Nortel Ethernet Routing Switch 8600

Commands Reference — CLI

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New in this release

The following sections detail what's new in *Nortel Ethernet Routing Switch 8600 Commands Reference — CLI* (NN46200-105) for Release 5.1:

Features

See the following sections for information about feature changes:

Bidirectional Forwarding Detection

Bidirectional Forwarding Detection (BFD) is a simple Hello protocol used between two peers. In BFD, each peer system periodically transmits BFD packets to the other. If one of the systems does not receive a BFD packet after a certain period of time, the system assumes that the link or the other system is down.

For more information about BFD, see "BGP services commands" (page 171).

Multicast Source Discovery Protocol

Nortel Ethernet Routing Switch 8600 (NN46205-524) is a new document in Release 5.1. MSDP is the new feature in this release.

Multicast Source Discovery Protocol (MSDP) connects multiple Internet Protocol (IP) Version 4 Protocol Independent Multicast Sparse-Mode (PIM-SM) domains. All rendezvous points (RP) in different domains can use MDSP to know multicast sources for a group. MSDP-speaking routers in a PIM-SM domain establish an MSDP peering relationship with MSDP peers in another domain. MSDP uses the Border Gateway Protocol (BGP) for inter-domain operation.

For more information about MSDP, see "Multicast Source Discovery Protocols commands" (page 743).

Terminal Access Controller Access Control System plus

Terminal Access Controller Access Control System plus (TACACS+) is a security application implemented as a client/server-based protocol that provides centralized validation of users attempting to gain access to a router or network access server.

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For more information about TACACS+, see “Security commands” (page 977).

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Introduction

The Nortel* Ethernet Routing Switch 8600 is a Chassis-based Switch that offers intelligent Layer 2-7 switching, internal Firewall, and Intrusion Detection System capabilities. It scales up to 384 Gigabit Ethernet ports and 96 10 Gigabit Ethernet ports as well and enables WAN connectivity for ATM, PoS, and Wave Division Multiplexing (WDM) technologies to provide a solid foundation for future network growth.

This guide provides the function and syntax for the commands that you can execute using the Nortel Ethernet Routing Switch 8600 command line interface (CLI).

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Administration Commands

This chapter describes the Ethernet Routing Switch 8600 Administration commands.

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Enter

Use this command to access the boot monitor.

Syntax

`Enter`

Parameters

None

Default

None

Related commands

None

back

Use this command to back up one level.

Syntax

`back`

Parameters

None

Default

None

Related commands

None

box

Use this command to go to top or box level.

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Syntax

back

Parameters

None

Default

None

Related commands

None

cp

Use this command to copy files.

Syntax

cp <srcfile> <destfile> [-y]

Parameters

None

Default

None

Related commands

None

cwc

Use this command to change current working level.

Syntax

cwc [..]

Parameters

None

Default

None

Related commands

None

date

Use this command to display calender time.

Syntax

date

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Parameters
None

Default
None

Related commands
None

dos-chkdsk
Use this command to check MS-DOS file system for inconsistencies.

Syntax
dos-chkdsk <device> [repair]

Parameters

Variable	Value
<device>	Specifies the device name, /flash | /pcmcia {string length 1..99}.
[repair]	Displays repair errors found.

Default
None

Related commands
None

dos-format
Use this command to initialize device with MS-DOS file system.

Syntax
dos-format <device>

Parameters

Variable	Value
<device>	Specifies the device name, /flash | /pcmcia {string length 1..99}.

Default
None

Related commands
None

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edit

Use this command to modify simple vi line editor script files.

Syntax

```
edit <file>
```

Parameters

None

Default

None

Related commands

None

grep

Use this command to match string in file.

Syntax

```
grep <string> <file>
```

Parameters

Variable	Value
<string>	Specifies the string to match {string length 0..1536}.

Default

None

Related commands

None

help

Use this command to display the eight forms of help are available in the system.

Syntax

```
help [<command>]
```

Parameters

None

Default

None

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Related commands

None

history

Use this command to view history commands substitution syntax.

Syntax

history

Parameters

None

Default

None

Related commands

None

install

Use this command to set up the initial configuration effective at boot-time.

Syntax

install

Parameters

None

Default

None

Related commands

None

login

Use this command to relogin to a different access level.

Syntax

login

Parameters

None

Default

None

Related commands

None

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mkdir

Use this command to make directory on file system.

Syntax

mkdir <dir>

Parameters

Variable	Value
<dir>	Specifies the directory path name {string length 1..99}.

Default

None

Related commands

None

more

Use this command to display contents of file.

Syntax

more <file> [type]

Parameters

Variable	Value
[type]	Specifies the file format {binary|ascii}.

Default

None

Related commands

None

mv

Use this command to move or rename file or directory with wildcard pattern.

Syntax

mv <old> <new>

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Parameters

Variable	Value
`<old>`	Specifies the file name /pcmcia/<file>| /flash/<file>. The string length ranges from 1 to 99.
`<new>`	Specifies the file name /pcmcia/<file>| /flash/<file>. The string length ranges from 1 to 99.

Default

None

Related commands

None

pcmcia-stop

Use this command to stop pcmcia-access. This command must be executed before ejecting the disk.

Syntax

```
pcmcia-stop
```

Parameters

None

Default

None

Related commands

None

peer copy

Use this command to copy <src> file to <dst> file.

Syntax

```
peer copy <src> <destfile> [-y]
```

Parameters

None

Default

None

Related commands

None

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peer rlogin

Use this command to rlogin to a remote host.

Syntax

peer rlogin

Parameters

None

Default

None

Related commands

None

pwc

Use this command to print current working level.

Syntax

pwc

Parameters

None

Default

None

Related commands

None

pwd

Use this command to print current file system directory path.

Syntax

pwc

Parameters

None

Default

None

Related commands

None

remove

Use this command to remove file or directory, with wildcard pattern.

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Syntax

remove <file> [-y]

Parameters

None

Default

None

Related commands

None

rename

Use this command to move or rename file or directory, with wildcard pattern.

Syntax

rename <old> <new>

Parameters

None

Default

None

Related commands

None

reset

Use this command to reset the switch.

Syntax

reset [-y]

Parameters

Variable	Value
[-y]	Skips the confirm question.

Default

None

Related commands

None

rlogin

Use this command to rlogin to a remote host.

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Syntax

rlogin <ipaddr> [-f]

Parameters

Variable	Value
[-f]	Reset rlogin to cop (only in privilege mode).
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

None

rm

Use this command to remove file or directory, with wildcard pattern.

Syntax

rm <file> [-y]

Parameters

Variable	Value
[-y]	Skips the confirm question.

Default

None

Related commands

None

rsh

Use this command to execute a shell command on a remote machine.

Syntax

rsh <ipaddr> -l <value> <cmd> [<string>] [<string>] [<string>] [<string>] [<string>] [<string>] [<string>]

Parameters

Variable	Value
[ipaddr]	Specifies the IP address in the {a.b.c.d} format.

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Variable	Value
<cmd>	Specifies the command to execute on remote host {string length 1..1536}.
<string>	Specifies the following type of string: • Param1 for rsh command {string length 0..1536} • Param2 for rsh command {string length 0..1536} • Param3 for rsh command {string length 0..1536} • Param4 for rsh command {string length 0..1536} • Param5 for rsh command {string length 0..1536} • Param6 for rsh command {string length 0..1536} • Param7 for rsh command {string length 0..1536}

Default

None

Related commands

None

save

Use this command to save the boot configuration to a file.

Syntax

save <savetype> [file <value>] [verbose] [standby <value>] [backup <value>] [mode <value>]

Parameters

Variable	Value
backup **<value>**	Saves the specified file name and identifies the file as a backup file. **value** uses one of the following formats: • [a.b.c.d]:<file> • peer/<file> • /pcmcia/ <file> • /flash/ <file>

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Variable	Value
	file is a string of 1–99 characters.
file **<value>**	Specifies the file name in one of the following formats for **value**: • [a.b.c.d]: <file> • peer/<file> • /pcmcia/ <file> • /flash/ <file> **File** is a string of 1–99 characters.
savetype	Specifies what to save. Possible values for this parameter are • config • bootconfig • log • trace • clilog
standby **<value>**	Saves the specified file name to the standby SF/CPU in the following format for **value**: • file name, /pcmcia/ <file> • /flash/ <file> **file** is a string of 1–99 characters.
verbose	Saves the default and current configuration. If you omit this parameter, the command saves only parameters you changed.

Default

None

Related commands

None

boot

Use this command to restart the switch.

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Syntax

```
boot [<file>] [config <value>] [-y]
```

Parameters

Variable	Value
`config <value>`	Specifies the software configuration device and file name in the format: *[a.b.c.d:]<file> /pcmcia/<file> /flash/<file>*. The file name, including the directory structure, can include up to 99 characters.
`file`	Specifies the software image device and file name in the format: *[a.b.c.d:]<file> /pcmcia/<file> /flash/<file>*. The file name, including the directory structure, can include up to 99 characters.
`-y`	Suppresses the confirmation message before the switch restarts. If you omit this parameter, you are asked to confirm the action before the switch restarts.

Default

None

Related commands

None

peer

Use this command to access the standby SF/CPU.

Syntax

```
peer <operation>
```

Parameters

Variable	Value
`operation`	Specifies either Telnet or rlogin.

Default

None

Related commands

None

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ping

Use this command to ping an IP network connection.

Syntax

ping <HostName/ipv4address/ipv6address> [scopeid <value>] [datasize <value>] [count <value>] [-s] [-I <value>] [-t <value>] [-d] [vrf <value>]

Parameters

Variable	Value
count <value>	Specifies the number of times to ping (for IPv4) (1–9999).
-d	Configures ping debug mode (for IPv4).
datasize <value>	Specifies the size of ping data sent in bytes (16–4076 for IPv4 or 16–65487 for IPv6).
HostName/ipv4address/ipv6address	Specifies the Host Name or IPv4 (a.b.c.d) or IPv6 (x:x:x:x:x:x:x:x) address (string length 1–256).
-I	Specifies the interval between transmissions, in seconds (1–60).
-s	Configures the continuous ping at the interval rate defined by the **[-I]** parameter (for IPv4).
scopeid <value>	Specifies the circuit ID (for IPv6) (1–9999).
-t	Specifies the no-answer time-out value in seconds (1–120) (for IPv4).
vrf <value>	Specifies the VRF name from 0–16 characters..

Default

None

Related commands

None

pingipx

Use this command to ping an Internetwork Packet Exchange (IPX) network connection.

Syntax

pingipx <ipxhost> <count> [-s] [-q] [-t <value>]

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Parameters

Variable	Value
ipxhost	Specifies the IP address of the network node to ping
count	Specifies the number of times to ping (for IPv4) (1–9999)
-s	Configures a continuous ping
-q	Configures quiet output (same as nonverbose mode)
-t	Specifies the no-answer time-out value in seconds (1–120)

Default

None

Related commands

None

md5

Use this command to calculate the MD5 digest.

Syntax

md5 <filename> [-r] [-c] [-a] [-f <value>]

Parameters

Variable	Value
wildcard (*)	Calculates the MD5 checksum of all files.

-f <checksum-file-name>	Stores the result of MD5 checksum to a file on flash or PCMCIA.
	
	If the output file specified with the **-f** option is one of the:
	
	• reserved file names on the switch, the command fails with the error message:
	`Error: Invalid operation.`
	
	• files for which MD5 checksum is to be computed, the command fails with the error message:
	`Ethernet Routing Switch-8610:5# md5 *.cfg -f config.cfg`

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Variable	Value

	`Error: Invalid operation on file <filename>`
	
	If the checksum file name specified by the **-f** option exists on the switch (and is not one of the reserved file names), the following message appears on the switch:
	
	`File exists. Do you wish to overwrite? (y/n)`

-r	Reverses the output. Use with the **-f** option to store the output to a file. The **-r** option cannot be used with the **-c** option.
-a	Adds data to the output file instead of overwriting it. You cannot use the **-a** option with the **-c** option.
-c	Compares the checksum of the specified file by **<filename>** with the MD5 checksum present in the checksum file name. You can specify the checksum file name using the **-f** option. If the checksum file name is not specified, the file **/flash/checksum.md5** is used for comparison. If the supplied checksum file name and the default file are not available on flash, the following error message appears: Error: Checksum file **<filename>** not present.

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Variable	Value
	The `-c` option also: • calculates the checksum of files specified by **`filename`** • compares the checksum with all keys in the checksum file, even if file names do not match • displays the output of comparison

Default

None

Related commands

None

reset-passwd

Use this command to reset all passwords to the factory defaults in the boot-monitor CLI.

Syntax

`reset-passwd`

Parameters

Variable	Value
`access-level`	Specifies the access level, such as l1 or l3, for which you want to change the password.
`username`	Identifies the user account for which you can change the associated password.

Default

None

Related commands

None

copy

Use this command to install a license file and file copying operations.

Syntax

`copy <a.b.c.d>:<srcfile> /flash/<destfile>`

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Parameters

Variable	Value
<a.b.c.d>	Specifies the IP address of the TFTP server where the license file is to be copied from.
<destfile>	Specifies the name of the license file when copied to the flash. The destination file name must be lower case and have a file extension of .dat. For example, bld100_8610adv.dat or license.dat.
<srcfile>	Specifies the name of the license file on the TFTP server. For example, bld100_8610adv.lic or license.dat.

Default

None

Related commands

None

config cli

Use this command to configure the boot monitor connection settings.

Syntax

config cli

Parameters

None

Default

None

Related commands

Variable	Value
defaultlogin <true | false>	Displays the current settings for the login prompt as true or false. The default is true.
defaultpassword <true | false>	Displays the current settings for the password prompt as true or false. The default is true.
info	Displays the current settings for the boot monitor CLI.

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Variable	Value
loginprompt <string>	Displays the logon prompt for the boot monitor in the form of a string. The default string value is login: **<string>** is a string from 1-1513 characters.
more <true|false>	Configures scrolling for the output display. The default is true. • **true** configures output display scrolling to one page at a time. • **false** configures the output display to continuous scrolling.
passwordprompt <string>	Displays the password prompt for the boot monitor. The default value is password: **<string>** is a string length of 1-1510 characters.
prompt <prompt>	Changes the boot monitor prompt to the defined string. • **prompt** is a string from 0–255 characters. The default prompt is ERS-8606.
rlogin-sessions <nsessions>	Configures the allowable number of inbound remote boot monitor CLI logon sessions; the default is 8. • **nsessions** is the number of sessions (0–8).
screenlines <nlines>	Configures the number of lines in the output display; the default is 23. • **nlines** is the number of lines (8–64).

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Variable	Value
telnet-sessions <nsessions>	Configures the allowable number of inbound Telnet sessions; the default is 8. • **nsessions** is the number of sessions (0–8).
timeout <seconds>	Configures the idle timeout period before automatic logoff for CLI sessions. The default is 900. • **seconds** is the timeout period in seconds (30–65535).

config bootconfig

Use this command to configure the boot monitor operations.

Syntax

config bootconfig

Parameters

None

Default

None

Related commands

None

config bootconfig flags factorydefaults true

Use this command to bypass the loading of the switch configuration.

Syntax

config bootconfig flags factorydefaults true

Parameters

None

Default

None

Related commands

None

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config bootconfig flags autoboot false

Use this command to configure the bootconfig autoboot flag.

Syntax

config bootconfig flags autoboot false

Parameters

Variable	Value
<true|false>	Turns the flag off or on.

Default

None

Related commands

None

save bootconfig

Use this command to save the boot configuration.

Syntax

save bootconfig

Parameters

None

Default

None

Related commands

None

config bootconfig cli

Use this command to modify the boot monitor command line interface (CLI).

Syntax

config bootconfig cli

Parameters

None

Default

None

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Related commands

Variable	Value
info	Displays the current settings for the boot monitor CLI.
more <true|false>	Configures scrolling for the output display. The default is true. • **true** configures output display scrolling to one page at a time. • **false** configures the output display to continuous scrolling.
prompt <value>	Changes the boot monitor prompt to the defined string. • **value** is a string from 1–32 characters.
screenlines <value>	Configures the number of lines in the output display; the default is 23. • **value** is the number of lines (8–64).
timeout <seconds>	Configures the idle timeout period before automatic logout for CLI sessions; the default is 0. • **seconds** is the timeout period in seconds (30–65535).

config bootconfig choice

Use this command to change the boot source order.

Syntax

config bootconfig choice <boot-choice>

Parameters

Variable	Value
boot-choice	Lists the order in which the specified boot devices are accessed after you reboot the switch. The options for **boot-choice** are **primary, secondary,** or **tertiary**. The default order is to access the PCMCIA card first, and then the onboard flash.

Default

None

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Related commands

Variable	Value
backup-config-file <file>	Identifies the backup boot configuration file. • **file** is the device and file name, up to 256 characters including the path.
boot-choice	Lists the order in which the specified boot devices are accessed after you reboot the switch. The options for **boot-choice** are **primary, secondary,** or **tertiary**.The default order is to access the PCMCIA card first, and then the onboard flash.
config-file <file>	Identifies the boot configuration file. **file** is the device and file name, up to 255 characters including the path.
image-file <file>	Identifies the image file. **file** is the device and file name, up to 255 characters including the path.
license-file <file>	Identifies the license file.
info	Displays the current boot choices and associated files.

config bootconfig delay

Use this command to configure the standby-to-master delay.

Syntax

config bootconfig delay <seconds>

Parameters

Variable	Value
<seconds>	Specifies the slave delay time. The range is from 0 to 255.

Default

None

Related commands

None

config bootconfig flags telnetd true

Use this command to enable Telnet server.

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Syntax

config bootconfig flags telnetd true
config bootconfig flags sshd false

Parameters

None

Default

None

Related commands

None

config bootconfig flags ha-cpu

Use this command to enable the High Availability (HA) mode.

Syntax

config bootconfig flags ha-cpu <true|flase>

Parameters

Variable	Value
true|flase	Turns flag on or off.

Default

None

Related commands

None

config bootconfig host

Use this command to configure the remote host logon.

Syntax

config bootconfig host

Parameters

None

Default

None

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Related commands

Variable	Value
ftp-debug <true|false>	Activates or disables debug mode on FTP. If you enable debug mode, debug messages display on the management console screen. The default is false.
info	Displays the current remote host logon settings.
password <value>	Configures the password to enable FTP transfers. • **value** is the password, up to 16 characters long. After you configure this password, only FTP is used for remote host logon. **ATTENTION** This password must match the password set for the FTP server, or the FTP operation fails. Also, if the password is set to a non-null value, all copying to and from the network uses FTP instead of TFTP. If the user name or password is incorrect, copying over the network fails.
tftp-debug <true|false>	Activates or disables debug mode on TFTP/TFTPD. If you enable debug mode, debug messages appear on the management console screen. The default is false.
tftp-hash <true|false>	Activates or disables the TFTP hash bucket display. The default is false.
tftp-rexmit <seconds>	Configures the TFTP retransmission timeout. The default value is 6 seconds. • **seconds** is the number of seconds (1–120).
tftp-timeout <seconds>	Configures the TFTP timeout. The default value is 6 seconds. • **seconds** is the number of seconds (1–120).
user <value>	Configures the remote user logon. • **value** is the user logon name, up to 16 characters long. The default string name is rick.

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config bootconfig master cpu

Use this command to specify the slot of the master SF/CPU.

Syntax

config bootconfig master <cpu-slot>

Parameters

Variable	Value
<cpu-slot>	Specifies the slot number, either 5 or 6, for the master SF/CPU.

Default

The default is slot 5.

Related commands

None

config bootconfig net

Use this command to configure the network port.

Syntax

config bootconfig net <cpu-net-port>

Parameters

Variable	Value
cpu-net-port	Specifies which network port.

Default

None

Related commands

None

config bootconfig sio

Use this command to optionally change the default generic port settings.

Syntax

config bootconfig sio <console|modem|pccard> [8databits <true|false]> [baud <rate>] [mode <ascii|slip|ppp>]

Parameters

Variable	Value
8databits <true|false>	Specifies either 8 (true) or 7 (false) data bits for each byte for the software to interpret.

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Variable	Value
baud <rate>	Configures the baud rate for the port. The default is 9600.
mode <ascii | slip | ppp>	Configures the communication mode for the serial port. The default is ASCII. If you are configuring the modem port, you can set the port to use either the Serial Line Internet Protocol (SLIP) or Point to Point Protocol (PPP) communication mode.

Default

The default is false.

Related commands

Variable	Value
enable <true | false>	Activates or disables the port. The default is true.
info	Displays information about the specified port.
mtu <bytes>	Configures the size of the maximum transmission unit for a PPP link (0–2048). The default is 0.
my-ip <ipaddr>	Configures the server IP address for the Ethernet Routing Switch 8600 of the point-to-point link. The default is 0.0.0.0. Nortel recommends that you use the IP address for the management port.
peer-ip <ipaddr>	Configures the peer, the PC, IP address on the point-to-point link. The default is 0.0.0.0. The switch assigns this value to a PC that connects through the modem port with configured TCP/IP properties to obtain an IP address automatically. If the client uses a static IP address, the Ethernet Routing Switch 8600 accepts this address. If you use the Password Authentication Protocol (PAP) authentication, you must ensure that the client uses the correct IP address.

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Variable	Value
pppfile <file>	Specifies the PPP configuration file to provide details for authentication and other options to include during the boot procedure of the switch. If you set the port mode to PPP, you must specify a PPP file name. For more information about this file, see Procedure job aid: PPP file. The PPP file name is a string value of no more than 64 characters. Identify the file in the format {a.b.c.d:|peer:|/pcmcia/|/flash/}<file>. **ATTENTION** Do not specify a PPP file name with more than 64 characters.
restart	Shuts down and initializes the port.
slip-compression <true|false>	Activates or disables Transmission Control Protocol over Internet Protocol (TCP/IP) header compression for SLIP mode. The default is false.
slip-rx-compression <true|false>	Activates or disables TCP/IP header compression on the receive packet for SLIP mode. The default is false.

config bootconfig sio pppfile

Use this command to configure PPP options.

Syntax

config bootconfig sio <console|modem|pccard> [mtu <bytes>] [my-ip <ipaddr>] [peer-ip <ipaddr>] pppfile <file>

Parameters

Variable	Value
mtu <bytes>	Configures the size of the maximum transmission unit for a PPP link (0–2048). The default is 0.
my-ip <ipaddr>	Configures the server IP address for the Ethernet Routing Switch 8600 of the point-to-point link. The default is 0.0.0.0. Nortel recommends that you use the IP address for the management port.

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Variable	Value
peer-ip <ipaddr>	Configures the peer, the PC, IP address on the point-to-point link. The default is 0.0.0.0. The switch assigns this value to a PC that connects through the modem port with configured TCP/IP properties to obtain an IP address automatically. If the client uses a static IP address, the Ethernet Routing Switch 8600 accepts this address. If you use the PAP authentication, you must ensure that the client uses the correct IP address.
pppfile <file>	Specifies the PPP configuration file to provide details for authentication and other options to include during the boot procedure of the switch. If you set the port mode to PPP, you must specify a PPP file name. For more information about this file, see Procedure job aid: PPP file. The PPP file name is a string value of no more than 64 characters. Identify the file in the format {a.b.c.d:|peer:|/pcmcia/|/flash/}<file>. **ATTENTION** Do not specify a PPP file name with more than 64 characters.

Default

The default is 0.0.0.0.

The default is 0.

Related commands

Variable	Value
8databits <true|false>	Specifies either 8 (true) or 7 (false) data bits for each byte for the software to interpret. The default is false.
baud <rate>	Configures the baud rate for the port. The default is 9600.
enable <true|false>	Activates or disables the port. The default is true.
info	Displays information about the specified port.

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Variable	Value
mode <ascii|slip|ppp>	Configures the communication mode for the serial port. The default is ASCII. If you are configuring the modem port, you can set the port to use either the SLIP or PPP communication mode.
restart	Shuts down and initializes the port.
slip-compression <true|false>	Activates or disables Transmission Control Protocol over IP (TCP/IP) header compression for SLIP mode. The default is false.
slip-rx-compression <true|false>	Activates or disables TCP/IP header compression on the receive packet for SLIP mode. The default is false.

config bootconfig sio compression

Use this command to optionally change the default SLIP settings.

Syntax

config bootconfig sio <console|modem|pccard> [slip-compression <true|false>] [slip-rx-compression <true|false>]

Parameters

Variable	Value
slip-compression <true|false>	Activates or disables TCP/IP header compression for SLIP mode.

Default

The default is false.

Related commands

Variable	Value
8databits <true|false>	Specifies either 8 (true) or 7 (false) data bits for each byte for the software to interpret. The default is false.
baud <rate>	Configures the baud rate for the port. The default is 9600.
enable <true|false>	Activates or disables the port. The default is true.
info	Displays information about the specified port.

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Variable	Value
mode <ascii | slip | ppp>	Configures the communication mode for the serial port. The default is ASCII. If you are configuring the modem port, you can set the port to use either the SLIP or PPP communication mode.
mtu <bytes>	Configures the size of the maximum transmission unit for a PPP link (0–2048). The default is 0.
my-ip <ipaddr>	Configures the server IP address for the Ethernet Routing Switch 8600 of the point-to-point link. The default is 0.0.0.0. Nortel recommends that you use the IP address for the management port.
peer-ip <ipaddr>	Configures the peer, the PC, IP address on the point-to-point link. The default is 0.0.0.0. The switch assigns this value to a PC that connects through the modem port with configured TCP/IP properties to obtain an IP address automatically. If the client uses a static IP address, the Ethernet Routing Switch 8600 accepts this address. If you use the PAP authentication, you must ensure that the client uses the correct IP address.
pppfile <file>	Specifies the PPP configuration file to provide details for authentication and other options to include during the boot procedure of the switch. If you set the port mode to PPP, you must specify a PPP file name. For more information about this file, see Procedure job aid: PPP file. The PPP file name is a string value of no more than 64 characters. Identify the file in the format {a.b.c.d:|peer:|/pcmcia/|/flash/}<file>. **ATTENTION** Do not specify a PPP file name with more than 64 characters.
restart	Shuts down and initializes the port.

config bootconfig sio restart

Use this command to restart the port.

Syntax

config bootconfig sio <cpu-sio-port> restart

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Parameters

Variable	Value
cpu-sio-port	Specifies console|modem|pccardserial port.

Default

None

Related commands

Variable	Value
8databits <true|false>	Specifies either 8 (true) or 7 (false) data bits for each byte for the software to interpret. The default is false.
baud <rate>	Configures the baud rate for the port. The default is 9600.
enable <true|false>	Activates or disables the port. The default is true.
info	Displays information about the specified port.
mode <ascii|slip|ppp>	Configures the communication mode for the serial port. The default is ASCII. If you are configuring the modem port, you can set the port to use either the SLIP or PPP communication mode.
mtu <bytes>	Configures the size of the maximum transmission unit for a PPP link (0–2048). The default is 0.
my-ip <ipaddr>	Configures the server IP address for the Nortel Ethernet Routing Switch 8600 of the point-to-point link. The default is 0.0.0.0. Nortel recommends that you use the IP address for the management port.
peer-ip <ipaddr>	Configures the peer, the PC, IP address on the point-to-point link. The default is 0.0.0.0. The switch assigns this value to a PC that connects through the modem port with configured TCP/IP properties to obtain an IP address automatically. If the client uses a static IP address, the Ethernet Routing Switch 8600 accepts this address. If you use the PAP authentication, you must ensure that the client uses the correct IP address.

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Variable	Value
pppfile <file>	Specifies the PPP configuration file to provide details for authentication and other options to include during the boot procedure of the switch. If you set the port mode to PPP, you must specify a PPP file name. For more information about this file, see Procedure job aid: PPP file. The PPP file name is a string value of no more than 64 characters. Identify the file in the format {a.b.c.d:|peer:|/pcmcia/|/flash/}<file>. **ATTENTION** Do not specify a PPP file name with more than 64 characters.
restart	Shuts down and initializes the port.
slip-compression <true|false>	Activates or disables Transmission Control Protocol over IP (TCP/IP) header compression for SLIP mode. The default is false.
slip-rx-compression <true|false>	Activates or disables TCP/IP header compression on the receive packet for SLIP mode. The default is false.

config bootconfig sio false

Use this command to disable the port.

Syntax

config bootconfig sio <cpu-sio-port> enable <true|false>

Parameters

Variable	Value
cpu-sio-port	Specifies the serial port (console|modem|pccard).

Default

None

Related commands

Variable	Value
8databits <true|false>	Specifies either 8 (true) or 7 (false) data bits for each byte for the software to interpret. The default is false.
baud <rate>	Configures the baud rate for the port. The default is 9600.

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Variable	Value
enable <true|false>	Activates or disables the port. The default is true.
info	Displays information about the specified port.
mode <ascii|slip|ppp>	Configures the communication mode for the serial port. The default is ASCII. If you are configuring the modem port, you can set the port to use either the SLIP or PPP communication mode.
mtu <bytes>	Configures the size of the maximum transmission unit for a PPP link (0–2048). The default is 0.
my-ip <ipaddr>	Configures the server IP address for the Nortel Ethernet Routing Switch 8600 of the point-to-point link. The default is 0.0.0.0. Nortel recommends that you use the IP address for the management port.
peer-ip <ipaddr>	Configures the peer, the PC, IP address on the point-to-point link. The default is 0.0.0.0. The switch assigns this value to a PC that connects through the modem port with configured TCP/IP properties to obtain an IP address automatically. If the client uses a static IP address, the Ethernet Routing Switch 8600 accepts this address. If you use the PAP authentication, you must ensure that the client uses the correct IP address.
pppfile <file>	Specifies the PPP configuration file to provide details for authentication and other options to include during the boot procedure of the switch. If you set the port mode to PPP, you must specify a PPP file name. For more information about this file, see Procedure job aid: PPP file. The PPP file name is a string value of no more than 64 characters. Identify the file in the format {a.b.c.d:|peer:|/pcmcia/|/flash/}<file>. **ATTENTION** Do not specify a PPP file name with more than 64 characters.
restart	Shuts down and initializes the port.

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Variable	Value
slip-compression <true|false>	Activates or disables Transmission Control Protocol over IP (TCP/IP) header compression for SLIP mode. The default is false.
slip-rx-compression <true|false>	Activates or disables TCP/IP header compression on the receive packet for SLIP mode. The default is false.

config bootconfig slot core-save

Use this command to save core image.

Syntax

config bootconfig slot <slots> core-save <enable|disable> [<file>]

Parameters

Variable	Value
<enable|disable>	Enables or disables core image.

Default

None

Related commands

Variable	Value
info	Need info. ****Note to the reviewer** The description for info and start-core is not shown in the switch. Need description for this value.**
start-core	Need info. ****Note to the reviewer** The description for info and start-core is not shown in the switch. Need description for this value.**

config bootconfig wlan config

Use this command to run WLAN configuration script.

Syntax

config bootconfig wlan config

Parameters

None

Default

None

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Related commands

Variable	Value
desired-ssid <ssid>	Sets the desired SSID.
info	Displays wireless LAN information.

config bootconfig tz

Use this command to configure the time zone.

Syntax

config bootconfig tz

Parameters

None

Default

None

Related commands

Variable	Value
dst-end <Mm.n.d/hhmm|MMddhhmm>	Configures the ending date of daylight saving time. You can specify the time in one of the two ways: • **Mm.n.d/hhmm** specifies an hour on the nth occurrence of a weekday in a month. For example, **M10.5.0/0200** means the fifth occurrence of Sunday in the tenth month (October) at 2:00 a.m. • **MMddhhmm** specifies a month, day, hour, and minute. For example, **10310200** means October 31 at 2:00 a.m.
dst-name <dstname>	Configures an abbreviated name for the local daylight saving time zone. • **dstname** is the name (for example, "pdt" is Pacific Daylight Time).
dst-offset <minutes|hh:mm>	Configures the daylight saving adjustment in minutes or hours:minutes. The values range from –4:0 to 4:0 for hours:minutes and from –240 to 240 for minutes. The default is 60.

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Variable	Value
dst-start <Mm.n.d /hhmm|MMddhhmm>	Configures the starting date of daylight saving time. • **Mm.n.d/hhmm** specifies an hour on the nth occurrence of a weekday in a month. For example, **M10.5.0/0200** means the fifth occurrence of Sunday in the tenth month (October) at 2:00 a.m. • **MMddhhmm** specifies a month, day, hour, and minute. For example, **10310200** means October 31 at 2:00 a.m.
info	Displays time zone information.
name <tz>	Configures an abbreviated name for the local time zone name. • **tz** is the name (for example "pst" is Pacific Standard Time).
offset-from-utc <minutes|hh:mm>	Configures the time zone offset in minutes or hours:minutes to subtract from Universal Coordinated Time (UTC), where positive numbers mean west of Greenwich and negative numbers mean east of Greenwich. The values range from -14:0 to 14:0 for hours:minutes and from -840 to 840 for minutes. The default value is 0.

config bootconfig flags

Use this command to enable remote access services from the run-time CLI.

Syntax

config bootconfig flags <access-service> <true|false>

Parameters

Variable	Value
access-service	Specify the type of remote access service. Enter one of the following: ftpd, rlogind, telnetd, tftpd, or sshd.
true|false	Specify true to activate the service; false to disable the service.

Default

None

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Related commands

None

config cli banner add

Use this command to configure the CLI banner.

Syntax

config cli banner add <string>

Parameters

Variable	Value
add <string>	Adds lines of text to the CLI logon banner. • **string** is an ASCII string from 1–80 characters.

Default

None

Related commands

Variable	Value
banner add <string>	Adds lines of text to the CLI logon banner. • **string** is an ASCII string from 1–80 characters.
banner defaultbanner <true|false>	Activates or disables by using the default CLI logon banner.
banner delete	Deletes an existing customized logon banner.
info	Displays the text added to the logon banner using the **config cli add** command.

config cli motd add

Use this command to configure the message-of-the-day.

Syntax

config cli motd add <string>

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Parameters

Variable	Value
add <string>	Creates a message of the day to show with the logon banner.**string** is an ASCII string from 1–1516 characters.

Default

None

Related commands

Variable	Value
delete	Deletes the message of the day.
displaymotd <true|false>	Displays (**true**) or does not display (**false**) the message of the day.
info	Displays information about the message of the day.

config cli clilog enable

Use this command to configure CLI logging.

Syntax

config cli clilog enable {true|false} [maxfilesize <integer>]

Parameters

enable {true|false}	Specify true to activate logging of CLI commands, or false to disable CLI logging.
maxfilesize <integer>	Specify the maximum size of the file clilog.txt in kilobytes (KB). The range is 64–256000.

Default

Default is 256 KB.

Related commands

Variable	Value
info	Displays the current settings for the boot monitor CLI.

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Variable	Value
more <true|false>	Configures scrolling for the output display. The default is true. • **true** configures output display scrolling to one page at a time. • **false** configures the output display to continuous scrolling.
prompt <value>	Changes the boot monitor prompt to the defined string. • **value** is a string from 1–32 characters.
screenlines <value>	Configures the number of lines in the output display; the default is 23. • **value** is the number of lines (8–64).
timeout <seconds>	Configures the idle timeout period before automatic logout for CLI sessions; the default is 0. • **seconds** is the timeout period in seconds (30–65535).

config setdate

Use this command to configure the date.

Syntax

config setdate <MMddyyyyhhmmss>

Parameters

Variable	Value
MMddyyyyhhmmss	Sets calendar time.

Default

The default is true.

Related commands

None

config sys set

Use this command to configure system-level switch parameters.

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Syntax

config sys set

Parameters

None

Default

None

Related commands

Variable	Value
clock-sync-time <minutes>	Configures the RTC-to-system clock synchronization time. • **minutes** is 15–3600 minutes. The default value is 60.
contact <contact>	Configures the contact information for the switch. • **contact** is an ASCII string from 0–255 characters (for example, a phone extension or an email address). The default e-mail address is http://support.nortel.com/.
clipId-topology-ip <id>	Sets the topology IP from the available Circuitless IP (CLIP). **id** is the circless IP interface id in te range of 1 to 256.
force-topology-ip-flag <true|false>	Sets flag to force choice of topology-IP. **true|false** is the enable/disable Force Topology IP Flag.
ecn-compatibility <enable|disable>	Activates or disables explicit congestion notification, as defined in Experimental Request For Comments (RFC) 2780. This feature is not currently supported on the Ethernet Routing Switch 8600. The default value is enable.

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Variable	Value
global-filter <enable|disable>	Activates or disables global filtering on the switch. After this command is activated, you must disable source MAC VLANs (`config sys set vlan-bysrcmac disable`). You cannot enable global filtering and source MAC-based VLANs at the same time. This command is available only on the Ethernet Routing Switch 8600 E and M modules. The default value is enable.
info	Displays current system settings.
location <location>	Configures the location information for the switch. **location** is an ASCII string from 0–255 characters. The default location given is 4655, Great America Parkway, Santa Clara, CA 95054.
max-vlan-resource-reservation <enable|disable>	Enables maximum VLAN feature.**enable|disable** enable or disable Force Topology IP Flag.
multicast-resource-reservation <value>	Reserves MGIDs for IPMC useage. **value** is the number of MGIDs reserved for IPMC usage in the range of 64 to 4083.
mroute-stream-limit <enable|disable>	Activates or disables multicast stream limiting. The default is disable.
mgmt-virtual-ip <ipaddr/mask>	Configures the virtual management port. **ipaddr|mask** is the IP address and mask of the virtual management port. The default value is 0.0.0.0/0.0.0.0.

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Variable	Value
mgmt-virtual-ipv6 <ipv6addr|prefix-len>	Configures the management of the virtual IPv6. • **ipv6addr** is the IPv6 address in the hexadecimal format. • **prefix-len** is the prefix length with a string length of 0–46. The default value is 0:0:0:0:0:0:0:0/0
mtu <bytes>	Activates Jumbo frame support. **bytes** is the Ethernet frame size, either 1522, 1950 (default), or 9600 bytes.
name <prompt>	Configures the root-level prompt name for the switch. **prompt** is an ASCII string from 0–255 characters (for example, LabSC7 or Closet4).
portlock <on|off>	Turns port locking on or off. To specify the ports to be locked, use the **config ethernet <ports> lock** command. The default value is off.
sendAuthenticationTrap <true|false>	Configures whether to send authentication failure traps. The default value is false.
smlt-on-single-cp <enable|disable> [timer <value>]	Activates or disables Split Multilink Trunking (SMLT) on the single CP. Optional parameter: **timer value** is the timer value for SMLT on the single CP feature timer. Valid options are 1–3. This mode is only applicable to E and M modules. R and RS modules support SMLT-on-single-CP configurations by default. The default value is set to disable and the timer value by default is 3.

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Variable	Value
topology <on|off>	Turns the topology feature on or off. The topology feature generates topology packets used by Enterprise Network Management System (ENMS). If this feature is turned off, the topology table is not generated. The default is on.
udp-checksum <enable|disable>	Activates or disables the User Datagram Protocol (UDP) checksum calculation. The default value is enable.
udpsrc-by-vip <enable|disable>	Activates or disables virtual IP as the UDP source.
vlan-bysrcmac <enable|disable>	Activates or disables the ability to configure source MAC VLANs on the switch. The default is disable. If you enable this command, you must disable the global filter command (**config sys set global-filter disable**). You cannot enable global filtering and source MAC-based VLANs at the same time.
wsm-direct-mode <enable|disable>	Activates or disables the configuration of the same community string on the Ethernet Routing Switch 8600 and the Web Switching Module (WSM) for a direct Simple Network Management Protocol (SNMP) connection to the WSM. The default configuration is disable.

config sys set clock-sync-time

Use this command to configure the synchronization interval.

Syntax

config sys set clock-sync-time <minutes>

Parameters

Variable	Value
minutes	Specifies the number of minutes between synchronization. The range is 15–3600 minutes.

