Default
None

Command Modes
Callhome configuration mode

Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

Usage Guidelines
You can generate a test message to test your Call Home communications using the callhome send diagnostic command.

Examples
This example shows how to configure Call Home to send test messages to all configured destinations:

```
switch(config-callhome)# callhome send diagnostic
switch(config-callhome)#
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show callhome</td>
<td>Displays Call Home configuration information.</td>
</tr>
<tr>
<td>show running-config callhome</td>
<td>Displays the running configuration information for Call Home.</td>
</tr>
</tbody>
</table>
callhome test

To send a Call Home test message to all configured destinations, use the `callhome test` command.

```
callhome test [inventory]
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>inventory</th>
<th>(Optional) Specifies that a Call Home inventory message be sent for testing the Call Home configuration.</th>
</tr>
</thead>
</table>

**Command Default**
None

**Command Modes**
EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to send a Call Home test message to all configured destinations:

```
switch# callhome test
tryin...message
switch#
```

This example shows how to send a Call Home inventory message to all configured destinations:

```
switch# callhome test inventory
tryin...message
switch#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show callhome</code></td>
<td>Displays Call Home configuration information.</td>
</tr>
<tr>
<td><code>show running-config callhome</code></td>
<td>Displays the running configuration information for Call Home.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>Specifies the name of a flow exporter.</td>
</tr>
<tr>
<td>exporter-name</td>
<td>Name of an existing flow exporter.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Any command mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>clear flow exporter</td>
<td>Clears the statistics for exporters.</td>
</tr>
<tr>
<td>flow exporter</td>
<td>Creates a flow exporter.</td>
</tr>
<tr>
<td>show flow exporter</td>
<td>Displays flow exporter status and statistics.</td>
</tr>
</tbody>
</table>
clear logging logfile

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

Syntax Description

This command has no arguments or keywords.

Command Default

None

Command Modes

EXEC mode

Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

Examples

This example shows how to clear the logging logfile:

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

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show logging logfile</td>
<td>Displays the messages in the log file.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to clear the NVRAM logs:

```
switch# clear logging nvram
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show logging nvram</td>
<td>Displays the NVRAM logs.</td>
</tr>
</tbody>
</table>
## 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

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>environmental-history</td>
<td>(Optional) Clears the OBFL environmental history.</td>
</tr>
<tr>
<td>exception-log</td>
<td>(Optional) Clears the OBFL exception log entries.</td>
</tr>
<tr>
<td>obfl-log</td>
<td>(Optional) Clears the OBFL (boot-uptime/device-version/obfl-history).</td>
</tr>
<tr>
<td>stack-trace</td>
<td>(Optional) Clears the OBFL stack trace entries.</td>
</tr>
</tbody>
</table>

### Command Default

None

### Command Modes

EXEC mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show logging onboard</td>
<td>Displays onboard failure logs.</td>
</tr>
</tbody>
</table>
clear logging onboard
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to clear the current logging session:

```
switch# clear logging session
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show logging session</td>
<td>Displays the logging session status.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

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

```
switch# clear ntp session
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show ntp</td>
<td>Displays NTP information.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>all-peers</td>
<td>Clears all peer transaction statistics.</td>
</tr>
<tr>
<td>io</td>
<td>Clears I/O statistics.</td>
</tr>
<tr>
<td>local</td>
<td>Clears local statistics.</td>
</tr>
<tr>
<td>memory</td>
<td>Clears memory statistics.</td>
</tr>
</tbody>
</table>

Command Default

None

Command Modes

EXEC mode

Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

Examples

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

switch# clear ntp statistics io

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show ntp</td>
<td>Displays NTP information.</td>
</tr>
</tbody>
</table>
**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. |

### Command Default

This command is not enabled by default.

### Command Modes

Flow record configuration

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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
```

---

**Cisco Nexus 5600 Series NX-OS System Management Command Reference**

**27**
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>collect counter</code></td>
<td>Configures the counters as a nonkey field and collects the counter values.</td>
</tr>
<tr>
<td><code>collect flow</code></td>
<td>Configures flow identifying fields as nonkey fields and collects their values.</td>
</tr>
<tr>
<td><code>collect ip</code></td>
<td>Configures an IPv4 field as a nonkey field and collects the value in it.</td>
</tr>
<tr>
<td><code>collect routing</code></td>
<td>Configures a routing attribute as a nonkey field and collects the value of the field.</td>
</tr>
<tr>
<td><code>collect timestamp</code></td>
<td>Configures the times tamp fields as nonkey fields and collects the values.</td>
</tr>
<tr>
<td><code>collect transport</code></td>
<td>Configures a transport layer field as a nonkey field and collects the values.</td>
</tr>
<tr>
<td><code>flow record</code></td>
<td>Creates a flow record.</td>
</tr>
<tr>
<td><code>match ip</code></td>
<td>Configures one or more of the IP fields as a key field.</td>
</tr>
<tr>
<td><code>match ipv4</code></td>
<td>Configures one or more of the IPv4 fields as a key field.</td>
</tr>
<tr>
<td><code>match ipv6</code></td>
<td>Configures one or more of the IPv6 fields as a key field.</td>
</tr>
<tr>
<td><code>match transport</code></td>
<td>Configures one or more of the transport fields as key fields.</td>
</tr>
<tr>
<td><code>show flow record</code></td>
<td>Displays the flow record status and statistics.</td>
</tr>
</tbody>
</table>
commit (Call Home)

To commit Call Home configuration changes and distribute the changes to call Cisco Fabric Services (CFS)-enabled devices, use the commit command.

```
commit
```

Syntax Description: This command has no arguments or keywords.

Command Default: None

Command Modes: Call home configuration mode

Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

Examples

This example shows how to commit CFS Call Home configuration changes:

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

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show callhome</td>
<td>Displays Call Home configuration information.</td>
</tr>
<tr>
<td>show running-config callhome</td>
<td>Displays the running configuration information for Call Home.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

Examples

This example shows how to commit the current session:

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

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>configure session</td>
<td>Creates a configuration session.</td>
</tr>
<tr>
<td>show configuration session</td>
<td>Displays the contents of the session.</td>
</tr>
<tr>
<td>verify</td>
<td>Verifies a session.</td>
</tr>
</tbody>
</table>
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]**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>maintenance-mode</th>
<th>Enters the maintenance profile configuration session for a maintenance mode profile.</th>
</tr>
</thead>
<tbody>
<tr>
<td>normal-mode</td>
<td>Enters the maintenance profile configuration session for a normal mode profile.</td>
<td></td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Privileged EXEC (#)

Global configuration mode (config)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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

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

To configure the optional contract number for the customer, use the `contract-id` command. To remove a contract number, use the `no` form of this command.

```
contract-id contract-number
no contract-id
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>contract-number</code></td>
<td>Contract number. The contract number can be up to 255 alphanumeric characters in free format.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Call home configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

You can configure the customer identification information that Cisco Smart Call Home should use. The service agreement includes the customer identification information, such as the customer ID, contract ID, and site ID.

**Examples**

This example shows how to configure the contract number for the customer:

```
switch(config-callhome)# contract-id 12095134-1706
switch(config-callhome)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>customer-id</td>
<td>Configures the customer number for the switch.</td>
</tr>
<tr>
<td>show callhome</td>
<td>Displays a summary of the Call Home configuration.</td>
</tr>
</tbody>
</table>
customer-id (Call Home)

To configure the optional unique identification number for the customer, use the `customer-id` command. To remove a customer number, use the `no` form of this command.

```
customer-id customer-no
no customer-id
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>customer-no</code></td>
<td>Customer number, as specified in the service agreement. The customer number can be up to 255 alphanumeric characters in free format.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Command Default</th>
<th>None</th>
</tr>
</thead>
</table>

**Command Modes**

Callhome configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

You can configure the customer identification information that Cisco Smart Call Home should use. The service agreement includes the customer identification information, such as the customer ID, contract ID, and site ID.

**Examples**

This example shows how to configure a customer number:

```
switch(config-callhome)# customer-id AXC-1203
switch(config-callhome)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>site-id</code></td>
<td>Configures the site number for the switch.</td>
</tr>
<tr>
<td><code>show callhome</code></td>
<td>Displays a summary of the Call Home configuration.</td>
</tr>
</tbody>
</table>
D Commands

• description (NetFlow exporter), page 36
• description (NetFlow monitor), page 37
• description (NetFlow record), page 38
• description (NetFlow sampler), page 39
• description (SPAN, ERSPAN), page 40
• destination, page 43
• destination (ERSPAN session), page 44
• destination (SPAN session), page 46
• destination-profile (Call Home), page 49
• diagnostic bootup level, page 53
• dscp, page 54
**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.

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

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

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>description line</code></td>
<td>Description string. The string can have a maximum of 63 alphanumeric characters.</td>
</tr>
<tr>
<td><code>no description [ line ]</code></td>
<td></td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

NetFlow exporter configuration (config-flow-exporter)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show flow exporter</code></td>
<td>Displays information about NetFlow exporters.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>line</code></td>
<td>Description string. The string can have a maximum of 63 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

NetFlow monitor configuration (config-flow-monitor)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

This example shows how to remove the description:

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show flow record</td>
<td>Displays information about NetFlow records.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>line</td>
<td>Description string. The string can have a maximum of 63 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

NetFlow record configuration (config-flow-record)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show flow record</td>
<td>Displays information about NetFlow records.</td>
</tr>
</tbody>
</table>
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. |

Command Default

None

Command Modes

NetFlow sampler configuration (config-flow-sampler)

Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show sampler</td>
<td>Displays information about NetFlow samplers.</td>
</tr>
</tbody>
</table>
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
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><code>description</code></td>
<td></td>
<td>String description of the SPAN session configuration. This string is limited to 32 characters.</td>
</tr>
</tbody>
</table>

| 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) |

<table>
<thead>
<tr>
<th>Command History</th>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7.0(0)N1(1)</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

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`. 
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
```

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
```

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
```

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
```

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-erspan)# description span-on-drop-erspan-session
```

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
```

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-erspan)# description span-on-latency-erspan-session
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>destination (SPAN session)</td>
<td>Configures a destination SPAN port.</td>
</tr>
<tr>
<td>monitor session</td>
<td>Creates a new SPAN session configuration.</td>
</tr>
<tr>
<td>show monitor session</td>
<td>Displays SPAN session configuration information.</td>
</tr>
<tr>
<td>show running-config monitor</td>
<td>Displays the running configuration information of a SPAN session.</td>
</tr>
<tr>
<td>source (SPAN session)</td>
<td>Configures a source SPAN port.</td>
</tr>
</tbody>
</table>
description (SPAN, ERSPAN)
**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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>ipaddr</code></td>
<td>Destination IP address for a collector.</td>
</tr>
<tr>
<td><code>ipv6addr</code></td>
<td>Destination IPv6 address for a collector.</td>
</tr>
<tr>
<td><code>use-vrf vrf_name</code></td>
<td>(Optional) Specifies the Virtual Routing and Forwarding (VRF) label.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

NetFlow exporter configuration (config-flow-exporter)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show flow exporter</td>
<td>Displays information about NetFlow exporters.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip</td>
<td>Configures the remote IP address.</td>
</tr>
<tr>
<td>ip_address</td>
<td>IPv4 address in the format A.B.C.D.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>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.</td>
</tr>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

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
```
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-erspan)# destination ip 192.0.3.1
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>monitor session</td>
<td>Creates a new SPAN session configuration.</td>
</tr>
<tr>
<td>show monitor session</td>
<td>Displays SPAN session configuration information.</td>
</tr>
<tr>
<td>show running-config monitor</td>
<td>Displays the running configuration information of</td>
</tr>
<tr>
<td></td>
<td>a SPAN session.</td>
</tr>
<tr>
<td>source (ERSPAN session)</td>
<td>Configures a source SPAN port.</td>
</tr>
<tr>
<td>source (SPAN session)</td>
<td>Configures a source SPAN port.</td>
</tr>
</tbody>
</table>
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| port-channel channel-num]| vlan vlan-num| vsan vsan-num}

no destination {interface [ethernet slot/[QSFP-module/] port| port-channel channel-num]| vlan vlan-num| vsan vsan-num}
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>interface</code></td>
<td>Specifies the interface type to use as the destination SPAN port.</td>
</tr>
<tr>
<td><code>ethernet slot/[QSFP-module/] port</code></td>
<td>Specifies the Ethernet interface to use as the destination SPAN port. The <code>slot</code> number is from 1 to 255. The <code>QSFP-module</code> number is from 1 to 199. The <code>port</code> number is from 1 to 128.</td>
</tr>
<tr>
<td><code>port-channel channel-num</code></td>
<td>Specifies the EtherChannel interface to use as the destination SPAN port. The EtherChannel number is from 1 to 4096.</td>
</tr>
<tr>
<td><code>vlan vlan-num</code></td>
<td>Specifies the VLAN interface to use as the destination SPAN port. The range is from 1 to 3967 and 4048 to 4093.</td>
</tr>
<tr>
<td><code>vsan vsan-num</code></td>
<td>Specifies the virtual storage area network (VSAN) to use as the destination SPAN port. The range is from 1 to 4093.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>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.</td>
</tr>
</tbody>
</table>
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)# destination interface ethernet 1/5
switch(config-monitor)# no shutdown
```

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
```

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
```

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>source (SPAN session)</td>
<td>Configures a source SPAN port.</td>
</tr>
<tr>
<td>monitor session</td>
<td>Creates a new SPAN session configuration.</td>
</tr>
<tr>
<td>show monitor session</td>
<td>Displays SPAN session configuration information.</td>
</tr>
<tr>
<td>show running-config monitor</td>
<td>Displays the running configuration information of a SPAN session.</td>
</tr>
</tbody>
</table>
destination-profile (Call Home)

To create a user-defined destination profile, or modify a predefined or user-defined destination profile, and configure the message format for that new destination profile, use the destination-profile command. To remove the destination profile, use the no form of this command.

```plaintext
destination-profile {CiscoTAC-1| full-txt-destination| short-txt-destination} {message-level level} message-size size} {alert-group alert| email-addr email-address| http url| transport-method {email| http}}

destination-profile profile-name [alert-group alert| email-addr email-address| format {XML| full-txt| short-txt}| http url| message-level level| message-size size| transport-method {email| http}]

no destination-profile
```

### Syntax Description

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CiscoTAC-1</td>
<td>Configures a destination profile for Extensible Markup Language (XML) messages.</td>
</tr>
<tr>
<td>full-txt-destination</td>
<td>Configures a destination profile for plain text messages.</td>
</tr>
<tr>
<td>short-txt-destination</td>
<td>Configures a destination profile for short text message.</td>
</tr>
<tr>
<td>message-level level</td>
<td>Specifies the Call Home message severity level. The range is from 0 to 9, with 0 being the lowest urgency, and 9 the highest urgency.</td>
</tr>
<tr>
<td>message-size size</td>
<td>Specifies the maximum message size. The range is as follows:</td>
</tr>
<tr>
<td></td>
<td>• full-txt-destination—From 0 to 5000000, and the default is 2500000.</td>
</tr>
<tr>
<td></td>
<td>• short-txt-destination—From 0 to 10000, and the default is 4000.</td>
</tr>
<tr>
<td></td>
<td>• CiscoTAC-1—5000000, which is not changeable.</td>
</tr>
</tbody>
</table>
### alert-group alert

Associates one or more alert groups with a destination profile. The *alert* group can be one of the following:

- **All**—All alert groups
- **Cisco-TAC**—Cisco TAC events
- **Configuration**—Configuration events
- **Diagnostic**—Diagnostic events
- **EEM**—EEM events
- **Environmental**—Power, fan, and temperature-related events
- **Inventory**—Inventory status events
- **License**—Licensing events
- **Linecard-Hardware**—Linecard-related events
- **Supervisor-Hardware**—Supervisor-related events
- **Syslog-group-port**—Syslog message events filed by the port manager
- **System**—Software-related events
- **Test**—User-generated test events

### email-addr

Specifies the e-mail address to which the alert should be sent.

### email-address

E-mail address in email address format. The address can be a maximum of 255 alphanumeric characters and cannot contain white spaces; for example, `personname@companyname.com`.

### http url

Specifies the HTTP or HTTPS URL. The *url* can be a maximum of 255 alphanumeric characters and cannot contain white spaces; for example, `http://site.com/services/callserv`, `https://site2.com/serv/CALL`.

### transport-method

Specifies the transport method for sending Call Home messages.

### email

Specifies that Call Home messages be sent through e-mail.

### http

Specifies that Call Home messages be sent using HTTP.
User-defined profile name. The profile name can be a maximum of 31 alphanumeric characters.

<table>
<thead>
<tr>
<th>profile-name</th>
<th>User-defined profile name. The profile name can be a maximum of 31 alphanumeric characters.</th>
</tr>
</thead>
<tbody>
<tr>
<td>format</td>
<td>Specifies that the Call Home message format is XML.</td>
</tr>
<tr>
<td>XML</td>
<td>Specifies that the Call Home message format is XML.</td>
</tr>
<tr>
<td>full-txt</td>
<td>Specifies that the Call Home message format is plain text.</td>
</tr>
<tr>
<td>short-txt</td>
<td>Specifies that the Call Home message format is a short text message.</td>
</tr>
</tbody>
</table>

Command Default

Message format: XML.
Message size: 2500000 for full-txt-destination, 4000 for short-txt-destination, and 4000000 for XML format.
Message level: 0
Alert group: All for full-text-destination and short-text-destination profiles. The cisco-tac alert group for the CiscoTAC-1 destination profile.

Command Modes

Callhome configuration mode

Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

Usage Guidelines

You can modify the following attributes for a predefined or user-defined destination profile:

- Destination e-mail address—The e-mail address to which the alert should be sent.
- Message formatting—The message format used for sending the alert (full text, short text, or XML).
- Message level—The Call Home message severity level for this destination profile.
- Message size—The allowed length of a Call Home message sent to the e-mail addresses in this destination profile.

Note

You cannot modify or delete the CiscoTAC-1 destination profile.

The Cisco Nexus 5000 Series switch does not generate an alert if the Call Home severity level of the alert is lower than the message severity level set for the destination profile.

Table 1 lists each Call Home message level keyword.
Table 1: Call Home Message Severity Level

<table>
<thead>
<tr>
<th>Call Home Level</th>
<th>Keyword</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>9</td>
<td>Catastrophic</td>
<td>Network-wide catastrophic failure.</td>
</tr>
<tr>
<td>8</td>
<td>Disaster</td>
<td>Significant network impact.</td>
</tr>
<tr>
<td>7</td>
<td>Fatal</td>
<td>System is unusable.</td>
</tr>
<tr>
<td>6</td>
<td>Critical</td>
<td>Critical conditions that indicate immediate attention is needed.</td>
</tr>
<tr>
<td>5</td>
<td>Major</td>
<td>Major conditions.</td>
</tr>
<tr>
<td>4</td>
<td>Minor</td>
<td>Minor conditions.</td>
</tr>
<tr>
<td>3</td>
<td>Warning</td>
<td>Warning conditions.</td>
</tr>
<tr>
<td>2</td>
<td>Notification</td>
<td>Basic notification and informational messages.</td>
</tr>
<tr>
<td>1</td>
<td>Normal</td>
<td>Normal event signifying return to normal state.</td>
</tr>
<tr>
<td>0</td>
<td>Debugging</td>
<td>Debugging messages.</td>
</tr>
</tbody>
</table>

Examples

This example shows how to create a user-defined Call Home destination profile to send Call Home messages through e-mail:

```
switch(config-callhome)# destination-profile myProfile alert-group Configuration email-addr myname@somecompany.com message-level 3 transport-method email
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>callhome</td>
<td>Configures a Call Home service.</td>
</tr>
<tr>
<td>copy running-config startup-config</td>
<td>Saves this configuration change.</td>
</tr>
<tr>
<td>show callhome</td>
<td>Displays Call Home configuration information.</td>
</tr>
<tr>
<td>show callhome destination-profile</td>
<td>Displays Call Home information for a destination profile.</td>
</tr>
</tbody>
</table>
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.