Default

The default is 60 minutes.

Related commands

None

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config sys set mgmt-virtual-ip

Use this command to create a virtual management port.

Syntax

config sys set mgmt-virtual-ip <ipaddr|mask>

Parameters

Variable	DescriptionValue
delay <seconds>	Sets standby delay at startup. **<seconds>** is the slave delay time in the range of 0 to 255.

Default

None

Related commands

None

config sys set msg-control action

Use this command to configure system message control action.

Syntax

config sys set msg-control action <suppress-msg|send-trap|both>

Parameters

Variable	Value
action <suppress-msg|send-trap|both>	Configures the message control action.

Default

None

Related commands

Variable	Value
control-interval <minutes>	Configures the message control interval, in minutes. The valid options are 1–30.
disable	Disables system message control.
enable	Activates system message control. Enabling this command suppresses duplicate error messages.

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Variable	Value
info	Displays the configuration of system message control.
max-msg-num <number>	Configures the number of occurrences of a message after which the control action happens. To set the maximum number of occurrences, enter a value from 2–500.

config sys set msg-control force-msg add

Use this command to configure the force message control option.

Syntax

config sys set msg-control force-msg add <string>

Parameters

Variable	Value
add <string>	Used to add a forced message control pattern • **string** is a string of 4 characters. You can add a four-byte pattern into the force-msg table. The software and the hardware log messages that use the first four bytes matching one of the patterns in the force-msg table undergo the configured message control action. You can specify up to 32 different patterns in the force-msg table. This includes a wild-card pattern (****) as well. Upon specifying the wild-card pattern, all messages undergo message control.

Default

None

Related commands

Variable	Value
del <string>	Used to delete a forced message control pattern**string** is a string of 4 characters.
info	Displays the current configuration.

config slot state

Use this command to change the administrative status of the module.

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Syntax

config slot <slots> state <enable|disable|reset>

Parameters

Variable	Value
slots	Specifies the slot list.

Default

None

Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.

config sys set flags m-mode true

Use this command to enable M mode.

Syntax

config sys set flags m-mode true

Parameters

Variable	Value
true	Enables extended memory mode.

Default

None

Related commands

None

config sys set flags r-mode true

Use this command to enable R mode.

Syntax

config sys set flags r-mode true

Parameters

Variable	Value
true	Enables extended memory mode.

Default

None

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Related commands

None

config sys set flags enhanced-operational-mode true

Use this command to enable enhanced operational mode.

Syntax

config sys set flags enhanced-operational-mode true

Parameters

Variable	Value
true	Turns flag on.

Default

None

Related commands

None

config bootconfig flags ha-cpu true

Use this command to enable CPU HA mode.

Syntax

config bootconfig flags ha-cpu true

Parameters

Variable	Value
true	Turns flag on.

Default

None

Related commands

None

config sys set mtu

Use this command to enable jumbo frames.

Syntax

config sys set mtu <bytes>

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Parameters

Variable	Value
<bytes>	Specifies the Ethernet frame size. The valid options are 1950 bytes (default), 1522 bytes (standard), or 9600 bytes (jumbo).

Default

The default is 1950 bytes.

Related commands

None

config slpp operation enable

Use this command to enable Simple Loop Prevention Protocol (SLPP).

Syntax

config slpp operation enable

Parameters

Variable	Value
operation <enable|disable>	Enables or disables the SLPP operation. **ATTENTION** The SLPP packets transmit and receive process is active only if the SLPP operation is enabled. When the SLPP operation is disabled, no SLPP packet is sent and any received SLPP packet is discarded.

Default

None

Related commands

Variable	Value
add <vid>	Adds a Virtual Local Area Network (VLAN) to a SLPP transmission list. **vid** is the VLAN ID.
etherType <pid>	Specifies the SLPP Protocol Data Unit (PDU) Ethernet type. **pid** is the SLPP protocol ID in hexadecimal format.

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Variable	Value
info	Shows current-level parameter settings and next-level directories.
remove <vid>	Removes a VLAN from a SLPP transmission list. **vid** is the ID of the VLAN.
tx-interval <integer>	Configures the SLPP packet transmit interval in milliseconds. **integer** is the SLPP packet transmit interval. The range is 500–5000. The default is 500.

config slpp etherType

Use this command to specify the SLPP protocol ID.

Syntax

config slpp etherType <pid>

Parameters

Variable	Value
etherType <pid>	Specifies the SLPP PDU Ethernet type. **pid** is the SLPP protocol ID in hexadecimal format.

Default

None

Related commands

Variable	Value
add <vid>	Adds a VLAN to a SLPP transmission list. **vid** is the VLAN ID.
info	Shows current-level parameter settings and next-level directories.
operation <enable|disable>	Enables or disables the SLPP operation. **ATTENTION** The SLPP packets transmit and receive process is active only if the SLPP operation is enabled. When the SLPP operation is disabled, no SLPP packet is sent and any received SLPP packet is discarded.

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Variable	Value
remove <vid>	Removes a VLAN from a SLPP transmission list. **vid** is the ID of the VLAN.
tx-interval <integer>	Configures the SLPP packet transmit interval in milliseconds. **integer** is the SLPP packet transmit interval. The range is 500–5000. The default is 500.

config slpp tx-interval

Use this command to configure the transmission interval.

Syntax

config slpp tx-interval <integer>

Parameters

Variable	Value
tx-interval <integer>	Configures the SLPP packet transmit interval in milliseconds. **integer** is the SLPP packet transmit interval. The range is 500–5000.

Default

The default is 500.

Related commands

Variable	Value
add <vid>	Adds a VLAN to a SLPP transmission list. **vid** is the VLAN ID.
etherType <pid>	Specifies the SLPP PDU Ethernet type. **pid** is the SLPP protocol ID in hexadecimal format.
info	Shows current-level parameter settings and next-level directories.

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Variable	Value
operation <enable|disable>	Enables or disables the SLPP operation. **ATTENTION** The SLPP packets transmit and receive process is active only if the SLPP operation is enabled. When the SLPP operation is disabled, no SLPP packet is sent and any received SLPP packet is discarded.
remove <vid>	Removes a VLAN from a SLPP transmission list.**vid** is the ID of the VLAN.

config slpp add

Use this command to add a VLAN to the transmission list.

Syntax

config slpp add <vid>

Parameters

Variable	Value
add <vid>	Adds a VLAN to a SLPP transmission list. **<vid>** is the VLAN ID.

Default

None

Related commands

Variable	Value
etherType <pid>	Specifies the SLPP PDU Ethernet type.**pid** is the SLPP protocol ID in hexadecimal format.
info	Shows current-level parameter settings and next-level directories.

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Variable	Value
operation <enable|disable>	Enables or disables the SLPP operation. **ATTENTION** The SLPP packets transmit and receive process is active only if the SLPP operation is enabled. When the SLPP operation is disabled, no SLPP packet is sent and any received SLPP packet is discarded.
remove <vid>	Removes a VLAN from a SLPP transmission list. **vid** is the ID of the VLAN.
tx-interval <integer>	Configures the SLPP packet transmit interval in milliseconds. **integer** is the SLPP packet transmit interval. The range is 500–5000. The default is 500.

config ethernet

Use this command to configure SLPP on a port.

Syntax

config ethernet <portlist> slpp

Parameters

Variable	Value
<portlist>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
info	Shows current-level parameter settings and next-level directories.

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Variable	Value
packet-rx <enable|disable>	Activates or disables SLPP packet reception on the listed ports.
packet-rx-threshold <integer>	Specifies the SLPP reception threshold on the ports. The packet reception threshold specifies how many SLPP packets are received by the port before it is administratively disabled. The range is 1–500 ms. **ATTENTION** Setting the rx-threshold to a value greater than 50 ms on a heavy loaded Ethernet Routing Switch 8600 can cause high CPU utilization if a loop occurs. Nortel recommends that you only configure the rx-threshold above 50 ms on lightly loaded switches.

config sys ext-cp-limit extcplimit enable

Use this command to enable extended CP limit.

Syntax

config sys ext-cp-limit extcplimit enable

Parameters

Variable	Value
extcplimit <enable|disable>	Configures the extended CP limit.

Default

The default is disabled.

Related commands

Variable	Value
info	Displays the current configuration.
max-ports-to-check <number of ports>	Configures the total number of ports to monitor. • **number of ports** is in the range of 0–512. The default is 0.

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Variable	Value
min-congestion-time <time in msec>	Configures the minimum time for which traffic keeps hitting the SF/CPU to trigger the congestion algorithm. • **time in msec** is the time in milliseconds in the range of 100–600000. The default is 3000.
port-congestion-time <time in sec>	Configures the time duration for which, if the bandwidth utilization for a monitoring port remains more than the threshold, the port is disabled. • **time in sec** is the time in seconds in the range of 1–600. The default is 5 seconds.
trap-level <Normal | Verbose | None>	Configures the trap level. The options are: • Normal–sends a single trap for all the ports which are disabled. • Verbose–sends a trap for each of the ports which is disabled. • None–no traps are sent. The default value is None.

config ethernet ext-cp-limit

Use this command to configure Extended CP Limit on a port.

Syntax

config ethernet <ports> ext-cp-limit <None \| SoftDown \| HardDown> [threshold-util-rate <value>]

Parameters

Variable	Value
<None | SoftDown | HardDown>	Indicates the following: • None–the port does not need to be checked. • SoftDown–the port belongs to the may-go-down-port-list. • HardDown–the port belongs to the must-go-down-port-list.

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Variable	Value
`<ports>`	Specifies the port or range of ports to configure in the slot/port format.
`threshold-util-rate`	Specifies the threshold bandwidth utilization rate from 1–100.

Default

The default value is 50%.

Related commands

None

config ethernet loop-detect action

Use this command to configure loop detect.

Syntax

`config ethernet <port> loop-detect <enable|disable> [action <value>] [arp-detect]`

Parameters

Variable	Value
`action <value>`	Specifies the loop detect action to be taken. • port-down shuts down the port upon detecting a flapping MAC address • vlan-block shuts down the VLAN upon detecting a flapping MAC address • mac-discard. ARP-Detect does not support this action.
`<enable|disable>`	Activates or disables the loop detect feature for the port.

Default

None

Related commands

Variable	Value
`arp-detect`	Activates Address Resolution Protocol (ARP)-Detect. Activate this feature in addition to loop detect on routed interfaces.

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config mac-flap-time-limit

Use this command to configure the interval at which MAC addresses are monitored.

Syntax

config mac-flap-time-limit <milliseconds>

Parameters

Variable	Value
milliseconds	Specifies the MAC flap time limit for loop detection.

Default

None

Related commands

None

config ethernet cp-limit

Use this command to configure CP Limit.

Syntax

config ethernet <ports> cp-limit <enable|disable> [multicast-limit <value>] [broadcast-limit <value>]

Parameters

Variable	Value
broadcast-limit <value>	Configures the broadcast control frame rate. The default is 10000 pps. The range is 1000–100000 pps.
<enable|disable>	Activates or disables the CP Limit feature. The default is activated.
multicast-limit <value>	Configures the multicast control frame rate. The default is 15000 pps. The range is 1000–100000 pps.

Default

For broadcast-limit the default is 10000 pps.

For multicast-limit the default is 15000 pps.

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Related commands

Variable	Value
broadcast-limit <value>	Configures the broadcast control frame rate. The default is 10000 pps. The range is 1000–100000 pps.
info	Displays the configured parameters for CP Limit. The syntax for this command is: config ethernet slot/port info
multicast-limit <value>	Configures the multicast control frame rate. The default is 15000 pps. The range is 1000–100000 pps.

config sys link-flap-detect interval

Use this command to configure the interval for link state changes.

Syntax

config sys link-flap-detect interval <interval>

Parameters

Variable	Value
interval <interval>	Configures the link-flap-detect interval in seconds. • **interval** is from 2–600.

Default

The default is 60.

Related commands

Variable	Value
auto-port-down <enable|disable>	Activates or disables automatic disabling of the port if the link-flap threshold is exceeded; the default is enable.
frequency <frequency>	Configures the number of changes that are allowed during the time specified by the **interval** command. The default is 10. **frequency** is from 1–9999.
interval <interval>	Sets link-flap-detect interval. **interval** is the interval to count link-flap frequency in the interval 2 to 600.

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Variable	Value
info	Shows the link-flap-detect settings.
send-trap <enable|disable>	Activates or disables sending traps. The default is enable.

config sys set power power-check-enable true

Use this command to configure power management.

Syntax

config sys set power power-check-enable true
config sys set power power-check-enable false

Parameters

none

Default

None

Related commands

Variable	Value
fan-check-enable <true|false>	Enables or disables the fan check.
info	Displays system power information summary.
slot-priority <slot-number> <critical|high|low>	Configures the priority for the slot for power management.

config sys set power slot-priority

Use this command to configure slot priority.

Syntax

config sys set power slot-priority <slot> <critical|high|low>

Parameters

Variable	Value
<critical|high|low>	Configures the priority for the slot.
slot	Specifies the slot for which your can set the priority value. You can configure priority for slots 1–4 and 7–10.

Default

None

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Related commands

None

config cli password access-level

Use this command to enable a CLI access level.

Syntax

config cli password access-level <access-level> <enable|disable>

Parameters

Variable	Value
access level	Specifies the required access level with a string length of 2–8.
enable|disable	Blocks or permits this access level.

Default

The default value is enable.

Related commands

Variable	Value
aging <days>	Sets age-out time for passwords.
min-passwd-len <integer>	Sets the minimum length for passwords in hsecure mode.
default-lockout-time <secs>	Modifies default lockout time after 3 invalid attempts.
lockout-time <IPAddress/IPv6Address> <secs>	Host lockout time.
info	Displays current level parameter settings and next level directories.
l1 <username>	Changes layer 1 read write login/password.
l2 <username>	Changes layer 2 read write login/password.
l3 <username>	Changes layer 3 read write login or password.
l4admin <username>	Changes l4admin read write login or password.
l4oper <username>	Changes l4oper read write login or password.
oper <username>	Changes oper read write login or password.

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Variable	Value
ro <username>	Changes read only login or password.
rw <username>	Changes read write login or password.
rwa <username>	Changes read write all login or password.
slbadmin <username>	Changes SLB admin read write login or password.
slboper <username>	Changes SLB oper read write login/password.
ssladmin <username>	Changes SSL admin read write login or password.
password-history <number>	Specifies the number of previous passwords to remember.

config cli password

Use this command to change a password.

Syntax

config cli password

Parameters

None

Default

None

Related commands

Variable	Value
access level <access level> <enable|disable>	Permits or blocks this access level. • **access level** is an integer from 2–8. • **enable|disable** activates or disables the chosen level.
aging <days>	Configures the age-out time for passwords. **days** is the age-out time as an integer from 1–365.

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default-lockout-time <secs>	Changes the default lockout time after three invalid attempts. **secs** is the lockout time in seconds and is in the range of 60–65000. The default is 60 seconds.
info	Shows the current-level parameter settings and the next-level directories.
l1 <username> [<password>]	Changes the Layer 1 read/write login and/or password. • **username** is the login name • **password** is the password associated with the login name.
l2 <username> [<password>]	Changes the Layer 2 read/write login and/or password. • **username** is the login name. • **password** is the password associated with the login name.
l3 <username> [<password>]	Changes the Layer 3 read/write login and/or password (applies only to the Ethernet Routing Switch 8600). • **username** is the login name. • **password** is the password associated with the login name.
l4admin <username>	Configures the Layer 4 administrator logon to connect to the Web Switching Module (WSM).*Nortel Ethernet Routing Switch 8600 Web Switching Module Fundamentals* ((NN46205-314)) explains abut WSM.
l4oper <username>	Configures the Layer 4 operator login to connect to the WSM. For information about the WSM, see *Nortel Ethernet Routing Switch 8600 Web Switching Module Fundamentals* (NN46205-314) .

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lockout-time <HostAddress> <secs>	Configures the host lockout time. • **HostAddress** is the Host Internet Protocol (IP) address in the format a.b.c.d. • **secs** is the lockout-out time in seconds for passwords lockout in the range of 60–65000. The default is 60 seconds.
min-passwd-len <integer>	Configures the minimum length for passwords in high-secure mode. **integer** is in a range from a minimum of 10–20.
oper <username>	Configures the operator login to connect to the WSM. *Nortel Ethernet Routing Switch 8600 Web Switching Module Fundamentals* ((NN46205-314)) explains about the WSM.
password-history <number>	Specifies the number of previous passwords to remember. **number** is a configurable range of 3–32 and the default is 3.
ro <username> [<password>]	Changes the read-only logon and/or password. • **username** is the login name. • **password** is the password associated with the login name.
rw <username> [<password>]	Changes the read/write login and/or password. • **username** is the login name. • **password** is the password associated with the login name.
rwa <username> [<password>]	Changes the read/write/all login and/or password. • **username** is the login name. • **password** is the password associated with the login name.

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slboper <username>	Configures the server load balancing (SLB) operator login to connect to the WSM. For more information about the WSM, see *Nortel Ethernet Routing Switch 8600 Web Switching Module Fundamentals* (NN46205-314) .
slbadmin <username>	Configures the SLB administrator login to connect to the WSM.For more information about the WSM, see *Nortel Ethernet Routing Switch 8600 Web Switching Module Fundamentals* (NN46205-314) .
ssladmin <username>	Configures the ssladmin login to connect to and configure the SAM (SSL acceleration module).

config sys access-policy enable

Use this command to enable the access policy feature globally.

Syntax

config sys access-policy enable <true|false>

Parameters

Variables	Value
enable <true|false>	Activates the access policy on the switch. • **true** activates the access policy feature globally. • false disables the access policy feature globally.

Default

None

Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.

config sys access-policy policy

Use this command to create an access policy.

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Syntax

config sys access-policy policy <pid> create

Parameters

Variables	Value
create	Creates the specified access policy on the switch.
<pid>	Specifies the number that identifies the policy that you are creating.

Default

None

Related commands

Variable	Value
accesslevel <level>	Sets policy access level.
access-strict <enable|disable>	Sets access level strictly.
delete	Deletes access policy.
disable	Disables access policy.
enable	Enables access policy.
host <IPAddress/IPv6Address>	Sets access policy trusted host address. **IPAddress/IPv6Address** is the host IPv4 address {a.b.c.d} or IPv6 address {x:x:x:x:x :x:x:x} {string length 0..46}.
info	Displays current level parameter settings and next level directories.
mode <mode>	Sets access policy mode.
name <name>	Sets access policy name.
network <addr/prefix-length>	Sets access policy netaddr or netmask.
precedence <precedence>	Sets access policy precedence.
snmp-group-add <group name> <model>	Adds SNMP-v3 group under this access policy.

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Variable	Value
snmp-group-del <group name> <model>	Removes SNMP-v3 group under this access policy. • **group name** is the SNMP-v3 group name {string length 1..32}. • **model** is the SNMP-v3 security model {snmpv1|snmpv2c|usm}.
snmp-group-info	Displays SNMP-v3 groups under a access policy.
username <string>	Sets access policy trusted host user name. **string** is the trusted host user name {string length 0..30}.

config sys access-policy policy pid

Use this command to configure optional parameters for an access policy.

Syntax

config sys access-policy policy <pid>

Parameters

None

Default

None

Related commands

Variables	Value
accesslevel <level>	Specifies the level of access if the policy is to allow access. **level** is the access level.
access-strict <true|false>	If this parameter is set to true (enable), only the current configuration for access level is accepted. If this parameter is set to false (disable), access is limited up to the level configured.
create	Creates the specified access policy on the switch.
delete	Removes the specified access policy from the switch.
disable	Disables the access policy on the switch.

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enable	Activates the access policy on the switch.
host <ipaddr/IPv6addr>	For rlogin access, specifies the trusted host address as an IP address.
info	Shows the current status of an access policy.
mode <allow|deny>	Specifies whether this network address is allowed or denied access through the specified access service. The default is allow.
name <name>	Specifies the name of the policy. The default name is **policy_<ID>**
network <addr/mask>	Specifies the IP address and subnet mask that are permitted or denied access through the specified access service.
precedence <precedence>	Specifies a precedence for the policy. **precedence** is a number from 1–128. This value determines which policy to use if multiple policies apply. Lower numbers take higher precedence. The default is 10.
snmp-group-add <group-name> <model>	Adds snmp-v3 group under this access policy. • **group-name** is the snmp-v3 group name of 1–32 characters. • **model** is the security model {snmpv1|snmpv2c|usm}.
snmp-group-del <group-name> <model>	Removes snmp-v3 group under this access policy • **group name** is the snmp-v3 group name of 1–32 characters. • **model** is the security model {snmpv1|snmpv2c|usm}.
snmp-group-info	Shows snmp-v3 groups under this access policy
username <string>	For rlogin access, specifies the trusted host user name.

config sys access-policy policy service

Use this command to enable an access service for the specified policy.

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Syntax

config sys access-policy policy <pid> service

Parameters

None

Default

None

Related commands

Variables	Value
ftp <enable|disable>	Activates or disables FTP for the specified policy. Because FTP derives its login/password from the CLI management filters, FTP works for the read-write-only (rwo) and read-write (rw) logins; however, it does not work for the read-only (ro) login.
http <enable|disable>	Activates or disables HTTP for the specified policy.
info	Shows the status (disable or enable) of each service (for example, ftp, http, rlogin) .
rlogin <enable|disable>	Activates or disables rlogin for the specified policy.
snmpv3 <enable|disable>	Activates or disables SNMPv3 for the specified policy. For more information about SNMPv3, see *Nortel Ethernet Routing Switch 8600 Security* (NN46205-601) .
ssh <enable|disable>	Activates or disables SSH for the specified policy. For more information about SSH, see *Nortel Ethernet Routing Switch 8600 Security* (NN46205-601) .
telnet <enable|disable>	Activates or disables Telnet for the specified policy.
tftp <enable|disable>	Activates or disables Trivial File Transfer Protocol (TFTP) for the specified policy.

config sys access-policy by-mac

Use this command to configure access policies by MAC address.

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Syntax

config sys access-policy by-mac

Parameters

None

Default

None

Related commands

Variables	Value
add <mac> <action>	Adds a MAC address to allow or deny. • **<mac>** is the MAC address in the format 0x00:0x00:0x00:0x00:0x00:0x00:0x00. • **<action>** is allow or deny.
del <mac>	Deletes a MAC address to allow or deny.
default-action <default-action>	Specifies the default action to allow or deny a MAC address with no match. The default action is allow.
info	Displays the current access level configured by MAC address.

config cli password level

Use this command to change passwords in the run-time CLI.

Syntax

config cli password <access-level <username>

Parameters

Variable	Value
access-level	Specifies the access level, such as l1 or l3, for which you want to change the password.
username	Identifies the user account for which you can change the associated password.

Default

None

Related commands

None

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config load-license

Use this command to load the license file to unlock the licensed features.

Syntax

config load-license

Parameters

None

Default

None

Related commands

None

config ntp enable true interval

Use this command to enable NTP globally.

Syntax

config ntp enable true interval <value>

Parameters

Variable	Value
enable <**true**|**false**>	Globally activates or disables NTP.

Default

The default is false.

Related commands

Variable	Value
info	Displays current NTP settings on this NTP server.
interval <value>	Specifies the time interval (10–1440 minutes) between successive NTP updates. The default is 15 minutes. **value** is the time interval in minutes. **ATTENTION** If an NTP is already activated, this configuration does not take effect until you disable the NTP and then reenable it.

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config ntp server create

Use this command to add an NTP server.

Syntax

config ntp server create <ipaddr> [enable <value>] [auth <value>] [key <value>]

Parameters

Variable	Value
create <ipaddr> [enable <value>] [auth <value>] [key <value>]	Adds an NTP server. • **ipaddr** is the IP address of the NTP server. NTP adds this address to a list of servers. The local NTP server consults this list of servers for time information. • **enable value** activates (true) or disables (false) the NTP server. • **auth value** activates (true) or disables (false) MD5 authentication on this NTP server. The default is no MD5 authentication. • **key value** specifies the key ID value used to generate the MD5 digest for this NTP server. The value range is an integer from 1–2147483647. The default value is 0, which indicates that authentication is disabled.

Default

The default is enable.

Related commands

Variable	Value
delete <ipaddr>	Deletes the NTP server. **ipaddr** is the IP address of the NTP server you want to delete.

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Variable	Value
info	Displays NTP server configuration settings on the switch.
set <ipaddr> [enable <value>] [auth <value>] [key <value>]	Use to modify NTP server parameters. • **ipaddr** is the IP address of the NTP server. • **enable value** activates (true) or disables (false) the NTP server. The default is enable. • **auth value** activates (true) or disables (false) MD5 authentication on this NTP server. The default is no MD5 authentication. • **key value** specifies the key ID value used to generate the MD5 digest for this NTP server. • The value range is an integer from 1–2147483647. The default value is 0, which indicates that authentication is disabled.

config ntp server create enable

Use this command to add an NTP server.

Syntax

config ntp server create 47.140.53.187 enable true

Parameters

None

Default

None

Related commands

None

config ntp server info

Use this command to display the current configuration.

Syntax

config ntp server info

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Parameters

Variable	Value
info	Displays NTP server configurations.

Default

None

Related commands

None

config ntp key create key

Use this command to create an authentication key.

Syntax

config ntp key create <auth_key_value> <secret_key_value>

Parameters

Variable	Value
create <auth_key_value> <secret_key_value>	Adds an MD5 authentication key entry to the list where: • **auth_key_value** is the key ID used to generate the MD5 digest. Specify a value between 1–2147483647. • **secret_key_value** is the MD5 key ID used to generate the MD5 digest. Specify an alphanumeric string between 0–8 characters.

Default

The default is 0.

Related commands

Variable	Value
delete <auth_key_value>	Delete an MD5 authentication key entry from the list. **auth_key_value** is the key ID used to generate the MD5 digest.
<ID>	Specifies the entry ID of the authentication key to apply to the NTP server.

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Variable	Value
info	Display NTP authentication key configuration settings.
set <auth_key_value> <secret_key_value>	Modifies a MD5 authentication key value where: • **auth_key_value** is the key ID used to generate the MD5 digest. Specify a value between 1–2147483647. The default is 0. • **secret_key_value** 2 is the MD5 key ID used to generate the MD5 digest. Specify an alphanumeric string between 0–8 characters.

config ntp server set

Use this command to enable MD5 authentication for the server.

Syntax

config ntp server set <IP address> auth true

Parameters

Variable	Value
set <auth_key_value> <secret_key_value>	Modifies a MD5 authentication key value where: • **auth_key_value** is the key ID used to generate the MD5 digest. Specify a value between 1–2147483647. • **secret_key_value** 2 is the MD5 key ID used to generate the MD5 digest. Specify an alphanumeric string between 0–8 characters.

Default

The default is 0.

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Related commands

Variable	Value
create <auth_key_value> <secret_key_value>	Adds an MD5 authentication key entry to the list where: • **auth_key_value** is the key ID used to generate the MD5 digest. Specify a value between 1–2147483647. The default is 0. • **secret_key_value** is the MD5 key ID used to generate the MD5 digest. Specify an alphanumeric string between 0–8 characters.
delete <auth_key_value>	Delete an MD5 authentication key entry from the list. **auth_key_value** is the key ID used to generate the MD5 digest.
info	Display NTP authentication key configuration settings.

config ntp server key

Use this command to assign an authentication key to the server.

Syntax

config ntp server set <IPaddr> [enable <value>] [auth <value>] [key <value>]

Parameters

None

Default

None

Related commands

Variable	Value
create <auth_key_value> <secret_key_value>	Adds an MD5 authentication key entry to the list where: • **auth_key_value** is the key ID used to generate the MD5 digest. Specify a value between 1–2147483647. The default is 0. • **secret_key_value** is the MD5 key ID used to generate the MD5

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Variable	Value
	digest. Specify an alphanumeric string between 0–8 characters.
delete <auth_key_value>	Delete an MD5 authentication key entry from the list. **auth_key_value** is the key ID used to generate the MD5 digest.
<ID>	Specifies the entry ID of the authentication key to apply to the NTP server.
info	Display NTP authentication key configuration settings.
<IP address>	Specifies the IP address of the NTP server for which you are enabling MD5 authentication.
set <auth_key_value> <secret_key_value>	Modifies a MD5 authentication key value where: • **auth_key_value** is the key ID used to generate the MD5 digest. Specify a value between 1–2147483647. The default is 0. • **secret_key_value** 2 is the MD5 key ID used to generate the MD5 digest. Specify an alphanumeric string between 0–8 characters.

config sys dns domain-name primary-create

Use this command to configure the Domain Name System (DNS) client.

Syntax

config sys dns domain-name <domain-name> primary-create <IPAddress | IPv6Address>

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Parameters

Variable	Value
primary-create <IPAddress|IPv6Address>	Configures the primary DNS server address. • **IPAddress** in a.b.c.d format configures the IP address • **IPv6Address** in hexadecimal format (string length 0–46) configures the IPv6 address
domain-name <domain-name>	Configures the default domain name. • **domain-name** is a string of 0–255 characters.

Default

None

Related commands

Variable	Value
delete <primary| secondary|tertiary>	Deletes the IP address of the specified primary, secondary, or tertiary DNS server.
info	Displays the list of DNS servers, with the status (active/inactive).
secondary-create <IPAddress|IPv6Address>	Configures the secondary DNS server address. • **IPAddress** in a.b.c.d format configures the IP address • **IPv6Address** in hexadecimal format (string length 0–46) configures the IPv6 address
tertiary-create <IPAddress|IPv6Address>	Configures the tertiary DNS server address. • **IPAddress** in a.b.c.d format configures the IP address • **IPv6Address** in hexadecimal format (string length 0–46) configures the IPv6 address

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config sys dns domain-name secondary-create

Use this command to add addresses for additional DNS servers.

Syntax

config sys dns domain-name <domain-name> secondary-create <IPAddress|IPv6Address> tertiary-create <IPAddress|IPv6Address>

Parameters

Variable	Value
secondary-create <IPAddress|IPv6Address>	Configures the secondary DNS server address. • **IPAddress** in a.b.c.d format configures the IP address • **IPv6Address** in hexadecimal format (string length 0–46) configures the IPv6 address
domain-name <domain-name>	Configures the default domain name. • **domain-name** is a string of 0–255 characters.

Default

None

Related commands

Variable	Value
delete <primary| secondary|tertiary>	Deletes the IP address of the specified primary, secondary, or tertiary DNS server.
info	Displays the list of DNS servers, with the status (active/inactive).

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Variable	Value
primary-create <IPAddress | IPv6Address>	Configures the primary DNS server address. • **IPAddress** in a.b.c.d format configures the IP address • **IPv6Address** in hexadecimal format (string length 0–46) configures the IPv6 address
tertiary-create <IPAddress | IPv6Address>	Configures the tertiary DNS server address. • **IPAddress** in a.b.c.d format configures the IP address • **IPv6Address** in hexadecimal format (string length 0–46) configures the IPv6 address

config sys set max-vlan-resource-reservation

Use this command to enable maximum VLAN mode.

Syntax

config sys set max-vlan-resource-reservation enable

Parameters

None

Default

None

Related commands

None

config sys set multicast-resource-reservation

Use this command to reserve mobility group IDs (MGIDs) for IP multicast (IPMC).

Syntax

config sys set multicast-resource-reservation <value>

Parameters

Variable	Value
value	Specifies the number of MGIDs to reserve for IPMC traffic. Select from the range of 64–4083.

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Default

The default value is 2048.

Related commands

None

config sys set record-reservation filter

Use this command to configure reservation for filter record type.

Syntax

config sys set record-reservation filter <value>

Parameters

Variable	Value
filter <value>	Specifies the number of records reserved for filters. The value ranges from 1025 to 8192.

Default

None

Related parameters

Variable	Value
info	Displays information about the reservation for filter record type.
icmp <value>	Specifies the configure reservation for IP Measurement Protocol (IPMP) record type.
local <value>	Specifies the configure reservation for local record type.
mac <value>	Specifies the configure reservation for MAC record type.
static-route <value>	Specifies the configure reservation for static-route record type.
vrrp <value>	Specifies the configure reservation for Virtual Router Redundancy Protocol (VRRP) record type.

config sys set action

Use this command to reset system functions.

Syntax

config sys set action

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Parameters

None

Default

None

Related commands

Variable	Value
cpuswitchover	Resets the switch to change over to the backup SF/CPU.
info	Displays the current settings for system actions.
resetconsole	Reinitializes the hardware universal asynchronous receiver transmitter (UART) drivers. Use this command only if the console or modem connection is hung.
resetcounters	Resets all the statistics counters in the switch to zero.
resetmodem	Resets the modem port.

source

Use this command to source a configuration.

Syntax

source <file> [stop] [debug] [syntax]

Parameters

Variable	Value
debug	Debugs the script output.
file	Specifies a file name and location from 1–99 characters. Use the format {a.b.c.d:|peer:|/pcmcia/|/flash/}<file>
stop	Stops the merge after an error occurs.
syntax	Verifies the script syntax.

Default

None

Related commands

None

show bootconfig master

Use this command to display the current configuration for the master SF/CPU.

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Syntax

show bootconfig master

Parameters

Variable	Value
master	Displays master information.

Default

None

Related commands

Variable	Value
choice [<boot-choice>]	Displays boot choice information.
cli	Displays cli information.
config <verbose>	Displays boot configuration.
flags	Displays boot flags.
host	Displays remote host login information.
info	Displays system information.
master	Displays master information.
mezz-image	Displays mezz-image information.
net	Displays port information.
show-all [file <value>]	Displays all bootconfig information.
sio	Displays port information.
slot	Access WSM module console.
tz	Displays timezone information.
wlan	Displays wireless LAN information.
bootp	Displays bootp configuration.

show license

Use this command to display the existing software licenses on your switch.

Syntax

show license

Parameters

None

Default

None

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Related commands

None

show bootconfig

Use this command to display the boot monitor configuration.

Syntax

show bootconfig

OR

config bootconfig show

Parameters

None

Default

None

Related commands

Variable	Value
choice [<boot-choice>]	Displays the current boot configuration choices.
cli	Displays the current CLI configuration.
config [verbose]	Displays the current boot configuration. • **verbose** includes all possible information. If you omit **verbose**, only the values that were changed from their default settings are displayed.
flags	Displays the current flag settings.
host	Displays the current host configuration.
info	Displays the current settings for the boot monitor.
master	Displays the current SF/CPU slot set as master and the settings for the **delay** and **multicast** command.
mezz-image	Displays the mezzanine image.
net	Displays the current configuration of the SF/CPU network ports.

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Variable	Value
show-all [file <value>]	Displays all relevant information about boot configuration on the switch. • **value** is the file name to which the output is redirected.
sio	Displays the current configuration of the SF/CPU serial ports.
slot	Access WSM module console.
tz	Displays the current configuration of the switch time zone.
wlan	Displays wireless LAN information.
bootp	Displays the BootP configuration.

show slpp

Use this command to display SLPP information.

Syntax

show slpp

Parameters

None

Default

None

Related commands

None

show ports info slpp

Use this command to display the SLPP information for a port or all ports.

Syntax

show ports info slpp [port <slot/port>]

Parameters

Variable	Value
port	Specifies the port or range of ports to configure in the slot/port format.

Default

None

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Related commands

Variable	Value
PORT NUM	Specifies the port number.
PKT-RX	Specifies if SLPP is enabled or disabled.
PKT-RX THRESHOLD	Specifies the threshold for packet reception from 1 to 20. After the port reaches the packet threshold, it shuts down.
INCOMING VLAN ID VLAN	Specifies the ID of the classified packet on a port disabled by SLPP.
SLPP PDU ORIGINATOR	Specifies the originator of the SLPP PDU.

show sys dns

Use this command to display the DNS client system status.

Syntax

show sys dns

Parameters

None

Default

None

Related commands

Variable	Value
eapol	Displays EAPOL setting.
ext-cp-limit	Displays ext-cp-limit setting.
force-msg	Displays MSG-control force MSG patterns.
info [card] [asic] [mda] [gbic]	Displays general system information • **card** displays card information in detail. • **asic** displays ASIC information in detail. • **mda** displays MDA information in detail. • **gbic** displays GBIC information in detail.

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Variable	Value
mcast-mlt-distribution	Displays mcast MLT distribution settings.
mcast-software-forwarding [vrf <value>] [vrfids <value>]	Displays mcast software forwarding settings.
mgid-usage	Displays VLAN and IPMC MGID usage.
msg-control	Displays system message control information.
perf	Displays system performance information.
record-reservation	Displays record-reservation and usage information for each record type.
set-topology-ip	Displays CLIP-IP set as topology IP.
show-all [file <value>]	Displays all system information
sw	Displays software information.
topology	Displays topology table information.

show host

Use this command to display the host information.

Syntax

show host <hostname | ipaddress | ipv6address>

Parameters

Variable	Value
hostname	Specifies the name of the host DNS server as a string of 0–255 characters.
ipaddress	Specifies the IP address of the host DNS server in a.b.c.d format.
ipv6address	Specifies the IPv6 address of the host DNS server in hexadecimal format (string length 0–46).

Default

None

Related commands

None

show cli

Use this command to display information about the CLI configuration.

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Syntax

show cli info

Parameters

Variable	Value
info	Displays log file information.

Default

None

Related commands

Variable	Value
info	Displays log file.
password	Displays login and passwords.
show-all [file <value>]	Displays all CLI information.
who	Displays who is logged in.

show sys info

Use this command to display system status and technical information about the switch hardware components.

Syntax

show sys info [card] [asic] [mda] [gbic]

Parameters

Variable	Value
info	Displays the current settings.
card	Displays information about all the installed modules.
asic	Displays information about the application-specific integrated circuit (ASIC) installed on each module.
mda	Displays information about installed media dependent adapters (MDA).
gbic	Displays information about installed gigabit interface converters (GBIC).

Default

None

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Related commands

Variable	Value
dns	Specifies the DNS default domain name.
eapol	Shows EAPOL setting.
ext-cp-limit	Shows ext-cp-limit setting.
force-msg	Shows msg-control force msg patterns.
info [card] [asic] [mda] [gbic]	Shows general system information.
mcast-mlt-distribution	Shows mcast Multi-link Trunking (MLT) distribution settings.
mcast-software-forwarding [vrf <values>] [vrfids <value>]	Shows mcast software forwarding settings.
mgid-usage	Shows VLAN and IPMC MGID usage.
msg-control	Shows system message control information.
perf	Shows system performance information.
record-reservation	Shows record-reservation and usage information for each record type.
set-topology-ip	Shows clip-IP set as topology IP.
show-all [<file <value>]	Shows all system information.
sw	Shows software information.
topology	Shows topology table information.

show port info all

Use this command to display the Maximum Transmission Unit (MTU) values for all ports on the chassis.

Syntax

show port info all

Parameters

Variable	Value
all	Displays all the general port information commands.

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Default

None

Related commands

None

show ntp server stat

Use this command to display NTP server statistics.

Syntax

show ntp server stat

Parameters

Variable	Value
stat	Displays NTP server statistics.

Default

None

Related commands

None

show sys power

Use this command to display a summary of the power information for the chassis.

Syntax

show sys power info

Parameters

Variable	Value
info	Displays power consumption for the chassis.

Default

None

Related commands

None

show sys power slot-info

Use this command to display detailed power information for each slot.

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Syntax

show sys power slot-info

Parameters

Variable	Value
slot-info	Displays power information per slot basis.

Default

None

Related commands

None

show tech

Use this command to display technical information about system status and information about the hardware, software, and operation of the switch.

Syntax

show tech

Parameters

Variable	Value
tech	Displays tech show command.

Default

None

Related commands

None

show sys

Use this command to display current system status and parameter configuration.

Syntax

show sys

Parameters

None

Default

None

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Related commands

None

show cli who

Use this command to display a list of users who are logged on to the switch.

Syntax

show cli who

Parameters

Variable	Value
who	Displays who is logged in.