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

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

### Syntax Description

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>bypass</td>
<td>Specifies that all bootup tests are skipped.</td>
</tr>
<tr>
<td>complete</td>
<td>Specifies that all bootup diagnostics are performed. This is the default value.</td>
</tr>
</tbody>
</table>

### Command Default

Complete

### Command Modes

Global configuration mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Examples

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

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

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

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

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show diagnostic bootup level</td>
<td>Displays the bootup diagnostics level.</td>
</tr>
<tr>
<td>show diagnostic bootup result</td>
<td>Displays the results of the diagnostics tests.</td>
</tr>
</tbody>
</table>
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.

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

### Syntax Description

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>dscp [dscp]</code></td>
<td>Differentiated services code point value. The range is from 0 to 63.</td>
</tr>
</tbody>
</table>

### Command Default

None

### Command Modes

NetFlow exporter configuration (config-flow-exporter)

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Usage Guidelines

This command does not require a license.

### Examples

This example shows how to configure the DSCP parameter:

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

This example shows how to remove the DSCP parameter:

```plaintext
switch(config-flow-exporter) show flow exporter
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show flow exporter</code></td>
<td>Displays information about NetFlow exporters.</td>
</tr>
</tbody>
</table>
E Commands

- email-contact (Call Home), page 56
- enable (Call Home), page 57
- erspan-id, page 59
- exporter, page 61
email-contact (Call Home)

To configure the e-mail address for the primary person responsible for the switch, use the email-contact command. To remove an email contact, use the no form of this command.

email-contact email-address

no email-contact

Syntax Description

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>email-address</td>
<td>E-mail address. The address can be a maximum of 255 alphanumeric characters in e-mail address format and cannot contain spaces.</td>
</tr>
</tbody>
</table>

Command Default

None

Command Modes

Callhome configuration mode

Command History

Release Modification
This command was introduced.

Examples

This example shows how to configure an e-mail address:

```
switch(config-callhome)# email-contact abc@xyz.com
switch(config-callhome)#
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>copy running-config startup-config</td>
<td>Saves this configuration change.</td>
</tr>
<tr>
<td>phone-contact</td>
<td>Configures the phone number for the primary person responsible for the switch.</td>
</tr>
<tr>
<td>show callhome</td>
<td>Displays a summary of the Call Home configuration.</td>
</tr>
</tbody>
</table>
enable (Call Home)

To enable the Cisco Smart Call Home service after you have configured the contact information, use the `enable` command. To disable the Smart Call Home service, use the `no` form of this command.

```
  enable
  no enable
```

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
Disabled

**Command Modes**
Callhome configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**
You must configure an e-mail server. Your switch must have IP connectivity to an e-mail server. You must configure the contact name (SNMP server contact), phone, and street address information before you enable Call Home.

**Examples**
This example shows how to enable the Cisco Smart Call Home service:

```
switch(config-callhome)# enable
  contact email address is not configured
callhome can not be enabled on the switch, because necessary configuration has not been done
Please check if all of following configuration is done
contact person name(sysContact)
contact person's email
contact person's phone number
street addr
To configure sysContact, please use snmp-server command
switch(config-callhome)#
```

This example shows how to disable the Cisco Smart Call Home service:

```
switch(config-callhome)# no enable
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>copy running-config startup-config</code></td>
<td>Saves this configuration change.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------</td>
<td>----------------------------------------------------------</td>
</tr>
<tr>
<td>email-contact</td>
<td>Configures the e-mail address.</td>
</tr>
<tr>
<td>show callhome</td>
<td>Displays a summary of the Call Home configuration.</td>
</tr>
</tbody>
</table>
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`

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>flow_id</code></td>
<td>ERSPAN flow ID. The range is from 1 to 1023.</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>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.</td>
</tr>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip dscp</td>
<td>Configures the DSCP value of the packets in the ERSPAN traffic.</td>
</tr>
<tr>
<td>ip ttl</td>
<td>Configures the IP time-to-live (TTL) value of the ERSPAN traffic.</td>
</tr>
<tr>
<td>vrf</td>
<td>Configures the VRF for ERSPAN traffic forwarding.</td>
</tr>
<tr>
<td>monitor-session</td>
<td>Enters the monitor configuration mode for configuring an ERSPAN or SPAN session for analyzing traffic between ports.</td>
</tr>
</tbody>
</table>
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. |

**Command Default**

None

**Command Modes**

NetFlow monitor configuration (config-flow-monitor)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

This example shows how to remove a NetFlow exporter:

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show flow record</td>
<td>Displays information about NetFlow records.</td>
</tr>
</tbody>
</table>
F Commands

- feature netflow, page 64
- feature ptp, page 65
- fex-group, page 66
- filter access-group, page 68
- flow monitor, page 70
- flow monitor (interface), page 73
- flow record, page 76
- flow timeout, page 78
**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.

**Command Default**

Disabled

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flow record</td>
<td>Creates a flow record and enters flow record configuration mode.</td>
</tr>
<tr>
<td>show flow record</td>
<td>Displays information about NetFlow flow records.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

Examples

This example shows how to enable PTP on the device:

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

Related Commands

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

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><code>name</code></td>
<td>Specifies the name of the FEX group.</td>
</tr>
</tbody>
</table>

### Command Default

None

### Command Modes

Global configuration mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>configure maintenance profile</code></td>
<td>Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.</td>
</tr>
<tr>
<td><code>show run mmode</code></td>
<td>Displays the currently running maintenance profile configuration on a switch.</td>
</tr>
<tr>
<td><code>show system mode</code></td>
<td>Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>system mode maintenance on-reload reset-reason</td>
<td>Boots the switch into maintenance mode automatically in the event of a specified system crash.</td>
</tr>
<tr>
<td>system mode maintenance shutdown</td>
<td>Shuts down all protocols and interfaces except the management interface (by using the <code>shutdown</code> command and not the default <code>isolate</code> command).</td>
</tr>
<tr>
<td>system mode maintenance timeout</td>
<td>Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>acl-filter</code></td>
<td>Access control list (ACL) name. An ACL associates the access list with the SPAN session.</td>
</tr>
</tbody>
</table>

### Command Default

None

### Command Modes

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

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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
```
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>monitor session</td>
<td>Creates a new SPAN or ERSPAN session.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>monitor-name</td>
<td>Name of the flow monitor that is created or modified.</td>
</tr>
</tbody>
</table>

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

**Command Modes**
Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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** - 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** - Specifies a flow record to use as follows:
  - **record-name** - Name of a record.
  - **netflow ipv4collection-type**
  - **netflow-original**
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
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>feature netflow</td>
<td>Enables the NetFlow feature.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>ip</code></td>
<td>Configures IP Flexible NetFlow flow monitoring.</td>
</tr>
<tr>
<td><code>ipv6</code></td>
<td>Configures IPv6 Flexible NetFlow flow monitoring.</td>
</tr>
<tr>
<td><code>monitor-name</code></td>
<td>Name of a flow monitor that you previously configured.</td>
</tr>
<tr>
<td><code>input</code></td>
<td>Monitors traffic that the routers are receiving on the interface.</td>
</tr>
<tr>
<td><code>sampler</code></td>
<td>Specifies the name of a flow sampler for the flow monitor.</td>
</tr>
<tr>
<td><code>sampler-name</code></td>
<td>Flow sampler for this flow monitor using the name of a sampler that you previously configured.</td>
</tr>
</tbody>
</table>

### Command Default

Disabled

### Command Modes

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

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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.

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
```

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

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flow exporter</td>
<td>Creates a flow exporter.</td>
</tr>
<tr>
<td>flow monitor</td>
<td>Creates a flow monitor.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>----------</td>
<td>------------------------</td>
</tr>
<tr>
<td>flow record</td>
<td>Creates a flow record.</td>
</tr>
<tr>
<td>sampler</td>
<td>Creates a flow sampler.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>record-name</code></td>
<td>Name of the flow record that is created or modified.</td>
</tr>
</tbody>
</table>

**Command Default**

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

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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)#
```

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flow monitor</td>
<td>Creates a flow monitor.</td>
</tr>
</tbody>
</table>
**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**

<table>
<thead>
<tr>
<th>seconds</th>
<th>Flow timeout value in seconds. The range is from 5 to 60 seconds.</th>
</tr>
</thead>
</table>

**Command Default**

The default settings is 15 seconds.

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flow record</td>
<td>Creates a flow exporter.</td>
</tr>
<tr>
<td>flow monitor</td>
<td>Creates a flow monitor.</td>
</tr>
</tbody>
</table>
H Commands

- hardware pq-drain, page 80
- hardware random-detect, page 82
To configure the proxy-queue drain rate settings, use the `hardware pq-drain` command in global configuration 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

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>10g 10g-drain-rate</code></td>
<td>Proxy Queue drain rate for the 10 G interface. The range is from 1 Mbps to 20000 Mbps.</td>
</tr>
<tr>
<td><code>40g 40g-drain-rate</code></td>
<td>Proxy Queue drain rate for the 10 G interface. The range is from 1 Mbps to 80000 Mbps.</td>
</tr>
</tbody>
</table>

### Command Default

Disabled

### Command Modes

Global configuration mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Usage Guidelines

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 Gigabit interfaces and 39900 Mbps of traffic from 40 Gigabit interfaces:

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

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>hardware random-detect</code></td>
<td>Configures ECN for a QoS group.</td>
</tr>
</tbody>
</table>
# 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.

```markdown
hardware random-detect min-thresh 10g 10g-min-threshold 40g 40g-min-threshold max-thresh 10g 10g-max-threshold 40g 40g-max-threshold ecn qos-group group-number
no hardware random-detect
```

## Syntax Description

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>min-thresh</code></td>
<td>Minimum threshold.</td>
</tr>
<tr>
<td><code>10g 10g-min-threshold</code></td>
<td>Minimum threshold for 10 Gigabit interfaces. The range is from 1 to 67108863 bytes.</td>
</tr>
<tr>
<td><code>40g 40g-min-threshold</code></td>
<td>Minimum threshold for 40 Gigabit interfaces. The range is from 1 to 67108863 bytes.</td>
</tr>
<tr>
<td><code>max-thresh</code></td>
<td>Maximum threshold.</td>
</tr>
<tr>
<td><code>10g 10g-max-threshold</code></td>
<td>Maximum threshold for 10 Gigabit interfaces. The range is from 1 to 67108863 bytes.</td>
</tr>
<tr>
<td><code>40g 40g-max-threshold</code></td>
<td>Maximum threshold for 40 Gigabit interfaces. The range is from 1 to 67108863 bytes.</td>
</tr>
<tr>
<td><code>ecn</code></td>
<td>Enables ECN for the specified QoS group.</td>
</tr>
<tr>
<td><code>qos-group group-number</code></td>
<td>Specifies the QoS group that is being configured.</td>
</tr>
</tbody>
</table>

## Command Default

Disabled

## Command Modes

Global configuration mode

## Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

## 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:

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>hardware pq-drain</code></td>
<td>Configures proxy queue drain rate.</td>
</tr>
</tbody>
</table>
hardware random-detect
I Commands

- ip access-list (session), page 86
- ip dns source-interface, page 87
- ip domain-list, page 89
- ip domain-lookup, page 91
- ip domain-name, page 92
- ip dscp (ERSSPAN), page 94
- ip host, page 96
- ip name-server, page 97
- ip port access-group (session), page 99
- ip ttl (ERSSPAN), page 101
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

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>ACL-name</code></td>
<td>Name of the IPv4 ACL. The name can be up to 64 alphanumeric characters and cannot contain a space or quotation mark.</td>
</tr>
</tbody>
</table>

### Command Default

No IPv4 ACLs are defined by default.

### Command Modes

Global session configuration mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>configure session</td>
<td>Creates a configuration session.</td>
</tr>
<tr>
<td>deny</td>
<td>Configures a deny rule in an IPv4 ACL.</td>
</tr>
<tr>
<td>permit</td>
<td>Configures a permit rule in an IPv4 ACL.</td>
</tr>
<tr>
<td>show configuration session</td>
<td>Displays the contents of the session.</td>
</tr>
</tbody>
</table>
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**

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

**Command Default**

None

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

This command does not require a license.
This example shows how to configure an Ethernet interface as the source interface for a DNS lookup:

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

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>ip domain-lookup</code></td>
<td>Enables the DNS lookup feature.</td>
</tr>
<tr>
<td><code>show ip dns source-interface</code></td>
<td>Displays information about the DNS source interfaces.</td>
</tr>
</tbody>
</table>
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]**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>domain-list</strong></td>
<td>Specifies the domain name for the IP domain list. The name can be any case-sensitive, alphanumeric string up to 63 characters.</td>
</tr>
<tr>
<td><strong>use-vrf name</strong></td>
<td>(Optional) Specifies the virtual routing and forwarding (VRF) to use to resolve the domain name for the IP domain list. The name can be any case-sensitive, alphanumeric string up to 32 characters.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Global configuration mode
VRF context configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>show hosts</strong></td>
<td>Displays information about the IP domain name configuration.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show hosts</td>
<td>Displays information about the DNS.</td>
</tr>
</tbody>
</table>
**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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>domain-name</td>
<td>Domain name. The name can be any case-sensitive, alphanumeric string up to 63 characters.</td>
</tr>
<tr>
<td>use-vrf name</td>
<td>(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.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

- Global configuration mode
- VRF context configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip domain-list</td>
<td>Configures the IP domain list.</td>
</tr>
<tr>
<td>ip domain-lookup</td>
<td>Enables the Domain Name Server (DNS) lookup feature.</td>
</tr>
<tr>
<td>show hosts</td>
<td>Displays information about the IP domain name configuration.</td>
</tr>
</tbody>
</table>
ip dscp (ERSPAN)

To configure the differentiated devices 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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>dscp_value</code></td>
<td>DSCP value of the packets in the ERSPAN traffic. The range is from 0 to 63.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>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.</td>
</tr>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

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-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
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip prec</td>
<td>Configures the IP precedence value of the ERSPAN traffic.</td>
</tr>
<tr>
<td>ip ttl</td>
<td>Configures the IP time-to-live (TTL) value of the ERSAN traffic.</td>
</tr>
<tr>
<td>monitor-session</td>
<td>Enters the monitor configuration mode for configuring an ERSPAN or SPAN session for analyzing traffic between ports.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>name</code></td>
<td>Hostname. The <code>name</code> can be any case-sensitive, alphanumeric string up to 80 characters.</td>
</tr>
<tr>
<td><code>address1</code></td>
<td>IPv4 address in the x.x.x.x format.</td>
</tr>
<tr>
<td><code>address2 ...address6</code></td>
<td>(Optional) Up to five additional IPv4 addresses in the x.x.x.x format.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>ipv6 host</code></td>
<td>Configures a static host name in the DNS database.</td>
</tr>
<tr>
<td><code>show hosts</code></td>
<td>Displays information about the IP domain name configuration.</td>
</tr>
</tbody>
</table>
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]

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip-address</td>
<td>IP address for the name server.</td>
</tr>
<tr>
<td>use-vrf name</td>
<td>(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.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

VRF context configuration mode

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip domain-list</td>
<td>Defines a list of domains.</td>
</tr>
<tr>
<td>ip domain lookup</td>
<td>Enables DNS-based host name-to-address translation.</td>
</tr>
<tr>
<td>show hosts</td>
<td>Displays information about the IP domain name</td>
</tr>
<tr>
<td></td>
<td>configuration.</td>
</tr>
<tr>
<td>vrf context</td>
<td>Creates a virtual routing and forwarding (VRF)</td>
</tr>
<tr>
<td></td>
<td>instance.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>access-list-name</code></td>
<td>Name of the IPv4 ACL. The name can be up to 64 alphanumeric, case-sensitive characters long.</td>
</tr>
<tr>
<td><code>in</code></td>
<td>Specifies that the ACL applies to inbound traffic.</td>
</tr>
<tr>
<td><code>out</code></td>
<td>Specifies that the ACL applies to outbound traffic.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Session interface configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

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
```
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show access-lists</td>
<td>Displays all ACLs.</td>
</tr>
<tr>
<td>show configuration session</td>
<td>Displays the contents of the session.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th><code>ttl_value</code></th>
<th>IP TTL value of the ERSPAN traffic. The range is from 1 to 255.</th>
</tr>
</thead>
</table>

**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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>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.</td>
</tr>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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  
```

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

```
switch(config)# no ip ttl 30  
```