Default

None

Related commands

None

show boot info

Use this command to display system information.

Syntax

show boot info

Parameters

None

Default

None

Related parameters

None

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BGP services commands

This chapter describes the Ethernet Routing Switch 8600 Border Gateway Protocol (BGP) services commands.

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config ip as-list create

Use this command to configure AS path lists.

Syntax

config ip as-list <listid> create <memberId> <permit|deny> <as path>

Parameters

Variable	Value
create <memberId> <permit|deny> <as path>	Creates the AS-path list. • **<memberId>** is an integer value between 0 and 65535 that represents the regular expression entry in the AS path list. • **<permit|deny>** permits or denies access for matching conditions. • **<as path>** is an integer value between 0 and 1536.

Default

None

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Related commands

Variable	Value
delete	Deletes the specified AS-path list entry.
info	Displays the current content of the specified AS-path list ID.

config ip bgp neighbor

Use this command to enable Bidirectional Forwarding Detection (BFD) on a BGP peer.

Syntax

config ip bgp neighbor <ip-addr> bfd <enable|disable>

Parameters

Variable	Value
enable|disable	Enables or disables feature.

Default

None

Related commands

None

config ip bgp enable

Use this command to configure BGP globally.

Syntax

config ip bgp enable <asnum>

Parameters

Variable	Value
local-as <asnum>	Sets a local autonomous system number on the current system. **asnum** is an integer value between 0 and 65535. You cannot enable BGP until you change the LocalAS value to any value other than 0. You cannot change configured values when BGP is enabled. This parameter only applies to VRF 0.

Default

The default value is 0.

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Related commands

Variable	Value
aggregate-address <prefix/len> <add|del> [as-set <value>] [summary-only <value>] [suppress-map <value>] [advertise-map <value>] [attribute-map <value>]	Adds or deletes an aggregate address in a BGP routing table. Because the routes in the table are only aggregated to EBGP peers, routing traffic is minimized. • **<prefix/len>** is an IP address and an integer value (between 0 and 32). • **<add|del>** adds or deletes the entry. • **as-set <value>** enables or disables autonomous system information. The default value is disable. • **summary-only <value>** enables or disables the summarization of routes not included in routing updates. This parameter creates the aggregate route and suppresses advertisements of more specific routes to all neighbors. The default value is disable. • **suppress-map <value>** is the route map name (string length between 0 and 64 characters long) for the suppressed route list. • **advertise-map <value>** is the route map name (any string length between 0 and 64 characters long) for route advertisements. • **attribute-map <value>** is the route map name (string length between 0 and 64 characters long).
aggregation <enable|disable>	Enables or disables the aggregation feature on this interface. The default value is enable. You cannot change the value when BGP is enabled.
always-cmp-med <enable|disable>	Enables or disables the comparison of the multi-exit discriminator (MED) parameter for paths from neighbors in different autonomous systems. A path with a lower MED is preferred over a path with a higher MED. The default value is disable.
auto-peer-restart <enable|disable>	Enables or disables the process that automatically restarts a connection to a BGP neighbor. The default value is enable.

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Variable	Value
auto-summary <enable|disable>	When enabled, BGP summarizes networks based on class limits (For example, Class A, B, C networks). The default value is enable.
cl-to-cl-reflection <enable|disable>	Enables or disables route reflection between two route-reflector clients. This option is applicable only if the route reflection value is set to enable. The default value is enable. Route reflection may be enabled even when clients are fully meshed. In this event, route reflection is not required. The default value is enable. This parameter only applies to VRF 0.
cluster-id <ipaddr> <add|del>	Sets a cluster ID. This option is applicable only if the route reflection value is set to enable, and if multiple route reflectors are in a cluster. The default value is add.**<ipaddr>** is the cluster ID of the reflector router. **<add|del>** adds or deletes the cluster ID. This parameter only applies to VRF 0.
comp-bestpath-med-confed <enable|disable>	When enabled, the router compares multiexit discriminator (MED) attributes within a confederation. The default value is disable. This parameter only applies to VRF 0.
create	Creates a BGP instance in a VRF. BGP configuration can occur in a nonzero VRF only when the BGP instance exists in the VRF. This parameter only applies to VRF instances.
debug-screen [<setting>]	Displays debug messages to the console, or saves them in a log file. **<setting>** is off or on. Disable BGP screen logging (off), or enable BGP screen logging (on).

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Variable	Value
default-local-pref <value> <add|del>	Specifies the default value of the local preference attribute. The default value is del. You cannot change the default value when BGP is enabled. • **<value>** is an integer value between 0 and 2147483647. • **<add|del>** adds or deletes the configuration.
default-metric <value> <add|del>	Sets a value that is sent to a BGP neighbor to determine the cost of a route a neighbor is using. A default metric value helps solve the problems associated with redistributing routes that have incompatible metrics. For example, whenever metrics do not convert, using a default metric provides a reasonable substitute and redistribution proceeds. Use this option in conjunction with the redistribute commands so the current routing protocol uses the same metric value for all redistributed routes. The default value is del. • **<value>** is an integer value between -1 and 2147483647 • **<add|del>** adds or deletes the configuration.
delete	Deletes the RP trigger of BGP from an existing non-zero VRF. This parameter only applies to non-zero VRFs.
deterministic-med <enable|disable>	Enables or disables deterministic Multiexit Discriminator (MED). The default value is disable.
disable	Disables BGP.
enable	Enables BGP. You cannot enable BGP until you change the Local AS to any value other than 0.
flap-dampening <enable|disable>	Enables or disables route suppression for routes that flap on and off. The default value is disable.

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Variable	Value
global-debug mask <value>	Displays specified debug information for BGP global configurations. The default value is none. • **<value>** is a list of mask choices separated by commas with no space between choices. Mask choices are: **none** disables all debug messages. **all** enables all debug messages. **error** enables display of debug error messages. **packet** enables display of debug packet messages. **event** enables display of debug event messages. **trace** enables display of debug trace messages. **warning** enables display of debug warning messages. **state** enables display of debug state transition messages. **init** enables display of debug initialization messages. **filter** enables display of debug messages related to filtering. **update** enables display of debug messages related to sending and receiving updates.

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Variable	Value
ibgp-report-import-rt <enable|disable>	Configures BGP to advertise imported routes to an interior BGP (IBGP) peer. This command also enables or disables advertisement of non-BGP imported routes to other IBGP neighbors. The default value is enable.
ignore-illegal-rtrid <enable|disable>	When enabled, BGP overlooks an illegal router ID. For example, you can set this command to enable or disable the acceptance of a connection from a peer that sends an open message using a router ID of 0 (zero). The default value is enable.
info	Displays the current BGP system configuration
local-as <asnum>	Sets a local autonomous system number on the current system. The default value is 0. **asnum** is an integer value between 0 and 65535. You cannot enable BGP until you change the LocalAS value to any value other than 0. You cannot change configured values when BGP is enabled. This parameter only applies to VRF 0.
max-equalcost-routes <value> <enable|disable>	Sets the maximum number of equal-cost-paths that are available to a BGP router by limiting the number of equal-cost-paths that can be stored in the routing table. The default value is enable. **<value>** is the max-equalcost-routes allowed. the range is 1 to 4 equal-cost-paths. The default value is 1. **ATTENTION** The state of this parameter is not shown in response to the **config ip vrf <vrfName> bgp** command.
neighbor-debug-all mask <value>	Displays specified debug information for BGP neighbors. The default value is none. For mask options, see the **global-debug mask <value>** section.

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Variable	Value
network <prefix/len> <add|del> [metric <value>]	Specifies IGP network prefixes for BGP to advertise for redistribution. This command imports routes into BGP. • **<prefix/len>** is the network address and mask. • **<add|del>** adds or deletes the configuration. • **metric <value>**The metric corresponds to the MED (multi-exit discriminator) BGP attribute for the route.
no-med-path-is-worst <enable|disable>	Enables or disables BGP to treat an update without a multi-exit discriminator (MED) attribute as the worst path. The default value is enable.
orig-def-route <enable|disable>	Enables the advertisement of a default route to peers, if it is present in the routing table. The default value is disable.
quick-start <enable|disable>	Enables or disables the quick-start flag for exponential backoff. The default value is disable.
restart	Restarts BGP on the current system.
route-reflection <enable|disable>	Enables or disables the reflection of routes from IBGP neighbors. The default value is enable. This parameter only applies to VRF 0.
route-refresh <enable|disable>	Enables or disables IP VPN Route Refresh. If enabled, a route refresh request received by a BGP speaker causes the speaker to resend all route updates it contains in its database that are eligible for the peer that issues the request. This parameter only applies to VRF 0.
router-id <ipaddr>	Specifies the BGP router ID. This parameter only applies to VRF 0.
stats-clear	Resets all displayed counters to zero.
synchronization <enable|disable>	Enables or disables the router to accept routes from BGP peers without waiting for an update from the IGP. The default value is enable.
traps <enable|disable>	Enables or disables traps.

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config ip bgp confederation identifier

Use this command to add the confederation identifier.

Syntax

config ip bgp confederation identifier <value> add

Parameters

Variable	Value
identifier <value> <add|del>	Specifies a BGP confederation identifier. You cannot configure this option when BGP is enabled. • **<value>** is an integer value between 0 and 65535. • **<add|del>** adds or deletes the confederation

Default

The default value is add.

Related commands

Variable	Value
info	Displays current confederation configuration information.
peers <as-num-list>	Adds autonomous systems to a confederation. **as-list** is an integer string length value between 0 and 256 that represents the AS number. Enter one or more as numbers within quotes (for example, "20 30 40 50") to add AS systems. Enter another set of numbers within quotes, or a single number within quotes to replace the previous configuration. Enter only a set of quotes (or 0) to delete the configuration.

config ip bgp confederation peers

Use this command to add the required AS to the confederation.

Syntax

config ip bgp confederation peers <as-num-list>

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Parameters

Variable	Value
as-num-list	Specifies the list of AS number as "20 30 40...", put the list in quote sign "", only the quote sign means empty list. The string length ranges from 0 to 255.

Default

None

Related commands

None

config ip bgp neighbor

Use this command to create a peer or peer group.

Syntax

config ip bgp neighbor <nbr_ipaddr|peer-group-name> create

Parameters

Variable	Value
nbr_ipaddr|peer-group-name	Specifies the neighbor IP address or neighbor group name char.

Default

None

Related commands

None

config ip bgp neighbor admin-state

Use this command to enable the BGP neighbor.

Syntax

config ip bgp neighbor <nbr_ipaddr|peer-group-name> admin-state enable

Parameters

Variable	Value
address-family vpnv4 <enable|disable>	Enables or disables BGP address families for IPv4 (BGP) and L3 VPN (MP-BGP) support. Enable this parameter for VPN/VRF Lite routes.

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Default

None

Related commands

Variable	Value
address-family vpnv4 <enable|disable>	Enables or disables BGP address families for Internet Protocol version 4 (IPv4) (BGP) and L3 VPN (MP-BGP) support. Enable this parameter for virtual private network /virtual routing and forwarding (VPN/VRF) Lite routes.
admin-state <enable|disable>	Enables or disables the administrative state of a BGP peer. The default value is disable.
bfd <enable|disable>	Enables or disables BFD on a BGP peer.
connect-retry-interval <value> <add|del>	Sets the time interval (in seconds) for the ConnectRetry Timer. The default value is 120 seconds. • **<value>** is an integer value between 1 and 65535 seconds. • **<add|del>** adds or deletes the configuration.
create	Creates a BGP peer or a peer group.
delete	Deletes a BGP peer or a peer group.
ebgp-multihop <enable|disable>	Enables or disables a connection to a BGP peer that is more than one hop away from the local router. The default value is disable.
hold-time <value> <add|del>	Sets the time interval (in seconds) for the BGP speaker for this peer. The default value is 180 seconds. • **<value>** is an integer value with a range 0, 3 to 180 seconds (the integer values 1 and 2 are not valid). • **<add|del>** adds or deletes the configuration.
info	Displays current configuration information of a BGP peer or peer-group .

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Variable	Value
ipvpn-lite-capability <enable|disable>	Specifies (when enabled) that IP VPN Lite capability can be enabled or disabled on the BGP neighbor peer. The default is disable.
keepalive-time <value> <add|del>	Specifies the time interval (in seconds) that transpires between transmissions of the local BGP router keep-alive packets. The keep-alive packets indicate the enabled status of the local BGP router to peers. The default value is 60 seconds. • **<value>** is an integer value between 0 and 21845 seconds. • **<add|del>** adds or deletes the configuration.
max-prefix <value> <add|del>	Sets a limit on the number of routes that can be accepted from a neighbor. The default value is 12000 routes. A value of 0 (zero) indicates that there is no limit to the number of routes that can be accepted. • **<value>** is an integer value between 0 and 2147483647 routes. • **<add|del>** adds or deletes the configuration.
MD5-authentication <enable|disable>	Enables or disables TCP MD5 authentication between two peers. The default value is disable.
neighbor-debug mask <value>	Displays specified debug information for a BGP peer. The default value is none. **<value>** is a list of mask choices separated by commas with no space between choices. For example:**{<mask>,<mask>,<mask>...}**. Mask choices are: **none** disables all debug messages.

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Variable	Value
	all enables all debug messages. **error** enables display of debug error messages. **packet** enables display of debug packet messages. **event** enables display of debug event messages. **trace** enables display of debug trace messages. **warning** enables display of debug warning messages. **state** enables display of debug state transition messages. **init** enables display of debug initialization messages. **filter** enables display of debug messages related to filtering. **update** enables display of debug messages related to sending and receiving updates.
nexthop-self <enable|disable>	When enabled, specifies that the next-hop attribute in an IBGP update is the address of the local router or the router that is generating the IBGP update. The default value is disable. The next-hop parameter can only be configured when the neighbor parameter is disabled.

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Variable	Value
originate-def-route <enable|disable>	Enables or disables the switch to send a default route advertisement to the specified neighbor. A default route does not have to be in the routing table. The default value is disable. Do not use this command if **orig-def-route** is globally enabled.
password <password> <add|del>	Specifies a password for TCP MD5 authentication between two peers. • **<password>** is an alphanumeric string length from 0 to 1536 characters. • **<add|del>** adds or deletes the password.
peer-group <peer-group-name> <add|del>	Adds a BGP peer to the specified subscriber group. You must create the specified subscriber group before you issue this command. • **<peer-group-name>** is a string length from 0 to 1536 characters. • **<add|del>** adds or deletes the configuration.
remote-as <asnum>	Configures a remote-as for a BGP peer or a peer-group. You cannot configure this option when the admin-state is enable. **asnum** is an integer value between 0 and 65535.
remove-private-as <enable|disable>	When enabled, strips private AS numbers when an update is sent. This feature is especially useful within a confederation. The default value is enable.

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Variable	Value
restart [soft-reconfiguration <value>]	Resets a BGP inbound or outbound (or both inbound and outbound) connection using BGP soft reconfiguration. • **<value>** is either inbound (**in**) or outbound soft configuration (**out**). If you do not specify in or out, both inbound and outbound soft configurations are triggered.
route-advertisement-interval <value> <add|del>	Specifies the time interval (in seconds) that transpires between each transmission of an advertisement from a BGP neighbor. The default value is 5 seconds. • **<value>** is an integer value between 5 and 120 seconds. • **<add|del>** adds or deletes the configuration.
route-policy <in|out> <route-map name> <add|del>	Applies a route policy rule to all routes that are learned from, or sent to, the local BGP router's peers, or peer groups. The local BGP router is the BGP router that allows or disallows routes and sets attributes in incoming or outgoing updates. • **<in|out>** indicates whether the route is incoming or outgoing. • **<route-map name>** name is an alphanumeric string length (0 to 256 characters) that indicates the name of the route map or policy. • **<add|del>** adds or deletes the configuration.

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Variable	Value
route-reflector-client <enable|disable>	Configures the specified neighbor or group of neighbors as its route reflector client. The default value is disable. All neighbors that are configured become members of the client group and the remaining IBGP peers become members of the non-client group for the local route reflector. The default value is enable.
route-refresh <enable|disable>	Enables or disables IP VPN Route Refresh for the BGP peer. If enabled, a route refresh request received by a BGP speaker causes the speaker to resend all route updates it contains in its database that are eligible for the peer that issues the request. The default value is disable.
send-community <enable|disable>	Enables or disables sending the update message community attribute to the specified peer. The default value is disable.
soft-reconfiguration-in <enable|disable>	When enabled, the router relearns routes from the specified neighbor or group of neighbors without resetting the connection when the policy changes in the inbound direction. The default value is disable.
stats-clear	Resets all displayed counters to zero.
update-source-interface <ipaddr> <add|del>	Specifies the source IP address when BGP packets are sent to this peer or peer group. You cannot configure this parameter when the admin-state is enable. • **<ipaddr>** is the specified source IP address. • **<add|del>** adds or deletes the configuration.
weight <value> <add|del>	Specifies the weight of a BGP peer or peer groups, or the priority of updates that can be received from that BGP peer. The default value is 0. If you have particular neighbors that you

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Variable	Value
	want to prefer for most of your traffic, you can assign a higher weight to all routes learned from that neighbor. • **<value>** is an integer value between 0 and 65535. • **<add|del>** adds or deletes the configuration.

config ip bgp redistribute create

Use this command to configure redistribution.

Syntax

config ip bgp redistribute <direct|ospf|rip|static> create [vrf-src <value>]

Parameters

Variable	Value
create	Creates the BGP route redistribution instance.

Default

None

Related commands

Variable	Value
apply	Applies the redistribution configuration. Changes do not take effect until you apply them.
delete	Deletes the BGP route redistribution instance.
disable	Disables the BGP route redistribution instance.
enable	Enables the BGP route redistribution instance.
info	Shows information about the BGP route redistribution instance.
metric <metric-value>	Configures the metric to apply to redistributed routes.
route-policy <policy name>	Configures the route policy to apply to redistributed routes.

config ip bgp redistribute route-policy

Use this command to specify a route policy to govern redistribution.

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Syntax

config ip bgp redistribute <direct|ospf|rip|static> route-policy <policy name> [vrf-src <value>] [clear]

Parameters

Variables	Value
vrf-src <value>	Specifies the VRF name. The string length is from 0 to 32.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies BGP route redistribution changes.
create [vrf-src <value>]	Creates BGP route redistribution.
delete [vrf-src <value>]	Deletes BGP route redistribution.
disable [vrf-src <value>]	Disables BGP route redistribution.
enable [vrf-src <value>]	Enables BGP route redistribution.
info [vrf-src <value>]	Displays BGP route redistribution configuration information.
metric <metric-value> [vrf-src <value>]	Sets BGP route redistribution metric.

config ip bgp redistribute

Use this command to enable the instance.

Syntax

config ip bgp redistribute <direct|ospf|rip|static> enable [vrf-src <value>]

Parameters

Variable	Value
vrf-src <value>	Specifies the VRF name. The string length string length if from 0 to 32.

Default

None

Related commands

None

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config ip bgp redistribute apply

Use this command to apply the redistribution instance.

Syntax

config ip bgp redistribute <direct|ospf|rip|static> apply [vrf-src <value>]

Parameters

Variable	Value
vrf-src <value>	Specifies the VRF name. The string length string length if from 0 to 32.

Default

None

Related commands

None

config ip bgp neighbor

Use this command to specify the peer IP address or the peer group name.

Syntax

config ip bgp neighbor <nbr_ipaddr|peer-group-name> <nbr_ipaddr|peer-group-name>

Parameters

None

Default

None

Related commands

None

config ip bfd

Use this command to enable BFD globally.

Syntax

config ip bfd <enable|disable>

Parameters

Variable	Value
enable	Enables BFD globally.

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Default

Related commands

Variable	Value
disable	Disables BFD globally.
enable	Enables BFD globally.
hold-off <seconds>	Specifies the BFD holddown time interval, from 0 to 65535 seconds. If set to 0, the hold-down timer is disabled.
info	Shows information about the BFD configuration.
traps <enable|disable>	Enables Simple Network Management Protocol (SNMP) traps for BFD.

config ip bfd traps enable

Use this command to enable the BFD traps.

Syntax

config ip bfd traps enable

Parameters

Variable	Value
enable|disable	Enables or disables feature.

Default

None

Related commands

None

config ip bfd hold-off

Use this command to configure the hold-down interval.

Syntax

config ip bfd hold-off <seconds>

Parameters

Variable	Value
<seconds>	Specifies the hold-off timer interval in the range of 0 to 65535.

Default

None

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Related commands

None

config ip ospf interface bfd

Use this command to enable BFD on an Open Shortest Path First (OSPF) interface.

Syntax

config ip ospf interface <ip-addr> bfd <enable|disable>

Parameters

Variable	Value
enable|disable	Enables or disables feature.

Default

Related commands

None

config ip prefix-list add-prefix

Use this command to create a prefix list.

Syntax

config ip prefix-list <listid> add-prefix <ipaddr/mask> [maskLenFrom <value>] [maskLenTo <value>]

Parameters

Variable	Value
add-prefix <ipaddr/mask> [maskLenFrom <value>] [maskLenTo <value>]	Creates or adds a prefix to the list. • **<ipaddr/mask>** specifies the IP address and network mask in the format a.b.c.d/x, a.b.c.d/x.x.x.x, or default. • **maskLenFrom <value>** specifies an integer in the range 0 to 32. • **maskLenTo <value>** specifies an integer in the range 0 to 32.

Default

None

Related commands

Variable	Value
delete	Deletes the specified prefix list entry.

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Variable	Value
info	Displays the current configuration of the specified prefix list.
name <value>	Names the prefix list.
remove-prefix <ipaddr/mask>	Removes the prefix entry from the list. **<ipaddr/mask>** specifies the IP address and network mask in the format a.b.c.d/x, a.b.c.d/x.x.x.x, or default.

config ip prefix-list name

Use this command to name the list.

Syntax

config ip prefix-list <listid> name <value>

Parameters

None

Default

None

Related commands

None

config ip community-list add-community

Use this command to create the community list and members.

Syntax

config ip community-list <listid> add-community <memberId> <permit|deny> <community-string>

Parameters

Variable	Value
add-community <memberId> <permit|deny> <community-string>	Adds an entry to the community list. • **<permit|deny>** sets the access mode, which permits or denies access for matching conditions. • **<memberId>** is an integer value between 0 and 65535 that represents the member ID in the community list. • **<community-string>** is an alphanumeric string value with a string length between 0 and 1536 characters (AS num:community-value) or (well-known

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Variable	Value
	community string). Well known communities include: internet, no-export, no-advertise, local-as (known as NO_EXPORT_SUBCONFED).

Default

N

Related commands

Variable	Value
delete	Deletes the specified community list entry.
info	Displays the current content of the specified community list ID.
remove-community [memberId <value>] [community-string <value>]	Removes an entry from the community list. • **<memberId>** is an integer value between 0 and 65535. • **<community-string>** is an alphanumeric string value with a string length between 0 and 1536 characters.

config ip extcommunity-list add-extcommunity

Use this command to create the list and specify members.

Syntax

config ip extcommunity-list <listid> add-extcommunity <member-id> [rt <value>] [soo <value>]

Parameters

Variable	Value
add-extcommunity <member-id> [rt <value>] [soo <value>]	Adds an entry to the extended community list. • **<member-id>** is an integer value between 0 and 65535 that represents the member ID in the community list. • **rt <value>** specifies the route target in the format {AS number:assigned number} (that is, {0 to 65535}:{0 to 2147483647}) or {ipaddress:assigned number} (that is, {a.b.c.d}:{0 to 65535}). • **soo <value>** specifies the site of origin in the format {AS number:assigned number} (that is, {0 to 65535}:{0 to 2147483647})

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Variable	Value
	or {ipaddress:assigned number} (that is, {a.b.c.d}:{0 to 65535}).

Default

None

Related commands

Variable	Value
delete	Deletes the specified extended community list entry.
info	Displays the current content of the specified extended community list ID.
remove-extcommunity <member-id>	Removes an entry from the extended community list. **<memberId>** is an integer value between 0 and 65535.

config ip static-route next-hop

Use this command to enable BFD on a static route.

Syntax

config ip static-route next-hop <ip-addr> bfd <enable|disable>

Parameters

Variable	Value
enable|disable	Enables or disables feature.

Default

None

Related commands

None

config ethernet

Use this command to enable BFD on the port.

Syntax

config ethernet <port> ip bfd <enable|disable>

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Parameters

Variable	Value
disable	Disables BFD on the interface.

Default

None

Related commands

Variable	Value
disable	Disables BFD on the interface.
enable	Enables BFD on the interface.
info	Shows information about the BFD configuration.
multiplier <value>	Specifies the detection time multiplier for asynchronous mode. The negotiated transmit interval, multiplied by this multiplier, provides the detection time for the transmitting system. The range is 1 to 20. The default value is 3.
rx-interval <milliseconds>	Specifies the minimum required interval that the switch supports between received BFD Control packets. The range is to 100 to 65535 milliseconds, with a default of 200.
tx-interval <milliseconds>	Specifies the minimum interval that the local switch would like to use when it transmits BFD Control packets. The range is 100 to 65535 milliseconds, with a default of 200.

config ethernet rx-interval

Use this command to configure the minimum receive interval.

Syntax

config ethernet <port> ip bfd rx-interval <milliseconds>

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Parameters

Variable	Value
`<milliseconds>`	Specifies the received interval in the range of 100 to 65535.

Default

None

Related commands

None

config ethernet tx-interval

Use this command to configure the minimum transmit interval.

Syntax

`config ethernet <ports> ip bfd tx-interval <milliseconds>`

Parameters

Variable	Value
`<milliseconds>`	Specifies the transmit interval in the range of 100 to 65535.
`<ports>`	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet multiplier

Use this command to configure the multiplier.

Syntax

`config ethernet <ports> ip bfd multiplier <value>`

Parameters

Variable	Value
`multiplier <value>`	Detects multiplier in the range of 1 to 20.

Default

None

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Related commands

None

config vlan

Use this command to enable BFD on the VLAN.

Syntax

config vlan <vlan-id> ip bfd <enable|disable>

Parameters

Variable	Value
enable	Enables BFD on the VLAN.

Default

None

Related commands

Variable	Value
disable	Disables BFD on the VLAN.
info	Shows information about the BFD configuration.
multiplier <value>	Specifies the detection time multiplier for asynchronous mode. The negotiated transmit interval, multiplied by this multiplier, provides the detection time for the transmitting system. The range is 1 to 20. The default value is 3.
rx-interval <milliseconds>	Specifies the minimum required interval that the switch supports between received BFD Control packets. The range is from 100 to 65535 milliseconds, with a default of 200.
tx-interval <milliseconds>	Specifies the minimum interval that the local switch would like to use when it transmits BFD Control packets. The range is 100 to 65535 milliseconds, with a default of 200.

config vlan rx-interval

Use this command to configure the minimum receive interval.

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Syntax

config vlan <vlan-id> ip bfd rx-interval <milliseconds>

Parameters

Variable	Value
<milliseconds>	Specifies the receive interval in the range of 100 to 65535.
<vlan-id>	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

config vlan tx-interval

Use this command to configure the minimum transmit interval.

Syntax

config vlan <vlan-id> ip bfd tx-interval <milliseconds>

Parameters

Variable	Value
<milliseconds>	Specifies the receive interval in the range of 100 to 65535.

Default

None

Related commands

None

config vlan multiplier

Use this command to configure the multiplier.

Syntax

config vlan <vlan-id> ip bfd multiplier <value>

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Parameters

Variable	Value
`<vlan-id>`	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

show ip bgp redistribution

Use this command to display redistribution configurations.

Syntax

`show ip bgp redistribution [exact <value>] [vrf <value>] [vrfids <value>]`

Parameters

Variable	Value
`exact <value>`	Specifies an exact match on the prefix.
`vrf <value>`	Specifies a VRF instance by name.
`vrfids <value>`	Specifies a range of VRFs by ID number.

Default

None

Related commands

None

show ip bfd session info

Use this command to display BFD session information.

Syntax

`show ip bfd session info`

Parameters

None

Default

None

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Related commands

None

show ip bfd stats

Use this command to display BFD statistics.

Syntax

show ip bfd stats

Parameters

None

Default

None

Related commands

None

show ip bfd info

Use this command to display BFD information.

Syntax

show ip bfd info

Parameters

None

Default

None

Related commands

None

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Commissioning commands

This chapter describes the Ethernet Routing Switch 8600 commissioning commands.

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save

Use this command to save to configuration.

Syntax

save <savetype> [file <value>] [verbose] [standby <value>] [backup <value>] [mode <cli|nncli>]

Parameters

Variable	Value
backup **<value>**	Saves the specified file name and identifies the file as a backup file. **value** uses one of the following formats: • /pcmcia/ <file> • /flash/ <file> file is a string of 1–99 characters.
file **<value>**	Specifies the file name in one of the following formats for **value**: • [a.b.c.d]: <file> • peer/<file> • /pcmcia/ <file> • /flash/ <file> file is a string of 1–99 characters.
mode <cli|nncli>	Saves the configuration as CLI or NNCLI.

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Variable	Value
savetype	Specifies what information to save. Possible values for this parameter are: • config • bootconfig • log • trace • clilog • snmplog
standby **<value>**	Saves the specified file name to the standby SF/CPU in the following format for **value**: • file name, /pcmcia/ <file> • /flash/ <file> file is a string of 1–99 characters.
verbose	Saves the default and current configuration. If you omit this parameter, the command saves only parameters you change.

Default

None

Related commands

None

config sys set name

Use this command to specify the system name, contact, and location.

Syntax

config sys set name <prompt>
config sys set contact <contact>
config sys set location <location>

Parameters

Variable	Value
contact <contact>	Alters the system contact. **contact** is the system contact. The string length is in the range of 0 to 255.
location <location>	Changes the system location.
name <prompt>	Changes the system name. **prompt** is the box or root level prompt . The string length ranges from 0 to 255.

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Default

None

Related commands

Variable	Value
clipId-topology-ip <id>	Sets the topology IP from the available CLIP. **id** is the circless IP interface id in the range of 1 to 256.
clock-sync-time <minutes>	Configures the RTC-to-system clock synchronization time. **minutes** is the RTC-to-System clock synchronization time in minutes in the range of 15 to 3600.
ecn-compatibility <enable|disable>	Enables or disables ecn-compatibility feature.
force-topology-ip-flag <true|false>	Sets flag to force choice of topology-IP. **true|false** Enables or disables Force Topology IP Flag.
global-filter <enable|disable>	Enables global filter feature.
info	Shows current-level parameter settings and next-level directories.
max-vlan-resource-reservation <enable|disable>	Enables MAX-VLAN feature.
mgmt-virtual-ip <ipaddr/mask>	Configures mgmt virtual IP. **ipaddr/mask** is the IP address and network mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}.
mgmt-virtual-ipv6 <ipv6addr/prefix-len>	Configures mgmt virtual IPV6 .**ipv6addr/prefix-len** is the IPV6 address. The string length ranges from 0 to 46.
mroute-stream-limit <enable|disable>	Global mroute stream limit configuration.**enable|disable** enables or disables mroute stream limit.

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Variable	Value
mtu <bytes>	Sets MTU (with CRC) to one of three values: 1522, 1950 and 9600. **bytes** is the MTU value in the range from 1522 to 9600.
multicast-resource-reservation <value>	Reserves MGIDs for IPMC use. **value** is the number of MGIDs reserved for IPMC use in the range from 64 to 4083.
portlock <on|off>	Turns portlock on or off.
sendAuthenticationTrap <true|false>	Sets authentication trap to true or false.
smlt-on-single-cp <enable|disable> [timer <value>]	Enables SMLT on Single CP feature. • **enable|disable** Enables or disables SMLT on single CP feature. • **[timer <value>]** is the timer value for SMLT on single CP feature timer in the range of 1 to 3.
topology <on|off>	Turns topology on or off.
udp-checksum <enable|disable>	Enables or disables UDP Checksum calculation.

config setdate

Use this command to configure the date.

Syntax

config setdate <MMddyyyyhhmmss>

Parameters

Variable	Value
setdate <MMddyyyyhhmmss>	Sets the calendar time.

Default

None

Related commands

None

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config cli password

Use this command to change a password.

Syntax

config cli password access-level <access level> <enable|disable>

Parameters

Variable	Value
access-level <access level> <enable|disable>	Permits or blocks this access level. • **access level** is an integer from 2–8. • **enable|disable** enables or disables the chosen level.

Default

None

Related commands

Variable	Value
aging <days>	Configures the time limit for passwords. **days** is the age-out time as an integer from 1–365.
default-lockout-time <secs>	Changes the default lockout time after three invalid attempts. **secs** is the lockout time in seconds and is in the 60–6500 range. The default is 60 seconds.
info	Shows the level parameter settings and the next-level directories.
l1 <username> [<password>]	Changes the Layer 1 read/write logon or password. • **username** is the logon name • **password** is the password associated with the logon name.
l2 <username> <password>	Changes the Layer 2 read/write logon or password. • **username** is the logon name.

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l3 <username> [<password>]	Changes the Layer 3 read/write logon and/or password (applies only to the Nortel Ethernet Routing Switch 8600). • **username** is the logon name. • **password** is the password associated with the logon name.
l4admin <username>	Configures the Layer 4 administrator logon to connect to the Web Switching Module (WSM). For more information about the WSM, see *Nortel Ethernet Routing Switch 8600 Web Switching Module Fundamentals* (NN46205-314) .
l4oper <username>	Configures the Layer 4 operator logon to connect to the WSM. For more information about the WSM, see *Nortel Ethernet Routing Switch 8600 Web Switching Module Fundamentals* (NN46205-314) .
lockout-time <HostAddress> <secs>	Configures the host lockout time. • **HostAddress** is the host IP address in the format a.b.c.d. • **secs** is the lockout time limit in seconds for passwords lockout in the 60–65000 range. The default is 60 seconds.
min-passwd-len <integer>	Configures the minimum length for passwords in high-secure mode. **integer** is in a minimum range of 10–20.
oper <username>	Configures the operator logon to connect to the WSM. For more information about the WSM, see *Nortel Ethernet Routing Switch 8600 Web Switching Module Fundamentals* (NN46205-314) .
password-history <number>	Specifies the number of previous passwords the switch stores. You cannot reuse a password that is stored in the password history. **number** uses a configurable range of 3–32 and the default is 3.

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ro <username> [<password>]	Changes the read-only logon or password. • **username** is the logon name. • **password** is the password associated with the logon name.
rw <username> [<password>]	Changes the read/write logon or password. • **username** is the logon name. • **password** is the password associated with the logon name.
rwa <username> [<password>]	Changes the read/write/all logon or password. • **username** is the logon name. • **password** is the password associated with the logon name.
slboper <username>	Configures the server load balancing (SLB) operator logon to connect to the WSM. For more information about the WSM, see *Nortel Ethernet Routing Switch 8600 Web Switching Module Fundamentals* (NN46205-314) .
slbadmin <username>	Configures the SLB administrator logon to connect to the WSM. For more information about the WSM, see *Nortel Ethernet Routing Switch 8600 Web Switching Module Fundamentals* (NN46205-314) .
ssladmin <username>	Configures the ssladmin logon to connect to and configure the secure sockets layer (SSL) Acceleration Module (SAM).

config bootconfig tz

Use this command to configure the time zone.

Syntax

config bootconfig tz dst-end <Mm.n.d/hhmm | MMddhhmm>

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Parameters

Variable	Value
dst-end <Mm.n.d/hhmm|MMddhhmm>	Configures the ending date of DST. You can specify the time in one of two ways: • **Mm.n.d/hhmm** specifies an hour on the nth occurrence of a weekday in a month. For example, **M10.5.0/0200** means the fifth occurrence of Sunday in the tenth month (October) at 2:00 a.m. • **MMddhhmm** specifies a month, day, hour, and minute. For example, **10310200** means October 31 at 2:00 a.m.

Default

None

Related commands

Variable	Value
dst-name <dstname>	Configures an abbreviated name for the local daylight saving time zone. **dstname** is the name. For example, PDT is Pacific Daylight Time.
dst-offset <minutes|hh:mm>	Configures the daylight saving adjustment in minutes. The default is 60 minutes.
dst-start <Mm.n.d/hhmm|MMddhhmm>	Configures the starting date of daylight saving time. • **Mm.n.d/hhmm** specifies an hour on the nth occurrence of a weekday in a month. For example, **M10.5.0/0200** means the fifth occurrence of Sunday in the tenth month (October) at 2:00 a.m. • **MMddhhmm** specifies a month, day, hour, and minute. For

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Variable	Value
	example, **10310200** means October 31 at 2:00 a.m.
info	Displays time zone information.
name <tz>	Configures an abbreviated name for the local time zone name. **tz** is the name. For example, PST is Pacific Standard Time.
offset-from-utc <minutes|hh:mm>	Configures the time zone offset in minutes to subtract from Universal Coordinated Time (UTC), where positive numbers mean west of Greenwich and negative numbers mean east of Greenwich.

config bootconfig sio baud

Use this command to configure port parameters based on the modem requirements.

Syntax

config bootconfig sio baud <rate>8databits <true|false>mode <ascii|slip|ppp>

Parameters

Variable	Value
baud <rate>	Configures the baud rate for the port.

Default

The default for 8 databits is false.

The default for baud is 9600.

The default for mode is the American Standard Code for Information Interchange (ASCII).

Related commands

Variable	Value
8databits <true|false>	Specifies either 8 (true) or 7 (false) data bits for each byte for software to interpret. The default is false.

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Variable	Value
baud <rate>	Configures the baud rate for the port. The default is 9600.
enable <true|false>	Enables or disables the port. The default is true.
info	Displays information about the specified port.
mode <ascii|slip|ppp>	Configures the communication mode for the serial port. The default is American Standard Code for Information Interchange (ASCII). If you are configuring the modem port, you can configure the port to use the SLIP or the PPP communication mode.
mtu <bytes>	Configures the size of the maximum transmission unit for a PPP link (0–2048). The default is zero.
my-ip <ipaddr>	Configures the server IP address for the Nortel Ethernet Routing Switch 8600 of the point-to-point link. The default is 0.0.0.0. Nortel recommends that you use the current IP address for the management port.
peer-ip <ipaddr>	Configures the peer (PC) IP address on the point-to-point link. The default is 0.0.0.0. The switch assigns this value to any PC that connects through the modem port with configured TCP/IP properties to obtain an IP address automatically. If the client uses a static IP address, the Nortel Ethernet Routing Switch 8600 accepts this address. If you use PAP authentication, you must ensure that the client uses the correct IP address.

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Variable	Value
pppfile <file>	Specifies the PPP configuration file you must use to provide details for authentication and other options the switch includes during the boot process. If you configure the port mode to PPP, you must specify a PPP filen ame.The PPP file name is a string value of no more than 64 characters. Identify the file in the format {a.b.c.d:|peer:|/pcmcia/|/flash/}<file>. **ATTENTION** Do not specify a PPP file name with more than 64 characters.
restart	Shuts down and initializes the port.
slip-compression <true|false>	Enables or disables Transmission Control Protocol over IP (TCP/IP) header compression for SLIP mode. The default is false.
slip-rx-compression <true|false>	Enables or disables TCP/IP header compression on the receive packet for SLIP mode. The default is false.

config bootconfig sio modem

Use this command in the run-time CLI, to configure the modem port.

Syntax

config bootconfig sio modem

Parameters

Variable	Value
mode <ascii|slip|ppp>	Configures the communication mode for the serial port. If you are configuring the modem port, you can configure the port to use the SLIP or the PPP communication mode.

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Variable	Value

Default

The default is American Standard Code for Information Interchange (ASCII).