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  
```
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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip dscp</td>
<td>Configures the DSCP value of the packets in the ERSSPAN traffic.</td>
</tr>
<tr>
<td>monitor-session</td>
<td>Enters the monitor configuration mode for configuring an ERSSPAN or SPAN session for analyzing traffic between ports.</td>
</tr>
</tbody>
</table>
L Commands

• layer2-switched flow monitor, page 104
• logging abort, page 106
• logging commit, page 107
• logging console, page 108
• logging distribute, page 110
• logging event, page 111
• logging event port, page 112
• logging ip access-list cache, page 113
• logging level, page 115
• logging logfile, page 117
• logging module, page 119
• logging monitor, page 121
• logging server, page 123
• logging timestamp, page 125
layer2-switched flow monitor

To associate a flow monitor and a sampler to the switch port input packets, use the `layer2-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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>flow-name</code></td>
<td>Name of the flow monitor to associate with the input packets.</td>
</tr>
<tr>
<td><code>input</code></td>
<td>Specifies that this association applies to input packets only.</td>
</tr>
<tr>
<td><code>sampler sampler-name</code></td>
<td>The sampler to associate with the input packets.</td>
</tr>
</tbody>
</table>

**Command Default**

none.

**Command Modes**

Interface configuration mode (config-if)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flow monitor</td>
<td>Create a Flexible NetFlow flow monitor.</td>
</tr>
<tr>
<td>sampler</td>
<td>Defines a sampler and enters the sampler configuration mode.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>logging distribute</code></td>
<td>Enables the distribution of the syslog server configuration to network switches using the CFS infrastructure.</td>
</tr>
<tr>
<td><code>show logging pending</code></td>
<td>Displays the pending changes to the syslog server configuration.</td>
</tr>
<tr>
<td><code>show logging status</code></td>
<td>Displays the logging status.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

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

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>logging distribute</strong></td>
<td>Enables the distribution of the syslog server configuration to network switches using the CFS infrastructure.</td>
</tr>
<tr>
<td><strong>show logging status</strong></td>
<td>Displays the logging status.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Related Commands</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>show logging console</td>
<td>Displays the console logging configuration.</td>
</tr>
</tbody>
</table>
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 logging distribute` 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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>logging abort</code></td>
<td>Cancels the pending changes to the syslog server configuration.</td>
</tr>
<tr>
<td><code>logging commit</code></td>
<td>Commits the changes to the syslog server configuration for distribution to the switches in the fabric.</td>
</tr>
<tr>
<td><code>show logging status</code></td>
<td>Displays the logging status.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>link-status</td>
<td>Specifies to log all UP/DOWN and CHANGE messages.</td>
</tr>
<tr>
<td>trunk-status</td>
<td>Specifies to log all TRUNK status messages.</td>
</tr>
<tr>
<td>default</td>
<td>Specifies to the default logging configuration is used by interfaces not explicitly configured.</td>
</tr>
<tr>
<td>enable</td>
<td>Enables the logging to override the port level configuration.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to log interface events:

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show logging</td>
<td>Displays the logging status.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>link-status</td>
<td>Specifies to log all UP/DOWN and CHANGE messages.</td>
</tr>
<tr>
<td>trunk-status</td>
<td>Specifies to log all TRUNK status messages.</td>
</tr>
<tr>
<td>default</td>
<td>(Optional) Specifies the default logging configuration that is used by interfaces not explicitly configured.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Interface configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show interface</td>
<td>Displays the interface configuration information.</td>
</tr>
<tr>
<td>show logging</td>
<td>Displays the logging status.</td>
</tr>
</tbody>
</table>
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. |

**Command Default**

None

**Command Modes**

Global configuration

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

This command does not require a license.

**Examples**

This example shows how 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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show logging ip access-list</code></td>
<td>Displays the status of IP access list logging.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax Element</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>facility</code></td>
<td>Facility. The facilities are listed in <a href="#">Table 1-1</a> of Appendix 1, &quot;System Message Logging Facilities.&quot; To apply the same severity level to all facilities, use the <code>all</code> facility.</td>
</tr>
</tbody>
</table>
| `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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show logging level</td>
<td>Displays the facility logging level configuration.</td>
</tr>
</tbody>
</table>
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**

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

**Command Default**

None

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show logging logfile</code></td>
<td>Displays the log file.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>severity-level</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>(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:</td>
<td></td>
</tr>
<tr>
<td>0 — emergency: System unusable</td>
<td></td>
</tr>
<tr>
<td>1 — alert: Immediate action needed</td>
<td></td>
</tr>
<tr>
<td>2 — critical: Critical condition</td>
<td></td>
</tr>
<tr>
<td>3 — error: Error condition</td>
<td></td>
</tr>
<tr>
<td>4 — warning: Warning condition</td>
<td></td>
</tr>
<tr>
<td>5 — notification: Normal but significant condition—default level</td>
<td></td>
</tr>
<tr>
<td>6 — informational: Informational message only</td>
<td></td>
</tr>
<tr>
<td>7 — debugging: Appears during debugging only</td>
<td></td>
</tr>
</tbody>
</table>

### Command Default

None

### Command Modes

Global configuration mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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
```
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          | (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

<table>
<thead>
<tr>
<th>Command History</th>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

| 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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show logging monitor</td>
<td>Displays the status of monitor logging.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>host</td>
<td>Hostname or IPv4/IPv6 address of the remote syslog server.</td>
</tr>
<tr>
<td>severity-level</td>
<td>(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:</td>
</tr>
<tr>
<td></td>
<td>• 0—emergency: System unusable</td>
</tr>
<tr>
<td></td>
<td>• 1—alert: Immediate action needed</td>
</tr>
<tr>
<td></td>
<td>• 2—critical: Critical condition—default level</td>
</tr>
<tr>
<td></td>
<td>• 3—error: Error condition</td>
</tr>
<tr>
<td></td>
<td>• 4—warning: Warning condition</td>
</tr>
<tr>
<td></td>
<td>• 5—notification: Normal but significant condition</td>
</tr>
<tr>
<td></td>
<td>• 6—informational: Informational message only</td>
</tr>
<tr>
<td></td>
<td>• 7—debugging: Appears during debugging only</td>
</tr>
<tr>
<td>facility</td>
<td>(Optional) Specifies the outgoing facility. The facilities are listed in Table 1-1 of Appendix 1, &quot;System Message Logging Facilities.&quot; The default outgoing facility is local7.</td>
</tr>
<tr>
<td>vrf vrf_name</td>
<td>(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.</td>
</tr>
<tr>
<td>management</td>
<td>Specifies the management VRF. This is the default VRF.</td>
</tr>
</tbody>
</table>
**Command Default**

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

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show logging server</td>
<td>Displays the configured syslog servers.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show logging timestamp</td>
<td>Displays the logging time-stamp configuration.</td>
</tr>
</tbody>
</table>
logging timestamp
M Commands

- match datalink, page 128
- match ip, page 130
- match ipv4, page 131
- match transport, page 133
- mode, page 134
- monitor erspan origin ip-address, page 136
- monitor session, page 138
- mtu, page 142
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

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>mac</code></td>
<td>Specifies the MAC address.</td>
</tr>
<tr>
<td><code>source-address</code></td>
<td>Specifies the source MAC address.</td>
</tr>
<tr>
<td><code>destination-address</code></td>
<td>Specifies the destination MAC address.</td>
</tr>
<tr>
<td><code>ethertype</code></td>
<td>Specifies the EtherType.</td>
</tr>
<tr>
<td><code>vlan</code></td>
<td>Specifies the VLAN ID.</td>
</tr>
</tbody>
</table>

### Command Default

None

### Command Modes

NetFlow record configuration (config-flow-record)

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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:

```bash
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:

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>match ip</td>
<td>Configures the match IP option for defining a NetFlow record map.</td>
</tr>
<tr>
<td>match ipv4</td>
<td>Configures the match IPv4 option for defining a NetFlow record map.</td>
</tr>
</tbody>
</table>
**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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>protocol</td>
<td>Specifies the protocol.</td>
</tr>
<tr>
<td>tos</td>
<td>Specifies the type of service (ToS).</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

NetFlow record configuration (config-flow-record)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

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
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show flow record</td>
<td>Displays information about NetFlow records.</td>
</tr>
</tbody>
</table>
**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
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>source</td>
<td>Specifies the source address.</td>
</tr>
<tr>
<td>destination</td>
<td>Specifies the destination address.</td>
</tr>
<tr>
<td>address</td>
<td>Specifies the address.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

NetFlow record configuration (config-flow-record)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

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
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show flow record</td>
<td>Displays information about NetFlow records.</td>
</tr>
</tbody>
</table>
match ipv4
**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**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>destination-port</td>
<td>Specifies the transport destination port.</td>
</tr>
<tr>
<td>source-port</td>
<td>Specifies the transport source port.</td>
</tr>
</tbody>
</table>

**Command Default**  
None

**Command Modes**  
NetFlow record configuration (config-flow-record)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show flow record</td>
<td>Displays information about NetFlow records.</td>
</tr>
</tbody>
</table>
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]
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>samples</td>
<td>Number of samples per sampling. The range is from 1 to 64.</td>
</tr>
<tr>
<td>out-of</td>
<td>M out of N packets.</td>
</tr>
<tr>
<td>packets</td>
<td>Number of packets in each sampling. The range is from 1 to 65536, and must be a power of 2.</td>
</tr>
</tbody>
</table>

**Command Default**: None

**Command Modes**: NetFlow sampler configuration (config-flow-sampler)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show sampler</td>
<td>Displays information about NetFlow samplers.</td>
</tr>
</tbody>
</table>
**monitor erspan origin ip-address**

To configure the Encapsulated Remote Switched Port Analyzer (ERSPAN) origin IP address, use the `monitor erspan 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]
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><code>ip-address</code></td>
<td>IP address.</td>
</tr>
<tr>
<td><code>global</code></td>
<td>(Optional) Specifies the default virtual device context (VDC) configuration across all VDCs.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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:

```bash
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:

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>monitor session</td>
<td>Configures a SPAN or an ERSPAN session.</td>
</tr>
</tbody>
</table>
M Commands

monitor erspan origin ip-address
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]
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>session-number</td>
<td>SPAN session to create or configure. The range is from 1 to 48.</td>
</tr>
<tr>
<td>all</td>
<td>Specifies to apply configuration information to all SPAN sessions.</td>
</tr>
<tr>
<td>shut</td>
<td>(Optional) Specifies that the selected session will be shut down for monitoring.</td>
</tr>
<tr>
<td>type</td>
<td>(Optional) Specifies the type of session to configure.</td>
</tr>
<tr>
<td>local</td>
<td>Specifies the session type to be local.</td>
</tr>
<tr>
<td>erspan-destination</td>
<td>Creates an ERSPAN destination session.</td>
</tr>
<tr>
<td>erspan-source</td>
<td>Creates an ERSPAN source session.</td>
</tr>
<tr>
<td>span-on-drop</td>
<td>Creates a SPAN on drop session.</td>
</tr>
<tr>
<td>span-on-drop-erspan</td>
<td>Creates a SPAN on drop ERSPAN session.</td>
</tr>
<tr>
<td>span-on-latency</td>
<td>Creates a SPAN on latency session</td>
</tr>
<tr>
<td>span-on-latency-erspan</td>
<td>Creates a SPAN on latency ERSPAN session</td>
</tr>
<tr>
<td>suspend</td>
<td>(Optional) Specifies to suspend the referenced SPAN session.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Global configuration mode
Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was modified. Support was added for the erspan-destination,</td>
</tr>
<tr>
<td></td>
<td>span-on-drop, span-on-drop-erspan, span-on-latency,</td>
</tr>
<tr>
<td></td>
<td>span-on-latency-erspan keywords, and the session-number range was</td>
</tr>
<tr>
<td></td>
<td>increased from 18 to 48.</td>
</tr>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

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
```

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

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-erspan)# description span-on-latency-erspan-session
switch(config-span-on-latency-erspan)# destination ip 192.0.3.1

Related Commands

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

<table>
<thead>
<tr>
<th>mtu-size</th>
<th>MTU truncation size. The range is from 64 to 1518.</th>
</tr>
</thead>
</table>

**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)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>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.</td>
</tr>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>monitor session</td>
<td>Places you in the monitor configuration mode for configuring a SPAN session.</td>
</tr>
<tr>
<td>show monitor session</td>
<td>Displays the status of the SPAN session.</td>
</tr>
</tbody>
</table>
mtu
N Commands

- ntp, page 146
- ntp abort, page 148
- ntp authenticate, page 149
- ntp commit, page 150
- ntp distribute, page 151
- ntp sync-retry, page 152
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>peer hostname</td>
<td>Specifies the hostname or IP address of an NTP peer.</td>
</tr>
<tr>
<td>server hostname</td>
<td>Specifies the hostname or IP address of the NTP server.</td>
</tr>
<tr>
<td>prefer</td>
<td>(Optional) Specifies this peer/server as the preferred peer/server.</td>
</tr>
<tr>
<td>use-vrf vrf-name</td>
<td>(Optional) Specifies the virtual routing and forwarding (VRF) used to reach this peer/server.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ntp distribute</td>
<td>Enables CFS distribution for NTP.</td>
</tr>
<tr>
<td>show ntp</td>
<td>Displays NTP information.</td>
</tr>
</tbody>
</table>
ntp abort

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

```plaintext
ntp abort
```

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
None

**Command Modes**
Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

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

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ntp distribute</td>
<td>Enables CFS distribution for NTP.</td>
</tr>
<tr>
<td>show ntp</td>
<td>Displays NTP information.</td>
</tr>
</tbody>
</table>
ntp authenticate

To enable Network Time Protocol (NTP) authentication, use the `ntp authenticate` command. To disable NTP authentication, use the `no` form of this command.

```
ntp authenticate
no ntp authenticate
```

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
Disabled

**Command Modes**
Global configuration (config)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**
This command does not require a license.

**Examples**
This example shows how to enable NTP authentication:

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

This example shows how to disable NTP authentication:

```
switch(config)# no ntp authenticate
switch(config)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show ntp authentication-status</code></td>
<td>Displays the status of NTP authentication.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

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

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ntp distribute</strong></td>
<td>Enables CFS distribution for NTP.</td>
</tr>
<tr>
<td><strong>show ntp</strong></td>
<td>Displays NTP information.</td>
</tr>
</tbody>
</table>
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.

Syntax Description
This command has no arguments or keywords.

Command Default
Disabled

Command Modes
Global configuration mode

Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ntp commit</td>
<td>Commits the NTP configuration changes to the active configuration.</td>
</tr>
<tr>
<td>show ntp</td>
<td>Displays NTP information.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

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

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>ntp distribute</code></td>
<td>Enables CFS distribution for NTP.</td>
</tr>
<tr>
<td><code>show ntp</code></td>
<td>Displays NTP information.</td>
</tr>
</tbody>
</table>
O Commands

- option exporter-stats timeout, page 154
- option interface-table timeout, page 155
- option sampler-table timeout, page 156
**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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>time</td>
<td>Time in seconds. The range is from 1 to 86400.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

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

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

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

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show flow exporter</td>
<td>Displays information about NetFlow exporters.</td>
</tr>
</tbody>
</table>
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.

**Command Default**

None

**Command Modes**

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

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show flow exporter</code></td>
<td>Displays information about the NetFlow exporters.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>time</td>
<td>Time in seconds. The range is from 1 to 86400.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

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

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

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

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show flow exporter</td>
<td>Displays information about NetFlow exporters.</td>
</tr>
</tbody>
</table>
P Commands

- packet latency threshold, page 158
- periodic-inventory (Call Home), page 159
- phone-contact (Call Home), page 161
- poweroff module, page 162
- ptp announce, page 163
- ptp delay request minimum interval, page 165
- ptp domain, page 167
- ptp priority1, page 168
- ptp priority2, page 169
- ptp source, page 171
- ptp sync interval, page 173
- ptp vlan, page 175
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. |

**Command Default**

None

**Command Default**

Interface configuration (config-if)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

This command does not require a license.

You apply this command to egress interfaces where SPAN-on-Latency functionality 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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>monitor session</td>
<td>Creates a SPAN or an ERSPAN session.</td>
</tr>
</tbody>
</table>
periodic-inventory (Call Home)

To configure the switch to periodically send a message with an inventory of all software services currently enabled and running on the device with hardware inventory information, use the periodic-inventory command. To disable the periodic messages, use the no form of this command.

```
periodic-inventory notification [interval time-period|timeofday time-of-day]
no periodic-inventory notification [interval time-period|timeofday time-of-day]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Notification</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>notification</td>
<td>Enables sending periodic software inventory messages.</td>
</tr>
<tr>
<td>interval time-period</td>
<td>(Optional) Specifies the time period for periodic inventory notification. The time period range is from 1 to 30 days, and the default is 7 days.</td>
</tr>
<tr>
<td>timeofday time-of-day</td>
<td>(Optional) Specifies the time of day for periodic inventory notification. The time of day is in HH:MM format.</td>
</tr>
</tbody>
</table>

**Command Default**

Interval: 7 days

**Command Modes**

Callhome configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

The switch generates two Call Home notifications: periodic configuration messages and periodic inventory messages.

**Examples**

This example shows how to configure a periodic inventory notification to generate every 5 days:

```
switch(config-callhome)# periodic-inventory notification interval 5
```

This example shows how to disable a periodic inventory notification for Call Home:

```
switch(config-callhome)# no periodic-inventory notification interval 5
```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>copy running-config startup-config</code></td>
<td>Saves this configuration change.</td>
</tr>
<tr>
<td><code>show callhome</code></td>
<td>Displays Call Home configuration information.</td>
</tr>
<tr>
<td><code>show running-config callhome</code></td>
<td>Displays the running configuration information for Call Home.</td>
</tr>
</tbody>
</table>
phone-contact (Call Home)

To configure the phone number for the primary person responsible for the device, use the phone-contact command. To remove a phone contact, use the no form of this command.

```
phone-contact phone-no
no phone-contact
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>phone-no</td>
<td>Phone number in international phone number format, such as +1-800-123-4567. The phone number can be a maximum of 17 alphanumeric characters and cannot contain spaces.</td>
</tr>
<tr>
<td>Note</td>
<td>You must use the + prefix before the number.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Callhome configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to configure a phone number for the primary person responsible for the device:

```
switch(config-callhome)# phone-contact +1-800-123-4567
switch(config-callhome)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>copy running-config startup-config</td>
<td>Saves this configuration change.</td>
</tr>
<tr>
<td>show callhome</td>
<td>Displays a summary of the Call Home configuration.</td>
</tr>
<tr>
<td>streetaddress</td>
<td>Configures the street address for the primary person responsible for the switch.</td>
</tr>
</tbody>
</table>
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. |

**Command Default**

None

**Command Default**

Global configuration (config)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show module</td>
<td>Displays information about modules.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>interval log-seconds</td>
<td>The number of log seconds between PTP announcement messages. The range is from 0 to 4 seconds.</td>
</tr>
<tr>
<td>timeout count</td>
<td>The number of PTP intervals before a timeout occurs on the interface. The range is from 2 to 10.</td>
</tr>
</tbody>
</table>

**Command Default**

The default interval is 1 log second.
The default timeout is 3 announce intervals.

**Command Modes**

Interfaces configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

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

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>feature ptp</td>
<td>Enables or disables PTP on the device.</td>
</tr>
<tr>
<td>ptp announce</td>
<td>Configures the interval between PTP announce messages on an interface or the number of PTP intervals before a timeout occurs on an interface.</td>
</tr>
<tr>
<td>ptp sync interval</td>
<td>Configures the interval between PTP synchronization messages on an interface.</td>
</tr>
<tr>
<td>ptp vlan</td>
<td>Configures the VLAN for the interface where PTP is being enabled.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------------------</td>
<td>--------------------------------------------------------------------</td>
</tr>
<tr>
<td><code>show ptp brief</code></td>
<td>Displays the PTP status.</td>
</tr>
<tr>
<td><code>show ptp port interface ethernet</code></td>
<td>Displays the status of the PTP port on the switch.</td>
</tr>
</tbody>
</table>
ptp domain

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

`ptp domain number`
`no ptp domain number`

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>number</code></td>
<td>Configures the domain number to use for this clock. The range is from 0 to 128.</td>
</tr>
</tbody>
</table>

**Command Default**

0

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

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

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>feature ptp</td>
<td>Enables or disables PTP on the device.</td>
</tr>
<tr>
<td>ptp source</td>
<td>Configures the source IP address for all PTP packets.</td>
</tr>
<tr>
<td>ptp priority1</td>
<td>Configures the priority 1 value to use when advertising this clock.</td>
</tr>
<tr>
<td>ptp priority2</td>
<td>Configures the priority 1 value to use when advertising this clock.</td>
</tr>
<tr>
<td>show ptp brief</td>
<td>Displays the PTP status.</td>
</tr>
<tr>
<td>show ptp clock</td>
<td>Displays the properties of the local clock.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

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

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>feature ptp</td>
<td>Enables or disables PTP on the device.</td>
</tr>
<tr>
<td>ptp source</td>
<td>Configures the source IP address for all PTP packets.</td>
</tr>
<tr>
<td>ptp domain</td>
<td>Configures the domain number to use for this clock.</td>
</tr>
<tr>
<td>ptp priority2</td>
<td>Configures the priority2 value to use when advertising this clock.</td>
</tr>
<tr>
<td>show ptp brief</td>
<td>Displays the PTP status.</td>
</tr>
<tr>
<td>show ptp clock</td>
<td>Displays the properties of the local clock.</td>
</tr>
</tbody>
</table>
**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**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>value</code></td>
<td>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.</td>
</tr>
</tbody>
</table>

**Command Default**

255 when advertising the clock

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

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

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

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>feature ptp</code></td>
<td>Enables or disables PTP on the device.</td>
</tr>
<tr>
<td><code>ptp source</code></td>
<td>Configures the source IP address for all PTP packets.</td>
</tr>
<tr>
<td><code>ptp domain</code></td>
<td>Configures the domain number to use for this clock.</td>
</tr>
<tr>
<td><code>ptp priority1</code></td>
<td>Configures the priority1 value to use when advertising this clock.</td>
</tr>
<tr>
<td><code>show ptp brief</code></td>
<td>Displays the PTP status.</td>
</tr>
<tr>
<td><code>show ptp clock</code></td>
<td>Displays the properties of the local clock.</td>
</tr>
</tbody>
</table>
ptp priority2
**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]
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><code>ip-address</code></td>
<td>Specifies the source IP address for all PTP packets. The IP address can be in IPv4 or IPv6 format.</td>
</tr>
<tr>
<td><code>vrf vrf</code></td>
<td>Specifies the VRF.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>feature ptp</td>
<td>Enables or disables PTP on the device.</td>
</tr>
<tr>
<td>ptp domain</td>
<td>Configures the domain number to use for this clock.</td>
</tr>
<tr>
<td>ptp priority1</td>
<td>Configures the priority 1 value to use when advertising this clock.</td>
</tr>
<tr>
<td>ptp priority2</td>
<td>Configures the priority 1 value to use when advertising this clock.</td>
</tr>
<tr>
<td>show ptp brief</td>
<td>Displays the PTP status.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td><code>show ptp clock</code></td>
<td>Displays the properties of the local clock.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>log-seconds</code></td>
<td>The number of log seconds between PTP synchronization messages on an interface. The range is from -3 seconds to 1 second.</td>
</tr>
</tbody>
</table>

**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**

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

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>vlan-id</code></td>
<td>The VLAN ID for the interface where PTP is being enabled. The range is from 1 to 4094.</td>
</tr>
</tbody>
</table>

**Command Default**

1

**Command Modes**

Interface configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

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

- rmon alarm, page 178
- rmon event, page 181
- rmon hcalarm, page 183
To configure Remote Monitoring (RMON) alarms on any integer-based Simple Network Management Protocol (SNMP) management information base (MIB) object, use the `rmon alarm` command. To remove an RMON alarm, use the `no` form of this command.

**Syntax**
```
rmon alarm alarm-no MIB-obj sample-interval {absolute|delta} rising-threshold rising-threshold-value \{event-index falling-threshold fall-threshold-value [ event-index ] [owner name]\} [owner name]
```
```
o rmon alarm alarm-no MIB-obj sample-interval {absolute|delta} rising-threshold rising-threshold-value \{event-index falling-threshold fall-threshold-value [ event-index ] [owner name]\} [owner name]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>alarm-no</code></td>
<td>Alarm number. The range is from 1 to 65535.</td>
</tr>
<tr>
<td><code>MIB-obj</code></td>
<td>MIB object to monitor. The MIB object must be an existing SNMP MIB object in standard dot notation; for example, 1.3.6.1.2.1.2.2.1.17.83886080.</td>
</tr>
<tr>
<td><code>sample-interval</code></td>
<td>Sample interval at which the switch collects a sample value of the MIB object. The range is from 1 to 700000 seconds.</td>
</tr>
<tr>
<td><code>absolute</code></td>
<td>Specifies the sample type as absolute.</td>
</tr>
<tr>
<td><code>delta</code></td>
<td>Specifies the sample type as delta.</td>
</tr>
<tr>
<td><code>rising-threshold</code></td>
<td>Configures the rising threshold value at which the switch triggers a rising alarm or resets a falling alarm.</td>
</tr>
<tr>
<td><code>rising-threshold-value</code></td>
<td>Rising threshold value. The range is from −2147483648 to 2147483647.</td>
</tr>
<tr>
<td><code>event-index</code></td>
<td>Event or action that the switch takes when an alarm, rising or falling, triggers. The event index range is from 0 to 65535.</td>
</tr>
<tr>
<td><code>falling-threshold</code></td>
<td>Configures the falling threshold value at which the switch triggers a falling alarm or resets a rising alarm.</td>
</tr>
<tr>
<td><code>falling-threshold-value</code></td>
<td>Falling threshold value. The range is from −2147483648 to 2147483647.</td>
</tr>
</tbody>
</table>

**Note**
- The falling threshold value must be less than the rising threshold.
Specifies an owner for the alarm. The name can be any alphanumeric string.

| owner name | (Optional) Specifies an owner for the alarm. The name can be any alphanumeric string. |

**Command Default**
None

**Command Modes**
Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**
Before you use this command, you must have configured an SNMP user and enabled SNMP notifications using the `snmp-server user` and `snmp-server enable traps` command, respectively.

You can only configure an RMON alarm on an integer-based SNMP MIB object. The MIB object must be in standard dot notation. For example, 1.3.6.1.2.1.2.1.17 represents ifOutOctets.17.

Absolute samples take the current snapshot of the MIB object value. Delta samples take two consecutive samples and calculate the difference between them. For example, you can set a delta type rising alarm on an error counter MIB object. If the error counter delta exceeds this value, you can trigger an event that sends an SNMP notification and logs the rising alarm event. This rising alarm will not occur again until the delta sample for the error counter drops below the falling threshold.

You can associate a particular event to each RMON alarm. RMON supports the following event types:

- SNMP notification—Sends an SNMP risingAlarm or fallingAlarm notification when the associated alarm triggers.
- Log—Adds an entry in the RMON log table when the associated alarm triggers.
- Both—Sends an SNMP notification and adds an entry in the RMON log table when the associated alarm triggers.

You can specify a different event for a falling alarm and a rising alarm.

**Examples**
This example shows how to configure an RMON alarm:

```bash
switch(config)# rmon alarm 1 1.3.6.1.2.1.2.1.17.83886080 5 delta rising-threshold 5 1 falling-threshold 0 owner test
switch(config)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>copy running-config startup-config</td>
<td>Saves the running configuration to the startup configuration file.</td>
</tr>
</tbody>
</table>
### Command Table

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snmp-server enable traps</td>
<td>Enables SNMP notifications on the switch.</td>
</tr>
<tr>
<td>snmp-server user</td>
<td>Configures an SNMP user.</td>
</tr>
<tr>
<td>show rmon</td>
<td>Displays information about RMON alarms and events.</td>
</tr>
</tbody>
</table>
To configure Remote Monitoring (RMON) events to associate with RMON alarms, use the **rmon event** command. To remove an RMON event, use the **no** form of this command.

```
rmon event event-index [description string] [log] [trap] [owner name]

no rmon event event-index [description string] [log] [trap] [owner name]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>event-index</td>
<td>Event or action that the switch takes when an alarm, rising or falling, triggers. The event index range is from 0 to 65535.</td>
</tr>
<tr>
<td>description string</td>
<td>(Optional) Specifies a description for the event. The description can be any alphanumeric string.</td>
</tr>
<tr>
<td>log</td>
<td>(Optional) Specifies that an RMON log be generated when the event occurs.</td>
</tr>
<tr>
<td>trap</td>
<td>(Optional) Specifies that an SNMP trap be generated when the event occurs.</td>
</tr>
<tr>
<td>owner name</td>
<td>(Optional) Specifies an owner for the alarm. The name can be any alphanumeric string.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

Before you use this command, you must have configured an SNMP user and enabled SNMP notifications using the **snmp-server user** and **snmp-server enable traps** command, respectively.

You can reuse the same event with multiple RMON alarms.

**Examples**

This example shows how to configure an RMON event:

```
switch(config)# rmon event 1 owner test
```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>copy running-config startup-config</code></td>
<td>Saves the running configuration to the startup configuration file.</td>
</tr>
<tr>
<td><code>snmp-server enable traps</code></td>
<td>Enables SNMP notifications on the switch.</td>
</tr>
<tr>
<td><code>snmp-server user</code></td>
<td>Configures an SNMP user.</td>
</tr>
<tr>
<td><code>show rmon</code></td>
<td>Displays information about RMON alarms and events.</td>
</tr>
</tbody>
</table>
To configure a high-capacity Remote Monitoring (RMON) alarm, use the `rmon hcalarm` command. To remove a high-capacity RMON alarm, use the `no` form of this command.

```
rmon hcalarm alarm-no MIB-obj sample-interval {absolute delta} startupalarm startup-alarm-type rising-threshold rising-threshold-value event-index falling-threshold fall-threshold-value [ event-index ] [owner name]
```

```
no rmon hcalarm alarm-no MIB-obj sample-interval {absolute delta} startupalarm startup-alarm-type rising-threshold rising-threshold-value event-index falling-threshold fall-threshold-value [ event-index ] [owner name]
```

### Syntax Description

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>alarm-no</code></td>
<td>Alarm number. The range is from 1 to 65535.</td>
</tr>
<tr>
<td><code>MIB-obj</code></td>
<td>MIB object to monitor. The MIB object must be an existing SNMP MIB object in standard dot notation; for example, 1.3.6.1.2.1.2.2.1.17.83886080.</td>
</tr>
<tr>
<td><code>sample-interval</code></td>
<td>Sample interval at which the switch collects a sample value of the MIB object. The range is from 1 to 700000 seconds.</td>
</tr>
<tr>
<td><code>absolute</code></td>
<td>Specifies the sample type as absolute.</td>
</tr>
<tr>
<td><code>delta</code></td>
<td>Specifies the sample type as delta.</td>
</tr>
<tr>
<td><code>startupalarm</code></td>
<td>Configures the startup alarm type.</td>
</tr>
<tr>
<td><code>startup-alarm-type</code></td>
<td>Startup alarm type. The range is from 1 to 3, where 1 is rising, 2 is falling, and 3 is rising or falling.</td>
</tr>
<tr>
<td><code>rising-threshold</code></td>
<td>Configures the rising threshold value at which the switch triggers a rising alarm or resets a falling alarm.</td>
</tr>
<tr>
<td><code>rising-threshold-value</code></td>
<td>Rising threshold value. The range is from 0 to 18446744073709551615.</td>
</tr>
<tr>
<td><code>event-index</code></td>
<td>Event or action that the switch takes when an alarm, rising or falling, triggers. The <code>event index</code> range is from 0 to 65535.</td>
</tr>
<tr>
<td><code>falling-threshold</code></td>
<td>Configures the falling threshold value at which the switch triggers a falling alarm or resets a rising alarm.</td>
</tr>
</tbody>
</table>
**fall-threshold-value**

Falling threshold value. The range is from 0 to 18446744073709551615.

**Note**

The falling threshold value must be less than the rising threshold.

**owner name**

(Optional) Specifies an owner for the alarm. The name can be any alphanumeric string.

---

**Command Default**

None

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

Before you use this command, you must have configured an SNMP user and enabled SNMP notifications using the `snmp-server user` and `snmp-server enable traps` command, respectively.

You can configure a high-capacity RMON alarm on any integer-based SNMP MIB object. The MIB object must be in standard dot notation. For example, 1.3.6.1.2.1.2.2.1.17 represents ifOutOctets.17.

Absolute samples take the current snapshot of the MIB object value. Delta samples take two consecutive samples and calculate the difference between them. For example, you can set a delta type rising alarm on an error counter MIB object. If the error counter delta exceeds this value, you can trigger an event that sends an SNMP notification and logs the rising alarm event. This rising alarm will not occur again until the delta sample for the error counter drops below the falling threshold.

You can associate a particular event to each high-capacity RMON alarm. RMON supports the following event types:

- **SNMP notification**—Sends an SNMP risingAlarm or fallingAlarm notification when the associated high-capacity alarm triggers.
- **Log**—Adds an entry in the RMON log table when the associated high-capacity alarm triggers.
- **Both**—Sends an SNMP notification and adds an entry in the RMON log table when the associated high-capacity alarm triggers.

You can specify a different event for a falling high-capacity alarm and a rising high-capacity alarm.

**Examples**

This example shows how to configure an RMON high-capacity alarm:

```
switch(config)# rmon hcalarm 3 1.3.6.1.2.1.2.2.1.17.83886080 5 delta startupalarm 3 rising-threshold 5 1 falling-threshold 3 3 owner test
switch(config)#
```
## Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>copy running-config startup-config</code></td>
<td>Saves the running configuration to the startup configuration file.</td>
</tr>
<tr>
<td><code>snmp-server enable traps</code></td>
<td>Enables SNMP notifications on the switch.</td>
</tr>
<tr>
<td><code>snmp-server user</code></td>
<td>Configures an SNMP user.</td>
</tr>
<tr>
<td><code>show rmon</code></td>
<td>Displays information about RMON alarms and events.</td>
</tr>
</tbody>
</table>
S Commands

- sampler, page 189
- snapshot create, page 191
- snapshot delete, page 192
- snapshot section, page 193
- snmp trap link-status, page 195
- snmp-server community, page 197
- snmp-server aaa-user cache-timeout, page 199
- snmp-server contact, page 200
- snmp-server context, page 201
- snmp-server enable traps, page 203
- snmp-server enable traps link, page 207
- snmp-server globalEnforcePriv, page 209
- snmp-server host, page 210
- snmp-server location, page 213
- snmp-server mib community-map, page 214
- snmp-server tcp-session, page 216
- snmp-server user, page 217
- source, page 219
- source interface (SPAN, ERSPAN), page 221
- source ip, page 224
- switchport monitor rate-limit, page 225
- switch-profile, page 227
- system fex-group shutdown, page 230
- system mode maintenance, page 232
- system mode maintenance always-use-custom-profile, page 234
- system mode maintenance dont-generate-profile, page 236
- system mode maintenance on-reload reset-reason, page 238
- system mode maintenance shutdown, page 240
- system mode maintenance timeout, page 242
- system soft-reload enable, page 244
- shut (SPAN, ERSPAN), page 246
- site-id (Call Home), page 248
- sleep instance, page 249
- soft-reload, page 251
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>name</code></td>
<td>Name of the sampler. The name can have a maximum of 63 alphanumeric characters.</td>
</tr>
</tbody>
</table>

**Command Default**

No samplers are defined.

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flow exporter</td>
<td>Creates a flow exporter.</td>
</tr>
<tr>
<td>flow monitor</td>
<td>Creates a flow monitor.</td>
</tr>
<tr>
<td>flow record</td>
<td>Creates a flow record.</td>
</tr>
</tbody>
</table>
snapshot create

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

```
snapshot create name description
```

**Syntax Description**

<table>
<thead>
<tr>
<th>name</th>
<th>The name variable can be 64 characters in length.</th>
</tr>
</thead>
<tbody>
<tr>
<td>description</td>
<td>The description variable can be 256 characters in length.</td>
</tr>
</tbody>
</table>

**Command Default**

None.

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1.0</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show snapshots before-maintenance-mode description</td>
<td>Displays snapshots present on the switch.</td>
</tr>
<tr>
<td>snapshot delete</td>
<td>Deletes the snapshot.</td>
</tr>
<tr>
<td>show snapshot compare</td>
<td>Compares snapshots and showing the summary and details of each feature.</td>
</tr>
</tbody>
</table>
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}
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>all</th>
<th>Deletes all the snapshots in the system.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><code>snapshot-name</code></td>
<td>Deletes the specified snapshot.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show snapshots</code></td>
<td>Displays snapshots present on the switch.</td>
</tr>
<tr>
<td><code>snapshot create</code></td>
<td>Generates a snapshot.</td>
</tr>
<tr>
<td><code>snapshot section</code></td>
<td>Adds or deletes a snapshot section.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>add</td>
<td>Adds the specified snapshot section to the snapshot.</td>
</tr>
<tr>
<td>section</td>
<td>Names the snapshot section that is added to the snapshot to display the show command output.</td>
</tr>
<tr>
<td>&quot;show command&quot;</td>
<td>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 (&quot;show&quot;).</td>
</tr>
<tr>
<td>row-id</td>
<td>The row-id argument specifies the tag of each row entry of the show command's XML output.</td>
</tr>
<tr>
<td>element-key1</td>
<td>Specifies the tag used to distinguish among row entries in the show command snapshot section output.</td>
</tr>
<tr>
<td>element-key2</td>
<td>(Optional) Specifies another tag used to distinguish among row entries in the show command snapshot section output.</td>
</tr>
<tr>
<td>delete</td>
<td>Deletes the specified snapshot section from the snapshot.</td>
</tr>
</tbody>
</table>

**Command Default**

None.