Related commands

Variable	Value
8databits <true|false>	Specifies either 8 (true) or 7 (false) data bits for each byte for software to interpret. The default is false.
baud <rate>	Configures the baud rate for the port. The default is 9600.
enable <true|false>	Enables or disables the port. The default is true.
info	Displays information about the specified port.
mtu <bytes>	Configures the size of the maximum transmission unit for a PPP link (0–2048). The default is zero.
Configures the server IP address for the Nortel Ethernet Routing Switch 8600 of theConfigures the server IP address for the Nortel Ethernet Routing Switch 8600 of the**my-ip <ipaddr>**	Configures the server IP address for the Nortel Ethernet Routing Switch 8600 of the point-to-point link. The default is 0.0.0.0. Nortel recommends that you use the current IP address for the management port.
peer-ip <ipaddr>	Configures the peer (PC) IP address on the point-to-point link. The default is 0.0.0.0. The switch assigns this value to any PC that connects through the modem port with configured TCP/IP properties to obtain an IP address automatically. If the client uses a static IP address, the Nortel Ethernet Routing Switch 8600 accepts this address. If you use PAP authentication, you must ensure that the client uses the correct IP address.

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Variable	Value
pppfile <file>	Specifies the PPP configuration file you must use to provide details for authentication and other options the switch includes during the boot process. If you configure the port mode to PPP, you must specify a PPP file name. The PPP file name is a string value of no more than 64 characters. Identify the file in the format {a.b.c.d:|peer:|/pcmcia/|/flash/}<file>. **ATTENTION** Do not specify a PPP file name with more than 64 characters.
restart	Shuts down and initializes the port.
slip-compression <true|false>	Enables or disables Transmission Control Protocol over IP (TCP/IP) header compression for SLIP mode. The default is false.
slip-rx-compression <true|false>	Enables or disables TCP/IP header compression on the receive packet for SLIP mode. The default is false.

config bootconfig master

Use this command to specify the slot of the primary SF/CPU.

Syntax

config bootconfig master <cpu-slot>

Parameters

Variable	Value
<cpu-slot>	Specifies the slot number for the primary SF/CPU. This variable can be 5 or 6.

Default

The default primary is slot 5.

Related commands

None

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config bootconfig net mgmt ip

Use this command to assign an IP address to the management and virtual port.

Syntax

config bootconfig net mgmt ip <ipaddr/mask> [cpu-slot <value>]
config sys set mgmt-virtual-ip <ipaddr/mask>

Parameters

Variable	Value
cpu-slot <value>	Specifies the Switch Fabric/Central Processor Unit (SF/CPU) module (8691SF/CPU or 8692SF/CPU), slot 5 or slot 6. If you do not specify a slot number for the IP address, the switch assigns the slot number to the currently active management module.
ipaddr/mask	Specifies the IP address and subnet mask of the management port (for example, 10.127.231.15/255.255.255.0). You cannot assign an address of 0.0.0.0/0.

Default

None

Related commands

None

config bootconfig flags

Use this command to enable the access service.

Syntax

config bootconfig flags <access-service> <true|false>

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Parameters

Variable	Value
access-service	Specifies the type of remote access service as one of the following: • ftpd • rlogind • telnetd • tftpd • sshd
true|false	True enables the service. False disables the service.

Default

None

Related commands

None

config bootconfig flags alt-led-enable

Use this command to enable or disable alternate LED behavior.

Syntax

config bootconfig flags alt-led-enable <true|false>

Parameters

Variable	Value
true|false	True enables the flag. False disables the flag.

Default

None

Related commands

None

config bootconfig flags block-warmstandby-switchover

Use this command to flag and stop secondary in warm standby mode from switching over to primary.

Syntax

config bootconfig flags block-warmstandby-switchover <true|false>

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Parameters

Variable	Value
true|false	True enables the flag. False disables the flag.

Default

None

Related commands

None

config bootconfig flags control-record-optimization

Use this command to enable or disable to add a hardware record for receiving L3 protocol control traffic that use multicast address.

Syntax

config bootconfig flags control-record-optimization <true|false>

Parameters

Variable	Value
true|false	True enables the flag. False disables the flag.

Default

None

Related commands

None

config bootconfig flags daylight-saving-time

Use this command to enable or disable daylight saving time.

Syntax

config bootconfig flags daylight-saving-time <true|false>

Parameters

Variable	Value
true|false	True enables the flag. False disables the flag.

Default

None

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Related commands

None

config bootconfig flags debug-config

Use this command to enable runtime debug of configuration file.

Syntax

config bootconfig flags debug-config <true|false|file>

Parameters

Variable	Value
true|false|file	Enables runtime debug of configuration file or log it to file.

Default

None

Related commands

None

config bootconfig flags debugmode

Use this command to enable runtime debug mode.

Syntax

config bootconfig flags debugmode <true|false>

Parameters

Variable	Value
true|false	True enables flag. False disable the flag.

Default

None

Related commands

None

config bootconfig flags egress-mirror

Use this command to enable egress mirror capability.

Syntax

config bootconfig flags egress-mirror <true|false>

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Parameters

Variable	Value
true|**false**	True enables flag. False disable the flag.

Default

None

Related commands

None

config bootconfig flags egress-mirror

Use this command to enable NNCLI and disable 8600 CLI.

Syntax

config bootconfig flags nncli <true\|**false>**

Parameters

Variable	Value
true|**false**	True enables flag. False disable the flag.

Default

None

Related commands

None

config bootconfig flags mezz

Use this command to enable mezzanine card to boot when it is present on CPU card.

Syntax

config bootconfig flags mezz <true\|**false>**

Parameters

Variable	Value
true|**false**	True enables flag. False disable the flag.

Default

None

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Related commands

None

config bootconfig flags reboot

Use this command to enable reboot on fatal error.

Syntax

config bootconfig flags reboot <true|false>

Parameters

Variable	Value
true|false	True enables flag. False disable the flag.

Default

None

Related commands

None

config bootconfig flags savetostandby

Use this command to enable or disable and save config/bootconfig automatically to standby CPU.

Syntax

config bootconfig flags savetostandby <true|false>

Parameters

Variable	Value
true|false	True enables flag. False disable the flag.

Default

None

Related commands

None

config bootconfig flags trace-logging

Use this command to enable system tracing to PC card file.

Syntax

config bootconfig flags trace-logging <true|false>

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Parameters

Variable	Value
true|**false**	True enables flag. False disable the flag.

Default

None

Related commands

None

config bootconfig flags verify-config

Use this command to enable or disable syntax check of configuration file.

Syntax

config bootconfig flags verify-config <true\|**false>**

Parameters

Variable	Value
true|**false**	True enables flag. False disable the flag.

Default

None

Related commands

None

config bootconfig flags wdt

Use this command to enable hardware watchdog timer.

Syntax

config bootconfig flags wdt <true\|**false>**

Parameters

Variable	Value
true|**false**	True enables flag. False disable the flag.

Default

None

Related commands

None

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config bootconfig parity-errors disable

Use this command to disable the parity error monitoring.

Syntax

config bootconfig parity-errors disable

Parameters

None

Default

None

Related commands

Variable	Value
enable	Enables the parity error monitoring
set <size>	Sets the number of parity errors needed to take an action
action-869xSF-disable <true|false>	Reboots the CP Card when excess parity errors are encountered
info	Displays current level parameter settings and next level directories.

config bootconfig host

Use this command to define conditions for the remote host logon.

Syntax

config bootconfig host ftp-debug <true|false>

Parameters

Variable	Value
ftp-debug <true|false>	Enables or disables debug mode on FTP. If you enable debug mode, debug messages appear on the management console screen.

Default

The default is false.

Related commands

Variable	Value
info	Displays the current remote host logon settings.

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Variable	Value
password <value>	Configures the password to enable FTP transfers. **value** is the password, up to 16 characters long. After you configure this password, only FTP is used for remote host logon. **ATTENTION** This password must match the password for the FTP server, or the FTP operation fails. Also, if you configure the password to a valid value, then all copying to and from the network uses FTP instead of TFTP. If the user name or password is incorrect, copying over the network fails.
tftp-debug <true|false>	Enables or disables debug mode on TFTP/TFTPD. If you enable debug mode, debug messages appear on the management console screen. The default is false.
tftp-hash <true|false>	Enables or disables the TFTP hash bucket display. The default is false.
tftp-rexmit <seconds>	Configures the TFTP retransmission timeout. The default value is 2 seconds. **seconds** is the number of seconds (1–2147483647).
tftp-timeout <seconds>	Configures the TFTP timeout. The default value is 6 seconds. **seconds** is the number of seconds (1–120).
user <value>	Configures the remote user logon. **value** is the user logon name (up to 16 characters).

config web-server enable

Use this command to enable the web server.

Syntax

config web-server enable

Parameters

None

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Default

None

Related commands

Variable	Value
def-display-rows <integer>	Sets web server default display row width.
disable	Turns web server off.
html-source-dir help-tftp <file>	Sets web server HTML directories.
http-port <integer>	Sets web server HTTP-port
info	Displays current level parameter settings and next level directories.
password <ro> <username> <password>	Sets web server passwords.

config web-server password

Use this command to configure the access password.

Syntax

config web-server password <ro> <username> <password>

Parameters

Variable	Value
password <ro> <username> <password>	Configures passwords for access to the Web interface. • **username** is the user logon name (up to 20 characters). • **password** is the password associated with the logon name (up to 20 characters). • **ro** is the keyword {ro|rw|rwa}.

Default

None

Related commands

None

show bootconfig master

Use this command to view the current setting for the primary SF/CPU.

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Syntax

show bootconfig master

Parameters

None

Default

None

Related commands

None

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Ethernet modules commands

This chapter describes the Ethernet Routing Switch 8600 Ethernet modules commands.

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config slot

Use this command to disable and enable a module.

Syntax

config slot <slot> state <enable|disable>

Parameters

Variable	Value
slot	Specifies the slot list.

Default

None

Related commands

None

config ethernet

Use this command to enable the port.

Syntax

config ethernet <ports> state <enable|disable>

Parameters

Variable	Value
slot/port	Specifies the port or range of ports to configure in the slot/port format.

Default

None

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Related commands

None

config ethernet alias

Use this command to set alias port name.

Syntax

config ethernet <ports> alias <name>

Parameters

Variable	Value
<ports>	Specifies the port list in the slot/port format.
<name>	Sets alias port name. The string length ranges from 0 to 64.

Default

None

Related commands

None

config ethernet block-traffic

Use this command to block all traffic ingressing a port.

Syntax

config ethernet <ports> block-traffic <true|false>

Parameters

Variable	Value
<ports>	Specifies the port list in the slot/port format.
<true|false>	Blocks all traffic ingressing this port.

Default

None

Related commands

None

config ethernet flush-mac

Use this command to flush the MAC.

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Syntax

config ethernet <ports> flush-mac <mac> [<vid>]

Parameters

Variable	Value
<mac>	Specifies the MAC address in the {xx:xx:xx:xx:xx:xx} format. The {string length ranges from 17 to 17.
<ports>	Specifies the port list in the slot/port format.
<vid>	Specifies the VLAN ID in the range of 1 to 4094.

Default

None

Related commands

None

config ethernet ip bfd hold-off

Use this command to hold-off BFD interval.

Syntax

config ethernet <ports> ip bfd hold-off <seconds>

Parameters

Variable	Value
<ports>	Specifies the port list in the slot/port format.
<seconds>	Specifies the hold-off timer interval in the range of 0 to 65535.

Default

None

Related commands

None

config ethernet ip route-discovery advertise-flag

Use this command to set reset the advertise flag for route discovery.

Syntax

config ethernet <ports> ip route-discovery advertise-flag <true|false>

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Parameters

Variable	Value
<ports>	Specifies the port list in the slot/port format.

Default

None

Related commands

Variable	Value
advertisement-address <224.0.0.1 OR 255.255.255.255>	Route discovery advertisement address.
advertisement-lifetime <seconds>	Specifies lifetime for router advertisements. **seconds** is the advertisement-lifetime {4..9000}.
info	Display current level parameter settings and next level directories.
max-advertisement-interval <seconds>	Specifies the maximum advertisement interval for router advertisements. **seconds** is the max-advertisement-interval {4..1800}.
min-advertisement-interval <seconds>	Minimum Advertisement interval for router advertisements. **seconds** is the minimum-advertisement-interval {4..9000}.
preference-level <preference-level value>	Specifies the preference level for router advertisement.

config ethernet ipv6 mtu

Use this command to configure ether IPv6 MTU command.

Syntax

config ethernet <ports> ipv6 mtu <mtu>

Parameters

Variable	Value
<mtu>	Specifies the MTU for IPv6 interface {1280..1500 or 9600}.
<ports>	Specifies the port list in the slot/port format.

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Default

None

Related commands

None

config ethernet linktrap

Use this command to set up or down the link trap.

Syntax

config ethernet <ports> linktrap <enable|disable>

Parameters

Variable	Value
<mtu>	Specifies the MTU for IPv6 interface {1280..1500 or 9600}.
<ports>	Specifies the port list in the slot/port format.

Default

None

Related commands

None

config ethernet routing

Use this command to set routing capability of ports.

Syntax

config ethernet <ports> routing <enable|disable>

Parameters

Variable	Value
<mtu>	Specifies the MTU for IPv6 interface {1280..1500 or 9600}.
<ports>	Specifies the port list in the slot/port format.

Default

None

Related commands

None

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config ethernet unknown-mac-discard activation

Use this command to enable or disable unknown MAC discard of this port.

Syntax

config ethernet <ports> unknown-mac-discard activation <enable|disable>

Parameters

Variable	Value
<ports>	Specifies the port list in the slot/port format.
<enable|disable>	Enables or disables discard unknown source MAC frame.

Default

None

Related commands

Variable	Value
add-allow-mac <mac> [auto]	Adds allow mac address to a port.
autolearn <enable|disable>	Enables or disable autolearn of a port.
autolearn-mode <one-shot|continuous>	Sets autolearn mode of a port.
info	Displays current level parameter settings and next level directories.
lock-autolearn-mac <enable|disable>	Locks autolearned MAC address of this port.
max-mac-count <max MAC count>	Sets the maximum number of MAC addresses allowed on this port.
remove-allow-mac <mac>	Removes allow MAC address from a port.
violation-downport <enable|disable>	Sets violation down port action of this port.
violation-logging <enable|disable>	Sets violation logging action of this port.
violation-sendAuthenticationTrap <enable|disable>	Sets violation send authentication trap action of this port.

config ethernet untagged-frames-discard

Use this command to set discard untagged frames.

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Syntax

config ethernet <ports> untagged-frames-discard <enable|disable>

Parameters

Variable	Value
<ports>	Specifies the port list in the slot/port format.
<enable|disable>	Enables or disables a feature.

Default

None

Related commands

None

config ethernet vlacp slow-periodic-time

Use this command to value slow periodic time in milliseconds.

Syntax

config ethernet <ports> vlacp slow-periodic-time <milliseconds>

Parameters

Variable	Value
<ports>	Specifies the port list in the slot/port format.
<enable|disable>	Enables or disables a feature.

Default

None

Related commands

Variable	Value
disable	Disables VLACP on port.
enable	Enables VLACP on port.
fast-periodic-time <milliseconds>	Specifies a value for fast periodic time in milliseconds. The VLACP fast periodic time ranges from 10 to 20000.
info	Displays current level parameter settings and next level directories.

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Variable	Value
slow-periodic-time <milliseconds>	Specifies a value for slow periodic time in milliseconds. The VLACP fast periodic time ranges from 10000 to 30000.
timeout <long|short>	Specifies the long timeout or short timeout usage.
timeout-scale <integer>	Specifies the timeout scale. timeout = periodic-time * timeout-scale. The value ranges from 2 to 10.
ethertype <ether type>	Specifies the VLACP protocol identification.
macaddress <mac>	Specifies the multicast MAC address used for VLACPDU. **mac** is the MAC address in the {0x00:0x00:0x00:0x00:0x00:0x00:0x00} format.

config ethernet ip create

Use this command to assign an IP address and VLAN ID to the port.

Syntax

config ethernet <ports> ip create <ipaddr/mask> <vid> [mac_offset <value>]

Parameters

Variable	Value
create <ipaddr/mask> <vid> [mac_offset <value>]	Assigns an IP address to a port to create a brouter port. • **<ipaddr/mask>** is the IP address and mask in a.b.c.d format. • **<vid>** is the VLAN ID in the range of 1 to 4094. • **mac_offset <value>** specifies a number by which to offset the MAC address of the brouter port from the chassis MAC address. This ensures that each IP address has a different MAC address.
<ports>	Indicates the slot and port number.

Default

None

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Related commands

Variable	Value
delete <ipaddr>	Deletes an IP address from a brouter port.
info	Displays configured IP characteristics on the port.
Rvs-Path-Chk <enable|disable> [mode <value>]	Enables or disables reverse path checking. • **mode <value>** is either exist-only mode or strict mode. In exist-only mode, RPC checks whether the incoming packet source IP address exists in the routing table. If the source IP entry is found, the packet is forwarded as usual; otherwise, the packet is discarded. In strict mode, RPC checks whether the incoming packet source IP address exists in the routing table. If the source IP entry is not found, RPC further checks to see if the source IP interface matches the packet incoming interface. If they match, the packet is forwarded as usual, otherwise, the packet is discarded. Reverse path checking is supported only on R series modules with R mode enabled.

config ethernet auto-negotiate

Use this command to configure Auto-Negotiation.

Syntax

config ethernet <ports> auto-negotiate <enable|disable>
config bootconfig flags 8616-reautoneg true

Parameters

Variable	Value
slot/port	Specifies the port or range of ports to configure in the slot/port format.
enable|disable	—

Default

None

Related commands

None

config ethernet auto-negotiate-advertisements

Use this command to configure Custom AutoNegotiation Advertisements Routing Switch (CANA RS) module 10/100/1000 Mbit/s ports.

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Syntax

config ethernet auto-negotiate-advertisements <10-full|10-half|100-full|100-half|1000-full|1000-half|default|none>

Parameters

Variable	Value
auto-negotiate-advertisements <10-full|10-half|100-full|100-half|1000-full|1000-half|default|none>	Specifies the CANA advertisement to send. Only R and RS module 10/100/1000 Mbit/s copper ports can use CANA. Autonegotiation must be enabled to use CANA.

Default

None

Related commands

Variable	Value
auto-negotiate <enable|disable>	Enables or disables Autonegotiation.
duplex <half|full>	Specifies half- or full-duplex mode. Only applicable to 10/100/1000 Mbit/s ports; 1 and 10 Gbit/s ports must use full-duplex mode.
name <name>	Specifies a name for the port.
preferred-phy <left|right>	For duplex connectors, specifies the line and connector you want to be active: left or right.
speed <10|100|1000>	Specifies the port speed. Not applicable to 1 Gigabit or 10 Gigabit Ethernet modules.
state <enable|disable|test>	Enables or disables the port. The default is enable.

config ethernet duplex

Use this command to set the duplex mode and port speed.

Syntax

config ethernet <slot/port> duplex <half|full>
config ethernet <slot/port> speed <10|100|1000>

Parameters

Variable	Value
slot/port	Specifies the port or range of ports to configure in the slot/port format.

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Default

None

Related commands

None

config ethernet info

Use this command to ensure that your configuration is correct.

Syntax

```
config ethernet <ports> info
show ports info l1-config [valn <value>] [port <value>]
```

Parameters

Variable	Value
`slot/port`	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config bootconfig flags 8616-reautoneg true

Use this command to configure an 8616 module and enable Auto-negotiation.

Syntax

```
config bootconfig flags 8616-reautoneg true
```

Parameters

None

Default

None

Related commands

None

config ethernet flow-control

Use this command to enable flow control.

Syntax

```
config ethernet <slot/port> tx-flow-control <enable|disable>
```


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Parameters

Variable	Value
slot/port	Specifies the port or range of ports to configure in the slot/port format.
enable|disable	—

Default

None

Related commands

None

config ethernet fc-pause0

Use this command to enable PAUSE frames.

Syntax

config ethernet <slot/port> fc-pause0 <enable|disable>
config ethernet <slot/port> fc-pause-time <1...65535>

Parameters

Variable	Value
enable|disable	Turns the flow-control pause zero on or off.
slot/port	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet sffd

Use this command to enable Single Fiber Fault detection.

Syntax

config ethernet <ports> sffd <enable|disable

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Parameters

Variable	Value
sffd <enable|disable>	Enables or disables Single Fiber Fault Detection. For SFFD to work properly, both ends of the fiber connection must have SFFD enabled and Auto-Negotiation disabled. This parameter only applies to 1 Gigabit Ethernet ports.

Default

None

Related commands

Variable	Value
auto-negotiate <enable|disable>	Enables or disables Auto-Negotiation.
fc-pause0 <enable|disable>	When **tx-flow-control** is enabled and **fc-pause0** is enabled, the TX port transmits MAC control PAUSE frames with a timer value of 0 to indicate to its link partner to resume transmission. The default is enable. This parameter only applies to 1 and 10 Gigabit Ethernet ports.
fc-pause-time <1...65535>	Setting the flow-control-pause time sets the timer value in the MAC control PAUSE frame. This indicates to the link partner how long to pause transmission. The pause time is in units of 512 bit-times. Do not set it to a low value, such as 1 or 2. These lower values reduce effect on network congestion. The default is 65535. This parameter only applied to 1 and 10 Gigabit Ethernet ports.
name <name>	Specifies a name for the port.
preferred-phy <left|right>	For duplex connectors, specifies which line and connector you want to be active: left or right.

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Variable	Value
state <enable|disable|test>	Enables or disables the port. The default is enable.
tx-flow-control <enable|disable>	Enables or disables flow control. When **tx-flow-control** is enabled, the TX port transmits MAC control PAUSE frames to indicate congestion on the receive side of the port interface. The link partner ceases transmission based on the MAC control frame pause-timer value. The default is disable. Flow control can only be enabled on 1 Gbit/s and 10 Gbit/s ports. Flow control cannot be enabled for ports that run at less than 1 Gbit/s.

config ethernet state

Use this command to enable 10 Gigabit Ethernet ports.

Syntax

config ethernet <ports> state <enable|disable|test>

Parameters

Variable	Value
slot/port	Specifies the port or range of ports to configure in the slot/port format.
enable|disable	—

Default

None

Related commands

None

config ethernet clock-source

Use this command to configure the clock source.

Syntax

config ethernet <slot/port> clock-source <internal|line>

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Parameters

Variable	Value
slot/port	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet tx-flow-control

Use this command to configure tx-flow-control.

Syntax

config ethernet <slot/port> tx-flow-control <enable|disable

Parameters

Variable	Value
enable|disable	—
slot/port	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet fc-pause0

Use this command to enable PAUSE frames.

Syntax

config ethernet <slot/port> fc-pause0 <enable|disable>

Parameters

Variable	Value
enable|disable	Turns the flow-control pause zero on or off.
slot/port	Specifies the port or range of ports to configure in the slot/port format.

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Default

None

Related commands

None

config ethernet fc-pause-time

Use this command to configure the flow-control-pause timer.

Syntax

config ethernet <ports> fc-pause-time <0...65535>

Parameters

Variable	Value
slot/port	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet wan-mode

Use this command to configure the mode for LAN/WAN modules.

Syntax

config ethernet <slot/port> wan-mode <enable|disable>

Parameters

Variable	Value
enable|disable	Enables or disables WAN mode.
slot/port	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet framing

Use this command to configure the framing type, If the mode is WAN.

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Syntax

config ethernet <slot/port> framing <sonet|sdh>

Parameters

Variable	Value
framing <sonet|sdh>	Specifies SONET or SDH framing. SONET (Synchronous Optical Network) is the standard format in North America. SDH (Synchronous Digital Hierarchy) is the standard format in Europe. The default is SONET. This parameter only applies to 10 Gbit/s WAN ports.

Default

None

Related commands

Variable	Value
clock-source <internal|line>	**line** mode uses the recovered Receive (Rx) clock to generate the Tx clock. **internal** mode uses the onboard oscillator to generate the transmit (Tx) clock. The default value is internal. Only applicable to 10 Gbit/s ports.
fc-pause0 <enable|disable>	When **tx-flow-control** is enabled and **fc-pause0** is enabled, the TX port transmits MAC control PAUSE frames with a timer value of 0 to indicate to its link partner to resume transmission. The default is enable. This parameter only applies to 1 and 10 Gigabit Ethernet ports.
fc-pause-time <1...65535>	Setting the flow-control-pause time sets the timer value in the MAC control PAUSE frame. This indicates to the link partner how long to pause transmission. The pause time is in units of 512 bit-times. Do not set it to a low value, such as 1 or 2. These lower values reduce effect on network congestion. The default is 65535. This parameter only applied to 1 and 10 Gigabit Ethernet ports.
name <name>	Specifies a name for the port.

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Variable	Value
preferred-phy <left|right>	For duplex connectors, specifies which line and connector you want to be active: left or right.
state <enable|disable|test>	Enables or disables the port. The default is enable.
tx-flow-control <enable|disable>	Enables or disables flow control. When **tx-flow-control** is enabled, the TX port transmits MAC control PAUSE frames to indicate congestion on the receive side of the port interface. The link partner ceases transmission based on the MAC control frame pause-timer value. The default is disable. Flow control can only be enabled on 1 Gbit/s and 10 Gbit/s ports. Flow control cannot be enabled for ports that run at less than 1 Gbit/s.
wan-mode <enable|disable>	Enables or disables WAN mode. This parameter is only applicable to the 8683XZR module. If WAN mode is enabled, SONET or SDH is used by the port. When you configure multiple ports of the 8683XZR module to WAN mode, the framing type and clock mode must be the same for all the WAN mode ports. Mixed configurations for multiple WAN mode enabled ports is not supported.

config ethernet vrf

Use this command to configure a Virtual Router Forwarding (VRF) port instance.

Syntax

config ethernet <slot/port> vrf <vrfName>

Parameters

Variable	Value
<vrfName>	Specifies the VRF by name.

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Default
None

Related commands
None

config sys set 8648gtr info
Use this command to show the current control MAC mappings.

Syntax
config sys set 8648gtr info

Parameters
None

Default
None

Related commands
None

config sys info
Use this command to display system information.

Syntax
config sys info

Parameters
None

Default
None

Related commands
None

config sys set 8648gtr high-priority-control-mac
Use this command to configure the control MAC addresses to be given high priority.

Syntax
config sys set 8648gtr high-priority-control-mac <register> [<mac>]

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Parameters

Variable	Value
<register> [<mac>]	**<register>** specifies the MAC address register and ranges from 0 to 5. **<mac>** specifies the MAC address to be given high priority. If no MAC address is specified, it is set to default.

Default

None

Related commands

Variable	Value
info	Shows information about the high priority control MAC addresses configured on the switch.

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Firewall and Intrusion commands

This chapter describes the Ethernet Routing Switch 8600 Firewall and Intrusion commands.

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/cfg/sys/accesslist/list

Use this command to view the access list.

Syntax

```
>> #/cfg/sys/accesslist/list
```

Parameters

Variable	Value
`list`	List displays all index and IP address information for all trusted clients.

Default

None

Related commands

None

/cfg/sys/adm/telnet/ena

Use this command to enable Telnet.

Syntax

```
>> # /cfg/sys/adm/telnet/ena
```


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Parameters
None

Default
None

Related commands
None

/cfg/sys/adm/ssh/ena
Use this command to enable secure shell (SSH) access.

Syntax
```
>> # /cfg/sys/adm/ssh/ena
>> SSH Administration# apply
```

Parameters
None

Default
None

Related commands
None

/cfg/sys/adm/sshkey/generate
Use this command to create new host keys.

Syntax
```
>> # /cfg/sys/adm/sshkey/generate
>> SSH Administration# apply
```

Parameters
None

Default
None

Related commands
None

/cfg/sys/adm/idle
Use this command to set the time-out parameter.

Syntax
```
>> # /cfg/sys/adm/idle <time-out period>
```


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Parameters

Variable	Value
`<time-out period>`	time-out period is specified in seconds, as an integer from 300-604800 seconds. Or you can specify time-out in minutes, from 5 minutes (5m) to 10080 minutes (10080m). Timeout can be specified in hours (1h-168h) or days (1d-7d). Timeout comes into effect only on the next log on.

Default

None

Related commands

None

/info

Use this command to view information.

Syntax

`/info`

Parameters

None

Default

None

Related commands

None

/info/host Info_host Menu

Use this command to access configuration, status, and statistics information on the run-time, link, Ethernet, and syslog parameters of the host.

Syntax

`/info/host Info_host Menu`

Parameters

None

Default

None

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Related commands

None

info/monitor

Use this command to display current and historical data.

Syntax

/info/monitor
info_monitor Menu

Parameters

None

Default

None

Related commands

None

info/net

Use this command to display the interface, route, and Virtual Router Redundancy Protocol (VRRP) details.

Syntax

/info/net

Parameters

None

Default

None

Related commands

None

/cfg

Use this command to configure the firewall.

Syntax

/cfg

Parameters

None

Default

None

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Related commands

None

/cfg/sys

Use this command to configure system-wide parameters.

Syntax

/cfg/sys

Parameters

None

Default

None

Related commands

None

/cfg/sys/time

Use this command to set the system date, time, and time zone options.

Syntax

/cfg/sys/time

Parameters

None

Default

None

Related commands

None

/cfg/sys/dns

Use this command to show IPv6 tunnel interface information.

Syntax

/cfg/sys/dns

Parameters

None

Default

None

Related commands

None

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/cfg/sys/cluster

Use this command to configure the firewall host IP address.

Syntax

/cfg/sys/cluster

Parameters

None

Default

None

Related commands

None

cluster management IP address

Use this command to change the cluster Management IP (MIP) address.

Syntax

<cluster Management IP address>

Parameters

None

Default

None

Related commands

None

/cfg/sys/accesslist

Use this command to specify IP addresses or address ranges that permit remote access to the system.

Syntax

/cfg/sys/accesslist

Parameters

None

Default

None

Related commands

None

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/cfg/sys/adm

Use this command to configure the Ethernet Routing Switch 8600.

Syntax

/cfg/sys/adm

Parameters

None

Default

None

Related commands

None

/cfg/sys/log

Use this command to configure system message logging features.

Syntax

/cfg/sys/log

Parameters

None

Default

None

Related commands

None

/cfg/sys/user

Use this command to add, modify, delete, or list firewall iSD user accounts, and change passwords.

Syntax

/cfg/sys/user

Parameters

None

Default

None

Related commands

None

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/cfg/net

Use this command to identify command syntax and usage for the network configuration menu.

Syntax

/cfg/net

Parameters

None

Default

None

Related commands

None

/cfg/lic

Use this command to preconfigure Check Point licenses for the iSD firewall.

Syntax

/cfg/lic

Parameters

None

Default

None

Related commands

None

/cfg/fw

Use this command to enable or reset the Check Point Secure Internal Communications (SIC).

Syntax

/cfg/fw

Parameters

None

Default

None

Related commands

None

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/cfg/misc

Use this command to turn warning messages on or off.

Syntax

/cfg/misc

Parameters

None

Default

None

Related commands

None

/boot

Use this command to upgrade software and reboot.

Syntax

/boot

Parameters

None

Default

None

Related commands

None

/boot/software

Use this command to load, activate, or remove software upgrade packages.

Syntax

/boot/software

Parameters

None

Default

None

Related commands

None

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/maint

Use this command to administer OSPF logs and technical support dumps, load Firewall policies, and test the synchronize network between hosts in a cluster.

Syntax

/maint

Parameters

None

Default

None

Related commands

None

/maint/tsdump

Use this command to create technical support dumps that you can copy to a floppy disk or load on an FTP server.

Syntax

/maint/tsdump

Parameters

None

Default

None

Related commands

None

/maint/backup

Use this command to back up the firewall configuration and restore it later to the same state.

Syntax

/maint/backup

Parameters

None

Default

None

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Related commands

None

/maint/ospf

Use this command to administer the log of open shortest path first (OSPF) events.

Syntax

/maint/ospf

Parameters

None

Default

None

Related commands

None

maint/rsh/

Use this command to enable the remote client to connect to the iSD to perform a single CLI.

Syntax

maint/rsh/

Parameters

None

Default

None

Related commands

None

cfg/net/if vlan

Use this command to configure the VLAN for the untrusted side of the network.

Syntax

>>Main# /cfg/net/if <vlan ID>

Parameters

Variable	Value
cluster <cluster-id>	The ID number of the clustered firewall

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Variable	Value
create ip	The IP address of the VLAN.
mini-slot	The mini-slot number of the firewall iSD.
slot	Slot number of the firewall iSD.
stg-id	Spanning Tree Group ID of the byport.
vlan <vid>	The ID number of the vlan.

Default

None

Related commands

None

/cfg/net/if vlan/vrrp

Use this command to configure VRRP sub-address and virtual router identification (VRID) for the first VLAN.

Syntax

>>Main# /cfg/net/if <VLAN ID>/vrrp

Parameters

Variable	Value
mini-slot	The mini-slot number of the Firewall iSD.
ha y	Yes implies High Availability.
stg-id	Spanning Tree Group ID of the byport.
vlan <vid>	The ID number of the VLAN.

Default

None

Related commands

None

/cfg/net/routes/add ip-address

Use this command to configure the firewall iSD and Check Point SmartCenter server static routes.

Syntax

>>Main# /cfg/net/routes/add <ip-address > mask <ip-address> 192.168.1.10

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Parameters

Variable	Value
add <ip-address>	IP address of the device to be added.
mask <ip-address>	Yes implements High Availability.
stg-id	Spanning Tree Group ID of the byport.
vlan <vid>	The ID number of the VLAN.

Default

None

Related commands

None

route add -p

Use this command to create a static route on the checkpoint smartCenter server to a subnet.

Syntax

```
c:\> route add -p 192.168.1.0 255.255.255.0 152.168.1.1
```

Parameters

Variable	Value
add <ip-address>	IP address of the device to be added.
mask <ip-address>	Yes implements High Availability.
stg-id	Spanning Tree Group ID of the byport.
vlan <vid>	The ID number of the VLAN.

Default

None

Related commands

None

conf vlan 30 create byport 1 firewall-vlan cluster

Use this command to configure the untrusted (public side) VLAN 30.

Syntax

```
conf vlan 30 create byport 1 firewall-vlan cluster 1
conf vlan 30 ports add 1/4-1/5
```

Parameters

None

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Default
None

Related commands
None

conf vlan 50 create byport 1 firewall-vlan cluster
Use this command to configure the trusted (protected side) VLAN 50.

Syntax

```
conf vlan 50 create byport 1 firewall-vlan cluster 1
conf vlan 50 ports add 1/7-1/8
```

Parameters
None

Default
None

Related commands
None

/cfg/net/if 30
Use this command to configure VLAN 30 and VLAN 50 on the iSD.

Syntax
VLAN 30:

```
/cfg/net/if 30
addr1 30.30.30.1
mask 255.255.255.0
vlan 30
port 2
en
apply
```

VLAN 50:

```
cfg/net/if 50
addr1 50.50.50.1
mask 255.255.255.0
vlan 50
port 2
```


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```
en

apply
```

Parameters
None

Default
None

Related commands
None

/cfg/net/ospf en
Use this command to enable OSPF on the VLANs. The OSPF works only when the iSD is in stand-alone mode.

Syntax
```
/cfg/net/ospf en

/cfg/net/ospf/if 30

en

/cfg/net/ospf/if 50

ena

apply
```

Parameters
None

Default
None

Related commands
None

conf vlan 30 create byport
Use this command to configure the trusted (protected side) VLANs 30, 40, and 50.

Syntax
VLAN 30:

```
conf vlan 30 create byport 1

conf vlan 30 ports add 1/6

conf vlan 30 ip create 30.30.30.1/24

conf vlan 30 ip ospf enable
```


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VLAN 40:

```
conf vlan 40 create byport 1
conf vlan 40 ports add 1/7
conf vlan 40 ip create 40.40.40.1/24
conf vlan 40 ip ospf enable
```

VLAN 50:

```
conf vlan 50 create byport 1
conf vlan 50 ports add 1/8
conf vlan 50 ip create 50.50.50.1/24
conf vlan 50 ip ospf enable
```

Parameters

None

Default

None

Related commands

None

conf vlan 60 create byport 1 firewall-peering-vlan

Use this command to configure the firewall-peering VLAN 60.

Syntax

```
conf vlan 60 create byport 1 firewall-peering-vlan cluster 1
conf vlan 60 ip create 60.60.60.1/24
conf vlan 60 ip ospf enable
```

Parameters

None

Default

None

Related commands

None

conf vlan 70 create byport 1

Use this command to configure the untrusted (public side) VLAN 70.

Syntax

```
conf vlan 70 create byport 1 firewall-vlan cluster 1
```


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```
conf vlan 70 ports add 1/4
```

Parameters

None

Default

None

Related commands

None

/cfg/net/if 60

Use this command to configure VLAN 60 and VLAN 70 on the iSD.

Syntax

VLAN 60:

```
/cfg/net/if 60
addr1 60.60.60.2
mask 255.255.255.0
vlan 60
port 2
ena
apply
```

VLAN 70:

```
/cfg/net/if 70
addr1 70.70.70.1
mask 255.255.255.0
vlan 70
port 2
ena
apply
```

Parameters

None

Default

None

Related commands

None

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/cfg/net/ospf en

Use this command to enable OSPF on the VLANs.

Syntax

```
/cfg/net/ospf en

/cfg/net/ospf/if 60

en

/cfg/net/ospf/if 70

ena

apply
```

Parameters

None

Default

None

Related commands

None

conf cluster 1 sync vlan 5

Use this command to create the sync VLAN on switch 1.

Syntax

```
conf cluster 1 sync vlan 5
```

Parameters

None

Default

None

Related commands

None

conf vlan 4094 create byport 1 naap-vlan

Use this command to create and configure NAAP VLAN and firewall cluster on switch 2.

Syntax

```
conf vlan 4094 create byport 1 naap-vlan

conf naap enable

conf naap set-console 3 4

conf cluster 1 create firewall
```


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```
conf cluster 1 add 3 4

conf cluster 1 mgmt vlan 10

conf cluster 1 sync vlan 5
```

Parameters

None

Default

None

Related commands

None

conf vlan 1900 create

Use this command to create the Inter Switch Trunk (IST).

Syntax

```
conf vlan 1900 create byport 1

conf vlan 1900 ip create 1.1.1.1/30

conf mlt 1 create

conf mlt 1 add ports 1/3,1/4

conf mlt 1 perform-tagging enable

conf mlt 1 add vlan 1900

conf mlt 1 ist create ip 1.1.1.2 vlan-id 1900
```

Parameters

None

Default

None

Related commands

None

conf vlan 30 create byport 1 firewall-vlan cluster

Use this command to create the client SMLT.

Syntax

```
conf vlan 30 create byport 1 firewall-vlan cluster 1

conf mlt 2 create

conf mlt 2 smlt create smlt-id 2

conf mlt 2 add vlan 30
```


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```
conf mlt 2 ports add 1/7
```

Parameters
None

Default
None

Related commands
None

conf vlan 50 create byport 1 firewall-vlan cluster
Use this command to create the server SMLT.

Syntax
```
conf vlan 50 create byport 1 firewall-vlan cluster 1

conf mlt 3 create

conf mlt 3 smlt create smlt-id 3

conf mlt 3 add vlan 50

conf mlt 3 ports add 1/8
```

Parameters
None

Default
None

Related commands
None

conf mlt 1 add vlan 5
Use this command to tag VLANs over Inter Switch Trunk (IST) MLT.

Syntax
```
conf mlt 1 add vlan 5

conf mlt 1 add vlan 10

conf mlt 1 add vlan 30

conf mlt 1 add vlan 50
```

Parameters
None

Default
None

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Related commands

None

conf vlan 1900 create byport

Use this command to create the IST.

Syntax

```
conf vlan 1900 create byport 1

conf vlan 1900 ip create 1.1.1.2/30

conf mlt 1 create

conf mlt 1 add ports 1/3,1/4

conf mlt 1 perform-tagging enable

conf mlt 1 add vlan 1900

conf mlt 1 ist create ip 1.1.1.1 vlan-id 1900
```

Parameters

None

Default

None

Related commands

None

conf vlan 30 create byport 1 firewall-vlan cluster

Use this command to create the client SMLT.