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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 ip_prefix
```

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

```
switch# snapshot section delete v4route
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show snapshots</code></td>
<td>Displays snapshots present on the switch.</td>
</tr>
<tr>
<td><code>snapshot create</code></td>
<td>Generates a snapshot.</td>
</tr>
<tr>
<td><code>snapshot delete</code></td>
<td>Deletes snapshots.</td>
</tr>
</tbody>
</table>
**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.

```plaintext
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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:

```plaintext
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:

```plaintext
switch(config)# interface ethernet 1/5
switch(config-if)# no switchport
switch(config-if)# snmp trap link-status
```

This example shows how to enable SNMP link-state traps for a specific Layer 2 interface:

```plaintext
switch(config)# interface ethernet 1/1
switch(config-if)# snmp trap link-status
```

This example shows how to enable SNMP link-state traps for a specific virtual Ethernet interface:

```plaintext
switch(config)# interface vethernet 1
switch(config-if)# snmp trap link-status
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>interface vethernet</code></td>
<td>Configures a virtual Ethernet interface.</td>
</tr>
<tr>
<td><code>no switchport</code></td>
<td>Configures an interface as a Layer 3 routed interface.</td>
</tr>
<tr>
<td><code>show snmp trap</code></td>
<td>Displays the SNMP notifications, enabled or disabled.</td>
</tr>
</tbody>
</table>
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, use 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**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>com-name</td>
<td>SNMP community string. The name can be any alphanumeric string up to 32 characters.</td>
</tr>
<tr>
<td>group grp-name</td>
<td>(Optional) Specifies the group to which the community belongs. The name can be a maximum of 32 characters.</td>
</tr>
<tr>
<td>ro</td>
<td>(Optional) Specifies read-only access with this community string.</td>
</tr>
<tr>
<td>rw</td>
<td>(Optional) Specifies read-write access with this community string.</td>
</tr>
<tr>
<td>use-acl acl-name</td>
<td>(Optional) Specifies the access control list (ACL) to filter SNMP requests. The name can be a maximum of 32 characters.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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.
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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show snmp community</td>
<td>Displays the SNMP community strings.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>seconds</th>
<th>Timeout value, in seconds. The range is from 1 to 86400. The default value is 3600 seconds.</th>
</tr>
</thead>
</table>

### Command Default

3600 seconds.

### Command Modes

Global configuration mode.

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show snmp</td>
<td>Displays information about SNMP.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Examples

This example shows how to set an SNMP contact:

```
switch(config)# snmp-server contact DialSystemOperatorAtBeeper#1235
```

This example shows how to remove an SNMP contact:

```
switch(config)# no snmp-server contact DialSystemOperatorAtBeeper#1235
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show snmp</td>
<td>Displays information about SNMP.</td>
</tr>
<tr>
<td>snmp-server location</td>
<td>Sets the system location string.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Keyword</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>context-name</td>
<td>SNMP context. The name can be any alphanumeric string up to 32 characters.</td>
</tr>
<tr>
<td>instance instance-name</td>
<td>(Optional) Specifies a protocol instance. The name can be any alphanumeric string up to 32 characters.</td>
</tr>
<tr>
<td>vrf vrf-name</td>
<td>(Optional) Specifies the virtual routing and forwarding (VRF) instance. The name is case sensitive, and can be a maximum of 32 alphanumeric characters.</td>
</tr>
<tr>
<td>default</td>
<td>Specifies the default VRF.</td>
</tr>
<tr>
<td>management</td>
<td>Specifies the management VRF.</td>
</tr>
<tr>
<td>topology topology-name</td>
<td>(Optional) Specifies the topology. The name can be any alphanumeric string up to 32 characters.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

Use the `snmp-server context` command to map between SNMP contexts and logical network entities, such as protocol instances or VRFs.
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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show snmp</td>
<td>Displays the SNMP status.</td>
</tr>
<tr>
<td>show snmp context</td>
<td>Displays information about SNMP contexts.</td>
</tr>
</tbody>
</table>
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.

```
```

```
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>aaa</td>
<td>(Optional) Enables notifications for a AAA server state change.</td>
</tr>
<tr>
<td>server-state-change</td>
<td>(Optional) Specifies the AAA server state change.</td>
</tr>
<tr>
<td>callhome</td>
<td>(Optional) Enables Cisco Call Home notifications.</td>
</tr>
<tr>
<td>event-notify</td>
<td>(Optional) Specifies the Cisco Call Home external event notification.</td>
</tr>
<tr>
<td>smtp-send-fail</td>
<td>(Optional) Specifies the SMTP message send fail notification.</td>
</tr>
<tr>
<td>entity</td>
<td>(Optional) Enables notifications for a change in the module status, fan status, or power status.</td>
</tr>
<tr>
<td>entity_fan_status_change</td>
<td>(Optional) Specifies the entity fan status change.</td>
</tr>
<tr>
<td>entity_mib_change</td>
<td>(Optional) Specifies the entity MIB change.</td>
</tr>
<tr>
<td>entity_module_inserted</td>
<td>(Optional) Specifies the entity module inserted.</td>
</tr>
<tr>
<td>entity_module_removed</td>
<td>(Optional) Specifies the entity module removed.</td>
</tr>
<tr>
<td>entity_module_status_change</td>
<td>(Optional) Specifies the entity module status change.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>entity_power_out_change</td>
<td>(Optional) Specifies the entity power out change.</td>
</tr>
<tr>
<td>entity_power_status_change</td>
<td>(Optional) Specifies the entity power status change.</td>
</tr>
<tr>
<td>entity_unrecognised_module</td>
<td>(Optional) Specifies the entity unrecognized module.</td>
</tr>
<tr>
<td>fcdomain</td>
<td>(Optional) Enables notifications for the Fibre Channel domain.</td>
</tr>
<tr>
<td>fcns</td>
<td>(Optional) Enables notifications for the name server.</td>
</tr>
<tr>
<td>fcs</td>
<td>(Optional) Enables notifications for the fabric configuration server.</td>
</tr>
<tr>
<td>fctrace</td>
<td>(Optional) Enables notifications for the route to an N port.</td>
</tr>
<tr>
<td>fspf</td>
<td>(Optional) Enables notifications for the Fabric Shortest Path First (FSPF).</td>
</tr>
<tr>
<td>license</td>
<td>(Optional) Enables notifications for the license manager.</td>
</tr>
<tr>
<td>notify-license-expiry</td>
<td>(Optional) Specifies the license expiry notification.</td>
</tr>
<tr>
<td>notify-license-expiry-warning</td>
<td>(Optional) Specifies the license expiry warning notification.</td>
</tr>
<tr>
<td>notify-licensefile-missing</td>
<td>(Optional) Specifies the license file missing notification.</td>
</tr>
<tr>
<td>notify-no-license-for-feature</td>
<td>(Optional) Specifies that a notification is sent when no license needs to be installed for the feature.</td>
</tr>
<tr>
<td>link</td>
<td>(Optional) Enables notifications for uplink and downlink interfaces.</td>
</tr>
<tr>
<td>rf</td>
<td>(Optional) Enables notifications for the redundancy framework.</td>
</tr>
<tr>
<td>redundancy_framework</td>
<td>(Optional) Specifies the Redundancy_Framework (RF) supervisor switchover MIB.</td>
</tr>
<tr>
<td>rmon</td>
<td>(Optional) Enables notifications for rising, falling, and high-capacity alarms.</td>
</tr>
<tr>
<td>fallingAlarm</td>
<td>(Optional) Specifies the RMON falling alarm.</td>
</tr>
<tr>
<td>hcFallingAlarm</td>
<td>(Optional) Specifies the high-capacity RMON falling alarm.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------------------------------------------------------------------------</td>
</tr>
<tr>
<td>hcRisingAlarm</td>
<td>(Optional) Specifies the high-capacity RMON rising alarm.</td>
</tr>
<tr>
<td>risingAlarm</td>
<td>(Optional) Specifies the RMON rising alarm.</td>
</tr>
<tr>
<td>rscn</td>
<td>(Optional) Enables RSCN notifications.</td>
</tr>
<tr>
<td>snmp</td>
<td>(Optional) Enables SNMP authentication notifications.</td>
</tr>
<tr>
<td>authentication</td>
<td>(Optional) Specifies the SNMP authentication trap.</td>
</tr>
<tr>
<td>vsan</td>
<td>(Optional) Enables notifications for VSANs.</td>
</tr>
<tr>
<td>vtp</td>
<td>(Optional) Enables notifications for a VLAN Trunking Protocol (VTP) domain.</td>
</tr>
<tr>
<td>zone</td>
<td>(Optional) Enables zone notifications.</td>
</tr>
<tr>
<td>default-zone-behavior-change</td>
<td>(Optional) Specifies the default zone behavior change notification.</td>
</tr>
<tr>
<td>merge-failure</td>
<td>(Optional) Specifies the merge failure notification.</td>
</tr>
<tr>
<td>merge-success</td>
<td>(Optional) Specifies the merge success notification.</td>
</tr>
<tr>
<td>request-reject1</td>
<td>(Optional) Specifies the request reject notification.</td>
</tr>
<tr>
<td>unsupp-mem</td>
<td>(Optional) Specifies the unsupported member notification.</td>
</tr>
</tbody>
</table>

**Command Default**
All notifications

**Command Modes**
Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>snmp-server enable traps link</code></td>
<td>Enables the Simple Network Management Protocol (SNMP) notifications on link traps.</td>
</tr>
<tr>
<td><code>show snmp trap</code></td>
<td>Displays the SNMP notifications enabled or disabled.</td>
</tr>
</tbody>
</table>
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:
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>IETF-extended-linkDown</td>
<td>Enables the Internet Engineering Task Force (IETF) extended link state down notification.</td>
</tr>
<tr>
<td>IETF-extended-linkUp</td>
<td>Enables the IETF extended link state up notification.</td>
</tr>
<tr>
<td>cisco-extended-linkDown</td>
<td>Enables the Cisco extended link state down notification.</td>
</tr>
<tr>
<td>cisco-extended-linkUp</td>
<td>Enables the Cisco extended link state up notification.</td>
</tr>
<tr>
<td>connUnitPortStatusChange</td>
<td>Enables the overall status of the connectivity unit Notification.</td>
</tr>
<tr>
<td>delayed-link-state-change</td>
<td>Enables the delayed link state change.</td>
</tr>
<tr>
<td>fcTrunkIfDownNotify</td>
<td>Enables the Fibre Channel Fabric Element (FCFE) link state down notification.</td>
</tr>
<tr>
<td>fcTrunkIfUpNotify</td>
<td>Enables the FCFE link state up notification.</td>
</tr>
<tr>
<td>fcot-inserted</td>
<td>Specifies that the Fibre Channel optical transmitter (FCOT) hardware has been inserted.</td>
</tr>
<tr>
<td>fcot-removed</td>
<td>Specifies that the FCOT has been removed.</td>
</tr>
<tr>
<td>linkDown</td>
<td>Enables the IETF Link state down notification.</td>
</tr>
<tr>
<td>linkUp</td>
<td>Enables the IETF Link state up notification.</td>
</tr>
</tbody>
</table>
**Command Default**
Disabled

**Command Modes**
Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

This example shows how to disable the SNMP link trap notification on the switch:

```
switch(config)# no snmp-server enable traps link
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show snmp trap</td>
<td>Displays the SNMP notifications enabled or disabled.</td>
</tr>
</tbody>
</table>
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**
```
<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>
```

**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**
```
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snmp-server user</td>
<td>Configures a new user to an SNMP group.</td>
</tr>
<tr>
<td>show snmp sessions</td>
<td>Displays the current SNMP sessions.</td>
</tr>
</tbody>
</table>
```
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

<table>
<thead>
<tr>
<th><strong>host-address</strong></th>
<th>IPv4 or IPv6 address or DNS name of the SNMP notification host.</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>community-string</strong></td>
<td>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 <code>snmp-server community</code> command prior to using the <code>snmp-server host</code> command.</td>
</tr>
<tr>
<td><strong>filter-vrf vrf-name</strong></td>
<td>Specifies the virtual routing and forwarding (VRF) instance. The name is case sensitive and can be a maximum of 32 alphanumeric characters.</td>
</tr>
<tr>
<td><strong>default</strong></td>
<td>Specifies the default VRF.</td>
</tr>
<tr>
<td><strong>management</strong></td>
<td>Specifies the management VRF.</td>
</tr>
<tr>
<td><strong>informs</strong></td>
<td>Sends SNMP informs to this host.</td>
</tr>
<tr>
<td><strong>traps</strong></td>
<td>Sends SNMP traps to this host.</td>
</tr>
</tbody>
</table>
### 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.

<table>
<thead>
<tr>
<th>Command Default</th>
<th>Disabled</th>
</tr>
</thead>
<tbody>
<tr>
<td>Command Modes</td>
<td>Global configuration mode</td>
</tr>
</tbody>
</table>

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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 send 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
```

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
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show snmp host</td>
<td>Displays information about the SNMP host.</td>
</tr>
</tbody>
</table>
**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 ]
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>text</td>
<td>(Optional) String that describes the system location information.</td>
</tr>
</tbody>
</table>

**Command Default**

No system location string is set.

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to set a system location string:

```
switch(config)# snmp-server location Building 3/Room 21
```

This example shows how to remove the system location string:

```
switch(config)# no snmp-server location Building 3/Room 21
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snmp-server contact</td>
<td>Sets the SNMP system contact (sysContact) string.</td>
</tr>
</tbody>
</table>
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 context. The name can be any alphanumeric string up to 32 characters.
```

**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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

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
```
## Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>snmp-server community</code></td>
<td>Configures an SNMP community.</td>
</tr>
<tr>
<td><code>snmp-server context</code></td>
<td>Configures an SNMP context.</td>
</tr>
<tr>
<td><code>show snmp</code></td>
<td>Displays the SNMP status.</td>
</tr>
</tbody>
</table>
**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**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>auth</td>
<td>(Optional) Specifies that one-time authentication for SNMP be enabled over the TCP session.</td>
</tr>
</tbody>
</table>

**Command Default**

Disabled

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show snmp</td>
<td>Displays the SNMP status.</td>
</tr>
</tbody>
</table>
**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}]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>username</td>
<td>Name of the user on the host that connects to the agent. The name can be a maximum of 32 alphanumeric characters.</td>
</tr>
<tr>
<td>groupname</td>
<td>(Optional) Name of the group to which the user is associated. The name can be a maximum of 32 alphanumeric characters.</td>
</tr>
<tr>
<td>auth</td>
<td>(Optional) Specifies that an authentication level setting will be initiated for the session.</td>
</tr>
<tr>
<td>md5</td>
<td>(Optional) Specifies that the HMAC-MD5-96 authentication level be used for the session.</td>
</tr>
<tr>
<td>sha</td>
<td>(Optional) Specifies that the HMAC-SHA-96 authentication level be used for the session.</td>
</tr>
<tr>
<td>auth-password</td>
<td>(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.</td>
</tr>
<tr>
<td>engineID engine-ID</td>
<td>(Optional) Specifies the SNMP engine ID.</td>
</tr>
<tr>
<td>localizedkey</td>
<td>(Optional) Specifies whether the passwords are in localized key format.</td>
</tr>
<tr>
<td>priv</td>
<td>(Optional) The option that initiates a privacy authentication level setting session.</td>
</tr>
<tr>
<td>priv-password</td>
<td>(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.</td>
</tr>
<tr>
<td>aes-128</td>
<td>(Optional) Specifies that a 128-bit AES algorithm for privacy be used for the session.</td>
</tr>
</tbody>
</table>
**Command Default**  
None

**Command Modes**  
Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to configure an SNMP user named authuser with authentication and privacy parameters:

```bash
switch(config)# snmp-server user authuser publicsecurity auth sha shapwd priv aes-128
```

This example shows how to delete an SNMP user:

```bash
switch(config)# no snmp-server user authuser
switch(config)#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show snmp user</td>
<td>Displays information about one or more SNMP users.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>if-type</td>
<td>Interface type. For more information, use the question mark (?) online help function.</td>
</tr>
<tr>
<td>if-number</td>
<td>Interface or subinterface number. For more information about the numbering syntax for your networking device, use the question mark (?) online help function.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

NetFlow exporter configuration (config-flow-exporter)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

This example shows how to remove the NetFlow exporter source interface configuration:

```
switch(config-flow-exporter)#
no source Ethernet3/11
```

```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show flow exporter</td>
<td>Displays information about NetFlow exporters.</td>
</tr>
</tbody>
</table>
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\| 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\| port-channel channel-num\| vethernet veth-num\} | vlan vlan-num | vsan vsan-num\}
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>interface</code></td>
<td>Specifies the interface type to use as the source SPAN port.</td>
</tr>
<tr>
<td><code>ethernet slot[QSFP-module/]port</code></td>
<td>Specifies the Ethernet interface to use as the source SPAN port. The <code>slot</code> number is from 1 to 255. The <code>QSFP-module</code> number is from 1 to 199. The <code>port</code> number is from 1 to 128.</td>
</tr>
<tr>
<td><code>port-channel channel-num</code></td>
<td>Specifies the EtherChannel interface to use as the source SPAN port. The EtherChannel number is from 1 to 4096.</td>
</tr>
<tr>
<td><code>vethernet veth-num</code></td>
<td>Specifies the virtual Ethernet interface to use as the source SPAN or ERSPAN port. The virtual Ethernet interface number is from 1 to 1048575.</td>
</tr>
<tr>
<td><code>both</code></td>
<td>(Optional) Specifies both ingress and egress traffic on the source port.</td>
</tr>
<tr>
<td><code>rx</code></td>
<td>(Optional) Specifies only ingress traffic on the source port.</td>
</tr>
<tr>
<td><code>tx</code></td>
<td>(Optional) Specifies only egress traffic on the source port.</td>
</tr>
<tr>
<td><code>vlan vlan-num</code></td>
<td>Specifies the VLAN interface 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.</td>
</tr>
<tr>
<td><code>vsan vsan-num</code></td>
<td>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.</td>
</tr>
</tbody>
</table>
### Source Interface (SPAN, ERSPAN)

<table>
<thead>
<tr>
<th>Command Default</th>
<th>None</th>
</tr>
</thead>
</table>

#### 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)

<table>
<thead>
<tr>
<th>Command History</th>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>7.0(0)N1(1)</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

#### 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:

```bash
switch# configure terminal
```
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
```

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
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>destination (SPAN, ERSPAN)</td>
<td>Configures a destination SPAN port.</td>
</tr>
<tr>
<td>monitor session</td>
<td>Creates a new SPAN session configuration.</td>
</tr>
<tr>
<td>show monitor session</td>
<td>Displays SPAN session configuration information.</td>
</tr>
<tr>
<td>show running-config monitor</td>
<td>Displays the running configuration information of a SPAN session.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip-address</td>
<td>Specifies the IP address of the source port.</td>
</tr>
</tbody>
</table>

Command Default

None

Command Modes

ERSPAN destination session configuration mode (config-erspan-dst)

Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>destination (SPAN, ERSPAN)</td>
<td>Configures a destination SPAN port.</td>
</tr>
<tr>
<td>monitor session</td>
<td>Creates a new SPAN session configuration.</td>
</tr>
<tr>
<td>show monitor session</td>
<td>Displays SPAN session configuration information.</td>
</tr>
<tr>
<td>show running-config monitor</td>
<td>Displays the running configuration information of a SPAN session.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1G</td>
<td>(Optional) Specifies that the rate limit is 1 GB.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Interface configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show interface switchport</code></td>
<td>Displays information on all interfaces configured as switch ports.</td>
</tr>
<tr>
<td><code>switchport private-vlan association trunk</code></td>
<td>Associates the isolated trunk port with the primary and secondary VLANs of a private VLAN.</td>
</tr>
</tbody>
</table>
switchport monitor rate-limit
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>sw-profile-name</code></td>
<td>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.</td>
</tr>
<tr>
<td><code>all-config</code></td>
<td>Specifies that the switch profile be deleted with all local and peer configurations.</td>
</tr>
<tr>
<td><code>local-config</code></td>
<td>Specifies that the switch profile only is to be deleted and no other configurations.</td>
</tr>
<tr>
<td><code>profile-only</code></td>
<td>Specifies that the switch profile only is to be deleted and no other configurations.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Configuration synchronization mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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 configuration information. The peer becomes unreachable.

**Examples**

This example shows how to create a switch profile named s6000a on switch 1 of the peer:

```
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:

```
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:

```
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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>config sync</td>
<td>Enters configuration synchronization mode.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>show switch-profile</td>
<td>Displays the switch profile created on the switch and its configuration revision.</td>
</tr>
<tr>
<td>sync-peers destination</td>
<td>Configures the peer switch for configuration synchronization.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>name</strong></td>
<td>Specifies the name of the FEX group.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Maintenance profile configuration (config-mm-mode)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Usage Guidelines**

This command does not require a license.

**Examples**

This example shows how to shutdown a FEX group:

```bash
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:

```bash
switch# configure terminal
switch(config)# configure maintenance profile maintenance-mode
switch(config-mm-profile)# no system fex-group fg1 shutdown
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>configure maintenance profile</strong></td>
<td>Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>---------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>show run mmode</td>
<td>Displays the currently running maintenance profile configuration on a switch.</td>
</tr>
<tr>
<td>show system mode</td>
<td>Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.</td>
</tr>
</tbody>
</table>
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.

**Command Default**

None

**Command Modes**

Global configuration (config)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was modified. The default mode for Graceful Insertion and Removal (GIR) is “isolate”.</td>
</tr>
<tr>
<td>7.1(0)N1(1)</td>
<td>This command was introduced. The default mode for GIR is “shutdown”.</td>
</tr>
</tbody>
</table>

**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 "isolate". 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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>configure maintenance profile</td>
<td>Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.</td>
</tr>
<tr>
<td>show system mode</td>
<td>Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.</td>
</tr>
<tr>
<td>system mode maintenance always-use-custom-profile</td>
<td>Applies the existing custom maintenance mode profile and prevents creation of auto-generated maintenance mode profile.</td>
</tr>
<tr>
<td>system mode maintenance on-reload reset-reason</td>
<td>Boots the switch into maintenance mode automatically in the event of a specified system crash.</td>
</tr>
<tr>
<td>system mode maintenance shutdown</td>
<td>Shuts down all protocols and interfaces except the management interface (by using the <code>shutdown</code> command and not the default <code>isolate</code> command).</td>
</tr>
<tr>
<td>system mode maintenance timeout</td>
<td>Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.</td>
</tr>
</tbody>
</table>
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.

```
switch(config)# system mode maintenance always-use-custom-profile
```

**Syntax Description**  This command has no arguments or keywords.

**Command Default**  None

**Command Modes**  Global configuration mode (config)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>configure maintenance profile</td>
<td>Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.</td>
</tr>
<tr>
<td>show run mmode</td>
<td>Displays the currently running maintenance profile configuration on a switch.</td>
</tr>
<tr>
<td>show system mode</td>
<td>Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>---------</td>
<td>-------------</td>
</tr>
<tr>
<td>system mode maintenance on-reload reset-reason</td>
<td>Boots the switch into maintenance mode automatically in the event of a specified system crash.</td>
</tr>
<tr>
<td>system mode maintenance shutdown</td>
<td>Shuts down all protocols and interfaces except the management interface (by using the <code>shutdown</code> command and not the default <code>isolate</code> command).</td>
</tr>
<tr>
<td>system mode maintenance timeout</td>
<td>Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.</td>
</tr>
</tbody>
</table>
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
go system mode maintenance dont-generate-profile
```

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
None

**Command Modes**
Global configuration (config)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>configure maintenance profile</td>
<td>Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.</td>
</tr>
<tr>
<td>show run mmode</td>
<td>Displays the currently running maintenance profile configuration on a switch.</td>
</tr>
<tr>
<td>show system mode</td>
<td>Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.</td>
</tr>
<tr>
<td>system mode maintenance on-reload reset-reason</td>
<td>Boots the switch into maintenance mode automatically in the event of a specified system crash.</td>
</tr>
<tr>
<td>system mode maintenance shutdown</td>
<td>Shuts down all protocols and interfaces except the management interface (by using the <code>shutdown</code> command and not the default <code>isolate</code> command).</td>
</tr>
<tr>
<td>system mode maintenance timeout</td>
<td>Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>reason</th>
<th>Specifies the reset reason. The reset reasons are as follows:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>• HW_ERROR—Hardware error</td>
</tr>
<tr>
<td></td>
<td>• SVC_FAILURE—Critical service failure</td>
</tr>
<tr>
<td></td>
<td>• KERN_FAILURE—Kernel panic</td>
</tr>
<tr>
<td></td>
<td>• WDOG_TIMEOUT—Watchdog timeout</td>
</tr>
<tr>
<td></td>
<td>• FATAL_ERROR—Fatal error</td>
</tr>
<tr>
<td></td>
<td>• MANUAL_RELOAD---Manual reload</td>
</tr>
<tr>
<td></td>
<td>• MAINTENANCE—Reloading the switch in maintenance mode if</td>
</tr>
<tr>
<td></td>
<td>the switch was already in maintenance mode before reload.</td>
</tr>
<tr>
<td></td>
<td>• MATCH_ANY—Any of the above reasons</td>
</tr>
<tr>
<td></td>
<td>• ANY_OTHER—Any reload reason not specified above</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Global configuration (config)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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:

```bash
switch(config)# system mode maintenance on-reload reset-reason fatal_error
switch(config)# system mode maintenance on-reload reset-reason hw_error
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>configure maintenance profile</code></td>
<td>Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.</td>
</tr>
<tr>
<td><code>show run mmode</code></td>
<td>Displays the currently running maintenance profile configuration on a switch.</td>
</tr>
<tr>
<td><code>show system mode</code></td>
<td>Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.</td>
</tr>
<tr>
<td><code>system mode maintenance shutdown</code></td>
<td>Shuts down all protocols and interfaces except the management interface (by using the <code>shutdown</code> command and not the default <code>isolate</code> command).</td>
</tr>
<tr>
<td><code>system mode maintenance timeout</code></td>
<td>Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.</td>
</tr>
</tbody>
</table>
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.

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
None

**Command Modes**
Global configuration (config)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>configure maintenance profile</td>
<td>Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.</td>
</tr>
<tr>
<td>show run mmode</td>
<td>Displays the currently running maintenance profile configuration on a switch.</td>
</tr>
<tr>
<td>show system mode</td>
<td>Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.</td>
</tr>
<tr>
<td>system mode maintenance on-reload reset-reason</td>
<td>Boots the switch into maintenance mode automatically in the event of a specified system crash.</td>
</tr>
<tr>
<td>system mode maintenance timeout</td>
<td>Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>value</code></td>
<td>Specifies the number of minutes for which the switch will be in maintenance mode. Range is from 5 to 65535 minutes.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Global configuration (config)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

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

```
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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show system soft-reload status</code></td>
<td>Displays the status of the soft reload.</td>
</tr>
<tr>
<td><code>soft-reload</code></td>
<td>Performs a manual soft reload of the switch.</td>
</tr>
</tbody>
</table>
shut (SPAN, ERSPAN)

To shut down an Ethernet Switched Port Analyzer (SPAN) or an Encapsulated Remote Switched Port Analyzer (ERSPAN) or an Ethernet Switched Port Analyzer (SPAN) session, use the shut command. To enable a SPAN or an ERSPAN or SPAN 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

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>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, and SPAN-on-Latency ERSPAN session configuration mode.</td>
</tr>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

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
```

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
```

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
```

This example shows how to shut down a SPAN session:

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

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
```

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
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>monitor session</td>
<td>Enters the monitor configuration mode.</td>
</tr>
<tr>
<td>show monitor session</td>
<td>Displays the virtual SPAN or ERSPAN configuration.</td>
</tr>
</tbody>
</table>
site-id (Call Home)

To configure the optional site number for the customer, use the `site-id` command. To remove a site number, use the `no` form of this command.

```plaintext
site-id site-number
no site-id
```

**Syntax Description**

```
<table>
<thead>
<tr>
<th>Syntax Example</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>site-number</td>
<td>Site number. The site number can be up to 255 alphanumeric characters in free format.</td>
</tr>
</tbody>
</table>
```

**Command Default**

None

**Command Modes**

Callhome configuration mode

**Command History**

```
<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>
```

**Usage Guidelines**

You can configure the customer identification information that Cisco Smart Call Home should use. The service agreement includes the customer identification information, such as the customer ID, contract ID, and site ID.

**Examples**

This example shows how to configure a site number:

```
switch(config-callhome)# site-id 10020-1203
switch(config-callhome)#
```

**Related Commands**

```
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>switch-priority</td>
<td>Configures the switch priority for the switch.</td>
</tr>
<tr>
<td>show callhome</td>
<td>Displays a summary of the Call Home configuration.</td>
</tr>
</tbody>
</table>
```
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. |

**Command Default**

None

**Command Modes**

maintenance profile configuration (config-mm-profile)

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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-af)#
exit
switch(config-mm-profile-router)#
sleep instance 1 10
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>configure maintenance profile</td>
<td>Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.</td>
</tr>
<tr>
<td>show run mmode</td>
<td>Displays the currently running maintenance profile configuration on a switch.</td>
</tr>
<tr>
<td>show system mode</td>
<td>Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.</td>
</tr>
</tbody>
</table>
**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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show system soft-reload status</code></td>
<td>Displays the status of the soft reload.</td>
</tr>
<tr>
<td><code>system soft-reload enable</code></td>
<td>Enables the switch to perform a soft reload after a process crash.</td>
</tr>
</tbody>
</table>
soft-reload
Show Commands

- show snmp host, page 256
- show snmp sessions, page 257
- show snmp trap, page 258
- show snmp user, page 260
- show system mode, page 261
- show tech-support mmode, page 263
- show diagnostic bootup level, page 265
- show diagnostic result, page 266
- show flow exporter, page 268
- show flow interface, page 270
- show flow record, page 272
- show flow timeout, page 275
- show hosts, page 276
- show ip dns source-interface, page 277
- show logging console, page 279
- show logging info, page 280
- show logging last, page 281
- show logging level, page 282
- show logging logfile, page 284
- show logging module, page 285
- show logging monitor, page 286
- show logging nvram, page 287
- show logging onboard, page 288
- show logging pending, page 293
• show logging pending-diff, page 294
• show logging server, page 295
• show logging session status, page 296
• show logging status, page 297
• show logging timestamp, page 298
• show monitor session, page 299
• show ntp authentication-status, page 301
• show ntp peers, page 302
• show ntp peer-status, page 303
• show ntp statistics, page 304
• show ntp timestamp-status, page 306
• show ptp brief, page 307
• show ptp clock, page 308
• show ptp clocks foreign-masters-record, page 309
• show ptp corrections, page 311
• show ptp parent, page 312
• show ptp port interface, page 313
• show ptp time-property, page 315
• show rmon, page 316
• show run mmode, page 318
• show running-config callhome, page 320
• show running-config interface vethernet, page 322
• show running-config monitor, page 324
• show running-config poe, page 326
• show running-config port-security, page 327
• show sampler, page 328
• show snapshots, page 329
• show snapshots compare, page 331
• show snapshots dump, page 334
• show snapshots sections, page 336
• show snmp community, page 338
• show snmp context, page 339
• show snmp engineID, page 340
• show snmp group, page 341
• show system soft-reload status, page 343
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**
This example shows how to display the SNMP host:

```
switch# show snmp host
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snmp-server host</td>
<td>Configures an SNMP host.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**
This example shows how to display the SNMP sessions:

```
switch# show snmp sessions
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show running-config snmp</td>
<td>Displays the running configuration information about SNMP.</td>
</tr>
</tbody>
</table>
**show snmp trap**

To display the Simple Network Management Protocol (SNMP) link trap generation information, use the `show snmp trap` command.

**Syntax Description**

This command has no arguments or keywords.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the SNMP traps:

```
switch# show snmp trap
```

<table>
<thead>
<tr>
<th>Trap type</th>
<th>Description</th>
<th>Enabled</th>
</tr>
</thead>
<tbody>
<tr>
<td>entity</td>
<td>entity_mib_change</td>
<td>Yes</td>
</tr>
<tr>
<td>entity</td>
<td>entity_module_status_change</td>
<td>Yes</td>
</tr>
<tr>
<td>entity</td>
<td>entity_power_status_change</td>
<td>Yes</td>
</tr>
<tr>
<td>entity</td>
<td>entity_module_inserted</td>
<td>Yes</td>
</tr>
<tr>
<td>entity</td>
<td>entity_module_removed</td>
<td>Yes</td>
</tr>
<tr>
<td>entity</td>
<td>entity_unrecognised_module</td>
<td>Yes</td>
</tr>
<tr>
<td>entity</td>
<td>entity_fan_status_change</td>
<td>Yes</td>
</tr>
<tr>
<td>link</td>
<td>linkDown</td>
<td>Yes</td>
</tr>
<tr>
<td>link</td>
<td>linkUp</td>
<td>Yes</td>
</tr>
<tr>
<td>link</td>
<td>IETF-extended-linkDown</td>
<td>Yes</td>
</tr>
<tr>
<td>link</td>
<td>IETF-extended-linkUp</td>
<td>Yes</td>
</tr>
<tr>
<td>link</td>
<td>cisco-extended-linkDown</td>
<td>Yes</td>
</tr>
<tr>
<td>link</td>
<td>cisco-extended-linkUp</td>
<td>Yes</td>
</tr>
<tr>
<td>callhome</td>
<td>event-notify</td>
<td>No</td>
</tr>
<tr>
<td>callhome</td>
<td>smtp-send-fail</td>
<td>No</td>
</tr>
<tr>
<td>cfs</td>
<td>state-change-notif</td>
<td>No</td>
</tr>
<tr>
<td>cfs</td>
<td>merge-failure</td>
<td>No</td>
</tr>
<tr>
<td>rf</td>
<td>redundancy_framework</td>
<td>Yes</td>
</tr>
<tr>
<td>aaa</td>
<td>server-state-change</td>
<td>No</td>
</tr>
<tr>
<td>license</td>
<td>notify-license-expiry</td>
<td>Yes</td>
</tr>
<tr>
<td>license</td>
<td>notify-no-license-for-feature</td>
<td>Yes</td>
</tr>
<tr>
<td>license</td>
<td>notify-licensefile-missing</td>
<td>Yes</td>
</tr>
<tr>
<td>license</td>
<td>notify-license-expiry-warning</td>
<td>Yes</td>
</tr>
<tr>
<td>zone</td>
<td>unsupp-mem</td>
<td>No</td>
</tr>
<tr>
<td>upgrade</td>
<td>UpgradeOpNotifyOnCompletion</td>
<td>Yes</td>
</tr>
<tr>
<td>upgrade</td>
<td>UpgradeJobStatusNotify</td>
<td>Yes</td>
</tr>
<tr>
<td>feature-control</td>
<td>FeatureOpStatusChange</td>
<td>No</td>
</tr>
<tr>
<td>syslog</td>
<td>cseFallSwCoreNotifyExtended</td>
<td>No</td>
</tr>
<tr>
<td>rmon</td>
<td>risingAlarm</td>
<td>No</td>
</tr>
</tbody>
</table>
show snmp trap

rmon         : fallingAlarm     No
rmon         : hcRisingAlarm    No
rmon         : hcFallingAlarm   No
cfg          : ccmCLIRunningConfigChanged No
snmp         : authentication   No
bridge       : topologychange   No
bridge       : newroot         No
stp          : inconsistency    No
stp          : loop-inconsistency No
stp          : root-inconsistency No
switch#

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snmp trap link-status</td>
<td>Enables SNMP link trap generation.</td>
</tr>
</tbody>
</table>
show snmp user

To display information on each Simple Network Management Protocol (SNMP) user, use the **show snmp user** command.

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
None

**Command Modes**
EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the SNMP users configured on the switch:

```bash
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:

```bash
switch# show snmp user admin

switch#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snmp-server user</td>
<td>Configures a new user to an SNMP group.</td>
</tr>
</tbody>
</table>
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.

**Command Default**

None

**Command Modes**

Any command mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>Supports display of current state of the maintenance mode timer when the switch is in maintenance mode.</td>
</tr>
<tr>
<td>7.1.0</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>show run mmode</strong></td>
<td>Displays the currently running maintenance profile configuration on a switch.</td>
</tr>
<tr>
<td><strong>system mode maintenance always-use-custom-profile</strong></td>
<td>Applies the existing custom maintenance-mode profile and prevents creation of auto-generated maintenance-mode profile.</td>
</tr>
<tr>
<td><strong>system mode maintenance on-reload reset-reason</strong></td>
<td>Boots the switch into maintenance-mode automatically in the event of a specified system crash.</td>
</tr>
<tr>
<td><strong>system mode maintenance shutdown</strong></td>
<td>Shuts down all protocols and interfaces except the management interface (by using the <code>shutdown</code> command and not the default <code>isolate</code> command).</td>
</tr>
<tr>
<td><strong>system mode maintenance timeout</strong></td>
<td>Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.</td>
</tr>
</tbody>
</table>
show tech-support mmode

To display information for maintenance profile troubleshooting, use the show tech-support mmode command.

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
None

**Command Modes**
Privileged EXEC

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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]
routerr 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
```
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>system mode maintenance always-use-custom-profile</code></td>
<td>Applies the existing custom maintenance-mode profile and prevents creation of auto-generated maintenance-mode profile.</td>
</tr>
<tr>
<td><code>system mode maintenance on-reload reset reason</code></td>
<td>Boots the switch into maintenance-mode automatically in the event of a specified system crash.</td>
</tr>
<tr>
<td><code>system mode maintenance shutdown</code></td>
<td>Shuts down all protocols and interfaces except the management interface (by using the <code>shutdown</code> command and not the default <code>isolate</code> command).</td>
</tr>
<tr>
<td><code>system mode maintenance timeout</code></td>
<td>Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>diagnostic bootup level</td>
<td>Configures the bootup diagnostic level for a faster module bootup time.</td>
</tr>
<tr>
<td>show diagnostic result</td>
<td>Displays the results of the diagnostics tests.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>module</strong></td>
<td>Specifies the module for which diagnostic results are displayed.</td>
</tr>
<tr>
<td><strong>module-no</strong></td>
<td>Module number. Valid values are 1 to 3.</td>
</tr>
<tr>
<td><strong>all</strong></td>
<td>Displays the diagnostic results for all modules.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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 ---------------------------------- > .
```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>diagnostic bootup level</code></td>
<td>Configures the bootup diagnostic level for a faster module bootup time.</td>
</tr>
<tr>
<td><code>show diagnostic bootup level</code></td>
<td>Displays the bootup diagnostics level.</td>
</tr>
</tbody>
</table>
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. |

**Command Default**

Information for all flow exporters configured on the router is displayed.

**Command Modes**

Any command mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```
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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>clear flow exporter</td>
<td>Clears the statistics for exporters.</td>
</tr>
<tr>
<td>destination</td>
<td>Configures an export destination for flow exporters.</td>
</tr>
<tr>
<td>dscp</td>
<td>Configures optional differentiated services code point (DSCP) parameters for flow exporters.</td>
</tr>
<tr>
<td>flow exporter</td>
<td>Creates a flow exporter.</td>
</tr>
<tr>
<td>option</td>
<td>Configure options for flow exporters.</td>
</tr>
<tr>
<td>show flow exporter</td>
<td>Displays flow exporter status and statistics.</td>
</tr>
<tr>
<td>source</td>
<td>Configures the source IP address interface for flow exporters.</td>
</tr>
<tr>
<td>template</td>
<td>Configures the template resend timeout for flow exporters.</td>
</tr>
<tr>
<td>transport</td>
<td>Configures the transport protocol for flow exporters.</td>
</tr>
</tbody>
</table>
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. |

**Command Default**

Information for the Flexible NetFlow accounting configuration on the interface is displayed.

**Command Modes**

Any command mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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 2: show flow interface Field Descriptions**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interface</td>
<td>The interface that information is applicable to.</td>
</tr>
</tbody>
</table>
The name of the flow monitor that is configured on the interface.

The direction of traffic the flow monitor is monitoring.

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show flow sampler</td>
<td>Displays flow sampler status and statistics.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name record-name</td>
<td>(Optional) Specifies the name of a flow record that you previously configured.</td>
</tr>
<tr>
<td>netflow record</td>
<td>(Optional) Configures the flow monitor to use one of the predefined records. See Table 3: Keywords and Descriptions for the record Argument, on page 273 for a listing of the available records and their definitions.</td>
</tr>
<tr>
<td>layer2-switched input</td>
<td>(Optional) Configures the flow monitor to use the Layer 2 switched collection scheme records.</td>
</tr>
<tr>
<td>protocol-port</td>
<td>(Optional) Configures the flow monitor to use protocol and ports aggregation records.</td>
</tr>
<tr>
<td>netflow-original</td>
<td>(Optional) Specifies the Flexible NetFlow implementation of original NetFlow with origin autonomous systems.</td>
</tr>
</tbody>
</table>

### Command Default

Information for all flow exporters configured on the router is displayed.

### Command Modes

Any command mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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 3: Keywords and Descriptions for the record Argument

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>original-input</td>
<td>Traditional IPv4 input NetFlow.</td>
</tr>
<tr>
<td>original-output</td>
<td>Traditional IPv4 output NetFlow.</td>
</tr>
</tbody>
</table>

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 4: show flow record netflow-original Field Descriptions

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Description</td>
<td>The description that you configured for the record or the default description–User defined.</td>
</tr>
<tr>
<td>No. of users</td>
<td>The number of references to this record in the configuration.</td>
</tr>
<tr>
<td>Fields</td>
<td>The fields that are included in this record. For more information on the fields, refer to the match and collect commands.</td>
</tr>
</tbody>
</table>

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>exporter</td>
<td>Specifies a flow exporter for flow monitors.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>flow monitor</td>
<td>Creates a flow monitor.</td>
</tr>
<tr>
<td>record</td>
<td>Configures a flow record for the flow monitor.</td>
</tr>
<tr>
<td>record</td>
<td>Configures a flow record a for flow monitor.</td>
</tr>
</tbody>
</table>
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.

**Command Default**

Information for the Flexible NetFlow accounting configuration on the interface is displayed.

**Command Modes**

Any command mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flow timeout</td>
<td>Creates a flow timeout.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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

switch#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip domain-list</td>
<td>Defines a list of domains.</td>
</tr>
<tr>
<td>ip domain lookup</td>
<td>Enables DNS-based host name-to-address translation.</td>
</tr>
<tr>
<td>ip domain-name</td>
<td>Configures a name server.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>vrf</td>
<td>(Optional) Displays information about the virtual routing and forwarding (VRF) instance.</td>
</tr>
<tr>
<td>vrf-name</td>
<td>(Optional) VRF name. The name is case sensitive and can be a maximum of 32 characters.</td>
</tr>
<tr>
<td>all</td>
<td>(Optional) Displays all VRF instances.</td>
</tr>
<tr>
<td>default</td>
<td>(Optional) Displays the default VRF information.</td>
</tr>
<tr>
<td>management</td>
<td>(Optional) Displays the management VRF information.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ip domain-lookup</td>
<td>Enables the DNS lookup feature.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td>ip dns source-interface</td>
<td>Configures interfaces for DNS domain lookup.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**
This example shows how to display the console logging configuration:

```
switch# show logging console
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>logging console</code></td>
<td>Configures logging to the console.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

Examples

This example shows how to display the logging configuration:

switch# show logging info

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>logging level</td>
<td>Enables logging messages from a defined facility.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the last 42 lines of the log file:

```
switch# show logging last 42
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>logging level</code></td>
<td>Enables logging messages from a defined facility.</td>
</tr>
</tbody>
</table>
show logging level

To display the facility logging severity level configuration, use the **show logging level** command.

```
show logging level [ facility ]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>facility</strong></td>
<td>(Optional) Logging facility. The facilities are listed in Table 1-1 of show logging level</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

```
<table>
<thead>
<tr>
<th>Facility</th>
<th>Default Severity</th>
<th>Current Session Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flexlink</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>0 (emergencies)</td>
<td>1 (alerts)</td>
<td>2 (critical)</td>
</tr>
<tr>
<td>3 (errors)</td>
<td>4 (warnings)</td>
<td>5 (notifications)</td>
</tr>
<tr>
<td>6 (information)</td>
<td>7 (debugging)</td>
<td></td>
</tr>
</tbody>
</table>
```

switch#

This example shows how to display the FCoE NPV logging severity level configuration:

```
switch# show logging level fcoe_mgr
```

```
<table>
<thead>
<tr>
<th>Facility</th>
<th>Default Severity</th>
<th>Current Session Severity</th>
</tr>
</thead>
<tbody>
<tr>
<td>fcoe_mgr</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>0 (emergencies)</td>
<td>1 (alerts)</td>
<td>2 (critical)</td>
</tr>
<tr>
<td>3 (errors)</td>
<td>4 (warnings)</td>
<td>5 (notifications)</td>
</tr>
<tr>
<td>6 (information)</td>
<td>7 (debugging)</td>
<td></td>
</tr>
</tbody>
</table>
```

switch#

This example shows how to display the Power over Ethernet (PoE) logging severity level configuration:

```
switch# show logging level poed
```

```
<table>
<thead>
<tr>
<th>Facility</th>
<th>Default Severity</th>
<th>Current Session Severity</th>
</tr>
</thead>
</table>
```

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>logging level</td>
<td>Configures the facility logging level.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>start-time yyyy mmm dd hh:mm:ss</td>
<td>(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.</td>
</tr>
<tr>
<td>end-time yyyy mmm dd hh:mm:ss</td>
<td>(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.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>logging logfile</td>
<td>Configures logging to a log file.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

Examples

This example shows how to display the module logging configuration:

switch# show logging module

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>logging module</td>
<td>Configures module logging.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the monitor logging configuration:

```
switch# show logging monitor
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>logging monitor</td>
<td>Configures logging on the monitor.</td>
</tr>
</tbody>
</table>
**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]
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>last number-lines</strong></td>
<td>(Optional) Specifies the number of lines to display. The number of lines is from 1 to 100.</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Command Default</th>
<th>None</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Command Modes</th>
<th>EXEC mode</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Command History</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Release</strong></td>
<td><strong>Modification</strong></td>
<td></td>
</tr>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
<td></td>
</tr>
</tbody>
</table>

| Examples | This example shows how to display the last 20 messages in the NVRAM log: |
|----------| switch# show logging nvram last 20 |

<table>
<thead>
<tr>
<th>Related Commands</th>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>logging level</strong></td>
<td>Enables logging messages from a defined facility.</td>
<td></td>
</tr>
</tbody>
</table>
To display the onboard logging information based on the error type, use the **show logging onboard** command.

`show logging onboard [boot-up| device-version| endtime| environmental-history| exception-log| kernel-trace| obfl-history| obfl-logs| stack-trace| starttime| status] [ > file | | type]`

### Syntax Description

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>boot-uptime</code></td>
<td>Displays the onboard failure logging (OBFL) boot and uptime information.</td>
</tr>
<tr>
<td><code>device-version</code></td>
<td>Displays the OBFL device version information.</td>
</tr>
<tr>
<td><code>endtime</code></td>
<td>Displays the OBFL logs until the specified end time in the following format: <code>mm/dd/yy-HH:MM:SS</code></td>
</tr>
<tr>
<td><code>environmental-history</code></td>
<td>Displays the OBFL environmental history.</td>
</tr>
<tr>
<td><code>exception-log</code></td>
<td>Displays the OBFL exception log.</td>
</tr>
<tr>
<td><code>kernel-trace</code></td>
<td>Displays the OBFL kernel trace information.</td>
</tr>
<tr>
<td><code>obfl-history</code></td>
<td>Displays the OBFL history information.</td>
</tr>
<tr>
<td><code>obfl-logs</code></td>
<td>Displays the OBFL technical support log information.</td>
</tr>
<tr>
<td><code>stack-trace</code></td>
<td>Displays the OBFL kernel stack trace information.</td>
</tr>
<tr>
<td><code>starttime</code></td>
<td>Displays the OBFL logs from the specified start time in the following format: <code>mm/dd/yy-HH:MM:SS</code></td>
</tr>
<tr>
<td><code>status</code></td>
<td>Displays the OBFL status enable or disable.</td>
</tr>
<tr>
<td><code>file</code></td>
<td>(Optional) Redirects the output to a file. See the &quot;Usage Guidelines&quot; section for additional information.</td>
</tr>
<tr>
<td><code>type</code></td>
<td>(Optional) Filters the output. See the &quot;Usage Guidelines&quot; section for additional information.</td>
</tr>
</tbody>
</table>

### Command Default

None

### Command Modes

EXEC mode
### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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.
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 5: show logging onboard boot-uptime Command Output**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Boot Time</td>
<td>Time boot occurred.</td>
</tr>
<tr>
<td>Slot Number</td>
<td>Slot number.</td>
</tr>
<tr>
<td>Serial Number</td>
<td>Serial number of the module.</td>
</tr>
<tr>
<td>Bios Version</td>
<td>Primary binary input and output system (BIOS) version.</td>
</tr>
<tr>
<td>Firmware Version</td>
<td>Firmware version.</td>
</tr>
</tbody>
</table>

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
```

<table>
<thead>
<tr>
<th>Timestamp</th>
<th>Device Name</th>
<th>Instance</th>
<th>Hardware</th>
<th>Software</th>
<th>Num</th>
<th>Version</th>
<th>Num</th>
<th>Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>GATOS</td>
<td>2</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>GATOS</td>
<td>3</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>GATOS</td>
<td>4</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>GATOS</td>
<td>5</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>GATOS</td>
<td>6</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>GATOS</td>
<td>7</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>GATOS</td>
<td>8</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>GATOS</td>
<td>9</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>GATOS</td>
<td>10</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>GATOS</td>
<td>11</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>GATOS</td>
<td>12</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>GATOS</td>
<td>13</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>ALTOS</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Wed Jan 30 07:07:00 2013</td>
<td>GATOS</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
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

### Table 6: show logging onboard device-version Command Output

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timestamp</td>
<td>Day, date, and time.</td>
</tr>
<tr>
<td>Device Name</td>
<td>Device name.</td>
</tr>
<tr>
<td>Instance Num</td>
<td>Number of instances.</td>
</tr>
<tr>
<td>Hardware Version</td>
<td>Hardware device version.</td>
</tr>
<tr>
<td>Software Version</td>
<td>Software device version.</td>
</tr>
</tbody>
</table>

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>clear logging onboard</td>
<td>Clears the OBFL entries in the persistent log.</td>
</tr>
<tr>
<td>hw-module logging onboard</td>
<td>Enables or disabled OBFL entries based on the error type.</td>
</tr>
</tbody>
</table>
show logging pending

To display the pending changes to the syslog server configuration, use the `show logging pending` command.

```
switch# show logging pending
```

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
None

**Command Modes**
EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**
This example shows how to display the pending changes to the syslog server configuration:

```
switch# show logging pending
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>logging abort</td>
<td>Cancels the pending changes to the syslog server configuration.</td>
</tr>
</tbody>
</table>
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.

```
switch# show logging pending-diff
switch#
```

**Syntax Description**

This command has no arguments or keywords.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the pending differences of the syslog server configuration:

```
switch# show logging pending-diff
switch#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>logging abort</td>
<td>Cancels the pending changes to the syslog server configuration.</td>
</tr>
</tbody>
</table>
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 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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the logging session status:

```
switch# show logging session status
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>logging level</td>
<td>Enables logging messages from a defined facility.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**
This example shows how to display the logging status:

```
switch# show logging status
Fabric Distribute : Enabled
Session State     : IDLE
switch#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>logging distribute</td>
<td>Enables the distribution of the syslog server configuration to network switches using the Cisco Fabric Services (CFS) infrastructure.</td>
</tr>
</tbody>
</table>
show logging timestamp

To display the logging time-stamp configuration, use the **show logging timestamp** command.

```plaintext
show logging timestamp
```

**Syntax Description**
This command has no arguments or keywords.

**Command Default**
None

**Command Modes**
EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the logging time-stamp configuration:

```plaintext
switch# show logging timestamp
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>logging timestamp</td>
<td>Configures the logging time stamp granularity.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>session</code></td>
<td>(Optional) Number of the session. The range is from 1 to 18.</td>
</tr>
<tr>
<td><code>all</code></td>
<td>(Optional) Displays all sessions.</td>
</tr>
<tr>
<td><code>brief</code></td>
<td>(Optional) Displays a brief summary of the information.</td>
</tr>
<tr>
<td><code>range range</code></td>
<td>(Optional) Displays a range of sessions. The range is from 1 to 18.</td>
</tr>
<tr>
<td><code>status</code></td>
<td>(Optional) Displays the operational state of all sessions.</td>
</tr>
</tbody>
</table>

**Note** This keyword applies only to SPAN sessions.

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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

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
```

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
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>monitor session</td>
<td>Creates a new Switched Port Analyzer (SPAN) session configuration.</td>
</tr>
<tr>
<td>show running-config monitor</td>
<td>Displays the running configuration information about SPAN sessions.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**
This example shows how to display the authentication status for NTP:

```
switch(config)#show ntp authentication-status
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>[no] ntp authenticate</code></td>
<td>Displays information about NTP peers.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display information about NTP peers:

```
switch(config)#show ntp peers
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show ntp peer-status</code></td>
<td>Displays status information about NTP peers.</td>
</tr>
</tbody>
</table>
**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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the peer status for NTP:

```
switch(config)# show ntp peer-status
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show ntp peers</code></td>
<td>Displays information about NTP peers.</td>
</tr>
</tbody>
</table>
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]}}
```

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>io</td>
<td>Displays the input-output statistics.</td>
</tr>
<tr>
<td>local</td>
<td>Displays the counters maintained by the local NTP.</td>
</tr>
<tr>
<td>memory</td>
<td>Displays the statistics counters related to the memory code.</td>
</tr>
<tr>
<td>peer</td>
<td>Displays the per-peer statistics counter of a peer.</td>
</tr>
<tr>
<td>ipaddr address</td>
<td>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.</td>
</tr>
<tr>
<td>name name1</td>
<td>Displays statistics for a named peer.</td>
</tr>
<tr>
<td>..nameN</td>
<td>(Optional) Displays statistics for one or more named peers.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the statistics for NTP:

```
switch(config)#show ntp statistics local
```
### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>clear ntp statistics</td>
<td>Clears NTP statistics</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the NTP time-stamp status:

```
switch(config)#show ntp timestamp-status
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>clear ntp statistics</td>
<td>Clears NTP statistics</td>
</tr>
<tr>
<td>ntp</td>
<td>Configures NTP peers and servers on the switch.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the PTP status:

```
switch(config)#show ptp brief
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show ptp clock</code></td>
<td>Displays the properties of the local clock.</td>
</tr>
<tr>
<td><code>show ptp clocks foreign-masters-record</code></td>
<td>Displays the state of foreign masters known to the PTP process.</td>
</tr>
<tr>
<td><code>show ptp corrections</code></td>
<td>Displays the last few PTP corrections.</td>
</tr>
<tr>
<td><code>show ptp parent</code></td>
<td>Displays the properties of the PTP parent and grandmaster clock.</td>
</tr>
<tr>
<td><code>show ptp port interface</code></td>
<td>Displays the status of the PTP port.</td>
</tr>
<tr>
<td><code>show ptp time-property</code></td>
<td>Displays the PTP clock time properties.</td>
</tr>
</tbody>
</table>
**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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the properties of the local clock:

```
switch(config)#show ptp clock
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show ptp brief</code></td>
<td>Displays the PTP status.</td>
</tr>
<tr>
<td><code>show ptp clocks foreign-masters-record</code></td>
<td>Displays the state of foreign masters known to the PTP process.</td>
</tr>
<tr>
<td><code>show ptp corrections</code></td>
<td>Displays the last few PTP corrections.</td>
</tr>
<tr>
<td><code>show ptp parent</code></td>
<td>Displays the properties of the PTP parent and grandmaster clock.</td>
</tr>
<tr>
<td><code>show ptp port interface</code></td>
<td>Displays the status of the PTP port.</td>
</tr>
<tr>
<td><code>show ptp time-property</code></td>
<td>Displays the PTP clock time properties.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethernet</td>
<td>Specifies an Ethernet interface.</td>
</tr>
<tr>
<td>slot/[QSFP-module/]port</td>
<td>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.</td>
</tr>
</tbody>
</table>

### Command Modes

Global configuration mode

### Command History

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show ptp brief</td>
<td>Displays the PTP status.</td>
</tr>
<tr>
<td>show ptp clock</td>
<td>Displays the properties of the local clock.</td>
</tr>
<tr>
<td>show ptp corrections</td>
<td>Displays the last few PTP corrections.</td>
</tr>
<tr>
<td>show ptp port interface</td>
<td>Displays the status of the PTP port.</td>
</tr>
<tr>
<td>show ptp parent</td>
<td>Displays the properties of the PTP parent and grandmaster clock.</td>
</tr>
<tr>
<td>show ptp time-property</td>
<td>Displays the PTP clock time properties.</td>
</tr>
</tbody>
</table>
show ptp clocks foreign-masters-record
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the most recent PTP corrections on the switch:

```
switch(config)#show ptp corrections
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show ptp brief</code></td>
<td>Displays the PTP status.</td>
</tr>
<tr>
<td><code>show ptp clock</code></td>
<td>Displays the properties of the local clock.</td>
</tr>
<tr>
<td><code>show ptp clocks foreign-masters-record</code></td>
<td>Displays the state of foreign masters known to the PTP process.</td>
</tr>
<tr>
<td><code>show ptp port interface</code></td>
<td>Displays the status of the PTP port.</td>
</tr>
<tr>
<td><code>show ptp parent</code></td>
<td>Displays the properties of the PTP parent and grandmaster clock.</td>
</tr>
<tr>
<td><code>show ptp time-property</code></td>
<td>Displays the PTP clock time properties.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the properties of the PTP parent and grandmaster clock:

```
switch(config)#show ptp parent
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show ptp brief</td>
<td>Displays the PTP status.</td>
</tr>
<tr>
<td>show ptp clock</td>
<td>Displays the properties of the local clock.</td>
</tr>
<tr>
<td>show ptp clocks foreign-masters-record</td>
<td>Displays the state of foreign masters known to the PTP process.</td>
</tr>
<tr>
<td>show ptp corrections</td>
<td>Displays the last few PTP corrections.</td>
</tr>
<tr>
<td>show ptp port interface</td>
<td>Displays the status of the PTP port.</td>
</tr>
<tr>
<td>show ptp time-property</td>
<td>Displays the PTP clock time properties.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ethernet</td>
<td>Specifies an Ethernet interface.</td>
</tr>
<tr>
<td>slot/[QSFP-module/]port</td>
<td>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.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Global configuration mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show ptp brief</td>
<td>Displays the PTP status.</td>
</tr>
<tr>
<td>show ptp clock</td>
<td>Displays the properties of the local clock.</td>
</tr>
<tr>
<td>show ptp clocks foreign-masters-record</td>
<td>Displays the state of foreign masters known to the PTP process.</td>
</tr>
<tr>
<td>show ptp corrections</td>
<td>Displays the last few PTP corrections.</td>
</tr>
<tr>
<td>show ptp port interface</td>
<td>Displays the status of the PTP port.</td>
</tr>
<tr>
<td>show ptp parent</td>
<td>Displays the properties of the PTP parent and grandmaster clock.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>--------------------------</td>
<td>--------------------------------------------------</td>
</tr>
<tr>
<td><code>show ptp time-property</code></td>
<td>Displays the PTP clock time properties.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the PTP clock time properties:

```
switch(config)#show ptp time-property
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show ptp brief</td>
<td>Displays the PTP status.</td>
</tr>
<tr>
<td>show ptp clock</td>
<td>Displays the properties of the local clock.</td>
</tr>
<tr>
<td>show ptp clocks foreign-masters-record</td>
<td>Displays the state of foreign masters known to the PTP process.</td>
</tr>
<tr>
<td>show ptp corrections</td>
<td>Displays the last few PTP corrections.</td>
</tr>
<tr>
<td>show ptp parent</td>
<td>Displays the properties of the PTP parent and grandmaster clock.</td>
</tr>
<tr>
<td>show ptp port interface</td>
<td>Displays the status of the PTP port.</td>
</tr>
</tbody>
</table>
show rmon

To display information about Remote Monitoring (RMON) alarms or high-capacity alarms or events, use the `show rmon` command.