Syntax

```
conf vlan 30 create byport 1 firewall-vlan cluster 1

conf mlt 2 create

conf mlt 2 smlt create smlt-id 2

conf mlt 2 add vlan 30

conf mlt 2 ports add 1/7
```

Parameters

None

Default

None

Related commands

None

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conf vlan 50 create byport 1 firewall-vlan cluster

Use this command to create the server SMLT.

Syntax

```
conf vlan 50 create byport 1 firewall-vlan cluster 1

conf mlt 3 create

conf mlt 3 smlt create smlt-id 3

conf mlt 3 add vlan 50

conf mlt 3 ports add 1/8
```

Parameters

None

Default

None

Related commands

None

conf mlt 1 add vlan 5

Use this command to tag VLANs over IST MLT.

Syntax

```
conf mlt 1 add vlan 5

conf mlt 1 add vlan 10

conf mlt 1 add vlan 30

conf mlt 1 add vlan 50
```

Parameters

None

Default

None

Related commands

None

conf vlan 30 create byport 1

Use this command to configure SMLT on switch-A and switch-B.

Syntax

```
conf vlan 30 create byport 1

conf vlan 30 ports add 1/1-1/2

conf mlt 2 create
```


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```
conf mlt 2 add vlan 30
```

Parameters
None

Default
None

Related commands
None

/cfg/net/vrrp/ha y
Use this command to enable High Availability (HA).

Syntax
```
/cfg/net/vrrp/ha y

apply
```

Parameters
None

Default
None

Related commands
None

/cfg/net/routes/add
Use this command to add a default static route.

Syntax
```
/cfg/net/routes/add 0.0.0.0 0.0.0.0 30.30.30.2
```

Parameters
None

Default
None

Related commands
None

/cfg/net/if 5
Use this command to configure sync VLAN 5.

Syntax
```
/cfg/net/if 5
```


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```
addr1 5.5.5.1
addr2 5.5.5.2
mask 255.255.255.0
vlan 5
port 2
enable
```

Default

None

Parameters

None

Related commands

None

/cfg/fw/sync/ena y

Use this command to enable synchronization.

Syntax

```
/cfg/fw/sync/ena y
apply
```

Parameters

None

Default

None

Related commands

None

/maint/rsh/passportip

Use this command to enable the remote shell client on the firewall iSD.

Syntax

```
/maint/rsh/passportip <ip address>
```

Parameters

Variable	Value
passportip <ip address>	Passport IP address

Default

None

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Related commands

None

config ethernet fw-isd fw-command

Use this command to configure with a single command.

Syntax

config ethernet <ports> fw-isd fw-command <Firewall command>

Parameters

Variable	Value
ethernet <isd-port>	Isd-port is the port number for the ethernet.
fw-command <firewall command>	fw-command can be one of the firewall commands such as **"/cfg/sys/accesslist"**

Default

None

Related commands

None

config naap fw-password-change

Use this command to change the password.

Syntax

config naap fw-password-change

Parameters

Variable	Value
fw-command <firewall command>	fw-command can be one of the firewall commands such as **"/cfg/sys/accesslist"**

Default

None

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Related commands

Variable	Value
connect <dev#> [<NAAP port#>]	Connects to a NAAP Device. • **dev#** is the NAAP device number {1..64}. • **NAAP port#** is the NAAP_TCP Port [Default - 23] {1..100}.
disable	Disables NAAP.
enable	Enables NAAP.
info	Displays NAAP information.
minislot-state <enable|disable> <Slot#> [<Mini-Slot#>]	Enables or disables the specified LaunchPad slot. • **enable|disable** enables or disables a feature. • **Slot#** is the LaunchPad Slot Number {1..10}. • **Mini-Slot#** is the LaunchPad Mini-Slot Number {1..4}.
set-console <Slot#> [<Mini-Slot#>]	Sets the console port on the specified LaunchPad slot.

connect

Use this command to connect to the first Network Access, Authentication, and Accounting Protocol (NAAP) peer device (iSD).

Syntax

connect <dev#> [<NAAP port#>]

Parameters

Variable	Value
connect devt#	Device number for the naap peer device.
NAAP port#	Port number for the NAAP peer device.

Default

None

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Related commands

Variable	Value
info	Info is the information menu used to display current information of the system.

/boot

Use this command to upgrade software and reboot.

Syntax

/boot

Parameters

None

Default

None

Related commands

None

Main/cfg/fw/client/add/

Use this command to allow SMART Client access to the iSDs.

Syntax

>> Main#/cfg/fw/client/add/<Network SMART Client IP address>

Parameters

Variable	Value
Network SMART Client IP address	The IP address of the Network Smart Server.

Default

None

Related commands

Variable	Value
apply	Applies the changes made.
ena	Enables the changes made.
dis	Dis disables the FireWall-1 unit.

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config cluster add-tps

Use this command to add TPS to a cluster with a firewall.

Syntax

config cluster <cluster-id> add-tps <slot#> <Mini-Slot#>

Parameters

Variable	Value
<cluster-id>S	Specifies the cluster ID in the range of 1 to 64.
<Mini-Slot#>	Minislot is the minislot number ID for the Firewall iSD.
<slot#>	Slot is the slot number ID for the Firewall iSD.

Default

None

Related commands

Variable	Value
add <slot#> <Mini-Slot#>	Adds an ISD to the cluster.
add-ports <ports>	Adds port to a cluster.
create <firewall|is>	Creates a cluster. **firewall|is** specifies the cluster type.
sync vlan <value>	Configures CP sync VLAN. **vlan <value>** is the VLAN ID in the range of 0 to 4093.
delete	Deletes the specified cluster.
info	Displays cluster information.
mgmt vlan <vlan>	Configures management VLAN. **vlan <value>** is the VLAN ID in the range of 0 to 4093.
remove <Slot#> <Mini-Slot#>	Removes an ISD from the cluster.
remove-ports <Slot#> <Mini-Slot#>	Removes ports to cluster.
remove-tps <Slot#> <Mini-Slot#>	Removes a TPS from the cluster.

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config cluster remove-tps

Use this command to remove TPS to a cluster without a firewall.

Syntax

config cluster <cluster-id> remove-tps <slot> <mini-slot>

Parameters

Variable	Value
cluster <cluster-id>	
<minislot>	Minislot is the minislot number ID for the Firewall iSD.
<slot>	Slot is the slot number ID for the Firewall iSD.

Default

None

Related commands

None

tcpdump -i fp1

Use this command to view traffic on the TPS CLI.

Syntax

tcpdump -i fp1

Parameters

None

Default

None

Related commands

None

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IP Routing commands

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telnet

Use this command to use Telnet to connect to the Standby CPU and reset it.

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Syntax

telnet <ipaddr>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address of the Standby CPU.

Default

None

Related commands

None

reset -y

Use this command to reset the Standby CPU.

Syntax

reset -y

Parameters

None

Default

None

Related commands

None

config ip forwarding enable

Use this command to enable IP forwarding entry.

Syntax

config ip forwarding enable

Parameters

None

Default

None

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Related commands

Variable	Value
disable	Disables IP forwarding (routing) on the router or VRF.
info	Displays current forwarding information for the router or VRF.

config ip forwarding info

Use this command to confirm that IP forwarding is enabled.

Syntax

config ip forwarding info

Parameters

None

Default

None

Related commands

Variable	Value
disable	Disables IP forwarding (routing) on the router or VRF.
enable	Enables IP forwarding (routing) on the router or VRF. The default is enable.

config ethernet

Use this command to enable routing on a port.

Syntax

config ethernet <ports> routing enable

Parameters

Variable	Value
<ports>	Indicates the slot and port number of the port you are configuring.

Default

None

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Related commands

Variable	Value
enable	Enables routing for the specified port.
disable	Disables routing for the specified port.

config ip route info

Use this command to display IP route information.

Syntax

config ip route info

show ip route info [ip <value>] [-s <value>] [alternative]

Parameters

Variable	Value
alternative	The **alternative** parameter displays the alternative routes.
ip <value>	Specifies the IP address of the network (a.b.c.d).
-s <value>	The **-s <value>** parameter indicates the subnet in one of the following formats (a.b.c.d/x; a.b.c.d/x.x.x.x; default).

Default

None

Related commands

None

config ip route delete

Use this command to delete the dynamically learned route.

Syntax

config ip route delete <ipaddr/mask> next-hop <value> [next-hop-vrf <value>]

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Parameters

Variable	Value
<ipaddr/mask>	Specifies the IP address and network mask of the dynamic route.
next-hop <value>	**next-hop <value>** specifies the IP address of the next-hop router.

Default

None

Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.

config ip route preference protocol

Use this command to configure the route preference for a protocol.

Syntax

config ip route preference protocol <protocol> <value>

Parameters

Variable	Value
protocol <protocol> <value>	Configures the preference value for the specified protocol. If two protocols have the same configured value, the default value is used as the tie-breaker. • **<protocol>** must be one of the following: static, ospf-intra, ospf-inter, ebgp, ibgp, rip, ospf-extern1, ospf-extern2, staticv6, ospfv3-intra, ospfv3-inter, ospfv3-extern1, or ospfv3-extern2. • **<value>** is from 1 to 255. 0 is reserved for local routes.

Default

None

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Related commands

Variable	Value
`info`	Displays the route preference configured for various protocols.

config ethernet action flushIp

Use this command to flush IP routing tables by port.

Syntax

`config ethernet <ports> action flushIp`

Parameters

Variable	Value
`<ports>`	Specifies the slot and port or list of slot and ports.

Default

None

Related commands

None

config vlan action flushIp

Use this command to flush IP routing tables by VLAN.

Syntax

`config vlan <vid> action flushIp`

Parameters

Variable	Value
`<vid>`	Specifies the VLAN ID.

Default

None

Related commands

None

config bootconfig net mgmt ip

Use this command to configure the IP address and mask for the management port.

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Syntax

config bootconfig net mgmt ip <ipaddr/mask> [cpu-slot <value>]

Parameters

Variable	Value
ip <ipaddr/mask> [cpu-slot <value>]	Specifies the IP address for the network management port. • **<ipaddr/mask>** is the IP address and network mask that you assign to the network management port in one of the following formats: a.b.c.d/x; a.b.c.d/x.x.x.x; default. • **<value>** is the slot ID to which the IP address applies in the range of 3 to 6. If the boot.cfg file is not present on the flash, the network management port (also referred to as the Out of Band [OOB] interface) is assigned a default IP address (192.168.168.168/24 for slot 5 or slot 3 [for an 8003 chassis] and 192.168.168.169/29 for slot 6). If an IP address is already configured for this interface in the boot.cfg file, the switch uses this address.

Default

None

Related commands

Variable	Value
autonegotiate <true|false>	Enables or disables Auto-Negotiation.
bootp <true|false>	Enables or disables bootp. If Bootstrap Protocol is enabled, the switch obtains its IP address automatically.
chk-src-route <true|false>	Enables or disables the switch to block packets that have no route back to the source.
<cpu-net-port>	Specifies the network port. **<cpu-net-port>** options include mgmt, cpu2cpu, or pccard.
enable <true|false>	Enables or disables the port.

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Variable	Value
fullduplex <true|false>	Enables or disables full-duplex mode on the port. Changing the duplex setting for this port from full to half duplex for a 8648GTR port causes a 30-second loss of bidirectional traffic while the software resets.
info	Displays the current configuration.
restart	Shuts down and reinitializes the port.
route [add|del] <netaddr|mask> <gateway>	Specifies the addition or deletion of the route for the network management port. • **<netaddr|mask>** is the IP address and network mask that you assign to the network management port in one the following formats: a.b.c.d/x; a.b.c.d/x.x.x.x; default. • **<gateway>** is the gateway IP address in the format a.b.c.d.
speed <10|100>	Configures the speed for the port as 10 or 100 megabits for every second (Mbit/s).
tftp <ipaddr>	Configures the Trivial File Transfer Protocol (TFTP) IP address in the format a.b.c.d.

config sys set mgmt-virtual-ip

Use this command to configure a virtual IP for the management port.

Syntax

config sys set mgmt-virtual-ip <ipaddr/mask>

Parameters

Variable	Value
<ipaddr/mask>	The **<ipaddr/mask>** parameter specifies the IP address and network mask that you assign to the network management port (a.b.c.d/x; a.b.c.d/x.x.x.x; default).

Default

None

Related commands

None

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save config standby

Use this command to save the configuration to the standby CPU.

Syntax

save config standby

Parameters

None

Default

None

Related commands

None

config vlan ip create

Use this command to assign an IP address to a VLAN.

Syntax

config vlan <vid> ip create <ipaddr/mask> [mac_offset <value>]

Parameters

Variable	Value
create <ipaddr/mask> [mac_offset <value>]	Assigns an IP address and subnet mask to the VLAN. • **<ipaddr/mask>** is the IP address and mask {a.b.c.d}. • **mac_offset <value>** specifies a number by which to offset the MAC address of the VLAN from the chassis MAC address. This ensures that each IP address has a different MAC address.
<vid>	Specifies the VLAN ID (VID). The range is 1 to 4094.

Default

None

Related commands

Variable	Value
delete <ipaddr>	Deletes the specified VLAN IP address.

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Variable	Value
info	Displays VLAN routing characteristics.
Rvs-Path-Chk <enable|disable> [mode <value>]	Enables or disables reverse path checking. **mode <value>** is either exist-only mode or strict mode. In exist-only mode, RPC checks whether the incoming packet source IP address exists in the routing table. If the source IP entry is found, the packet is forwarded as usual; otherwise, the packet is discarded. In strict mode, RPC checks whether the incoming packet source IP address exists in the routing table. If the source IP entry is not found, RPC further checks if the source IP interface matches the packet incoming interface. If they match, the packet is forwarded as usual; otherwise, the packet is discarded. Reverse path checking is supported only on R series modules with R mode enabled.

config vlan vrf

Use this command to associate the VLAN with a VRF instance.

Syntax

config vlan <vid> vrf <vrfName>

Parameters

Variable	Value
<vid>	Specifies the VLAN ID (VID). The range is 1 to 4094.
vrf <vrfName>	Specifies the VRF name.

Default

None

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Related commands

Variable	Value
create <ipaddr/mask> [mac_offset <value>]	Assigns an IP address and subnet mask to the VLAN. • **<ipaddr/mask>** is the IP address and mask {a.b.c.d}. • **mac_offset <value>** specifies a number by which to offset the MAC address of the VLAN from the chassis MAC address. This ensures that each IP address has a different MAC address.
delete <ipaddr>	Deletes the specified VLAN IP address.
info	Displays VLAN routing characteristics.
Rvs-Path-Chk <enable|disable> [mode <value>]	Enables or disables reverse path checking. **mode <value>** is either exist-only mode or strict mode. In exist-only mode, RPC checks whether the incoming packet source IP address exists in the routing table. If the source IP entry is found, the packet is forwarded as usual; otherwise, the packet is discarded. In strict mode, RPC checks whether the incoming packet source IP address exists in the routing table. If the source IP entry is not found, RPC further checks if the source IP interface matches the packet incoming interface. If they match, the packet is forwarded as usual; otherwise, the packet is discarded. Reverse path checking is supported only on R series modules with R mode enabled.

config vlan ip info

Use this command to confirm that the configuration to Associate the VLAN with a VRF instance is correct

Syntax

```
config vlan <vid> ip info
config vlan <vid> vrf <vrfName> ip info
show vlan info ip [<vid>] [port <value>] [vrf <value>]
[vrfids <value>]
```


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Parameters

Variable	Value
<vid>	**<vid>** is the VLAN ID (VID). The range is 1 to 4094.
vrf <vrfName>	Specifies the VRF name.

Default

None

Related commands

None

config ip default-ttl

Use this command to configure the default TTL for all routing protocols.

Syntax

config ip default-ttl <seconds>

Parameters

Variable	Value
default-ttl <seconds>	Configures the default time-to-live (TTL) value for a routed packet. The TTL is the maximum number of seconds before a packet is discarded. **seconds** is a number from 1 to 255. The default value of 255 is used if a time is not supplied in the datagram header.

Default

None

Related commands

Variable	Value
alternative-route <enable|disable>	Enables or disables the Alternative Route feature. The default value is enabled. If the alternative-route parameter is disabled, all existing alternative routes are removed. If the parameter is enabled, all alternative routes are added back.

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Variable	Value
ecmp <enable|disable>	Enables or disables ECMP. The default is disabled. If the ECMP parameter is disabled, all existing ECMP routes are removed. After ECMP is enabled, all ECMP routes are re-added.
ecmp-1-pathlist <prefix-list-name>	Configures one equal-cost path to the same destination prefix. After ECMP is disabled, the default value is 1. After ECMP is enabled, the default is 4. The range for this value is 1 to 4 paths (8 paths for R mode). To remove the policy, enter a blank string. **prefix-list-name** is the name of the policy with a range of 0 to 64 characters. To configure this parameter, you must globally enable ECMP.
ecmp-2-pathlist <prefix-list-name>	Configures up to two equal-cost paths to the same destination prefix. After ECMP is disabled, the default value is 1. After ECMP is enabled, the default is 4. The range for this value is 1 to 4 paths. To remove the policy, enter a blank string. **prefix-list-name** is the name of the policy with a range of 0 to 64 characters. To configure this parameter, you must globally enable ECMP.
ecmp-3-pathlist <prefix-list-name>	Configures up to three equal-cost paths to the same destination prefix. After ECMP is disabled, the default value is 1. After ECMP is enabled, the default is 4. The range for this value is 1 to 4 paths. To remove the policy, enter a blank string. **prefix-list-name** is the name of the policy with a range of 0 to 64 characters. To configure this parameter, you must globally enable ECMP.

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Variable	Value
ecmp-4-pathlist <prefix-list-name>	Configures up to four equal-cost paths to the same destination prefix. After you disable ECMP, the default value is 1. After you enable ECMP, the default is 4. The range for this value is 1 to 4 paths. To remove the policy, enter a blank string. **prefix-list-name** is the name of the policy with a range of 0 to 64 characters. To configure this parameter, you must globally enable ECMP.
ecmp-max-path <integer>	Configures the maximum number of ECMP paths. **integer** is the maximum number of ECMP paths. The range for this number with R mode false is 1 to 4, and with R mode true, the range is 1 to 8.
ecmp-pathlist-apply	Applies changes to all ECMP pathlist configurations.
icmp-redirect-msg <enable|disable>	Enables or disables the switch to send ICMP destination redirect messages.
icmp-unreach-msg <enable|disable>	Enables or disables the unreachable message feature. While enabled, generates Internet Control Message Protocol (ICMP) net unreachable messages if the destination network is not reachable from this router. These messages help determine if the routing switch is reachable over the network. The default is disabled. **ATTENTION** Nortel recommends that you only enable icmp-unreach-msg if it is absolutely required. If icmp-unreach-msg is enabled and a packet is received for which there is no route in the routing table, CPU utilization can dramatically increase.
info	Displays the current global IP configuration.
ip-supernet <enable|disable>	Enables or disables supernetting. If supernetting is globally enabled, the switch can learn routes with a route mask less then 8 bits. Routes with a mask length less than 8 bits cannot have ECMP paths, even if the ECMP feature is globally enabled.

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Variable	Value
max-routes-trap <enable|disable>	Enables or disables the switch to send a trap if the switch exceeds the maximum number of routes.
more-specific-non-local-route <enable|disable>	Enables or disables the more-specific-non-local-route feature. If enabled, the switch can enter a more-specific nonlocal route into the routing table.

config ip ecmp enable

Use this command to enable Equal Cost MultiPath (ECMP).

Syntax

config ip ecmp enable

Parameters

None

Default

None

Related commands

Variable	Value
disable	Disable ECMP.

config ip alternative-route enable

Use this command to enable the Alternative Route feature globally.

Syntax

config ip alternative-route enable

Parameters

None

Default

None

Related commands

Variable	Value
disable	Disables alternative-route feature.

config ip info

Use this command to confirm the correct configuration of global parameters.

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Syntax

config ip info

Parameters

None

Default

None

Related commands

Variable	Value
alternative-route <enable|disable>	Enables or disables the Alternative Route feature. The default value is enabled. If the alternative-route parameter is disabled, all existing alternative routes are removed. If the parameter is enabled, all alternative routes are added back.
default-ttl <seconds>	Configures the default time-to-live (TTL) value for a routed packet. The TTL is the maximum number of seconds before a packet is discarded. **seconds** is a number from 1 to 255. The default value of 255 is used if a time is not supplied in the datagram header.
ecmp <enable|disable>	Enables or disables ECMP. The default is disabled. If the ECMP parameter is disabled, all existing ECMP routes are removed. After ECMP is enabled, all ECMP routes are re-added.
ecmp-1-pathlist <prefix-list-name>	Configures one equal-cost path to the same destination prefix. After ECMP is disabled, the default value is 1. After ECMP is enabled, the default is 4. The range for this value is 1 to 4 paths (8 paths for R mode). To remove the policy, enter a blank string. **prefix-list-name** is the name of the policy with a range of 0 to 64 characters. To configure this parameter, you must globally enable ECMP.

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Variable	Value
ecmp-2-pathlist <prefix-list-name>	Configures up to two equal-cost paths to the same destination prefix. After ECMP is disabled, the default value is 1. After ECMP is enabled, the default is 4. The range for this value is 1 to 4 paths. To remove the policy, enter a blank string. **prefix-list-name** is the name of the policy with a range of 0 to 64 characters. To configure this parameter, you must globally enable ECMP.
ecmp-3-pathlist <prefix-list-name>	Configures up to three equal-cost paths to the same destination prefix. After ECMP is disabled, the default value is 1. After ECMP is enabled, the default is 4. The range for this value is 1 to 4 paths. To remove the policy, enter a blank string. **prefix-list-name** is the name of the policy with a range of 0 to 64 characters. To configure this parameter, you must globally enable ECMP.
ecmp-4-pathlist <prefix-list-name>	Configures up to four equal-cost paths to the same destination prefix. After you disable ECMP, the default value is 1. After you enable ECMP, the default is 4. The range for this value is 1 to 4 paths. To remove the policy, enter a blank string. **prefix-list-name** is the name of the policy with a range of 0 to 64 characters. To configure this parameter, you must globally enable ECMP.
ecmp-max-path <integer>	Configures the maximum number of ECMP paths. **integer** is the maximum number of ECMP paths. The range for this number with R mode false is 1 to 4, and with R mode true, the range is 1 to 8.
ecmp-pathlist-apply	Applies changes to all ECMP pathlist configurations.
icmp-redirect-msg <enable|disable>	Enables or disables the switch to send ICMP destination redirect messages.

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Variable	Value
icmp-unreach-msg <enable|disable>	Enables or disables the unreachable message feature. While enabled, generates Internet Control Message Protocol (ICMP) net unreachable messages if the destination network is not reachable from this router. These messages help determine if the routing switch is reachable over the network. The default is disabled. **ATTENTION** Nortel recommends that you only enable icmp-unreach-msg if it is absolutely required. If icmp-unreach-msg is enabled and a packet is received for which there is no route in the routing table, CPU utilization can dramatically increase.
ip-supernet <enable|disable>	Enables or disables supernetting. If supernetting is globally enabled, the switch can learn routes with a route mask less then 8 bits. Routes with a mask length less than 8 bits cannot have ECMP paths, even if the ECMP feature is globally enabled.
max-routes-trap <enable|disable>	Enables or disables the switch to send a trap if the switch exceeds the maximum number of routes.
more-specific-non-local-route <enable|disable>	Enables or disables the more-specific-non-local-route feature. If enabled, the switch can enter a more-specific nonlocal route into the routing table.

config ip static-route create

Use this command to create an IP static route.

Syntax

config ip static-route create <ipaddr/mask> next-hop <value> cost <value> [preference <value>] [local-next-hop <value>] [next-hop-vrf <value>]

Parameters

Variable	Value
create <ipaddr/mask> next-hop <value> cost <value> [preference <value>] [local-next-hop <value>] [next-hop-vrf <value>]	Adds a static or default route to the router or VRF instance. • **<ipaddr/mask>** is the IP address and mask for the route destination. • **next-hop <value>** is the IP address of the next-hop router (the next router at which

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Variable	Value
	packets must arrive on this route). When you create a black hole static route, configure this parameter to 255.255.255.255 as the IP address of the router through which the specified route is accessible. • **cost <value>** is the route metric. • **preference <value>** is the route preference. • **next-hop <value>** is the IP address of the next-hop router (the next router at which packets must arrive on this route). • **next-hop-vrf <value>** specifies the next-hop VRF.

Default

None

Related commands

Variable	Value
delete <ipaddr/mask> next-hop <value> [next-hop-vrf <value>]	Deletes a static route. • **<ipaddr/mask>** is the IP address and mask for the route destination. • **next-hop <value>** is the IP address of the next-hop router. • **next-hop-vrf <value>** specifies the next-hop VRF.
disable <ipaddr/mask> next-hop <value> [next-hop-vrf <value>]	Disables a static route. • **<ipaddr/mask>** is the IP address and mask for the route destination. • **next-hop <value>** is the IP address of the next-hop router. • **next-hop-vrf <value>** specifies the next-hop VRF.

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Variable	Value
enable <ipaddr/mask> next-hop <value> [next-hop-vrf <value>]	Enables a static route. • **<ipaddr/mask>** is the IP address and mask for the route destination. • **next-hop <value>** is the IP address of the next-hop router. • **next-hop-vrf <value>** specifies the next-hop VRF.
info	Displays characteristics of the static route.
local-next-hop <true|false> <ipaddr/mask> next-hop <value> [next-hop-vrf <value>]	Modifies the static route local-next-hop. A static route with a local next hop is a route that is valid and up when the next hop is active (for example, the switch has a valid ARP entry of the next hop in its ARP database). The switch uses ARP for the next hop to check its availability. A static route with a nonlocal next hop is a route that is active when the next hop is reachable through an IGP (that is, OSPF). You can enter a static route with a next-hop address that is, for example, an address of a remote Internet gateway router. If this gateway router is reachable through an IGP, this static route is activated. The switch in this case checks whether the nonlocal next hop can be reached through an IGP and if the IGP next hop ARP address is active. • **<ipaddr/mask>** is the IP address and mask for the route destination. • **next-hop <value>** is the IP address of the next-hop router. • **next-hop-vrf <value>** specifies the next-hop VRF.
preference <value> <ipaddr/mask> next-hop <value> [next-hop-vrf <value>]	Modifies the static route preference. • **<ipaddr/mask>** is the IP address and mask for the route destination. • **next-hop <value>** is the IP address of the next-hop router. • **next-hop-vrf <value>** specifies the next-hop VRF.

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config ip circuitless-ip-int

Use this command to create a CLIP interface.

Syntax

config ip circuitless-ip-int <id> create <ipaddr/mask>

Parameters

Variable	Value
create <ipaddr/mask>	Creates a CLIP interface. **<ipaddr/mask>** is the IP address and net mask of the circuitless IP interface.

Default

None

Related commands

Variable	Value
area <ipaddr>	Designates an area for the CLIP interface. **<ipaddr>** is the IP address of the OSPF area that is associated with the CLIP.
delete <ipaddr>	Deletes the specified CLIP interface. **<ipaddr>** is the IP address of the CLIP.
ipvpn-lite-capability enable	Enables IP VPN on the CLIP interface.
info	Displays the configured parameters for the CLIP interface.
ospf <enable|disable>	Enables or disables passive mode OSPF for the CLIP interface.
pim <enable|disable>	Enables or disables PIM for the CLIP interface.

config ip circuitless-ip-int enable

Use this command to enable PIM on the CLIP interface.

Syntax

config ip circuitless-ip-int <id> pim enable

Parameters

Variable	Value
<id>	Specifies the integer in the range 1 to 256 that indicates the identification number for the specific CLIP.

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Default

None

Related commands

Variable	Value
area <ipaddr>	Designates an area for the CLIP interface. **<ipaddr>** is the IP address of the OSPF area that is associated with the CLIP.
create <ipaddr/mask>	Creates a CLIP interface. **<ipaddr/mask>** is the IP address and net mask of the circuitless IP interface.
delete <ipaddr>	Deletes the specified CLIP interface. **<ipaddr>** is the IP address of the CLIP.
ipvpn-lite-capability enable	Enables IP VPN on the CLIP interface.
info	Displays the configured parameters for the CLIP interface.
ospf <enable|disable>	Enables or disables passive mode OSPF for the CLIP interface.
pim <enable|disable>	Enables or disables PIM for the CLIP interface.

config ip circuitless-ip-int ipvpn-lite-capability enable

Use this command to enable IP VPN on the CLIP interface.

Syntax

config ip circuitless-ip-int <id> ipvpn-lite-capability enable

Parameters

none

Default

None

Related commands

Variable	Value
disable	Enables IP VPN on the CLIP interface.

config ip circuitless-ip-int area

Use this command to define the area.

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Syntax

config ip circuitless-ip-int <id> area <ipaddr>

Parameters

Variable	Value
area <ipaddr>	Designates an area for the CLIP interface. **<ipaddr>** is the IP address of the OSPF area that is associated with the CLIP.

Default

None

Related commands

None

config ip circuitless-ip-int info

Use this command to show current level parameter settings and next level directories.

Syntax

config ip circuitless-ip-int info
show ip circuitless-ip-int info [vrf <value>] [vrfids <value>]

Parameters

None

Default

None

Related commands

Variable	Value
area <ipaddr>	Designates an area for the CLIP interface. **<ipaddr>** is the IP address of the OSPF area that is associated with the CLIP.
create <ipaddr/mask>	Creates a CLIP interface. **<ipaddr/mask>** is the IP address and net mask of the circuitless IP interface.
delete <ipaddr>	Deletes the specified CLIP interface. **<ipaddr>** is the IP address of the CLIP.
ipvpn-lite-capability enable	Enables IP VPN on the CLIP interface.

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Variable	Value
ospf <enable|disable>	Enables or disables passive mode OSPF for the CLIP interface.
pim <enable|disable>	Enables or disables PIM for the CLIP interface.

config ip dhcp-relay

Use this command to configure Dynamic Host Configuration Protocol (DHCP) parameters globally.

Syntax

config ip dhcp-relay

Parameters

None

Default

None

Related commands

Variable	Value
create-fwd-path agent <value> server <value> [mode <value>] [state <value>]	Configures the forwarding path from the client to the server. • **agent <value>** is the IP address configured on an interface (a locally configured IP address) that must be configured to forward or relay BootP or DHCP messages. • **server <value>** is the IP address of the DHCP server on the network. If this IP address corresponds to the locally configured IP network, the DHCP packet is broadcast out of the interface. • **mode <value>** indicates whether to forward BootP messages only, DHCP messages only, or both {bootp | dhcp | bootp_dhcp}. • **state <value>** enables or disables the forwarding path.

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Variable	Value
delete-fwd-path agent <value> server <value>	Deletes the forwarding path from the client to the server. • **agent <value>** is the IP address configured on an interface (a locally configured IP address). • **server <value>** is the IP address of the DHCP server on the network.
disable-fwd-path agent <value> server <value>	Disables DHCP relaying on the path from the IP address to the server. This is the default. • **agent <value>** is the IP address configured on an interface (a locally configured IP address). • **server <value>** is the IP address of the DHCP server on the network.
enable-fwd-path agent <value> server <value>	Enables DHCP relaying on the path from the IP address to the server. • **agent <value>** is the IP address configured on an interface (a locally configured IP address). • **server <value>** is the IP address of the DHCP server on the network. If this IP address corresponds to the locally configured IP network, the DHCP packet is broadcast out from the interface.
info	Displays the current DHCP global configuration on the switch.
mode <mode> agent <value> server <value>	Modifies DHCP mode to forward BootP messages only, DHCP messages only, or both. The default is both. • **mode** is {bootp | dhcp | bootp_dhcp}. • **agent <value>** is the IP address configured on an interface (a locally configured IP address). • **server <value>** is the IP address of the DHCP server on the network.

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config ip udpfwd protocol

Use this command to configure User Datagram Protocol (UDP) protocols.

Syntax

config ip udpfwd protocol <udpport>

Parameters

Variable	Value
udpport	The UDP protocol port number in the range of 1 to 65535.

Default

None

Related commands

Variable	Value
create <protoname>	Creates a new UDP protocol. **protoname** is the UDP protocol name as a string.
delete	Deletes a UDP port protocol.
info	Displays created or deleted UDP protocols.

config ip udpfwd portfwd

Use this command to configure a UDP port forward entry.

Syntax

config ip udpfwd portfwd

Parameters

None

Default

None

Related commands

Variable	Value
add-portfwd <udpport> <ipaddr>	Adds a UDP protocol port to the specified port forwarding list. • **udpport** is a UDP protocol port in the range of 1 to 65535. • **ipaddr** is an IP address in a.b.c.d format.

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Variable	Value
info	Displays the current configuration for the port forward list ID.
remove-portfwd <udpport> <ipaddr>	Removes a protocol port forwarding entry and IP address from the list. • **udpport** is a UDP protocol port in the range of 1 to 65535. • **ipaddr** is an IP address in a.b.c.d format.

config ip udpfwd portfwdlist

Use this command to configure the UDP port forwarding list.

Syntax

config ip udpfwd portfwdlist <fwdlistid>

Parameters

Variable	Value
fwdlistid	The port forwarding list number in the range of 1 to 1000.

Default

None

Related commands

Variable	Value
add-portfwd <udpport> <ipaddr>	Adds a UDP protocol port to the specified port forwarding list. • **udpport** is a UDP protocol port in the range of 1 to 65535. • **ipaddr** is an IP address in a.b.c.d format.
create	Creates a UDP port forwarding list.
delete	Deletes a port forwarding list ID.
info	Displays the current configuration for the port forward list ID.

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Variable	Value
name <name>	Assigns a name to the UDP port forwarding list. • **name** is an alphabetic string.
remove-portfwd <udpport> <ipaddr>	Removes a protocol port forwarding entry and IP address from the list. • **udpport** is a UDP protocol port in the range of 1 to 65535. • **ipaddr** is an IP address in a.b.c.d format.

config ip udpfwd interface

Use this command to configure UDP forward interfaces.

Syntax

config ip udpfwd interface <ipaddr>

Parameters

Variable	Value
ipaddr	Indicates the IP address of the selected interface.

Default

None

Related commands

Variable	Value
broadcastmask <mask>	Sets the interface broadcast mask (the interface broadcast mask can be different from the interface mask) **mask** is an IP address in a.b.c.d format.
create <fwdlistid>	Assigns a forwarding list ID in the range of 1 to 1000 to an interface IP address.
delete	Removes the forwarding list from the IP address.
info	Displays the current configuration of the UDP interface.
maxttl <maxttl>	Sets maximum time-to-live (TTL) value for the UDP broadcast forwarded by the interface.
udpportfwdlist <fwdlistid>	The port forwarding list, in the range of 1 through 1000.

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config ip arp

Use this command to configure Address Resolution Protocol (ARP) static entries.

Syntax

config ip arp

Parameters

None

Default

None

Related commands

Variable	Value
add ports <value> ip <value> mac <value> [vlan <value>]	Adds a static entry to the ARP table. • **ports <value>** are the port numbers, shown as slot/port. • **ip <value>** is the IP address in format {a.b.c.d}. • **mac <value>** is the 48-bit hardware MAC address in the format {0x00:0x00:0x00:0x00:0x00:0x00}. • **vlan <value>** is the name or number of a VLAN.
aging <minutes>	Sets the length of time in seconds an entry remains in the ARP table before timeout. **minutes** is a number between 1 and 32767.
arpreqthreshold <integer>	Configures the maximum number of outstanding ARP requests that a switch can generate. • **integer** is in the range of 50 to 1000. The default value is 500.

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Variable	Value
delete <ipaddr>	Removes an entry from the ARP table. **ipaddr** is the IP address in a.b.c.d format.
info	Displays ARP characteristics.
multicast-mac-flooding <enable|disable>	Determines whether ARP entries for multicast MAC addresses are associated with the VLAN or the port interface on which they were learned.

config ip arp vlan

Use this command to clear ARP timers.

Syntax

clear ip arp vlan <vid>

Parameters

Variable	Value
<vid>	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

config ip prefix-list

Use this command to configure prefix lists.

Syntax

config ip prefix-list <name>

Parameters

None

Default

None

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Related commands

Variable	Value
add-prefix <ipaddr|mask> [maskLenFrom <value>] [maskLenTo <value>]	Adds a prefix entry to the prefix list. • **ipaddr|mask** is the IP address and mask. • **maskLenFrom <value>** is the lower bound mask length. The default is the mask length. • **maskLenTo <value>** is the higher bound mask length. The default is the mask length. Lower bound and higher bound mask lengths together can define a range of networks.
delete	Deletes the prefix list.
info	Displays all of the prefixes in a given list.
name <name>	Renames the specified prefix list. The name length is from 1 to 64 characters.
remove-prefix <ipaddr/mask>	Removes a prefix entry from the prefix list. **<ipaddr/mask>** is the IP address and mask.

config ip route-policy

Use this command to create a route policy.

Syntax

config ip route-policy <policy_name> seq <seq_number> create

Parameters

Variable	Value
<policy-name>	The route policy name (1 to 64 characters in length).
<seq_number>	The integer sequence number in the range of 1 to 65535. A sequence number acts as an implicit preference; a lower sequence number is preferred.

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Default

None

Related commands

Variable	Value
action <permit|deny>	Specifies the action to take when a permit or deny policy is selected for a specific route. Permit allows the route, deny ignores the route.
create	Creates a route policy with a policy name and a sequence number. When you create a route policy in the CLI, the ID is internally generated using an automated algorithm. When you create a route policy in Device Manager, you can manually assign the ID number.
delete	Deletes a route policy with a policy name and a sequence number.
disable	Disables a route policy with a policy name and a sequence number.
enable	Enables a route policy with a policy name and a sequence number.
info	Displays current configuration information about the policy sequence number.
match-as-path <as-list> [clear]	If configured, the switch matches the as-path attribute of the Border Gateway Protocol (BGP) routes against the contents of the specified AS-lists. This field is used only for BGP routes and ignored for all other route types. • as-list specifies the list IDs of up to four AS-lists, separated by a comma. • [clear] removes the configured value for match-as-path.

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Variable	Value
match-community <community-list> [clear]	If configured, the switch matches the community attribute of the BGP routes against the contents of the specified community lists. This field is used only for BGP routes and ignored for all other route types. • community-list specifies the list IDs of up to four defined community lists, separated by a comma. • [clear] removes the configured value for match-community.
match-community-exact <enable|disable> [clear]	When disabled, match-community-exact results in a match when the community attribute of the BGP routes matches any entry of any community-list specified in match-community. When enabled, match-community-exact results in a match when the community attribute of the BGP routes matches all of the entries of all the community lists specified in match-community. • [clear] removes the configured value for match-community-exact.
match-interface <prefix-list> [clear]	If configured, the switch matches the IP address of the interface by which the Routing Information Protocol (RIP) route was learned against the contents of the specified prefix list. This field is used only for RIP routes and ignored for all other route types. • prefix-list specifies the name of up to four defined prefix lists, separated by a comma. • [clear] removes the configured value for match-interface.
match-metric <metric> [clear]	If configured, the switch matches the metric of the incoming advertisement or existing route against the specified value. If 0, this field is ignored. • metric is 1 to 65535. The default is 0. • [clear] removes the configured value for match-metric.