`show rmon {alarms| events| hcalarms| info| logs}`

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
<th>Command Default</th>
<th>Command Modes</th>
<th>Command History</th>
</tr>
</thead>
<tbody>
<tr>
<td>alarms</td>
<td>Displays the RMON alarms.</td>
<td>None</td>
<td>EXEC mode</td>
<td>This command was introduced.</td>
</tr>
<tr>
<td>events</td>
<td>Displays the RMON events.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>hcalarms</td>
<td>Displays the RMON high-capacity alarms.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>info</td>
<td>Displays the RMON configuration information.</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>logs</td>
<td>Displays information about the RMON event logs.</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the RMON high-capacity alarms configured on the switch:

```
switch# show rmon hcalarms
High Capacity Alarm 3 is active, owned by admin
Monitors 1.3.6.1.2.1.2.1.17.83886080 every 5 second(s)
Taking delta samples, last value was 216340
Rising threshold is 0, assigned to event 3
Falling threshold is 0, assigned to event 0
On startup enable rising alarm
Number of Failed Attempts is 0
switch#
```

This example shows how to display the RMON events configured on the switch:

```
switch# show rmon events
Event 5 is active, owned by admin
Description is myRMONEvent
Event firing causes nothing, last fired never
switch#
```
This example shows how to display the RMON configuration information:

```
switch# show rmon info
Maximum allowed 32 bit or 64 bit alarms : 512
Number of 32 bit alarms configured : 0
Number of 64 bit hcalarms configured : 1
switch#
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>rmon alarm</td>
<td>Creates RMON alarms.</td>
</tr>
<tr>
<td>rmon event</td>
<td>Creates RMON events.</td>
</tr>
<tr>
<td>rmon hcalarm</td>
<td>Creates RMON high-capacity alarms.</td>
</tr>
<tr>
<td>show running-config</td>
<td>Displays the running configuration.</td>
</tr>
</tbody>
</table>
show run mmode

To display the currently running maintenance profile configuration on a switch, use the `show run mmode` command.

**show run mmode [all]**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>all</th>
<th>Displays the currently running maintenance profile configuration along with the defaults.</th>
</tr>
</thead>
</table>

**Command Default**
None

**Command Modes**
Privileged EXEC

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>configure maintenance profile</code></td>
<td>Enters a maintenance profile configuration session to create a custom maintenance mode profile or a custom normal mode profile.</td>
</tr>
<tr>
<td><code>show system mode</code></td>
<td>Displays the current system mode and the current state of the maintenance mode timer when the switch is in maintenance mode.</td>
</tr>
<tr>
<td><code>system mode maintenance always-use-custom-profile</code></td>
<td>Applies the existing custom maintenance mode profile and prevents creation of auto-generated maintenance mode profile.</td>
</tr>
<tr>
<td><code>system mode maintenance on-reload reset-reason</code></td>
<td>Boots the switch into maintenance mode automatically in the event of a specified system crash.</td>
</tr>
<tr>
<td><code>system mode maintenance shutdown</code></td>
<td>Shuts down all protocols and interfaces except the management interface (by using the <code>shutdown</code> command and not the default <code>isolate</code> command).</td>
</tr>
<tr>
<td><code>system mode maintenance timeout</code></td>
<td>Configures the maintenance window timer to keep the switch in maintenance mode for a specified number of minutes.</td>
</tr>
</tbody>
</table>
show running-config callhome

To display the Call Home running configuration, use the `show running-config callhome` command.

```
show running-config callhome [all]
```

**Syntax Description**

| all               | (Optional) Displays all the default and configured information. |

**Command Default**

Displays only the configured information.

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the Call Home running configuration:

```
switch# show running-config callhome
!Command: show running-config callhome
!Time: Fri Jun 18 09:37:56 2010
version 5.0(2)N1(1)
callhome
   alert-group configuration user-def-cmd show ip routing
switch#
```

This example shows how to display the entire Call Home running configuration, including the default values:

```
switch# show running-config callhome all
!Command: show running-config callhome all
!Time: Fri Jun 18 09:38:03 2010
version 5.0(2)N1(1)
callhome
   switch-priority 7
   destination-profile CiscoTAC-1 transport-method email
   no destination-profile CiscoTAC-1 transport-method http
destination-profile CiscoTAC-1 message-size 5000000
   destination-profile CiscoTAC-1 message-level 0
destination-profile full_txt transport-method email
   no destination-profile full_txt transport-method http
destination-profile full_txt message-size 2500000
   destination-profile full_txt message-level 0
destination-profile short_txt transport-method email
   no destination-profile short_txt transport-method http
destination-profile short_txt message-size 4000
   destination-profile short_txt message-level 0
destination-profile CiscoTAC-1 alert-group cisco-tac
destination-profile full_txt alert-group all
destination-profile short_txt alert-group all
```
alert-group configuration user-def-cmd show ip routing
no enable
duplicate-message throttle
periodic-inventory notification
periodic-inventory notification interval 7
periodic-inventory notification timeofday 08:00
switch#

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show callhome</td>
<td>Displays Call Home configuration information.</td>
</tr>
</tbody>
</table>
show running-config interface vethernet

To display the currently running configuration for a virtual Ethernet interface, use the `show running-config interface vethernet` command.

`show running-config interface vethernet veth-id [all] expand-port-profile`

**Syntax Description**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>veth-id</strong></td>
<td>Virtual Ethernet interface number. The range is from 1 to 1,048,575.</td>
</tr>
<tr>
<td><strong>all</strong></td>
<td>(Optional) Displays the full operating information including default settings.</td>
</tr>
<tr>
<td><strong>expand-port-profile</strong></td>
<td>(Optional) Displays the configuration information of port profiles.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.1(3)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the running configuration for a virtual Ethernet interface:

```
switch# show running-config interface vethernet 10
!Command: show running-config interface Vethernet10
!Time: Fri Jan 2 01:40:37 2009
version 5.1(3)N1(1)
interface Vethernet10
  inherit port-profile ppVeth
  untagged cos 3
  switchport access vlan 101
  bind interface Ethernet1/5 channel 10
switch#
```

This example shows how to display detailed information on the running configuration for a specified virtual Ethernet interface:

```
switch# show running-config interface vethernet 10 all
```
## Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>interface vethernet</td>
<td>Configures a virtual Ethernet interface.</td>
</tr>
</tbody>
</table>
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]**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>all</th>
<th>(Optional) Displays current SPAN configuration information including default settings.</th>
</tr>
</thead>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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#
```
<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>monitor session</td>
<td>Configures SPAN or ERSPAN sessions.</td>
</tr>
<tr>
<td>show monitor session</td>
<td>Displays information about SPAN or ERSPAN sessions.</td>
</tr>
</tbody>
</table>
show running-config poe

[NOTE: per Christine, “the commands exist in the software but I was told they will remain in the code but we shouldn't show them in the docs until the rubicon fex goes out”]

To display the running configuration for Power over Ethernet (PoE) ports, use the **show running-config poe** command.

**show running-config poe [all]**

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>all</td>
<td>(Optional) Displays detailed information about PoE ports, including default settings.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0(3)N2(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the running configuration for PoE ports:

```
switch# show running-config poe
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show startup-config poe</td>
<td>Displays the startup configuration information about PoE ports.</td>
</tr>
<tr>
<td>show tech-support poe</td>
<td>Displays troubleshooting information about PoE ports.</td>
</tr>
</tbody>
</table>
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**

| Syntax Description | all | (Optional) Displays detailed information about secure ports, including default settings. |

**Command Default**

None

**Command Modes**

EXEC mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>clear port-security dynamic</td>
<td>Clears the dynamically secured addresses on a port.</td>
</tr>
<tr>
<td>show startup-config port-security</td>
<td>Displays the configuration information in the startup file.</td>
</tr>
</tbody>
</table>
show sampler

To display a NetFlow sampler, use the `show sampler` command.

```
show sampler [name] [sampler-name]
```

**Syntax Description**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>name</td>
<td>(Optional) Specifies a sampler.</td>
</tr>
<tr>
<td>sampler-name</td>
<td>(Optional) Sampler name. The maximum number of characters is 63.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Any command mode

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>sampler</code></td>
<td>Configures a sampler to collect data for a user selected packet ratio to preserve hardware resources.</td>
</tr>
</tbody>
</table>
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.

**Command Default**

None

**Command Modes**

Privileged EXEC

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1.0</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>snapshot create name description</code></td>
<td>Creates a snapshot. The name variable can be 64 characters in length. The description variable can be 256 characters in length.</td>
</tr>
<tr>
<td><code>snapshot delete</code></td>
<td>Deletes a snapshot.</td>
</tr>
<tr>
<td><code>show snapshots compare</code></td>
<td>Displays the comparison between two snapshots.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-------------------------</td>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>show snapshots dump</td>
<td>Displays content of the various sections in a generated snapshot.</td>
</tr>
<tr>
<td>snapshot section</td>
<td>Adds or deletes a snapshot section.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Argument</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>snapshot-1</code></td>
<td>Displays the comparison between the two snapshots.</td>
</tr>
<tr>
<td><code>snapshot-2</code></td>
<td>Displays the comparison between the two snapshots.</td>
</tr>
<tr>
<td><code>ipv4routes</code></td>
<td>Displays a comparison of the IPv4 routes between the two snapshots.</td>
</tr>
<tr>
<td><code>ipv6routes</code></td>
<td>Displays a comparison of the IPv6 routes between the two snapshots.</td>
</tr>
<tr>
<td><code>summary</code></td>
<td>Displays a summary of the comparison between the two snapshots.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

Privileged EXEC

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.1.0</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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]
```

---

Cisco Nexus 5600 Series NX-OS System Management Command Reference
This example shows how to display a summary of the comparison between two snapshots:

```
switch# show snapshots compare before_maintenance after_maintenance summary
```

```
<table>
<thead>
<tr>
<th>Feature</th>
<th>before_maintenance</th>
<th>after_maintenance</th>
</tr>
</thead>
<tbody>
<tr>
<td>basic summary</td>
<td></td>
<td></td>
</tr>
<tr>
<td># of interfaces</td>
<td>50</td>
<td>50</td>
</tr>
<tr>
<td># of vlans</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td># of ipv4 routes vrf default</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td># of ipv4 paths vrf default</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td># of ipv4 routes vrf management</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td># of ipv4 paths vrf management</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td># of ipv6 routes vrf default</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td># of ipv6 paths vrf default</td>
<td>3</td>
<td>3</td>
</tr>
<tr>
<td>interfaces</td>
<td></td>
<td></td>
</tr>
<tr>
<td># of eth interfaces</td>
<td>48</td>
<td>48</td>
</tr>
<tr>
<td># of eth interfaces up</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td># of eth interfaces down</td>
<td>47</td>
<td>47</td>
</tr>
<tr>
<td># of eth interfaces other</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td># of vlan interfaces</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td># of vlan interfaces up</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td># of vlan interfaces down</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td># of vlan interfaces other</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>
```

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show snapshots</td>
<td>Displays snapshots on a switch.</td>
</tr>
<tr>
<td>show snapshots dump</td>
<td>Display content of the various sections in a generated snapshot.</td>
</tr>
<tr>
<td>show snapshots sections</td>
<td>Displays content of the various sections in a generated snapshot.</td>
</tr>
<tr>
<td>snapshot create name description</td>
<td>Creates a snapshot. The name variable can be 64 characters in length. The description variable can be 256 characters in length.</td>
</tr>
<tr>
<td>snapshot delete</td>
<td>Deletes a snapshot.</td>
</tr>
<tr>
<td>Command</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------</td>
<td>---------------------------------------------------------------</td>
</tr>
<tr>
<td>show snapshots dump</td>
<td>Displays content of the various sections in a generated snapshot.</td>
</tr>
<tr>
<td>snapshot section</td>
<td>Adds or deletes a snapshot section.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>snapshot-name</th>
<th>Name of the snapshot.</th>
</tr>
</thead>
</table>

**Command Default**

None

**Command Modes**

Privileged EXEC

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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: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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show snapshots</code></td>
<td>Displays snapshots on a switch.</td>
</tr>
<tr>
<td><code>show snapshots sections</code></td>
<td>Displays content of the various sections in a generated snapshot.</td>
</tr>
<tr>
<td><code>snapshot create name description</code></td>
<td>Creates a snapshot. The name variable can be 64 characters in length. The description variable can be 256 characters in length.</td>
</tr>
<tr>
<td><code>snapshot delete</code></td>
<td>Deletes a snapshot.</td>
</tr>
<tr>
<td><code>show snapshots dump</code></td>
<td>Displays content of the various sections in a generated snapshot.</td>
</tr>
<tr>
<td><code>snapshot section</code></td>
<td>Adds or deletes a snapshot section.</td>
</tr>
</tbody>
</table>
show snapshots sections

To display the user-specified sections in a snapshot, use the `show snapshots sections` command.

```
switch# show snapshots sections
user-specified snapshot sections
--------------------
[v4route]
show command: show ip route detail vrf all
row id: ROW_prefix
key1: ipprefix
key2: -
```

**Syntax Description**

This command has no arguments or keywords.

**Command Default**

None

**Command Modes**

Privileged EXEC

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show snapshots compare</td>
<td>Displays the comparison between two snapshots.</td>
</tr>
<tr>
<td>show snapshots dump</td>
<td>Displays content of the various sections in a generated snapshot.</td>
</tr>
<tr>
<td>snapshot create name description</td>
<td>Creates a snapshot. The name variable can be 64 characters in length. The description variable can be 256 characters in length.</td>
</tr>
<tr>
<td>snapshot delete</td>
<td>Deletes a snapshot.</td>
</tr>
<tr>
<td>snapshot section</td>
<td>Adds or deletes a snapshot section.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snmp-server community</td>
<td>Configures the community access string to permit access to the SNMP protocol.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**Examples**

This example shows how to display the SNMP contexts:

```
switch# show snmp context
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>snmp-server context</td>
<td>Configures an SNMP context.</td>
</tr>
</tbody>
</table>
**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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
switch#
```

**Related Commands**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>show running-config snmp</code></td>
<td>Displays the running configuration information about SNMP.</td>
</tr>
</tbody>
</table>
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**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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.
Vlan policy: permit (default)
Interface policy: permit (default)
Vrf policy: permit (default)
Role: priv-1
Description: This is a system defined privilege role.
Vlan policy: permit (default)
Interface policy: permit (default)
Vrf policy: permit (default)
Role: priv-0
Description: This is a system defined privilege role.
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.
Vlan policy: permit (default)
Interface policy: permit (default)
Vrf policy: permit (default)
Rule Perm Type Scope Entity
-------------------------------------------------------------------
1 permit read-write
switch#

Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show running-config snmp</td>
<td>Displays the running configuration information about SNMP.</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.3(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>soft-reload</td>
<td>Performs a manual soft reload of the switch.</td>
</tr>
<tr>
<td>system soft-reload enable</td>
<td>Enables the switch to perform a soft reload after a process crash.</td>
</tr>
</tbody>
</table>
show system soft-reload status
T Commands

- template data timeout, page 346
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**

<table>
<thead>
<tr>
<th>Syntax</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>time</code></td>
<td>(Optional) Time in seconds. The range is from 1 to 86400.</td>
</tr>
</tbody>
</table>

**Command Default**

None

**Command Modes**

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

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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**

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show flow exporter</td>
<td>Displays information about NetFlow exporters.</td>
</tr>
</tbody>
</table>
V Commands

- verify (session), page 348
- version 5, page 349
- version 9, page 351
- vrf (ERSPAN), page 353
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

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>commit</td>
<td>Commits a session.</td>
</tr>
<tr>
<td>configure session</td>
<td>Creates a configuration session.</td>
</tr>
<tr>
<td>show configuration session</td>
<td>Displays the contents of the session.</td>
</tr>
</tbody>
</table>
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.

Command Default

None

Command Modes

NetFlow exporter configuration (config-flow-exporter)

Command History

```
<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>
```

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

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>show flow exporter</td>
<td>Displays information about NetFlow exporters.</td>
</tr>
<tr>
<td>version 9</td>
<td>Configures the NetFlow exporter to version 9.</td>
</tr>
</tbody>
</table>
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.

**Command Default**
Flow exporters are not present in the configuration until you create them.

**Command Modes**
Flow export configuration

**Command History**

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

**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
```

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:

```plaintext
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:

```plaintext
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:

```plaintext
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:

```plaintext
switch(config)# flow exporter flow-export-test
switch(config-flow-exporter)# version 9
switch(config-flow-exporter-version-9)# template data
```

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>flow exporter</td>
<td>Creates a flow exporter.</td>
</tr>
<tr>
<td>flow monitor</td>
<td>Creates a flow monitor.</td>
</tr>
<tr>
<td>flow record</td>
<td>Creates a flow record.</td>
</tr>
<tr>
<td>sampler</td>
<td>Creates a flow sampler.</td>
</tr>
</tbody>
</table>
vrf (ERSPAN)

To configure a virtual routing and forwarding (VRF) instance for Encapsulated Remote Switched Port Analyzer (ERSPAN) traffic forwarding in both the source and destination, 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

<table>
<thead>
<tr>
<th>Syntax Description</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>vrf_name</td>
<td>Name of the VRF. The VRF name can be any case-sensitive, alphanumeric string up to 32 characters.</td>
</tr>
<tr>
<td>default</td>
<td>Specifies the default VRF instance.</td>
</tr>
<tr>
<td>management</td>
<td>Specifies the management VRF instance.</td>
</tr>
</tbody>
</table>

### 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

<table>
<thead>
<tr>
<th>Release</th>
<th>Modification</th>
</tr>
</thead>
<tbody>
<tr>
<td>7.0(0)N1(1)</td>
<td>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.</td>
</tr>
<tr>
<td>6.0(2)N1(1)</td>
<td>This command was introduced.</td>
</tr>
</tbody>
</table>

### Usage Guidelines

This command does not require a license.

### Examples

This example shows how to configure a VRF instance for the ERSSPAN 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:

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

This example shows how to configure a VRF instance for the SPAN-on-Latency ESRSPAN source session:

```plaintext
switch# configure terminal
switch(config)# monitor session 1 type span-on-latency-erspan
switch(config-span-on-latency-erspan)# vrf default
```

### Related Commands

<table>
<thead>
<tr>
<th>Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>monitor-session</td>
<td>Enters the monitor configuration mode for configuring an ERSSPAN or SPAN session for analyzing traffic between ports.</td>
</tr>
<tr>
<td>show monitor session</td>
<td>Displays information about the Ethernet switched port analyzer (SPAN) or ERSSPAN monitor session.</td>
</tr>
</tbody>
</table>