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Variable	Value
match-network <prefix-list> [clear]	If configured, the switch matches the destination network against the contents of the specified prefix lists. • prefix-list specifies the name of up to four defined prefix lists, separated by a comma. • [clear] removes the configured value for match-network.
match-next-hop <prefix-list> [clear]	If configured, matches the next-hop IP address of the route against the contents of the specified prefix list. This field applies only to non-local routes. • prefix-list specifies the name of up to four defined prefix lists, separated by a comma. • [clear] removes the configured value for match-next-hop.
match-protocol <protocol name> [clear]	If configured, matches the protocol through which the route is learned. Protocol name is any|xxx, where xxx is local, OSPF, External BGP (EBGP), Internal BGP (IBGP), RIP, Distance Vector Multicast Routing Protocol (DVMRP), static, or any combination. The value is a string length of 0 to 40.
match-route-src <prefix-list> [clear]	If configured, matches the next-hop IP address for RIP routes and advertising router IDs for OSPF routes against the contents of the specified prefix list. This option is ignored for all other route types. • prefix-list specifies the name of up to four defined prefix lists, separated by a comma. • [clear] removes the configured value for match-route-src.
match-route-type <route-type>	Sets a specific route type to match (applies only to OSPF routes). route-type specifies OSPF routes of the specified type only (External-1 or External-2). Any other value is ignored.

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Variable	Value
match-tag <tag> [clear]	Specifies a list of tags used during the match criteria process. Contains one or more tag values. • tag is a value from 0 to 256. • [clear] removes the configured values for match-tag.
match vrf [vrf <value>] [vrfids <value>] [clear]	Sets a specific VRF to match (applies only to OSPF routes).
name <policy_name>	Renames a created policy and changes the name field for all sequence numbers under the given policy.
<policy-name>	The route policy name (1 to 64 characters in length).
<seq_number>	The integer sequence number in the range of 1 to 65 535. A sequence number acts as an implicit preference; a lower sequence number is preferred.
set-as-path <as-list-id> [clear]	If configured, the switch adds the AS number of the AS-list to the BGP routes that match this policy. • as-list-id specifies the list ID of up to four defined as-lists separated by a comma. • [clear] removes the configured value for set-as-path.
set-as-path-mode <tag|prepend> [clear]	Indicates the path mode.
set-automatic-tag <enable|disable> [clear]	Sets the tag automatically. Used for BGP routes only.
set-community <community-list> [clear]	If configured, the switch adds the community number of the community list to the BGP routes that match this policy. • community-list specifies the list ID of up to four defined community lists separated by a comma. • [clear] removes the configured value for set-community.

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Variable	Value
set-community-mode <unchanged|additive|none> [clear]	Sets the community mode. • additive—the switch prepends the community number of the community list specified in set-community to the old community path attribute of the BGP routes that match this policy. • none—the switch removes the community path attribute of the BGP routes that match this policy to the specified value. • [clear]removes the configured value for set-community-mode.
set-injectlist <prefix-list> [clear]	If configured, the switch replaces the destination network of the route that matches this policy with the contents of the specified prefix list. • prefix-list specifies one prefix list by name. • [clear] removes the configured value for set-injectlist.
set-local-pref <pref-value> [clear]	A value used during the route decision process in the BGP protocol. Applicable to BGP only.
set-mask <ipaddr>	If configured, sets the mask of the route that matches this policy. This applies only to RIP accept policies. ipaddr is a valid contiguous IP mask.
set-metric <metric-value> [clear]	If configured, sets the metric value for the route while announcing a redistribution. The default is 0. If the default is configured, the original cost of the route is advertised into OSPF; for RIP, the original cost of the route or default-import-metric is used.
set-metric-type <metric-type> [clear]	If configured, sets the metric type for the routes to announce into the OSPF domain that matches this policy. The default is type 2. This field is applicable only for OSPF announce policies.
set-next-hop <ipaddr> [clear]	Specifies the IP address of the next-hop router. Ignored for Distance Vector Multicast Routing Protocol (DVMRP) routes.

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Variable	Value
set-nssa-pbit <enable|disable>	Sets the not so stubby area (NSSA) translation P bit. Applicable to OSPF announce policies only.
set-origin <origin> [clear]	If configured, the switch changes the origin path attribute of the BGP routes that match this policy to the specified value.
set-origin-egp-as <origin-egp-as> [clear]	Indicates the remote autonomous system number. Applicable to BGP only.
set-preference <pref-value> [clear]	Setting the preference to a value greater than 0 specifies the route preference value to assign to the routes that match this policy. This applies to accept policies only. • pref-value is a value from 0 to 255. The default is 0. If the default is configured, the global preference value is used. • [clear] removes the configured value for set-preference.
set-tag <tag> [clear]	Sets the tag of the destination routing protocol. If not specified, the switch forwards the tag value in the source routing protocol. A value of 0 indicates that this parameter is not set.
set-weight <weight> [clear]	The weight value for the routing table. For BGP, this value overrides the weight configured through NetworkTableEntry, FilterListWeight, or NeighborWeight. Used for BGP only. A value of 0 indicates that this parameter is not set.

config ip route-policy match-metric

Use this command to define the fields the policy enforces.

Syntax

config ip route-policy <policy name> seq <seq number> match-metric <metric> [clear]

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Parameters

Variable	Value
<policy-name>	The route policy name (1 to 64 characters in length).
<seq_number>	The integer sequence number in the range of 1 to 65 535. A sequence number acts as an implicit preference; a lower sequence number is preferred.

Default

None

Related commands

Variable	Value
action <permit|deny>	Specifies the action to take when a permit or deny policy is selected for a specific route. Permit allows the route, deny ignores the route.
create	Creates a route policy with a policy name and a sequence number. When you create a route policy in the CLI, the ID is internally generated using an automated algorithm. When you create a route policy in Device Manager, you can manually assign the ID number.
delete	Deletes a route policy with a policy name and a sequence number.
disable	Disables a route policy with a policy name and a sequence number.
enable	Enables a route policy with a policy name and a sequence number.
info	Displays current configuration information about the policy sequence number.
match-as-path <as-list> [clear]	If configured, the switch matches the as-path attribute of the Border Gateway Protocol (BGP) routes against the contents of the specified AS-lists. This field is used only for BGP routes and ignored for all other route types. • as-list specifies the list IDs of up to four AS-lists, separated by a comma. • [clear] removes the configured value for match-as-path.

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Variable	Value
match-community <community-list> [clear]	If configured, the switch matches the community attribute of the BGP routes against the contents of the specified community lists. This field is used only for BGP routes and ignored for all other route types. • community-list specifies the list IDs of up to four defined community lists, separated by a comma. • [clear] removes the configured value for match-community.
match-community-exact <enable|disable> [clear]	When disabled, match-community-exact results in a match when the community attribute of the BGP routes matches any entry of any community-list specified in match-community. When enabled, match-community-exact results in a match when the community attribute of the BGP routes matches all of the entries of all the community lists specified in match-community. • [clear] removes the configured value for match-community-exact.
match-interface <prefix-list> [clear]	If configured, the switch matches the IP address of the interface by which the RIP route was learned against the contents of the specified prefix list. This field is used only for RIP routes and ignored for all other route types. • prefix-list specifies the name of up to four defined prefix lists, separated by a comma. • [clear] removes the configured value for match-interface.
match-metric <metric> [clear]	If configured, the switch matches the metric of the incoming advertisement or existing route against the specified value. If 0, this field is ignored. • metric is 1 to 65535. The default is 0. • [clear] removes the configured value for match-metric.

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Variable	Value
match-network <prefix-list> [clear]	If configured, the switch matches the destination network against the contents of the specified prefix lists. • prefix-list specifies the name of up to four defined prefix lists, separated by a comma. • [clear] removes the configured value for match-network.
match-next-hop <prefix-list> [clear]	If configured, matches the next-hop IP address of the route against the contents of the specified prefix list. This field applies only to non-local routes. • prefix-list specifies the name of up to four defined prefix lists, separated by a comma. • [clear] removes the configured value for match-next-hop.
match-protocol <protocol name> [clear]	If configured, matches the protocol through which the route is learned. • protocol name is any|xxx, where xxx is local, OSPF, External BGP (EBGP), Internal BGP (IBGP), RIP, Distance Vector Multicast Routing Protocol (DVMRP), static, or any combination. The value is a string length of 0 to 40.
match-route-src <prefix-list> [clear]	If configured, matches the next-hop IP address for RIP routes and advertising router IDs for OSPF routes against the contents of the specified prefix list. This option is ignored for all other route types. • prefix-list specifies the name of up to four defined prefix lists, separated by a comma. • [clear] removes the configured value for match-route-src.
match-route-type <route-type>	Sets a specific route type to match (applies only to OSPF routes). • route-type specifies OSPF routes of the specified type only (External-1 or External-2). Any other value is ignored.

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Variable	Value
match-tag <tag> [clear]	Specifies a list of tags used during the match criteria process. Contains one or more tag values. • tag is a value from 0 to 256. • [clear] removes the configured values for match-tag.
match vrf [vrf <value>] [vrfids <value>] [clear]	Sets a specific VRF to match (applies only to OSPF routes).
name <policy_name>	Renames a created policy and changes the name field for all sequence numbers under the given policy.
<policy-name>	The route policy name (1 to 64 characters in length).
<seq_number>	The integer sequence number in the range of 1 to 65 535. A sequence number acts as an implicit preference; a lower sequence number is preferred.
set-as-path <as-list-id> [clear]	If configured, the switch adds the AS number of the AS-list to the BGP routes that match this policy. • as-list-id specifies the list ID of up to four defined as-lists separated by a comma. • [clear] removes the configured value for set-as-path.
set-as-path-mode <tag|prepend> [clear]	Indicates the path mode.
set-automatic-tag <enable|disable> [clear]	Sets the tag automatically. Used for BGP routes only.
set-community <community-list> [clear]	If configured, the switch adds the community number of the community list to the BGP routes that match this policy. • community-list specifies the list ID of up to four defined community lists separated by a comma. • [clear] removes the configured value for set-community.

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Variable	Value
set-community-mode <unchanged|additive|none> [clear]	Sets the community mode. • additive—the switch prepends the community number of the community list specified in set-community to the old community path attribute of the BGP routes that match this policy. • none—the switch removes the community path attribute of the BGP routes that match this policy to the specified value. • [clear]removes the configured value for set-community-mode.
set-injectlist <prefix-list> [clear]	If configured, the switch replaces the destination network of the route that matches this policy with the contents of the specified prefix list. • prefix-list specifies one prefix list by name. • [clear] removes the configured value for set-injectlist.
set-local-pref <pref-value> [clear]	A value used during the route decision process in the BGP protocol; applicable to BGP only.
set-mask <ipaddr>	If configured, sets the mask of the route that matches this policy. This applies only to RIP accept policies. • ipaddr is a valid contiguous IP mask.
set-metric <metric-value> [clear]	If configured, sets the metric value for the route while announcing a redistribution. The default is 0. If the default is configured, the original cost of the route is advertised into OSPF; for RIP, the original cost of the route or default-import-metric is used.
set-metric-type <metric-type> [clear]	If configured, sets the metric type for the routes to announce to the OSPF domain that matches this policy. The default is type 2. This field is applicable only for OSPF announce policies.
set-next-hop <ipaddr> [clear]	Specifies the IP address of the next-hop router. Ignored for Distance Vector Multicast Routing Protocol (DVMRP) routes.
set-nssa-pbit <enable|disable>	Sets the not so stubby area (NSSA) translation P bit. Applicable to OSPF announce policies only.
set-origin <origin> [clear]	If configured, the switch changes the origin path attribute of the BGP routes that match this policy to the specified value.

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Variable	Value
set-origin-egp-as <origin-egp-as> [clear]	Indicates the remote autonomous system number. Applicable to BGP only.
set-preference <pref-value> [clear]	Specifies the route preference value to assign to the routes that match this policy, on setting the preference to a value greater than 0. • pref-value is a value from 0 to 255. The default is 0. If the default is configured, the global preference value is used. • [clear] removes the configured value for set-preference.
set-tag <tag> [clear]	Sets the tag of the destination routing protocol. If not specified, the switch forwards the tag value in the source routing protocol. A value of 0 indicates that this parameter is not set.
set-weight <weight> [clear]	The weight value for the routing table. For BGP, this value overrides the weight configured through NetworkTableEntry, FilterListWeight, or NeighborWeight. Used for BGP only. A value of 0 indicates that this parameter is not set.

config ip route-policy action

Use this command to define the action the policy takes.

Syntax

config ip route-policy <policy_name> seq <seq_number> action <permit|deny>

Parameters

Variable	Value
<policy-name>	The route policy name (1 to 64 characters in length).
<seq_number>	The integer sequence number in the range of 1 to 65 535. A sequence number acts as an implicit preference; a lower sequence number is preferred.

Default

None

Related commands

None

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config ip route-policy info

Use this command to display current information about the IP route policy.

Syntax

```
config ip route-policy <policyname> seq <seq_number> info
show ip route-policy info [name <value>] [seq <value>]
[all] [vrf <value>] [vrfids <value>]
```

Parameters

Variable	Value
<policy-name>	The route policy name (1 to 64 characters in length).
<seq_number>	The integer sequence number in the range of 1 to 65 535. A sequence number acts as an implicit preference; a lower sequence number is preferred.

Default

None

Related commands

None

config ip route-policy seq

Use this command to enable the route policy.

Syntax

```
config ip route-policy <policy_name> seq <seq_number>
enable
```

Parameters

Variable	Value
<policy-name>	The route policy name (1 to 64 characters in length).
<seq_number>	The integer sequence number in the range of 1 to 65 535. A sequence number acts as an implicit preference; a lower sequence number is preferred.

Default

None

Related commands

None

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config ip route-discovery disable

Use this command to set alias port name.

Syntax

config ip route-discovery disable

Parameters

None

Default

None

Related commands

Variable	Value
enable	Enables route discovery.
info	Displays current level parameter settings and next level directories.

config ip ospf accept adv-rtr

Use this command to configure a policy to accept external routes from a router.

Syntax

config ip ospf accept adv-rtr <ipaddr>

Parameters

Variable	Value
ipaddr	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

Variable	Value
apply	Applies the OSPF accept policy changes.
create	Creates an OSPF accept entry for a specified advertising router.
delete	Deletes an OSPF accept entry for a specified advertising router.
disable	Disables an OSPF accept entry for a specified advertising router.
enable	Enables an OSPF accept entry for a specified advertising router.

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Variable	Value
info	Displays OSPF accept configuration information for a specified advertising router.
metric-type <type1|type2|any>	Indicates the OSPF external type. This parameter describes which types of OSPF external routes match this entry. • **any** means match all external routes. • **type1** means match external type 1 only. • **type2** means match external type 2 only.
route-policy <policy_name>	Specifies the name of the route policy to be used for filtering external routes advertised by the specified advertising router before accepting into the routing table.

config ip ospf accept

Use this command to apply an Open Shortest Path First (OSPF) accept policy.

Syntax

config ip ospf accept adv-rtr <ipaddr> apply

Parameters

None

Default

None

Related commands

Variable	Value
apply	Applies OSPF accept policies.

config vlan rsmlt

Use this command to configure Routed SMLT (RSMLT) on a VLAN.

Syntax

config vlan <vid> ip rsmlt

Parameters

Variable	Value
vid	The VLAN ID in the range of 1 to 4094.

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Default

None

Related commands

Variable	Value
disable	Disables RSMLT on the VLAN.
enable	Enables RSMLT on the VLAN.
holddown-timer <seconds>	Defines how long the recovering/rebooting switch remains in a non-Layer 3 forwarding mode for the peer router MAC address. **seconds** is the timer value in seconds. The range of the value is from 0 to 3600 seconds.
holdup-timer <seconds>	Defines how long the RSMLT switch maintains forwarding for its peer. **seconds** is the timer value in seconds. The value is a range from 0 to 3600 seconds or 9999. 9999 means infinity.
info	Displays the RSMLT local and peer information.

config ip rsmlt rsmlt-edge-support

Use this command to enable RSMLT-edge .

Syntax

config ip rsmlt rsmlt-edge-support <enable|disable>

Parameters

None

Default

None

Related commands

Variable	Value
clear-rsmlt-peer [<vid>]	Clears RSMLT Peer information.
info	Displays edge support peer information.

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config ip bfd enable

Use this command to enable the BFD globally.

Syntax

config ip bfd enable

Parameters

Variable	Value
disable	Disables BFD globally
enable	Enables BFD globally

Default

None

Related commands

Variable	Value
hold-off <seconds>	Specifies the BFD holddown time interval, from 0 to 65535 seconds. If set to 0, the hold-down timer is disabled.
info	Shows information about the BFD configuration
traps <enable|disable>	Enables Simple Network Management Protocol (SNMP) traps for BFD

config vlan ip bfd

Use this command to configure BFD on a VLAN.

Syntax

config vlan <vlan-id> ip bfd enable

Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

The default is 1.

Related commands

Variable	Value
disable	Disables BFD on the VLAN.

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Variable	Value
enable	Enables BFD on the VLAN.
info	Shows information about the BFD configuration.
multiplier <value>	Specifies the detection time multiplier for asynchronous mode. The negotiated transmit interval, multiplied by this multiplier, provides the detection time for the transmitting system. The range is 1 to 20.
rx-interval <milliseconds>	Specifies the minimum required interval that the switch supports between received BFD Control packets. The range is to 100 to 65535 milliseconds, with a default of 200.
tx-interval <milliseconds>	Specifies the minimum interval that the local switch would like to use when it transmits BFD Control packets. The range is 100 to 65535 milliseconds, with a default of 200.

config vlan ip bfd rx-interval

Use this command to configure BFD on a brouter port.

Syntax

config vlan <vlan-id> ip bfd rx-interval <milliseconds>

Parameters

Variable	Value
milliseconds	Specifies the transmit interval in the range of 100 to 65535.
<vlan-id>	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

config vlan ip bfd tx-interval

Use this command to configure the minimum transmit interval.

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Syntax

config vlan <vlan-id> ip bfd tx-interval <milliseconds>

Parameters

Variable	Value
milliseconds	Specifies the transmit interval in the range of 100 to 65535.
vlan-id	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

Related commands

None

config vlan ip bfd multiplier

Use this command to configure the multiplier.

Syntax

config vlan <vlan-id> ip bfd multiplier <value>

Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

config ethernet ip bfd

Use this command to enable BFD on the port .

Syntax

config ethernet <ports> ip bfd enable

Parameters

None

Default

None

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Related commands

Variable	Value
disable	Disables BFD on the interface.
enable	Enables BFD on the interface.
info	Shows information about the BFD configuration.
multiplier <value>	Specifies the detection time multiplier for asynchronous mode. The negotiated transmit interval, multiplied by this multiplier, provides the detection time for the transmitting system. The range is 1 to 20.
rx-interval <milliseconds>	Specifies the minimum required interval that the switch supports between received BFD Control packets. The range is to 100 to 65535 milliseconds, with a default of 200.
tx-interval <milliseconds>	Specifies the minimum interval that the local switch would like to use when it transmits BFD Control packets. The range is 100 to 65535 milliseconds, with a default of 200.

config ethernet ip bfd rx-interval

Use this command to configure the minimum receive interval.

Syntax

config ethernet <ports> ip bfd rx-interval <milliseconds>

Parameters

Variable	Value
milliseconds	
vlan-id	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

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config ethernet ip bfd tx-interval

Use this command to configure the minimum transmit interval.

Syntax

config ethernet <ports> ip bfd tx-interval <milliseconds>

Parameters

Variable	Value
port	Specifies the port or range of ports to configure in the slot/port format.
milliseconds	Specifies the transmit interval in the range of 100 to 65535.

Default

None

Related commands

None

config ethernet ip bfd multiplier

Use this command to configure the multiplier.

Syntax

config ethernet <ports> ip bfd multiplier <value

Parameters

Variable	Value
<port>	Specifies the port or range of ports to configure in the slot/port format.
<value>	Detects multiplier in the range of 1 to 20.

Default

None

Related commands

None

config ip ospf interface

Use this command to enable BFD on an OSPF interface.

Syntax

config ip ospf interface <ipaddr> bfd <enable|disable>

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Parameters

Variable	Value
`<ip-addr>`	Specifies the IP address in the {a.b.c.d} format.
`<enable|disable>`	Turns the BFD on or off.

Default

None

Related commands

None

config ip bgp neighbour

Use this command to enable BFD on a BGP peer.

Syntax

`config ip bgp neighbor <ip-addr> bfd <enable|disable>`

Parameters

Variable	Value
`<ip-addr>`	Specifies the IP address in the {a.b.c.d} format.
`<enable|disable>`	Turns the BFD on or off.

Default

None

Related commands

None

config ip static-route next-hop

Use this command to enable BFD on a static route.

Syntax

`config ip static-route next-hop <ip-addr> bfd <enable|disable>`

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Parameters

Variable	Value
<enable|disable>	Turns the BFD on or off.
<ip-addr>	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

None

config ethernet dhcp-relay

Use this command to configure DHCP parameters on specified ports.

Syntax

config ethernet <ports> ip dhcp-relay

Parameters

None

Default

None

Related commands

Variable	Value
broadcast <enable|disable>	When enabled, sends the server reply as a broadcast to the end station. When disabled, sends the server reply as a unicast to the end station.
create-fwd-path server <value> [vrid <value>] [mode <value>] [state <value>]	Creates a forward path server with a virtual router ID (or VRRP ID), a mode, and a state. • **value** is the IP address in the format a.b.c.d. • **vrid <value>** is the ID of the virtual router and is an integer between 0 and 255. • **mode <value>** is a choice of bootp, dhcp, or bootp_dhcp. • **state <value>** enables or disables the forward path server.

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Variable	Value
delete-fwd-path server <value> [vrid <value>]	Deletes a forward path server with a specific value and virtual router ID. • **value** is the IP address in the format a.b.c.d. • **vrid <value>** is the ID of the virtual router (or VRRP ID) and is an integer between 0 and 255.
disable	Disables DHCP relay on the port. This is the default state.
disable-fwd-path server <value> [vrid <value>]	Disables a forward path server with a specific value and virtual router ID. • **value** is the IP address in the format a.b.c.d. • **vrid <value>** is the ID of the virtual router (or VRRP ID) and is an integer between 0 and 255.
enable	Enables DHCP relay on the port.
enable-fwd-path server <value> [vrid <value>]	Enables a forward path server with a specific value and virtual router ID (or VRRP ID). • **value** is the IP address in the form a.b.c.d. • **vrid <value>** is the ID of the virtual router and is an integer between 0 and 255.
fwd-path-mode <mode> server <value> [vrid <value>]	Sets the forward path mode. • **mode** is a choice of bootp, dhcp, or bootp_dhcp. • **server <value>** is the IP address in the form a.b.c.d. • **vrid <value>** is the ID of the virtual router (or VRRP ID) and is an integer between 0 and 255.
info	Displays the current DHCP configuration on the port.
max-hop <max-hop>	Sets the maximum number of hops before a BootP/DHCP packet is discarded (1 to 16). The default is 4.

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Variable	Value
min-sec <min-sec>	Sets the minimum seconds count for DHCP. If the secs field in the BootP/DHCP packet header is greater than this value, the switch relays or forwards the packet; otherwise, the packet is dropped (0 to 65535). The default is 0 seconds.
mode <mode>	Sets DHCP mode to forward BootP messages only, DHCP messages only, or both. The default is both.

config ethernet ip arp-response

Use this command to enable ARP on a port.

Syntax

config ethernet <ports> ip arp-response

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
disable	Disables ARP responses on the port.
enable	Enables ARP responses on the port.
info	Displays ARP response status on the port.

config ethernet ip proxy

Use this command to configure a proxy ARP on a port.

Syntax

config ethernet <ports> ip proxy

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

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Default

None

Related commands

Variable	Value
disable	Disables ARP proxy responses on the port.
enable	Enables ARP proxy responses on the port.
info	Displays ARP proxy status on the port.

config ethernet loop-detect

Use this command to configure ARP loop detection.

Syntax

config ethernet <ports> loop-detect <enable|disable> [action <value>] [arp-detect]

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.
value	port-down|vlan-block or mac-discard.

Default

None

Related commands

None

config ethernet ip vrrp

Use this command to configure VRRP on a port.

Syntax

config ethernet <ports> ip vrrp <vrid>

Parameters

Variable	Value
vrid	A unique integer value that represents the virtual router ID in the range 1 to 255. The virtual router acts as the default router for one or more assigned addresses.

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Default

None

Related commands

Variable	Value
action <action_choice>	Indicates options to override the hold-down timer manually and force preemption. • **action_choice** can be set to preemption to preempt the timer or set to none to allow the timer to keep working.
address <ipaddr>	Sets the IP address of the VRRP physical interface that forwards packets to the virtual IP addresses associated with the virtual router. • **ipaddr** is the IP address of the master VRRP.
adver-int <seconds>	Sets the the time interval between sending VRRP advertisement messages. • **seconds** is between 1 and 255 seconds. The value must be the same on all participating routers. The default is 1.
backup-master <enable | disable>	Enables or disables the VRRP backup master. This option is supported only on Split MultiLink Trunking (SMLT) ports. **ATTENTION** Do not enable Backup Master if Critical IP is enabled.

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Variable	Value
critical-ip <ipaddr>	Sets the critical IP address for VRRP. **ipaddr** is the IP address on the local router, which is configured so that a change in its state causes a role switch in the virtual router (for example, from master to backup in case the interface goes down).
critical-ip-enable <enable|disable>	Enables or disables the critical IP address option. **ATTENTION** Do not enable Critical IP if Backup Master is enabled.
delete	Deletes VRRP from the port.
disable	Disables VRRP on the port.
enable	Enables VRRP on the port.
fast-adv-enable <enable|disable>	Enables or disables the Fast Advertisement Interval. The default is disabled. • **enable** means use the Fast Advertisement Interval. • **disable** means use the regular advertisement interval.
fast-adv-int <milliseconds>	Sets the Fast Advertisement Interval, the time interval between sending VRRP advertisement messages. **milliseconds** can be between 200 and 1000 milliseconds, and must be the same on all participating routers. The default is 200. You must enter values in multiples of 200 milliseconds.

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Variable	Value
holddown-timer <seconds>	Modifies the behavior of the VRRP failover mechanism by allowing the router enough time to detect the Open Shortest Path First (OSPF) or Routing Information Protocol (RIP) routes. **seconds** is the time interval (in seconds) a router is delayed when changing to master state.
info	Displays the current port VRRP configuration.
ports	Specifies the port or range of ports to configure in the slot/port format.
priority <prio>	Sets the port VRRP priority. • **prio** is the value (between 1 and 254) used by the VRRP router. The default is 100. Assign the value 255 to the router that owns the IP address associated with the virtual router.
vrid	A unique integer value that represents the virtual router ID in the range 1 to 255. The virtual router acts as the default router for one or more assigned addresses.

config ip vrrp ping-virtual-address

Use this command to enable or disable virtual address ping.

Syntax

config ip vrrp ping-virtual-address <enable|disable>

Parameters

Variable	Value
<enable|disable>	Enables or disables a ping virtual address.
<name>	Sets alias port name. The string length ranges from 0 to 64.

Default

None

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Related commands

Variable	Value
send-trap <enable|disable>	Enables or disable VRRP send trap.
info	Display current level parameter settings and next level directories.

config vlan ip dhcp-relay

Use this command to configure DHCP routing on a VLAN.

Syntax

config vlan <vid> ip dhcp-relay

Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

Done

Related commands

Variable	Value
broadcast <enable|disable>	Sets whether the server reply is broadcast back to the end station.
create-fwd-path server <value> [vrid <value>] [mode <value>] [state <value>]	Creates a forward path server with a virtual router ID, a mode, and a state. • **value** is the IP address in the form a.b.c.d. • **vrid <value>** is the ID of the virtual router and is an integer between 0 and 255. • **mode <value>** is a choice of bootp, dhcp, or bootp_dhcp. • **state <value>** enables or disables the forward path server.
delete-fwd-path server <value> [vrid <value>]	Deletes a forward path server with a specific value and virtual router ID. • **value** is the IP address in the form a.b.c.d. • **vrid <value>** is the ID of the virtual router and is an integer between 0 and 255.

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Variable	Value
disable	Disables DHCP relaying on the VLAN. This is the default state.
disable-fwd-path server <value> [vrid <value>]	Disables a forward path server with a specific value and virtual router ID. • **value** is the IP address in the form a.b.c.d. • **vrid <value>** is the ID of the virtual router and is an integer between 0 and 255.
enable	Enables DHCP relay on the VLAN.
enable-fwd-path server <value> [vrid <value>]	Enables a forward path server with a specific value and virtual router ID. • **value** is the IP address in the format a.b.c.d. • **vrid <value>** is the ID of the virtual router and is an integer between 0 and 255.
fwd-path-mode <mode> server <value> [vrid <value>]	Sets the forward path mode. • **mode** is a choice of bootp, dhcp, or bootp_dhcp. • **server <value>** is the IP address in the form a.b.c.d. • **vrid <value>** is the ID of the virtual router and is an integer between 0 and 255.
info	Displays DHCP characteristics on the VLAN.
max-hop <max-hop>	Sets the maximum number of hops before the BootP/DHCP packet is dropped (1 to 16).
min-sec <min-sec>	Sets the minimum seconds count for DHCP. If the secs field in the packet header is greater than this value, the switch forwards the packet; otherwise it is dropped (0 to 65535).
mode <mode>	Sets DHCP mode to forward BootP messages only, DHCP messages only, or both. The default is both.

config vlan ip arp-response

Use this command to enable ARP on a VLAN.

Syntax

config vlan <vid> ip arp-response

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Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

Variable	Value
disable	Disables ARP responses on the VLAN.
enable	Enables ARP responses on the VLAN.
info	Displays ARP response status on the VLAN.

config vlan ip proxy

Use this command to configure an ARP proxy on a VLAN.

Syntax

config vlan <vid> ip proxy

Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

Variable	Value
disable	Disables ARP proxy on the VLAN.
enable	Enables ARP proxy on the VLAN, allowing a router to answer a local ARP request for a remote destination.
info	Displays ARP proxy status on the VLAN.

config vlan ip vrrp

Use this command to configure VRRP on a VLAN.

Syntax

config vlan <vid> ip vrrp <vrid>

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Parameters

Variable	Value
vid	The VLAN ID in the range of 1 to 4094.
vrid	The virtual router ID in the range of 1 to 255, a number that uniquely identifies a virtual router on a VRRP router. The virtual router acts as the default router for one or more assigned addresses.

Default

None

Related commands

Variable	Value
action <action_choice>	Sets the manual override of the delay timer for the virtual router interface.
address <ipaddr>	Sets the IP address of the virtual router interface.
adver-int <seconds>	Sets the time interval (in seconds) between sending advertisement messages. • **seconds** is in the range of 1 to 255. The default is 1.
backup-master <enable|disable>	Enables or disables the VRRP backup master for a VLAN. This option is only supported on SMLT ports. **ATTENTION** Do not enable Backup Master if Critical IP is enabled.
critical-ip-enable <enable|disable>	Enables or disables the critical IP address option. **ATTENTION** Do not enable Critical IP if Backup Master is enabled.
critical-ip <ipaddr>	Sets the critical IP address for VRRP. **ipaddr** is the IP address on the local router configured so that a change in its state causes a role switch in the virtual router (for example, from master to backup in case the interface goes down).

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Variable	Value
delete	Deletes the VRRP from the VLAN.
disable	Disables the VRRP on the VLAN.
enable	Enables VRRP on the VLAN.
fast-adv-enable <enable|disable>	Enables or disables the Fast Advertisement Interval. The default is disabled. • **enable** enables the Fast Advertisement Interval. • **disable** enables the Regular Advertisement Interval.
fast-adv-int <milliseconds>	Sets the time interval between sending Fast Advertisement messages. **milliseconds** is the interval between 200 and 1000 milliseconds. This interval must be the same on all participating routers. The default is 200. You must enter values in multiples of 200 milliseconds.
holddown-timer <seconds>	Sets the time interval (in seconds) that a router is delayed when changing to master state.
info	Displays the current VLAN VRRP settings.
priority <prio>	Sets the port VRRP priority value used by this VRRP router. **prio** is between 1 and 254. The default is 100. Assign the value 255 to the router that owns the IP address associated with the virtual router.
vid	The VLAN ID in the range of 1 to 4094.
vrid	The virtual router ID in the range of 1 to 255, a number that uniquely identifies a virtual router on a VRRP router. The virtual router acts as the default router for one or more assigned addresses.

config ip rip domain

Use this command to change RIP configuration domain.

Syntax

config ip rip domain <value>

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Parameters

Variable	Value
vid	The VLAN ID in the range of 1 to 4094.
vrid	The virtual router ID in the range of 1 to 255, a number that uniquely identifies a virtual router on a VRRP router. The virtual router acts as the default router for one or more assigned addresses.

Default

None

Related commands

None

config ip vrf igmp fast-leave-mode

Use this command to fast leave method.

Syntax

config ip vrf <vrfName> igmp fast-leave-mode <one-user|multiple-user>

Parameters

Variable	Value
<vrfname>	Specifies the VRF name in the range of 0 to 32.
{one-user|multiple-user}	Specifies the fast leave method.

Default

None

Related commands

Variable	Value
generate-trap <enable|disable>	Sets IGMP trap. **enable|disable** enables or disables IGMP trap.
generate-log <enable|disable>	Sets IGMP log. **enable|disable** enables or disables IGMP trap.
info	Displays current level parameter settings and next level directories.

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config ip vrf igmp interface access-control create

Use this command to create a new VRF instance.

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> access-control <name> create <HostAddress> <HostMask> <deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both>

Parameters

None

Default

None

Related commands

Variable	Value
delete <HostAddress> <HostMask>	Deletes a VRF instance. **enable|disable** enables or disables IGMP trap.
mode <HostAddress> <HostMask> <deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both>	Sets mode for the access control group entry. **enable|disable** enables or disables IGMP trap.
info	Displays current level parameter settings and next level directories.

config ip vrf igmp interface fast-leave

Use this command to create a new VRF instance.

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> fast-leave <enable|disable>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<enable|disable>	Enables or disables fast leave.
<vrfName>	Specifies the VRF name and the string length ranges from 0 to 32.

Default

None

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Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.

config ip vrf igmp interface last-memb-query-int 1/10

Use this command to query IGMP last member interval.

Syntax

config ip vrf <vrfName> igmp interface last-memb-query-int 1/10 seconds

Parameters

Variable	Value
1/10	Specifies the Last Member Query interval in the range of 0 to 255.
<vrfName>	Specifies the VRF name and the string length ranges from 0 to 32.

Default

None

Related commands

None

config ip vrf igmp interface mrdisc max-advertisement-interval

Use this command to know the maximum interval between successive advertisements.

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> mrdisc max-advertisement-interval [seconds]

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
[seconds]	Specifies the maximum advertisement interval in the range of 2 to 180.
<vrfName>	Specifies the VRF name and the string length ranges from 0 to 32.

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Default

None

Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.
max-advertisement-interval [seconds]	Specifies the maximum advertisement interval between successive initial advertisements. **seconds** is the maximum initial advertisement interval in the range of 2 to 180.
max-initial-advertisements [integer]	Specifies the maximum advertisements after initialization. **integer** is the maximum initial advertisements in the range of 2..15.
min-advertisement-interval[seconds]	minimum interval between successive advertisements. **integer** is the maximum advertisement interval in the range of 3 to 180.
mrdisc-enable <enable|disable>	Enables mrdisc.
neighbor-dead-interval [seconds]	Specifies the maximum time allowed before a neighbor is declared dead. **seconds** is the interval a neighbor is declared dead in the range of 2 to 180.

config ip vrf igmp interface proxy-snoop

Use this command to enable proxy snoop.

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> proxy-snoop <enable|disable>

Parameters

Variable	Value
<enable|disable>	Enables or disables proxy snoop.

Default

None

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Related commands

None

config ip vrf igmp interface query-interval

Use this command to query IGMP interval.

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> query-interval <seconds>

Parameters

Variable	Value
<seconds>	Specifies the IGMP query interval in the range of 1 to 65535.

Default

None

Related commands

None

config ip vrf igmp interface query-max-resp 1/10 seconds

Use this command to query the maximum IGMP response time.

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> query-max-resp 1/10 seconds

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfName>	Specifies the VRF name and the string length ranges from 0 to 32.

Default

None

Related commands

None

config ip vrf igmp interface robustval

Use this command to enable IGMP robustness.

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Syntax

config ip vrf <vrfName> igmp interface <ipaddr> robustval <integer>

Parameters

Variable	Value
<integer>	Specifies the robust value in the range of 1 to 255.

Default

None

Related commands

None

config ip vrf igmp interface router-alert

Use this command to enable router-alert.

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> router-alert <enable|disable>

Parameters

Variable	Value
<enable|dosable>	Enables or disables router alert check.

Default

None

Related commands

None

config ip vrf igmp interface snoop

Use this command to enable snoop.

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> snoop <enable|disable>

Parameters

Variable	Value
	Enables or disables the operation.

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Default

None

Related commands

None

config ip vrf igmp interface ssm-snoop

Use this command to enable support for PIM-SSM on snooping interface.

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> ssm-snoop <enable|disable>

Parameters

Variable	Value
<enable|disable>	Enables or disables SSM snoop.

Default

None

Related commands

None

config ip vrf igmp interface static-members enable

Use this command to enable stream limitation on interface.

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> static-members <FromGroupAddress-ToGroupAddress> add <ports> <static|blocked>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
add <ports> <static|blocked>	Adds ports to the static group entry.

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Variable	Value
create <ports> <static|blocked>	Creates a static group entry for specified VLAN.
delete	Deletes the static group entry created.
info	Displays current level parameter settings and next level directories.
remove <ports> <static|blocked>	Deletes ports from the static group entry created.

config ip vrf igmp interface stream-limit enable

Use this command to enable stream-limit.

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> stream-limit enable

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
disable	Disables stream limitation on interface.
info	Displays stream limitation on interface.
max-streams	Specifies the maximum number of streams allowed on interface.

config ip vrf igmp interface stream-limit-members enable

Use this command to enable stream limitation on interface ports.

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> stream-limit-members enable <ports> max-streams <value>

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Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<ports>	Specifies the port list.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
disable <ports>	Disables stream limitation on interface ports.
info	Displays stream limitation on interface ports.
set <ports> max-streams <value>	Modifies stream limitation on interface ports.

config ip vrf igmp interface version

Use this command to display the IGMP version.

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> version <integer>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.
version <integer>	Specifies the IGMO version in the range of 1 to 3.

Default

None

Related commands

None

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config ip vrf igmp interface dynamic-downgrade-version enable

Use this command to

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> dynamic-downgrade-version enable <true|false>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

Related commands

Variable	Value

config ip vrf igmp interface compatibility-mode enable

Use this command to

Syntax

config ip vrf <vrfName> igmp interface <ipaddr> compatibility-mode enable <true|false>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

None

config ip vrf igmp ssm dynamic-learning

Use this command to disable or enable dynamic-learning.

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Syntax

config ip vrf <vrfName> igmp ssm dynamic-learning <enable|disable>

Parameters

Variable	Value
<enable|disable>	Enable or disables dynamic learning from IGMPv3 reports.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.

config ip vrf igmp ssm ssm-channel create group

Use this command to create a SSM channel entry.

Syntax

config ip vrf <vrfName> igmp ssm ssm-channel create group <value> source <value>

Parameters

Variable	Value
group <value>	Specifies the group address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
delete group <value>	Deletes the source specific multicast table entry created.
disable <all or group> [<Group Address>]	Disables specific or all source specific multicast table entries.

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Variable	Value
enable <all or group> [<Group Address>]	Enables specific or all source specific multicast table entries.
info	Displays current level parameter settings and next level directories.

config ip vrf igmp ssm ssm-grp-range group

Use this command to display the PIM-SSM group range.

Syntax

config ip vrf <vrfName> igmp ssm ssm-grp-range group <value> mask <value>

Parameters

Variable	Value
group <value>	Specifies the group address in the {a.b.c.d} format.
mask <value>	Specifies the address mask in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

None

config ip vrf igmp igap clear-counters

Use this command to clear all IGAP serviceability counters.

Syntax

config ip vrf <vrfName> igmp igap clear-counters

Parameters

Variable	Value
<vrfName>	Specifies the VRF name. The string length ranges from 0 to 32.

Default

None

Related commands

None

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config ip vrf route delete

Use this command to delete route paths.

Syntax

config ip vrf route delete <ipaddr/mask> next-hop <value> [next-hop-vrf <value>]

Parameters

Variable	Value
<ipaddr/mask>	Specifies the IP address and network mask of the dynamic route.
next-hop <value>	**next-hop <value>** specifies the IP address of the next-hop router.

Default

None

Related commands

None

config ip vrf route preference protocol

Use this command to delete route paths.

Syntax

config ip vrf <vrfName> route protocol <protocol> <value>

Parameters

Variable	Value
<protocol>	Specifies the protocol type {static|ospf-intra|ospf-inter|ebgp|ibgp|rip|ospf-extern1|ospf-extern2|staticv6|ospfv3-intra|ospfv3-inter|ospfv3-extern1|ospfv3extern2}.
<value>	Specifies the preference value (0 is reserved for Local routes). The string value ranges from 1 to 255.

Default

None

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Related commands

Variable	Value
info	Displays route preference information.

config ip vrf route-discovery disable

Use this command to disable route discovery.

Syntax

config ip vrf <vrfName> route-discovery disable

Parameters

Variable	Value
<vrfName>	Specifies the VRF name.

Default

None

Related commands

Variable	Value
enable	Enables route discovery.
info	Displays route preference information.

config ip vrf static-route delete

Use this command to delete static route entries.

Syntax

config ip vrf <vrfName> static-route delete <ipaddr/mask> next-hop <value> [next-hop-vrf <value>]

Parameters

Variable	Value
<ipaddr/mask>	Specifies the IP address and network mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}.
[next-hop-vrf <value>]	Specifies the next hop VRF name. The string length ranges from 0 to 32.
<vrfName>	Specifies the VRF name.

Default

None

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Related commands

Variable	Value
disable <ipaddr/mask> next -hop <value> [next-hop-vrf <value>]	Disable static route entries.
enable <ipaddr/mask> next-hop <value> [next-hop-vrf <value>]	Enables static route entries.
info	Displays current level parameter settings and next level directories.
local-next-hop <true|false> <ipaddr/mask> next-hop <value>	Modifies static route local-next-hop.
preference <value> <ipaddr/mask> next-hop <value> [next-hop-vrf <value>]	Modifies static route preference.

config ip vrf mroute info

Use this command to display mroute information.

Syntax

config ip vrf <vrfName> mroute info

Parameters

Variable	Value
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

None

config ip vrf mroute interface info

Use this command to display mroute interface information.

Syntax

config ip vrf <vrfName> mroute interface <ipaddr> info

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Parameters

Variable	Value
`<ipaddr>`	Specifies the IP address in the {a.b.c.d} format.
`<vrfname>`	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

None

config ip vrf mroute interface ttl

Use this command to set TTL for all multicast interface.

Syntax

`config ip vrf <vrfName> mroute interface <ipaddr> ttl <ttl>`

Parameters

Variable	Value
`<ipaddr>`	Specifies the IP address in the {a.b.c.d} format.
`<ttl>`	Specifies time to live in seconds in the range of 1 of 255.
`<vrfname>`	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

None

config ip vrf mroute interface mroute resource-usage egress-Threshold

Use this command to record threshold for multicast egress.

Syntax

`config ip vrf <vrfName> mroute resource-usage egress-Threshold <integer>`

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Parameters

Variable	Value
<integer>	Specifies the IP Multicast Egress Threshold Count in the range of 0 to 32767.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
ingress-Threshold <integer>	Specifies the threshold for multicast ingress records in the range of 0 to 32767.
info	Displays current level parameter settings and next level directories.
send-Trap-And-Log <enable|disable>	Enables or disables send trap and log.
trap-Msg-Only <enable|disable>	Enables or disables trap MSG.
log-Msg-Only <enable|disable>	Enables or disables Log MSG.

config ip vrf mroute static-source-group create

Use this command to create a timed prune list entry.

Syntax

config ip vrf <vrfName> mroute static-source-group <GroupAddress> create <SourceSubnet> <SrcSubnetMask>

Parameters

Variable	Value
<GroupAddress>	Specifies the IP address in the {a.b.c.d} format.
<SourceSubnet>	Specifies the IP address in the {a.b.c.d} format.
<SrcSubnetMask>	Specifies the subnet mask address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

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Related commands

Variable	Value
delete <SourceSubnet> <SrcSubnetMask>	Deletes the timed prune list entry created.
info	Displays current level parameter settings and next level directories.

config ip vrf ospf accept apply

Use this command to apply OSPF accept policy changes.

Syntax

config ip vrf <vrfName> ospf accept apply

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
create	Creates OSPF accept policies.
delete	Deletes OSPF accept policies.
disable	Disables OSPF accept policies.
enable	Enables OSPF accept policies.
info	Accepts OSPF adv-rtr information.
metric-type <type1 | type2 | any>	Sets OSPF accept policy metric-type. **type1 | type2 | any** is the metric-type.
route-policy <policy name> [clear]	Sets OSPF accept route-policy (To delete the policy, enter blank string as policy name. **policy name** is the policy name. The string length ranges from 0 to 64.

config ip vrf ospf accept adv-rtr apply

Use this command to apply OSPF accept policy changes.

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Syntax

config ip vrf <vrfName> ospf accept adv-rtr <ipaddr> apply

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
create	Creates OSPF accept policies.
delete	Deletes OSPF accept policies.
disable	Disables OSPF accept policies.
enable	Enables OSPF accept policies.
info	Accepts OSPF adv-rtr information.
metric-type <type1 | type2 | any>	Sets OSPF accept policy metric-type. **type1 | type2 | any** is the metric-type.
route-policy <policy name> [clear]	Sets OSPF accept route-policy (To delete the policy, enter blank string as policy name. **policy name** is the policy name. The string length ranges from 0 to 64.

config ip vrf ospf area create

Use this command to apply OSPF accept policy changes.

Syntax

config ip vrf <vrfName> ospf area <ipaddr> create

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

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Default

None

Related commands

Variable	Value
create	Creates an area.
delete	Deletes OSPF area.
import-summaries <true|false>	Imports summary option for this area.
info	Displays current level parameter settings and next level directories.
nssa <true|false>	Configures area to be NSSA.
stub <true|false>	Imports external option for this area.
stub-metric <stub-metric>	Specifies the stub default metric for the stub area.

config ip vrf ospf area range advertise-metric

Use this command to change the advertise-metric.

Syntax

config ip vrf <vrfName> ospf area <ipaddr> range <ipaddr/mask> advertise-metric <cost> lsa-type <value>

Parameters

Variable	Value
<ipaddr/mask>	Specifies the IP address and network mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}.
<cost>	Specifies the metric value in the range of 0 to 65535.
<value>	Specifies LSA-type {summary-link|nssa-extlink}.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

None

config ip vrf ospf area range advertise-mode

Use this command to change the advertise-mode.

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Syntax

config ip vrf <vrfName> ospf area <ipaddr> range <ipaddr/mask> advertise-mode <mode> lsa-type <value>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<ipaddr/mask>	Specifies the IP address and network mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}.
<mode>	Specifies the mode value {summarize|suppress|no-summarize}.
<value>	Specifies the LSA-type {summary-link |nssa-extlink}.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

None

config ip vrf ospf area range delete

Use this command to delete a range.

Syntax

config ip vrf <vrfName> ospf area <ipaddr> range <ipaddr/mask> delete lsa-type <value>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

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Related commands

Variable	Value
`info`	Displays current level parameter settings and next level directories.

config ip vrf ospf area area stub

Use this command to import external option for this area.

Syntax

```
config ip vrf <vrfName> ospf area <ipaddr> stub <true|false>
```

Parameters

Variable	Value
`<ipaddr>`	Specifies the IP address in the {a.b.c.d} format.
`<vrfname>`	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

None

config ip vrf ospf area area stub-metric

Use this command to stub default metric for the stub area.

Syntax

```
config ip vrf <vrfName> ospf area <ipaddr> stub-metric
<stub-metric>
```

Parameters

Variable	Value
`<ipaddr>`	Specifies the IP address in the {a.b.c.d} format.
`<vrfname>`	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

None

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config ip vrf ospf area virtual-interface add-message-digest-key

Use this command to display the message digest key.

Syntax

config ip vrf <vrfName> ospf area <ipaddr> virtual-interface <nbr> add-message-digest-key <md5-key-id> md5-key <value>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
authentication-key <authentication-key >	Specifies the authentication key.
authentication-type <auth-type>	Specifies the authentication type for a interface.
change-primary-md5-key <md5-key-id>	Changes the primary key used for encrypting out going packets.

config ip vrf ospf area virtual-interface create

Use this command to create a virtual interface.

Syntax

config ip vrf <vrfName> ospf area <ipaddr> virtual-interface <nbr> create

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

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Related commands

Variable	Value
delete	Deletes a virtual interface.
delete-message-digest-key	Deletes message digest key.
hello-interval	Specifies hello interval.
dead-interval	Specifies the dead interval.
info	Displays current level parameter settings and next level directories.
retransmit-interval <seconds>	Specifies the transmit interval.
transit-delay <seconds>	Specifies the transmit delay time.

config ip vrf ospf as-boundary-router

Use this command to set OSPF as boundary router.

Syntax

config ip vrf <vrfName> ospf as-boundary-router <enable|disable>

Parameters

Variable	Value
<enable|disable>	Enables or disables the operation.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

None

config ip vrf ospf auto-vlink

Use this command to set OSPF auto virtual link.

Syntax

config ip vrf <vrfName> ospf auto-vlink <enable|disable>

Parameters

Variable	Value
<enable|disable>	Enables or disables the operation.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

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Default

None

Related commands

None

config ip vrf ospf default-metric

Use this command to set OSPF default matric.

Syntax

```
config ip vrf <vrfName> ospf default-metric [ethernet
<value>] [fast-ethernet <value>] [gig-ethernet <value>]
[ten-gig-ethernet <value>]
```

Parameters

Variable	Value
`<vrfname>`	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
`delete`	Deletes OSPF instance for the VRF.
`disable`	Disables OSPF.
`enable`	Enables OSPF.
`holddown <seconds>`	Sets OSPF SPF holddown timer value.

config ip vrf ospf host-route create

Use this command to set OSPF default matric.

Syntax

```
config ip vrf <vrfName> ospf host-route <ipadddr> create [metric
<value>]
```

Parameters

Variable	Value
`<ipaddr>`	Specifies the IP address in the {a.b.c.d} format.
`<vrfname>`	Specifies the VRF name in the range of 0 to 32.

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Default

None

Related commands

Variable	Value
delete	Deletes host route.
info	Display current level parameter settings and next level directories.

config ip vrf ospf ospf interface add-message-digest-key

Use this command to add message digest key.

Syntax

config ip vrf <vrfName> ospf interface <ipaddr> add-message-digest-key <md5-key-id> md5-key <value>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<md5-key-id>	Specifies message-digest-key ID in the range of 1 to 255.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
admin-status <enable|disable> [<if-type>]	Specifies the administration status of the interface.
area <ipaddr>	Specifies the interface area.
authentication-key <authentication-key>	Specifies the interface authentication key.
authentication-type <auth-type>	Specifies the authentication type for the interface.
change-primary-md5-key <md5-key-id>	Modifies the primary key used for encrypting out going packets.
create [<if-type>]	Creates a OSPF interface.
delete	Deletes a OSPF interface.

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Variable	Value
delete-message-digest-key <md5-key-id>	Deletes message digest key.
hello-interval <seconds>	Specifies the hello interval time.
dead-interval <seconds>	Specifies the dead interval time.
info	Display current level parameter settings and next level directories.
interface-type [<if-type>]	Specifies the type of the interface.
metric <metric>	Specifies the interface metric.
mtu-ignore <enable|disable>	Enables or disables MTU-ignore.
poll-interval <seconds>	Specifies the poll interval time in the range of 0 to 2147483647 seconds.
priority <priority>	Specifies the interface priority.
retransmit-interval <seconds>	Specifies retransmit interval in the range of 0 to 3600 seconds.
transit-delay <seconds>	Specifies the transit delay time in the range of 0 to 3600 seconds.

config ip vrf ospf neighbor create

Use this command to create a neighbor.

Syntax

config ip vrf <vrfName> ospf neighbor <ipaddr> create <priority>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
delete	Deletes host route.
info	Display current level parameter settings and next level directories.
priority <priority>	Sets neighbor priority.

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config ip vrf ospf redistribute apply

Use this command to apply OSPF redistribution changes.

Syntax

config ip vrf <vrfName> ospf redistribute apply

Parameters

Variable	Value
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

None

config ip vrf ospf redistribute bgp apply

Use this command to apply OSPF route redistribution changes.

Syntax

config ip vrf <vrfName> ospf redistribute bgp apply [vrf-src <value>]

Parameters

Variable	Value
[vrf-src <value>]	Specifies the VRF name. The string length is in the range of 0 to 32.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
metric <metric-value>[vrf-src <value>]	Sets OSPF route redistribution metric.
metric-type <type1 | type2>[vrf-src <value>]	Sets OSPF route redistribution metric type.
route-policy <policy name>[vrf-src <value>] [clear]	Sets OSPF route redistribution route policy (to delete the policy, enter blank string as policy name).
subnets <allow | supres> [vrf-src <value>]	Sets OSPF route redistribution subnet value.

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config ip vrf ospf redistribute direct apply

Use this command to apply OSPF route redistribution changes.

Syntax

config ip vrf <vrfName> ospf redistribute direct apply [vrf-src <value>]

Parameters

Variable	Value
[vrf-src <value>]	Specifies the VRF name. The string length is in the range of 0 to 32.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
create [vrf-src <value>]	Creates OSPF route redistribution.
delete [vrf-src <value>]	Deletes OSPF route redistribution.
disable [vrf-src <value>] [clear]	Disables OSPF route redistribution.
enable [vrf-src <value>]	Enables OSPF route redistribution.
info	Displays OSPF route redistribution configuration information.
metric <metric-value> [vrf-src <value>]	Sets OSPF route redistribution metric.
metric-type <type1|type2> [vrf-src <value>]	Sets OSPF route redistribution metric.
route-policy <policy name>[vrf-src <value>] [clear]	Sets OSPF route redistribution metric type.
subnets <allow|supress> [vrf-src <value>]	Sets OSPF route redistribution subnet value.

config ip vrf ospf redistribute

Use this command to

Syntax

config ip vrf <vrfName> [ospf|bgp] redistribute direct

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Parameters

Variable	Value
[vrf-src <value>]	Specifies the VRF name. The string length is in the range of 0 to 32.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies RIP or OSPF redistribution changes.
create [vrf-src <value>]	Creates RIP route redistribution.
delete [vrf-src <value>]	Deletes RIP route redistribution.
disable [vrf-src <value>]	Disables RIP route distribution.
enable [vrf-src <value>]	Enables RIP route distribution.
info	RIP route redistribution configuration information.
metric <metric-value> [vrf-src <value>]	set the metric value for rip redistribution
metric-type <type1 | type2> [vrf-src <value>]	Sets OSPF route redistribution metric type.
route-policy <policy name> type1 | type2	set OSPF and RIP route redistribution route policy (to delete the policy, enter blank string as policy name).
subnets <allow | supress> type1 | type2	Sets OSPF and RIP route redistribution subnet value.

config ip vrf ospf redistribute ospf apply

Use this command to apply OSPF route redistribution changes.

Syntax

config ip vrf <vrfName> ospf redistribute ospf apply [vrf-src <value>]

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Parameters

Variable	Value
[vrf-src <value>]	Specifies the VRF name. The string length is in the range of 0 to 32.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies OSPF route redistribution changes.
create [vrf-src <value>]	Creates OSPF route redistribution.
delete [vrf-src <value>]	Deletes OSPF route redistribution.
disable [vrf-src <value>]	Disables OSPF route redistribution.
enable [vrf-src <value>]	Enables OSPF route redistribution.
info [vrf-src <value>]	Specifies OSPF route redistribution configuration information.
metric <metric-value> [vrf-src <value>]	Sets OSPF route redistribution metric.
metric-type <type1|type2> [vrf-src <value>]	Sets OSPF route redistribution metric type.
route policy <policy name> [vrf-src <value>]	Sets OSPF route redistribution route policy (to delete the policy, enter blank string as policy name).
subnets <allow|supress> [vrf-src <value>]	Sets OSPF route redistribution subnet value.

config ip vrf ospf redistribute rip apply

Use this command to apply OSPF route redistribution changes.

Syntax

config ip vrf <vrfName> ospf redistribute rip apply [vrf-src <value>]

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Parameters

Variable	Value
[vrf-src <value>]	Specifies the VRF name. The string length is in the range of 0 to 32.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies OSPF route redistribution changes.
create [vrf-src <value>]	Creates OSPF route redistribution.
delete [vrf-src <value>]	Deletes OSPF route redistribution.
disable [vrf-src <value>]	Disables OSPF route redistribution.
enable [vrf-src <value>]	Enables OSPF route redistribution.
info [vrf-src <value>]	Specifies OSPF route redistribution configuration information.
metric <metric-value> [vrf-src <value>]	Sets OSPF route redistribution metric.
metric-type <type1 | type2> [vrf-src <value>]	Sets OSPF route redistribution metric type.
route policy <policy name> [vrf-src <value>]	Sets OSPF route redistribution route policy (to delete the policy, enter blank string as policy name).

config ip vrf ospf redistribute static apply

Use this command to apply OSPF route redistribution changes.

Syntax

config ip vrf <vrfName> ospf redistribute static apply [vrf-src <value>]

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Parameters

Variable	Value
<vrfname>	Specifies the VRF name in the range of 0 to 32.
[vrf-src <value>]	Specifies the VRF name. The string length is in the range of 0 to 32.

Default

None

Related commands

Variable	Value
create [vrf-src <value>]	Creates OSPF route redistribution.
delete [vrf-src <value>]	Deletes OSPF route redistribution.
disable [vrf-src <value>]	Disables OSPF route redistribution.
enable [vrf-src <value>]	Enables OSPF route redistribution.
metric <metric-value> [vrf-src <value>]	Sets OSPF route redistribution metric.
metric-type <type1|type2> [vrf-src <value>]	Sets OSPF route redistribution metric type.
route policy <policy name> [vrf-src <value>]	Sets OSPF route redistribution route policy (to delete the policy, enter blank string as policy name).
info [vrf-src <value>]	OSPF route redistribution configuration information.

config ip vrf ospf rfc1583-compatibility

Use this command to enable or disable RFC 1583 compatibility flag.

Syntax

config ip vrf <vrfName> ospf rfc1583-compatibility <enable|disable>

Parameters

Variable	Value
<enabel|disable>	Enables or disables RFC 1583 compatibility flag.
<vrfName>	Specifies the VRF name in the range of 0 to 32.

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Default

None

Related commands

None

config ip vrf ospf trap

Use this command to set OSPF trap.

Syntax

config ip vrf <vrfName> ospf trap <enable|disable>

Parameters

Variable	Value
<enabel|disable>	Enables or disables OSPF trap.
<vrfName>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

None

config ip vrf ospf info

Use this command to display OSPF information..

Syntax

config ip vrf <vrfName> ospf info

Parameters

Variable	Value
<vrfName>	Specifies the VRF name. The string length ranges from 0 to 32.

Default

None

Related commands

None

config ip vrf rip redistribute direct apply

Use this command to apply RIP redistribution changes.

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Syntax

config ip vrf <vrfName> rip redistribute direct apply

Parameters

Variable	Value
<vrfName>	Specifies the VRF name.

Default

None

Related commands

Variable	Value
create [vrf-src <value>]	Creates RIP route redistribution.
delete [vrf-src <value>]	Deletes RIP route redistribution.
enable [vrf-src <value>]	Enables RIP route distribution.
disable [vrf-src <value>]	Disables RIP route distribution.
info [vrf-src <value>]	RIP route redistribution configuration information.
metric <metric-value> [vrf-src <value>]	Sets the metric value for RIP redistribution.
route-policy <policy name> [vrf-src <value>] [clear]	Sets the route policy for RIP redistribution.

config ip vrf rip redistribute ospf apply

Use this command to apply RIP route redistribution changes.

Syntax

config ip vrf <vrfName> rip redistribute ospf apply [vrf-src <value>]

Parameters

Variable	Value
[vrf-src <value>]	Specifies the VRF name. The string length is in the range of 0 to 32.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

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Related commands

Variable	Value
create [vrf-src <value>]	Creates RIP route redistribution.
delete [vrf-src <value>]	Deletes RIP route redistribution.
disable [vrf-src <value>]	Disables RIP route redistribution.
enable [vrf-src <value>]	Enables RIP route redistribution.
info [vrf-src <value>]	Specifies RIP route redistribution configuration information.
metric <metric-value> [vrf-src <value>]	Sets the metric value for RIP redistribution.
route-policy <policy-name> [vrf-src <value>]	Sets the route policy for RIP redistribution.

config ip vrf rip redistribute rip apply

Use this command to apply RIP route redistribution changes.

Syntax

config ip vrf <vrfName> rip redistribute rip apply [vrf-src <value>]

Parameters

Variable	Value
[vrf-src <value>]	Specifies the VRF name. The string length is in the range of 0 to 32.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

Related commands

Variable	Value
create [vrf-src <value>]	Creates RIP route redistribution.
delete [vrf-src <value>]	Deletes RIP route redistribution.
disable [vrf-src <value>]	Disables RIP route redistribution.
enable [vrf-src <value>]	Enables RIP route redistribution.
metric <metric-value> [vrf-src <value>]	Sets the metric value for RIP redistribution.

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Variable	Value
route-policy <policy-name> [vrf-src <value>]	Sets the route policy for RIP redistribution.
info [vrf-src <value>]	Specifies RIP route redistribution configuration information.

config ip vrf rip redistribute static apply

Use this command to apply RIP route redistribution changes.

Syntax

config ip vrf <vrfName> rip redistribute static apply [vrf-src <value>]

Parameters

Variable	Value
<vrfname>	Specifies the VRF name in the range of 0 to 32.
[vrf-src <value>]	Specifies the VRF name. The string length is in the range of 0 to 32.

Default

None

Related commands

Variable	Value
create [vrf-src <value>]	Creates RIP route redistribution.
delete [vrf-src <value>]	Deletes RIP route redistribution.
disable [vrf-src <value>]	Disables RIP route redistribution.
enable [vrf-src <value>]	Enables RIP route redistribution.
info [vrf-src <value>]	Specifies RIP route redistribution configuration information.
metric <metric-value> [vrf-src <value>]	Sets the metric value for RIP redistribution.
route-policy <policy-name> [vrf-src <value>]	Sets the route policy for RIP redistribution.

config ip vrf pim debug-pimmsg assert

Use this command to set assert debug trace to true or false.

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Syntax

config ip vrf <vrfname> pim debug-pimmsg assert <true=1|false=2>

Parameters

Variable	Value
<vrfName>	Specifies the VRF name. The string length ranges from 0 to 32.

Default

None

Related commands

Variable	Value
bstrap <true=1|false=2>	Enables or disables bootstrap debug trace.
group <ipaddress>	Sets group value to specific multicast group value.
hello <true=1|false=2>	Enables or disables hello debug trace.
info	Displays current level parameter settings.
joinprune <true=1|false=2>	Enables or disables joinprune debug trace.
pimdbglog <true=1|false=2>	Enables or disables PIM debug log.
pimdbgtrace <true=1|false=2>	Enables or disables PIM debug trace in a particular session.
rcv <true=1|false=2>	Enables or disables RCV debug trace.
register <true=1|false=2>	PIM register suppression timeout.
regstop <true=1|false=2>	Enables or disables register stop debug trace.
rp-adv <true=1|false=2>	Enables or disables RP-Adv debug trace.
send <true=1|false=2>	Enables or disables send trace.
source <ipaddress>	Enables or disables source value to specific source IP address.

config ip vrf pim interface

Use this command to enable PIM on specific interface with specific type.

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Syntax

config ip vrf <vrfname> pim interface <ipaddr> create <active|passive>

Parameters

Variable	Value
<active|passive>	Specifies the interface type.
<vrfName>	Specifies the VRF name. The string length ranges from 0 to 32.

Default

None

Related commands

Variable	Value
disable	Disables PIM on specific interface.
enable	Enables PIM on specific interface.
hellointerval <seconds>	Specifies the frequency at which PIM hello messages are sent. **seconds** is the hello interval {0..18724}.
info	Displays current level parameter settings and next level directories.
interface-type <active|passive>	Specifies the PIM interface type.
joinprune-interval <seconds>	Specifies the frequency at which PIM join or prune messages are sent.

config ip vrf pim interface virtual-neighbor add

Use this command to add PIM virtual neighbor entries.

Syntax

config ip vrf <vrfname> pim interface <ipaddr> virtual-neighbor add <ipaddr>

Parameters

Variable	Value
<ipaddr>	Specifies the neighboring IP address in the {a.b.c.d} format.

Default

None

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Related commands

Variable	Value
delete <ipaadr>	Deletes PIM instance for the VRF.
info	Displays current level parameter settings.

config ip vrf pim joinprune-interval

Use this command to PIM joinprune interval.

Syntax

config ip vrf <vrfname> pim joinprune-interval <integer>

Parameters

Variable	Value
<integer>	Specifies the join/prune interval value {1..18724}.
<vrfName>	Specifies the VRF name.

Default

None

Related commands

Variable	Value
delete <ipaadr>	Deletes PIM instance for the VRF.
info	Displays current level parameter settings.

config ip vrf pim static-rp add grp

Use this command to add static RP entries.

Syntax

config ip vrf <vrfname> pim static-rp add grp <value> mask <value> rp <value>

Parameters

Variable	Value
grp <value>	Specifies the group IP address in the {a.b.c.d} format.

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Variable	Value
mask <value>	Specifies the mask IP address in the {a.b.c.d} format.
<vrfName>	Specifies the VRF name.

Default

None

Related commands

Variable	Value
delete grp <value> mask <value> rp <value>	Deletes static RP entries.
disable	Disables static-RP entries.
enable	Enables static-RP entries.
info	Displays current level parameter settings and next level directories.

config ip vrf prefix-list add-prefix

Use this command to add prefix to a list. A list is created if it does not exist.

Syntax

config ip vrf <vrfname> prefix-list <name> add-prefix <ipaddr/mask> [maskLenFrom <value>] [maskLento <value>]

Parameters

Variable	Value
<ipaddr/mask>	Specifies the IP address and network mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}.
maskLenFrom <value>	Specifies the MaskLenFrom in the range of 0 to 32.
maskLento <value>	Specifies the MaskLenTo in the range of 0 to 32.
<vrfName>	Specifies the VRF name.

Default

None

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Related commands

Variable	Value
delete	Deletes prefix-list.
info	Displays current level parameter settings and next level directories.
name <name>	Renames the list. **name** is the new name. The string length ranges from 1 to 64.
remove-prefix <ipaddr/mask>	removes prefix from a list.

config ip vrf route-policy info

Use this command to displays general information about policy with this name.

Syntax

config ip vrf <vrfname> route-policy <policy-name> info

Parameters

Variable	Value
<policy-name>	Specifies the policy name. The string length ranges from 1 to 64.
<vrfName>	Specifies the VRF name.

Default

None

Related commands

None

config ip vrf route-policy seq action

Use this command to add prefix to a list. A list is created if it does not exist.

Syntax

config ip vrf <vrfname> route-policy <policy name> seq <seq number> action <permit|deny>

Parameters

Variable	Value
<seq numberk>	Specifies the sequence number in the range of 1 to 65535.

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Variable	Value
<policy name>	Specifies the policy name {string length 1..64}.
<permit|deny>	Specifies the VRF name.
<vrfName>	Specifies the VRF name. The string length ranges from 0 to 32.

Default

None

Related commands

Variable	Value
create	Creates route-policy with specific name and sequence number.
delete	Deletes route-policy.
disable	Disables route-policy.
enable	enable route-policy
info	Displays current level parameter settings and next level directories.
match-as-path <as-list> [clear	Matches as path. Applicable for BGP only. Ignored in all other cases. **as-list** is the match as in the AS-path list, represents multiple AS-list ID as 2,4,5,6,7.
match-community <match-list> clear	Matches community. Applicable for BGP only. Ignored in all other cases. **match-list** is the match community in the community list, represents multiple community-list id as 2,4,5,6,7 {string length 0..256}.
match-community-exact <enable|disable> [clear]	Matches community exact. Applicable for BGP only. Ignored in all other cases.
match-interface <prefix-list> [clear]	Matches received interface. Applicable to RIP only. Ignored otherwise. **prefix-list** is the match interfaces in a list {string length 0..259}.

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Variable	Value
match-local-pref <pref-val> [clear]	Matches local preference, that is applicable to all protocols. **pref-val** is the match preference {0..2147483647}.
match-metric <metric> [clear]	matches metric. Applicable to all protocols. **metric** is the match metric value {0..65535}.
match-network <prefix-list> [clear]	Matches network. Applicable to all protocols. **prefix-list** is the match address in a list {string length 0..259}.
match-next-hop <prefix-list> [clear]	Matches next-hop. Applicable to BGP, RIP. ignored otherwise. **prefix-list** is the match next-hop in a list {string length 0..259}.
match-protocol <protocol name> [clear]	Matches protocol. Applicable to RIP and DVMRP announce policy. Ignored otherwise. **protocol name** any|xxx, where xxx is local, OSPF, EBGP, IBGP, RIP, DVMRP, static, or any combination separated by | {string length 0..40}.
match-tag <tag> [clear]	Matches tag. Applicable to BGP only. Ignored in all other cases. **tag** is the match tag value {string length 0..256}.
match-vrf [[vrf <value>] [vrfids <value>] [clear]	Matches VRF. Applicable for RIP only. Ignored in all other cases.
match-route-dest <prefix-list> [clear]	Matches the route destination address. Applicable to BGP only. Ignored in all other cases.
match-route-src <prefix-list> [clear]	Matches the route source address. Applicable to BGP,RIP,DVMRP only. Ignored in all other cases. **prefix-list** is the match route-SRC in a list {string length 0..259}.

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Variable	Value
match-route-type <route-type>	Matches the route-type. Applicable to BGP,OSPF. ignored otherwise. **route-type** is the route type to be matched. {any|local|internal|external|external-1|external-2}.
name <policy name>	Renames the list. **policy name** is the policy name {string length 1..64}.
set-as-path <as-list-id> [clear]	Sets as path. Applicable to BGP only. Ignored in all other cases.
set-as-path-mode <tag|prepend> [clear]	Sets as path mode. Applicable to BGP only. Ignored in all other cases. **tag|prepend** sets the AS-path mode {string length 0..256}.
set-automatic-tag enable|disable> [clear]	Sets tag automatically. Applicable to BGP only. Ignored in all other cases.
set-community <community-list> [clear]	Sets community. Applicable to BGP only. Ignored in all other cases. **community-list** sets community list {string length 0..256}.
set-community-mode <unchanged|additive|none> [clear]	Sets community mode. Applicable to BGP only. Ignored in all other cases. **unchanged|additive|none** sets community mode {string length 0..9}.
set-extcommunity <extcommunity-list-id> [clear]	Sets extended community. **extcommunity-list-id**is the extcommunity-list-ID {1..1024}.
set-extcommunity-mode <append|unchanged|overwrite> [clear]	Sets extended community mode. **append|unchanged|overwrite** is the mode for setting the extended community.
set-injectlist <prefix-list> [clear]	Sets inject or advertise list. Ignored for DVMRP.
set-local-pref <pref-value> [clear]	Sets local preference. Applicable to BGP only. Ignored in all other cases. preference value to be set {0..65535}
set-mask <ipaddr.	Sets mask. Applicable for RIP accept only . Ignored in all other cases.
set-metri <metric-value> [clear]	Sets metric. Applicable to BGP and OSPF only. Ignored otherwise. **metric-value** is the metric value to be set {0..65535}.

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Variable	Value
set-metric-type <metric-type>	Sets metric type. Applicable to OSPF only. Ignored in all other cases.
set-metric-type-internal <metric-type-internal> [clear]	Sets the MED value for routes advertised to EBGP NBRS to the IGP metric value. **metric-type-internal** is the metric type for internal set up {0..1}.
set-next-hop <ipaddr> [clear]	Sets the next-hop. Applicable to BGP only. Ignored in all other cases.
set-nssa-pbit <enable|disable>	Sets or clears translation P bit. Applicable for OSPF announce only. Ignored in all other cases.
set-origin <origin> [clear]	Sets origin. Applicable to BGP only. Ignored in all other cases.
set-origin-egp-as <origin-egp-as> [clear]	Sets origin EGP AS. Applicable to BGP only. Ignored in all other cases. **origin-egp-as** sets origin EGP AS of the route {0..65535}.
set-preference <pref-value> [clear]	Sets preference. used only for RIP or OSPF accept. Is ignored for DVMRP.
set-tag <tag> [clear]	Sets tag. Applicable to BGP only. Ignored in all other cases. **tag** sets tag value {0..65535}.
set-weight <weight> [clear]	Sets weight. Applicable to BGP only. Ignored in all other cases. **weight** sets weight value {0..65535}.

config ip vrf rip default-import-metric

Use this command to set RIP Default Import Metric.

Syntax

config ip vrf <vrfname> rip default-import-metric <metric>

Parameters

Variable	Value
<metric>	Sets the RIP Default Import Metric. The string length ranges from 0 to 15.
<vrfName>	Specifies the VRF name.

Default

The default value is 8.

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Related commands

Variable	Value
delete	Deletes a RIP instance.
diable	Disables RIP.
domain <value>	Changes RIP interface configuration domain. **value** is the domain value {0..39321}.
holddown <seconds>	Sets RIP hold down timer. **seconds** is the hold down period in seconds {0..360}.
info	Displays current level parameter settings and next level directories.

config ip vrf rip interface auto-aggr

Use this command to enable or disable auto-aggregation flag.

Syntax

config ip vrf <vrfname> rip interface <ipaddr> auto-aggr <enable|disable>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<enable|disable>	Enables or disables a feature.
<vrfName>	Specifies the VRF name.

Default

The default value is 8.

Related commands

Variable	Value
cost <cost>	Sets interface cost. **cost** is the interface cost {1..15}.
default-supply <enable|disable>	Enables or disables accept-default-route flag.
disable	Disables RIP on specific interface.
enable	Enables RIP on a specific interface.
holddown <seconds>	Sets RIP hold down timer for a specific interface. **seconds** is the hold down timer in seconds {0..360}.

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Variable	Value
in-policy <policy name>	Sets RIP in-policy on a specific interface (to delete the policy, enter blank string as policy name).
info	Displays current level parameter settings and next level directories.
listen <enable|disable>	Enables or disables listen flag.
out-policy <policy name>	Sets RIP out-policy on specific interface (to delete the policy, enter blank string as policy name).
poison <enable|disable>	Enables or disables poison flag.
receive-mode <mode>	Changes RIP receive mode.
send-mode <mode>	Changes RIP send mode.
supply <enable|disable>	Enables or disables supply flag.
timeout <seconds.	Sets RIP timeout interval for the interface.
trigger <enable|disable>	Enables or disables triggered-update flag.

config ip vrf bgp aggregate-address

Use this command to configure IP BGP aggregate-address command.

Syntax

config ip vrf <vrfName> bgp aggregate-address <prefix/len> <add|del> [as-set <value>] [summary-only <value>] [summary-only <value>] [suppress-map <value>] [advertise-map <value>] [attribute-map <value>]

Parameters

Variable	Value
<prefix/len>	Specifies the prefix and LEN value {a.b.c.d/len}.
<add|del>	Adds or deletes the configuration {add|del}.
[as-set <value>]	Disables or enables AS-set.
[summary-only <value>]	Specifies the summary-only {disable|enable}.
[suppress-map <value>]	Specifies the suppress-map-name {string length 0..1536}.

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Variable	Value
[advertise-map <value>]	Specifies the advertise-map-name {string length 0..1536}.
[attribute-map <value>]	Specifies the attribute-map-name {string length 0..1536}.

Default

None

Related commands

Variable	Value
always-cmp-med <enable|disable>	Specifies the configuration IP BGP always-CMP-med command.
auto-peer-restart <enable|disable>	Specifies the configuration IP BGP auto-peer-restart command.
auto-summary <enable|disable>	Specifies the configuration IP BGP auto-summary command.
debug-screen [<settings>	Specifies the configuration IP BGPdebug-screen command.
default-local-pref <value> <add|del>	Specifies the configuration IP BGP default-local-preference command.
default-metric <value> <add|del>	Specifies the configuration IP BGP default-metric command.
delete	Deletes BGP instance for the VRF
deterministic-med <enable|disable>	Specifies the configuration IP BGP deterministic-med command.
disable	Specifies the configuration IP BGP disable command.
enable	Specifies the configuration IP BGP enable command.
flap-dampening <enable|disable>	Specifies the configuration IP BGP dampening command.
global-debug mask <value>	Specifies the mask list .
ibgp-report-import-rt <enable|disable>	Specifies the configuration IP BGP ibgp-report-import-rt command.
ignore-illegal-rtrid <enable|disable>	Specifies the configuration IP BGP ignore-illegal-rtrid command.
info	Specifies the configuration IP BGP information command.

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Variable	Value
max-equalcost-routes <value> <enable|disable>	Specifies the configuration IP BGP max-equalcost-routes command.
network <prefix/len> <add|del> [metric <value>]	Specifies the configuration IP BGP network command.
no-med-path-is-worst <enable|disable>	Specifies the configuration IP BGP no-med-path-is-worst command.
orig-def-route <enable|disable>	Specifies the configuration IP BGP orig-def-route command.
quick-start <enable|disable>	Specifies the configuration IP BGP QuickStart command
restart [soft-reconfiguration <value>]	Specifies the configuration IP BGP restart command.
route-policy <in|out> <route-map name> <add|del>	Specifies the configuration IP BGP route-policy command.
router-id <ipaddr>	Specifies the configuration IP BGP router-ID command.
stats-clear	Specifies the configuration IP BGP statistics clear command.
synchronization <enable|disable>	Specifies the configuration IP BGP synchronization command.
traps <enable|disable>	Specifies the configuration IP BGP traps command.

config ip vrf pim candbsr interface preference

Use this command to enable candidate BSR entry to an interface.

Syntax

config ip vrf <vrfName> pim candbsr interface <ipaddr> enable preference <value>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
preference <value>	Specifies the preference in the range of 0 to 255.
<vrfName>	Specifies the VRF name in the range of 0 to 32.

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Default

None

Related commands

Variable	Value
disable	Disables candidate BSR entry.
info	Displays current level parameter settings and next level directories.

config ip vrf pim candbsr add grp

Use this command to add candidate RP entries.

Syntax

config ip vrf <vrfName> pim candrp add grp <value> mask <value> rp <value>

Parameters

Variable	Value
grp <value>	Specifies the group IP address in the {a.b.c.d} format.
mask <value>	Specifies the mask IP address in the {a.b.c.d} format.
rp <value>	Specifies the RP IP address in the {a.b.c.d} format.

Default

None

Related commands

Variable	Value
delete grp <value> mask <value> rp <value>	Deletes candidate RP entries.
info	Displays current level parameter settings and next level directories.

config ip vrf static-mroute create

Use this command to add static mroute entries.

Syntax

config ip vrf <vrfName> static-mroute create <ipaddr/mask> rpf <value> [preference <value>]

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Parameters

Variable	Value
<ipaddr/mask>	Specifies the IP address in the {a.b.c.d} format.
[preference <value>]	Specifies the preference. The string length ranges from 1 to 255.

Default

None

Related commands

Variable	Value
delete <ipaddr/mask> rpf <value> [preference <value>]	Deletes static mroute entries.
disable <ipaddr/mask> rpf <value>	Disables static mroute entries.
enable <ipaddr/mask> rpf <value>	Enables static mroute entries.
info	Displays current level parameter settings and next level directories.

config ip vrf dhcp-relay create-fwd-path

Use this command to create FWD path.

Syntax

config ip vrf <vrfName> dhcp-relay create-fwd-path agent <value> server <value> [mode <value>] [state <value>]

Parameters

Variable	Value
[mode <value>]	Specifies the mode value {bootp|dhcp|bootp_dhcp}.
state <value>]	Enables or disables a state.
<vrfName>	Specifies the VRF name.

Default

None

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Related commands

Variable	Value
delete-fwd-path agent <value> server <value>	Deletes FWD path.
disable-fwd-path agent <value> server <value>	Disables global DHCP-relay.
enable-fwd-path agent <value> server value>	Enables global DHCP-relay.
mode <mode> agent <mode> server value>	Changes DHCP-relay mode.
info	Displays current level parameter settings and next level directories.

config ip vrf extcommunity-list add-extcommunity

Use this command to add extcommunity.

Syntax

config ip vrf <vrfName> extcommunity-list <listid> add-extcommunity <member-id> [rt <value>] [soo <value>]

Parameters

Variable	Value
add-extcommunity <member-id> [rt <value>] [soo <value>]	Adds an entry to the extended community list. • **<member-id>** is an integer value between 0 and 65535 that represents the member ID in the community list. • **rt <value>** specifies the route target in the format {AS number:assigned number} (that is, {0 to 65535}:{0 to 2147483647}) or {ipaddress:assigned number} (that is, {a.b.c.d}:{0 to 65535}). • **soo <value>** specifies the site of origin in the format {AS number:assigned number} (that is, {0 to 65535}:{0 to 2147483647}) or {ipaddress:assigned number} (that is, {a.b.c.d}:{0 to 65535}).

Default

None

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Related commands

Variable	Value
delete	Deletes the specified extended community list entry.
info	Displays the current content of the specified extended community list ID.
remove-extcommunity <member-id>	Removes an entry from the extended community list. **<memberId>** is an integer value between 0 and 65535.

config ip vrf udpfwd interface broadcastmask

Use this command to set the interface broadcast mask.

Syntax

config ip vrf <vrfName> udpfwd interface <ipaddr> broadcastmask <mask>

Parameters

Variable	Value
<ipaddr/mask>	Specifies the IP address in the {a.b.c.d} format.
[preference <value>]	Specifies the preference. The string length ranges from 1 to 255.

Default

None

Related commands

Variable	Value
create <mask>	Creates UDP forward interface.
delete <fwdlistid>	Deletes UDP forward interface.
info	Displays current level parameter settings and next level directories.
maxttl <maxttl>	Sets maximum TTL for this interface.
udpportfwdlist <fwdlistid>	Sets UDP port forward list.

config ip vrf udpfwd portfwdlist

Use this command to set the interface broadcast mask.

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Syntax

config ip vrf <vrfName> udpfwd portfwdlist <fwdlistid> add-portfwd <udpport> <ipaddr>

Parameters

Variable	Value
<ipaddr/mask>	Specifies the IP address in the {a.b.c.d} format.
[preference <value>]	Specifies the preference. The string length ranges from 1 to 255.

Default

None

Related commands

Variable	Value
create <mask>	Creates UDP forward list.
delete <fwdlistid>	Deletes UDP port forward list.
info	Display current level parameter settings and next level directories.
name <name>	Sets UDP port forward list name.
remove-portfwd <udpport> <ipaddr>	Removes port forward entry from the list.

config ip vrf udpfwd portfwd remove-portfwd

Use this command to remove port forward entry from the list.

Syntax

config ip vrf <vrfName> udpfwd portfwd remove-portfwd <udpport> <ipaddr>

Parameters

Variable	Value
<udpport>	Specifies the UDP port number {1..65535}.
<ipaddr>	Specifies the IP address in the {a.b.c.d}.

Default

None

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Related commands

Variable	Value
add-portfwd <udpport> <ipaddr>	Adds port forward entry to the list.
info	Display current level parameter settings and next level directories.

config ip vrf udpfwd protocol create

Use this command to create UDP protocol entry.

Syntax

config ip vrf <vrfName> udpfwd protocol <udpport> create <protoname>

Parameters

Variable	Value
<udpport>	Specifies the UDP port number {1..65535}.
<ipaddr>	Specifies the IP address in the {a.b.c.d}.

Default

None

Related commands

Variable	Value
delete	Deletes UDP protocol entry.
info	Display current level parameter settings and next level directories.

config ip vrf vrrp ping-virtual-address

Use this command to enables or disables virtual address ping.

Syntax

config ip vrf <vrfName> vrrp ping-virtual-address <enable|disable>

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Parameters

Variable	Value
`<enables|disables>`	Enables or disables a feature.
`<vrfName>`	Specifies the VRF name.

Default

None

Related commands

Variable	Value
`send-trap <enable|disable>`	Enables or disable VRRP send trap.
`info`	Display current level parameter settings and next level directories.

show ip forwarding

Use this command to view the global IP forwarding configuration on the switch.

Syntax

`config ip forwarding`

Parameters

None

Default

None

Related commands

Variable	Value
`disable`	Disables IP forwarding (routing) on the router or VRF.
`enable`	Enables IP forwarding (routing) on the router or VRF. The default is enable.
`info`	Displays current forwarding information for the router or VRF.

show ports info brouter port

Use this command to confirm the configuration assigned to an IP address and VLAN ID to the port is correct.

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Syntax

show ports info brouter port [vlan <value>]

Parameters

None

Default

None

Related commands

Variable	Value
create <ipaddr/mask> <vid> [mac_offset <value>]	Assigns an IP address to a port to create a brouter port. • **<ipaddr/mask>** is the IP address and mask in a.b.c.d format. • **<vid>** is the VLAN ID in the range of 1 to 4094. • **mac_offset <value>** specifies a number by which to offset the MAC address of the brouter port from the chassis MAC address. This ensures that each IP address has a different MAC address.
delete <ipaddr>	Deletes an IP address from a brouter port.
info	Displays configured IP characteristics on the port.
Rvs-Path-Chk <enable|disable> [mode <value>]	Enables or disables reverse path checking. • **mode <value>** is either exist-only mode or strict mode. In exist-only mode, RPC checks whether the incoming packet source IP address exists in the routing table. If the source IP entry is found, the packet is forwarded as usual; otherwise, the packet is discarded. In strict mode, RPC checks whether the incoming packet source IP address exists in the routing table. If the source IP entry is not found, RPC further checks to see if the source IP interface matches the packet incoming interface. If they match, the packet is forwarded as usual, otherwise, the packet is discarded. Reverse path checking is supported only on R series modules with R mode enabled.

show boot net

Use this command to show the complete network management status.

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Syntax

show boot net

Parameters

None

Default

None

Related commands

None

show ip interface

Use this command to show the IP interfaces and addresses on the switch.

Syntax

show ip interface [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
[vrf <value>]	Specifies the VRF name). The string length is from 0 to 32.
[vrfids <value>]	Specifies the VRF range.

Default

None

Related commands

None

show ip bfd session

Use this command to display BFD session information.

Syntax

show ip bfd session info
show ip bfd session next-hop <NextHop>

Parameters

Variable	Value
<NextHop>	Specifies the NextHop address in the {a.b.c.d} format.

Default

None

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Related commands

None

show ip dhcp-relay fwd-path

Use this command to display information about the DHCP relay forward path.

Syntax

show ip dhcp-relay fwd-path [vrf <value>] [vrfids <value>]

Parameters

None

Default

None

Related commands

None

show ip dhcp-relay counters

Use this command to display information about DHCP relay counters.

Syntax

show ip dhcp-relay counters [vrf <value>] [vrfids <value>]

Parameters

None

Default

None

Related commands

None

show ip dhcp-relay show-all

Use this command to show all DHCP relay information.

Syntax

show ip dhcp-relay show-all [file <value>] [vrf <value>] [vrfids <value>] vrf <vrfname>

Parameters

Variable	Value
file	The file name to which the output is redirected.

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Variable	Value
vrfName	Identifies the VRF.
vrfids	Identifies the range of VRF ids.

Default
None

Related commands
None

show ip bfd stats
Use this command to display BFD statistics.

Syntax
show ip bfd stats

Parameters
None

Default
None

Related commands
None

show ip bfd
Use this command to display BFD information.

Syntax
show ip bfd info

Parameters
None

Default
None

Related commands
None

show ip udpfwd show-all
Use this command to display all IP UDP forwarding information.

Syntax
show ip udpfwd show-all [file <value>] [vrf <avlue>] [vrfids <value>]

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Parameters

Variable	Value
fwdlistid	A list ID number with a range of 1 to 1000.
ipaddr	The IP address for the interface in a.b.c.d format.
value	The file name to which the output is redirected (**/pcmcia/ <file>** | **/flash/ <file>** where file is a string of 1 to 99 characters).

Default

None

Related commands

None

show ip udpfwd interface

Use this command to display information about the UDP interface.

Syntax

show ip udpfwd interface info [<ipaddr>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
ipaddr	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

None

show ip udpfwd portfwd

Use this command to display the UDP port forwarding table.

Syntax

show ip udpfwd portfwd info [vrf <value>] [vrfids <value>]

Parameters

None

Default

None

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Related commands

None

show ip udpfwd portfwdlist

Use this command to display the UDP port forwarding list table for the specified list or all lists on the switch.

Syntax

show ip udpfwd portfwdlist info [<fwdlistid>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
<fwdlistid>	Specifies the forward list ID in the range of 1 to 1000.

Default

None

Related commands

None

show ip udpfwd protocol

Use this command to display the UDP protocol table with the UDP port numbers.

Syntax

show ip udpfwd protocol info [vrf <value>] [vrfids <value>]

Parameters

None

Default

None

Related commands

None

show ip ospf info accept

Use this command to display information about the configured OSPF entries .

Syntax

show ip ospf accept info [vrf <value>] [vrfids <value>]

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Parameters

None

Default

None

Related commands

None

show ip rsmlt info

Use this command to display RSMLT information about the interface.

Syntax

show ip rsmlt info [<local/peer>] [vrf <value>] [vrifids <value>]

Parameters

Variable	Value
[<local|peer>]	Specifies the local or peer switch.
[vrf <value>]	Specifies the VRF name.
[vrifids <value>]	Specifies the VRF ID range.

Default

None

Related commands

None

show ports info

Use this command to display data for a specified port or for all ports.

Syntax

show ports info arp [port <value>]

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

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show vlan info arp

Use this command to display ARP information for the specified port or for all ports.

Syntax

show vlan info arp [<vid>] [port <value>]

Parameters

Variable	Value
[vrf <value>]	Specifies the VRF name.
[vrifids <value>]	Specifies the VRF ID range.

Default

None

Related commands

None

show ip vrrp info

Use this command to display VRRP port information.

Syntax

show ip vrrp info [vrid <value>] [ip <value>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
ip	The IP address of the master VRRP.
vrid <value>	A unique integer value that represents the virtual router ID in the range 1 to 255. The virtual router acts as the default router for one or more assigned addresses.

Default

None

Related commands

Variable	Value
global-settings [vrf <value>] [vrfids <value>]	Displays VRRP global information.

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Variable	Value
show-all [file <value>] [vrf <value>] [vrfids <value>]	Displays VRRP information.
stats [vrid <value>] [ip <value>] [vrf <value>] [vrfids <value>]	Displays VRRP statistics.

show vlan info vrrp

Use this command to display the extended VRRP configuration for all VLANs or a specified VLAN on the switch.

Syntax

show vlan info vrrp extended [<vid>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
<main | extended>	Indicates values for extended or main VRRP configurations.
vid	The VLAN ID in the range of 1 to 4094.
[<vid>] [vrf <value>]	Indicates the VRF name.
[vrfids <value>]	Indicates a range of VRF IDs.

Default

None

Related commands

None

show ip vrpp info

Use this command to display VRRP information about the interface.

Syntax

info [vrid <value>] [ip <value>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
ip <value>	The IP address of the master VRRP.

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Variable	Value
vrid <value>	A unique integer value that represents the virtual router ID in the range 1 to 255. The virtual router acts as the default router for one or more assigned addresses.
[vrf <value>]	Indicates the VRF name.
[vrfids <value>]	Indicates a range of VRF IDs.

Default

None

Related commands

None

show ip arp info

Use this command to display the configuration information in the ARP table.

Syntax

show ip arp info [<ip address>] [-s <value>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
ip address	The network IP address for the table.
-s <value>	The subnet in the format (a.b.c.d/x|a.b.c.d/x.x.x.x|default).

Default

None

Related commands

None

show ip prefix-list

Use this command to display the prefix list.

Syntax

show ip prefix-list [<list name>] [prefix <value>] [vrf <value>] [vrfids <value>]

Parameters

None

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Default

None

Related commands

None

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IP Multicast Routing Protocols commands

This chapter describes the Ethernet Routing Switch 8600 IP Multicast Routing Protocols commands.

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config ip arp static-mcastmac

Use this command to configure Layer 3 multicast MAC filtering.

Syntax

config ip arp static-mcastmac

Parameters

None

Default

None

Related commands

Variable	Value
add mac <value> ip <value> vlan <value> [port <value>] [mlt <value>]	Adds static multicast MAC entries. • **mac <value>** is the MAC address. • **ip <value>** is the IP address. • **vlan <value>** is the VLAN ID number. • **port <value>** is the port that receives the multicast flooding. • **mlt <value>** is the multilink trunk ID.

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Variable	Value
delete <ipaddr>	Deletes static multicast MAC entries. • **ipaddr** is the IP address.
info	Displays current settings.

config ethernet ip dvmrp default-listen

Use this command to apply the default route policy to a port.

Syntax

config ethernet <ports> ip dvmrp default-listen <enable|disable> default-supply <enable|disable> default-supply-metric <cost>

Parameters

Variable	Value
default-listen <enable|disable>	Learns the default route over the specified VLAN if this feature is enabled on the VLAN. The options are enable and disable. The default setting is enable.
default-supply <enable|disable>	Generates and advertises only the default route if this feature is enabled on the VLAN. No other route is advertised to the neighbors on this VLAN. The options are enable and disable. The default setting is disable.
default-supply-metric <cost>	Advertises the specified metric over the VLAN if you configure the VLAN to supply the default route. The range is 1–31 hops. The default setting is 1 hop.
interface-type <active|passive>	Specifies the interface type as active or passive. The default is active.
vid	Specifies a VLAN ID from 1–4092.

Default

None

Related commands

Variable	Value
advertise-self <enable|disable>	Advertises the local network if set to enable. The default is enable.

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Variable	Value
create <active|passive>	Enables DVMRP on a specific interface of a specific interface type. • **active** is an active interface type. • **passive** is a passive interface type. The default is active.
disable	Disables DVMRP on a specific interface.
enable	Enables DVMRP on a specific interface.
in-policy <policy_name>	Specifies the DVRMP route in-policy. • **policy_name** is a policy name that uses a string length of 0–64.
info	Shows the current-level parameter settings and next-level directories.
interface-type <active|passive>	Specifies the interface type as active or passive. The default is active.
metric <cost>	Specifies the DVMRP route metric. • **cost** is the metric value with a range of 1–31. The default is 1.
out-policy <policy_name>	Specifies the DVRMP route out-policy. • **policy_name** is a policy name that uses a string length of 0–64.

config ethernet ip igmp

Use this command to configure IGMP on Ethernet ports.

Syntax

config ethernet <ports> ip igmp

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

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Related commands

Variable	Value
compatibility-mode enable <true|false>	Enables or disables v2-v3 compatibility mode. The default value is false, which means IGMPv3 is not compatible with IGMPv2.
dynamic-downgrade-version enable <true|false>	Configures if the Ethernet Routing Switch 8600 downgrades the version of IGMP to handle older query messages. If the switch downgrades, the host with IGMPv3 only capability does not work. If you do not configure the switch to downgrade the version of IGMP, the switch logs a warning. The default value is true, which means the switch downgrades to the oldest version of IGMP on the network.
fast-leave <enable|disable>	Enables or disables the fast leave mode, which a switch uses to immediately stop forwarding traffic for a multicast group as soon as an IGMPv2 leave group message is received on an interface. The default is disable.
flush <mrouter|sender|grp-member> **[<SenderAddress>] [<GroupAddress>]**	Flushes the specified table.
info	Displays IGMP settings on the port.
last-memb-query-int <1/10_seconds>	The maximum response time (in tenths of a second) that is inserted into group-specific queries sent in response to leave group messages. This value is also the time between group-specific query messages. This value is not configurable for IGMPv1. Decreasing the value reduces the time to detect the loss of the last member of a group. **1/10_seconds** is the range from 0–255, and the default is 10 tenths of a second. Nortel recommends that you configure this value between 3–10 (equal to 0.3 – 1.0 seconds).
query-interval <seconds>	Configures the frequency (in seconds) at which the port transmits host query packets. **seconds** is the range of 1–65535 seconds. The default value is 125 seconds.

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Variable	Value
query-max-resp <1/10_seconds>	The maximum response time (in tenths of a second) advertised in IGMPv2 general queries on this interface. This value is not configurable for IGMPv1. Smaller values allow a router to prune groups faster. **1/10_seconds** is an integer value with a range of 0–255 and a default of 100 tenths of a second (equal to 10 seconds). **ATTENTION** You must configure this value lower than the query-interval.
robustval <integer>	Configures the expected packet loss of a network. **integer** is the range of 2–255 with a default of 2. Increase the value if you expect the network to experience packet loss.
router-alert **<enable|disable>**	When enabled, this parameter instructs the router to ignore IGMP packets that do not contain the router alert IP option. When disabled (default setting), the router processes IGMP packets regardless of whether the router alert IP option is set or not. **ATTENTION** To maximize your network performance, Nortel recommends that you set this parameter according to the version of IGMP currently in use: • IGMPv1 - Disable • IGMPv2 - Enable • IGMPv3 - Enable
version <integer>	Configures the version of IGMP that you want to configure on this port. For IGMP to function correctly, all routers on a LAN must use the same version. **integer** is an integer value with a value of 1, 2, or 3. The default value is 2 (IGMPv2).

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config ether ip dvmrp

Use this command to apply a DVMRP announce policy.

Syntax

```
config ether <port> ip dvmrp out-policy ""
```

Parameters

Variable	Value
""	Indicates the policy used in the current session. If you do not enter a name, you delete the policy.. **ATTENTION** If you delete an accept policy from an interface, VLAN, or port, you change the configuration; you do not delete the policy itself.
ipaddr	Specifies the address of the interface.
policy name	Specifies the name of the accept policy you create.

Default

None

Related commands

None

config ether ip dvmrp in-policy

Use this command to apply an accept policy from the port.

Syntax

```
config ethernet <port> ip dvmrp in-policy <policy-name>
config ethernet <port> ip dvmrp in-policy ""
```

Parameters

Variable	Value
""	Indicates the policy used in the current session. If you do not enter a name, you delete the policy. **ATTENTION** If you delete an accept policy from an interface, VLAN, or port, you change the configuration; you do not delete the policy itself.

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Variable	Value
policy name	Specifies the name of the Announce policy you create.
port	Identifies the number of the port.

Default

None

Related commands

None

config ethernet ip dvmrp interface passive

Use this command to configure an active or passive port type.

Syntax

config ethernet <port> ip dvmrp interface-type <active|passive>

Parameters

Variable	Value
active	Specifies that the interface receives all types of incoming DVMRP packets from neighbors and sends out probes or route reports to its neighbor switches.
passive	Specifies that the interface drops all types of incoming DVMRP packets from neighbors and does not send out probes or route reports to its neighbor switches.
port	Specifies the number of the port.

Default

None

Related commands

None

config ethernet ip pim candbsr enable preference

Use this command to configure a candidate BSR.

Syntax

config ethernet <ports> ip pim candbsr enable preference <value>

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Parameters

Variable	Value
enable preference <value>	Enables the C-BSR on this interface and configures its preference value to become a BSR. The C-BSR with the highest BSR preference and address is the preferred BSR. The default is –1, which indicates that the current interface is not a C-BSR.
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
disable	Disables the C-BSR on this interface.
info	Displays the C-BSR preference setting for this interface.

config ethernet ip pim

Use this command to enable PIM on an Ethernet.

Syntax

config ethernet <ports> ip pim

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
create <active|passive>	Enables PIM on a specific brouter port with a specific type. An active port accepts PIM control transmitted or received traffic. A passive port prevents PIM control traffic from transmitting or receiving, thereby reducing the load on a system. This feature is useful when a high number of PIM interfaces exist and connect to end users, not to other switches. The default is active.

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Variable	Value
disable	Disables PIM on the selected brouter port.
enable	Enables PIM on the selected port.
hellointerval <seconds>	Specifies how long to wait (in seconds) before the PIM switch sends out the next hello message to neighboring switches. The default is 30 seconds.
info	Displays current PIM configuration settings on the selected brouter port.
interface-type <active|passive>	Specifies whether the selected port is active or passive. You can change the state of a PIM interface after you create it but only if you disable PIM on the port. The default is active.
joinprune-interval <seconds>	Specifies how long to wait (in seconds) before the PIM switch sends out the next join/prune message to its upstream neighbors. The default is 60 seconds.

config ethernet

Use this command to enable DVMRP on an Ethernet.

Syntax

config ethernet <ports> ip dvmrp enable

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
advertise-self <enable|disable>	Enables or disables the advertisement of local routes for the selected port to other switches on the network. The default is enable.
create <active|passive>	Configures the interface type: active or passive. The default is active.
default-listen <enable|disable>	Learns the default route over the specified port if this feature is enabled on the interface. The default setting is enable.

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Variable	Value
default-supply <enable|disable>	Generates and advertises the default route if this feature is enabled on the port. The default setting is disable.
default-supply-metric <cost>	Advertises the specified metric over the port if you have configured the port to supply the default route. The range is 1–31 hops. The default setting is 1 hop.
disable	Disables DVMRP on the port.
enable	Enables DVMRP on the port.
in-policy <policy_name>	Applies a DVMRP accept policy. • **policy_name** is a policy name that uses a string length of 0–64 characters.
info	Displays DVMRP settings on the port.
interface-type <active|passive>	Configures an interface as active or passive. The default is active.
metric <cost>	Configures the DVMRP route metric. • **cost** is the maximum number of hops with a value of 1–31. The default is 1.
out-policy <policy_name>	Applies a DVMRP accept policy. • **policy_name** is a policy name that uses a string length of 0–64 characters.

config ethernet ip igmp stream-limit

Use this command to enable multicast stream limitation.

Syntax

config ethernet <ports> ip igmp stream-limit enable

Parameters

Variable	Value
enable	Enables stream limitation on this port.
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

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Related commands

Variable	Value
enable	Enables stream limitation on this port.
disable	Disables stream limitation on this port.
info	Displays information about the stream limits set on this port.
max-streams <integer>	Configures the maximum number of allowed streams on this port. The range is from 0–65535 and the default is 4.

config ethernet ip igmp access-control

Use this command to configure multicast access control for an IGMP Ethernet port.

Syntax

config ethernet <ports> ip igmp access-control <name>

Parameters

Variable	Value
name	Configures the name of the access policy from 1–64 characters.
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
create <HostAddress> <HostMask> <deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both>	Creates an access control group entry for a specific IGMP Ethernet port. • **HostAddress** is the IP address of the host. • **HostMask** is the subnet mask used to determine the host or hosts covered by this configuration. You can use the host subnet mask to restrict access to a portion of the host network. • **deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both** indicates the action you want for the specified IGMP

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Variable	Value
	Ethernet port. For example, if you specify deny-both, the interface denies both transmitted and received traffic.
delete <HostAddress> <HostMask>	Deletes the access control group entry for the specified IGMP interface. • **HostAddress** is the IP address of the host. • **HostMask** is the subnet mask used to determine the host or hosts covered by this configuration.
info	Displays the settings for the access-control parameter.
mode <HostAddress> <HostMask> <deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both>	Changes the access control group configuration. • **HostAddress** is the IP address of the host. • **HostMask** is the subnet mask used to determine the host or hosts covered by this configuration. • **deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both** indicates the action you want for the specified IGMP interface. For example, if you specify deny-both, the interface denies both transmitted and received traffic.
name	Configures the name of the access policy from 1–64 characters.
ports	Specifies the port or range of ports to configure in the slot/port format.

config ethernet mroute-limit enable

Use this command to enable stream limits.

Syntax

config ethernet <ports> mroute-limit enable true

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Parameters

Variable	Value
enable <true|false>	Enables or disables the feature on the specified port. By default it is disabled.
port	Specifies the port or range of ports to configure in the slot/port format.

Default

By default it is disabled.

Related commands

Variable	Value
enable <true|false>	Enables or disables the feature on the specified port.
info	Displays the current configuration.
max-allowed-streams <integer>	Configures the maximum number of streams for the specified port. The port is shut down if the number of streams exceeds this limit. The value is a number between 1–32768. The default value is 1984 streams.
max-allowed-streams-timer-check <integer>	Configures the sampling interval, which is used to check if the number of ingress multicast streams to the SF/CPU is under a configured limit or if the port needs to be shut down. The range is between 1–3600. The default value is 10 seconds.

config ethernet ip pgm state

Use this command to enable PGM on Ethernet ports.

Syntax

config ethernet <ports> ip pgm state enable

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.
state <enable|disable>	Modifies the current state (enable or disable) of PGM on the selected port. The default is disable.

Default

The default is disable.

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Related commands

Variable	Value
info	Displays current PGM settings on the selected port.
max-nak-rdata-int <integer>	Specifies how long to wait for RDATA, in milliseconds (ms), after receiving an NCF. The range is 1–2147483647 and the default value is 10 000 ms.
max-nak-re-xmit-cnt <integer>	Configures the maximum number of NAK retransmission packets allowed for each second. The range is 1–2147483647 and the default value is 2.
nak-eliminate-int <integer>	Specifies the length of time (in milliseconds) during which a network element (NE) eliminates duplicate NAKs. After this interval expires, the NE suspends NAK elimination until the first duplicate arrives. After this NAK is forwarded, the NE eliminates duplicate NAKs for the specified interval. You must configure this parameter lower than **max-nak-rdata-int**. The range is 0–2147483647 and the default value is 5000 ms.
nak-re-xmit-int <integer>	Specifies how long to wait for a NAK confirmation (NCF), in milliseconds, before retransmitting the NAK. The range is 100–2147483647 and the default value is 1000 ms.
state <enable|disable>	Modifies the current state (enable or disable) of PGM on the selected port. The default is disable.

config ip dvmrp enable

Use this command to enable Distance Vector Multicast Routing Protocol (DVMRP) globally.

Syntax

config ip dvmrp enable

Parameters

None

Default

None

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Related commands

Variable	Value
disable	Globally disables DVMRP on the switch.
enable	Globally activates DVMRP on the switch.
fwd-cache-timeout <integer>	Configures the forward cache timeout (in seconds). • **integer** is the range of 300–86400 seconds. The default value is 300 seconds.
generate-log <enable|disable>	Enables or disables the DVMRP log. The default is disable.
generate-trap <enable|disable>	Enables or disables the DVMRP trap. The default is disable.
info	Displays DVMRP settings on the switch.
leaf-timeout <integer>	Configures the length of time (in seconds) the router waits for a response from a neighbor before considering the attached network as a leaf network. • **integer** is the range of 25–4000 seconds. The default value is 125 seconds.
nbr-probe-interval <integer>	Configures the time interval (in seconds) for the DVMRP router to send a neighbor probe message on its interface. • **integer** is the range of 5–30 seconds. The default value is 10 seconds.
nbr-timeout <integer>	Configures the length of time (in seconds) the router waits to receive a report from a neighbor before considering the connection inactive. • **integer** is the range of 35–8000 seconds. The default value is 35 seconds.
prune-resend <enable|disable>	Sends prune messages every 3 minutes, to address the link failures at remote upstream switches. The feature is disabled by default.

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Variable	Value
route-discard-timeout <integer>	Configures the route discard timeout (in seconds). • **integer** is the range of 40–8000. The default value is 260 seconds.
route-expiration-timeout <integer>	Configures the route expiration timeout (in seconds). • **integer** is the range of 20–400 seconds. The default value is 140 seconds.
route-switch-timeout <integer>	Configures the route switch timeout (in seconds). • **integer** is the range of 20–2000. The default value is 140 seconds.
show-next-hop-table <enable|disable>	Enables or disables showing information about the DVMRP next hops. The default is disable.
triggered-update-interval <integer>	Configures the time interval (in seconds) between triggered update messages sent after routing information changes. • **integer** is the range of 5–1000 seconds. The default value is 5 seconds.
update-interval <integer>	Configures the time interval (in seconds) between DVMRP router update messages. • **integer** is the range of 10–2000 seconds. The default value is 60 seconds.

config ip dvmrp interface

Use this command to enable DVMRP on an interface.

Syntax

config ip dvmrp interface <ipaddr> enable

Parameters

Variable	Value
ipaddr	Indicates the IP address of the selected interface.

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Default

None

Related commands

Variable	Value
advertise-self <enable|disable>	Enables or disables the advertisement of local routes for the selected interface to other switches on the network. The default is enable.
create <active|passive>	Configures the interface type: active or passive. The default is active.
default-listen <enable|disable>	Learns the default route over the specified interface if this feature is enabled on the interface. The default setting is enable.
default-supply <enable|disable>	Generates and advertises the default route if this feature is enabled on the interface. The default setting is disable.
default-supply-metric <cost>	Advertises the specified metric over the interface if you configured the interface to supply the default route. The range is 1–31 hops. The default setting is 1 hop.
disable	Disables DVMRP on the local router interface.
enable	Enables DVMRP on the local router interface.
in-policy <policy_name>	Applies a DVMRP accept policy. **policy_name** is a policy name that uses a string length of 0–64 characters.
info	Displays information about the specified DVMRP local router interface.
interface-type <active|passive>	Configures an interface as active or passive. The default is active.
metric <cost>	Configures the cost metric (maximum number of hops) for the router interface. **cost** is the range of 1–31. The default is 1.
out-policy <policy_name>	Applies a DVMRP accept policy. **policy_name** is a policy name that uses a string length of 0–64 characters.

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config ip dvmrp show-next-hop-table

Use this command to enable the next-hop table.

Syntax

config ip dvmrp show-next-hop-table enable

Parameters

None

Default

None

Related commands

None

config ip dvmrp interface

Use this command to apply the policy to an interface.

Syntax

config ip dvmrp interface <ipaddr> default-listen <enable|disable> default-supply <enable|disable> default-supply-metric <cost>

Parameters

Variable	Value
default-listen <enable|disable>	Learns the default route over the specified interface if this feature is enabled on the interface. The options are enable and disable. The default setting is enable.
default-supply <enable|disable>	Generates and advertises the default route if this feature is enabled on the interface. The options are enable and disable. The default setting is disable.
default-supply-metric <cost>	Advertises the specified metric over the interface if you configured the interface to supply the default route. The range is 1–31 hops. The default setting is 1 hop.
ipaddr	Indicates the IP address of the selected interface.

Default

None

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Related commands

Variable	Value
advertise-self <enable|disable>	Advertises the local network if the setting is enable. The default is enable.
create <active|passive>	Enables DVMRP on a specific interface of a specific interface type. • **active** is an active interface type. • **passive** is a passive interface type. The default is active.
disable	Disables DVMRP on a specific interface.
enable	Enables DVMRP on a specific interface
in-policy <policy_name>	Specifies the DVMRP route in-policy. **policy_name** is a policy name that uses a string length of 0–64.
info	Shows the current-level parameter settings and next-level directories.
interface-type <active|passive>	Specifies the interface type as active or passive. The default is active.
metric <cost>	Specifies the DVMRP route metric. **cost** is the metric value with a range of 1–31. The default is 1.
out-policy <policy_name>	Specifies the DVMRP route out-policy. **policy_name** is a policy name that uses a string length of 0–64.

config ip dvmrp interface

Use this command to apply the announce policy to an interface.

Syntax

config ip dvmrp interface <ipaddr> out-policy <policy_name>config ip dvmrp interface <ipaddr> out-policy ""

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Parameters

Variable	Value
ipaddr	Specifies the IP address in the {a.b.c.d} format.

Default

Name

Related commands

None

config ip dvmrp in-policy

Use this command to apply an accept policy.

Syntax

config ip dvmrp interface <ipaddr> in-policy <policy-name>
config ip dvmrp interface <ipaddr> in-policy ""

Parameters

Variable	Value
""	Indicates the policy used in the current session. If you do not enter a name, you delete the policy. **ATTENTION** If you delete an accept policy from an interface, VLAN, or port, you change the configuration; you do not delete the policy itself.
ipaddr	Specifies the address of the interface.
policy name	Specifies the name of the accept policy you create.

Default

None

Related commands

None

config ip dvmrp interface advertise-self

Use this command to delete a policy advertise local networks.

Syntax

config ip dvmrp interface <ipaddr> advertise-self enable

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Parameters

Variable	Value
enable	Enables the advertisement of local routes for the selected interface to other switches on the network.
disable	Disables the advertisement of local routes for the selected interface to other switches on the network.
ipaddr	Specifies the address of the interface.

Default

None

Related commands

None

config ip dvmrp interface create passive

Use this command to create a passive DVMRP interface.

Syntax

config ip dvmrp interface <ipaddr> create passive

Parameters

Variable	Value
active	Specifies that the interface receives all types of incoming DVMRP packets from neighbors and sends out probes or route reports to its neighbor switches.
ipaddr	Specifies the address of the interface.
passive	Specifies that the interface drops all types of incoming DVMRP packets from neighbors and does not send out probes or route reports to its neighbor switches.

Default

None

Related commands

None

config ip dvmrp interface interface-type

Use this command to configure an interface as active or passive.

Syntax

config ip dvmrp interface <ipaddr> interface-type <active|passive>

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Parameters

Variable	Value
active	Specifies that the interface receives all types of incoming DVMRP packets from neighbors and sends out probes or route reports to its neighbor switches.
ipaddr	Specifies the address of the selected interface.
passive	Specifies that the interface drops all types of incoming DVMRP packets from neighbors and does not send out probes or route reports to its neighbor switches.

Default

None

Related commands

None

config ip pim enable

Use this command to enable PIM-SM.

Syntax

config ip pim enable

Parameters

Variable	Value
bootstrap-period <integer>	Specifies the interval (in seconds) that the elected bootstrap router (BSR) waits between originating bootstrap messages. **integer** is an integer in the range of 5–32757. The default is 60.
c-rp-adv-timeout <integer>	Specifies how often (in seconds) a router configured as a candidate rendezvous point (C-RP) router sends C-RP advertisement messages. After this timer expires, the C-RP router sends an advertisement message to the elected BSR. **integer** is an integer in the range of 5–26214. The default is 60.
disable	Globally disables PIM on the switch.

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Variable	Value
disc-data-timeout <integer>	Specifies how long (in seconds) to discard data until the join is received from the rendezvous point (RP). An IP multicast discard record is created after a register packet is sent, until the the timer expires or a join is received. **integer** is an integer in the range of 5–65535. The default is 60.
enable	Globally activates PIM on the switch.
fast-joinprune <enable|disable>	Specifies the fast PIM join prune. **enable|disable** enables or disables PIM-SSM fast joinprune.
fwd-cache-timeout <integer>	Specifies the forward cache timeout value. **integer** is an integer in the range of 10–86400. The default is 210. **ATTENTION** When you configure one of the timers, activity-chk-interval or fwd-cache-timeout, with a non-default value, you cannot configure the other timer.
info	Displays current PIM settings on the switch.
joinprune-interval <integer>	Specifies how long to wait (in seconds) before the PIM router sends out the next join/prune message to its upstream neighbors. **integer** is an integer in the range of 1–18724. The default is 60.
mode <sparse|ssm>	Configures the mode of this interface globally. After you change from one mode to another, an information message appears to remind you that traffic does not stop immediately. The default is sparse.

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Variable	Value
register-suppression-timeout <integer>	Specifies how long (in seconds) the designated router (DR) suppresses sending registers to the RP. The timer starts after the DR receives a register-stop message from the RP. **integer** is an integer in the range of 6–65535. The default is 60.
unicast-route-change-timeout <integer>	Specifies how often (in seconds) the switch polls the routing table manager (RTM) for unicast routing information updates for PIM. **ATTENTION** Lowering this value increases how often the switch polls the RTM. This can affect the performance of the switch, especially when a high volume of traffic flows through the switch. **integer** is an integer in the range of 2–65535. The default is 5.

Default

None

Related commands

Variable	Value
activity-chk-interval <15|30|210>	Specifies how often (in seconds) to check traffic activity for a multicast group. The lower the value, the more often the switch checks the activity. • The default is 30. Be aware of the following conditions: • Before you can change the activity-chk-interval, you must disable PIM globally. • Nortel recommends that you configure an activity check interval of 30 seconds. • On Internet Group membership Authentication Protocol (IGAP)-enabled interfaces, set the activity check interval to 30 seconds or less.

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Variable	Value
	• On non-IGAP enabled interfaces, configure the activity check interval to 210 seconds for systems that use a large number (200+) of S,G streams. • When you configure one of the timers, activity-chk-interval or fwd-cache-timeout, with a non-default value, you cannot configure the other timer.
bootstrap-period <integer>	Specifies the interval (in seconds) that the elected bootstrap router (BSR) waits between originating bootstrap messages. **integer** is an integer in the range of 5–32757. The default is 60.
c-rp-adv-timeout <integer>	Specifies how often (in seconds) a router configured as a candidate rendezvous point (C-RP) router sends C-RP advertisement messages. After this timer expires, the C-RP router sends an advertisement message to the elected BSR. **integer** is an integer in the range of 5–26214. The default is 60.
disable	Globally disables PIM on the switch.
disc-data-timeout <integer>	Specifies how long (in seconds) to discard data until the join is received from the rendezvous point (RP). An IP multicast discard record is created after a register packet is sent, until the timer expires or a join is received. **integer** is an integer in the range of 5–65535. The default is 60.
enable	Globally activates PIM on the switch.
fwd-cache-timeout <integer>	Specifies the forward cache timeout value. **integer** is an integer in the range of 10–86400. The default is 210. **ATTENTION** When you configure one of the timers, activity-chk-interval or fwd-cache-timeout, with a non-default value, you cannot configure the other timer.
info	Displays current PIM settings on the switch.

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Variable	Value
joinprune-interval <integer>	Specifies how long to wait (in seconds) before the PIM router sends out the next join/prune message to its upstream neighbors. **integer** is an integer in the range of 1–18724. The default is 60.
mode <sparse | ssm>	Configures the mode of this interface globally. After you change from one mode to another, an information message appears to remind you that traffic does not stop immediately. The default is sparse.
register-suppression-timeout <integer>	Specifies how long (in seconds) the designated router (DR) suppresses sending registers to the RP. The timer starts after the DR receives a register-stop message from the RP. **integer** is an integer in the range of 6–65535. The default is 60.
unicast-route-change-timeout <integer>	Specifies how often (in seconds) the switch polls the routing table manager (RTM) for unicast routing information updates for PIM. **ATTENTION** Lowering this value increases how often the switch polls the RTM. This can affect the performance of the switch, especially when a high volume of traffic flows through the switch. **integer** is an integer in the range of 2–65535. The default is 5.

config ip pim interface

Use this command to enable Protocol Independent Multicast (PIM) on an interface.

Syntax

config ip pim interface <ipaddr> enable

Parameters

Variable	Value
ipaddr	Indicates the IP address of the selected interface.

Default

None

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Related commands

Variable	Value
create <active|passive>	Enables PIM on a specific interface with a specific type. An active interface accepts PIM control transmitted and received traffic. A passive interface prevents PIM control traffic from transmitting or receiving, thereby reducing the load on a system. This feature is useful when a high number of PIM interfaces exist and connect to end users, not to other switches. The default is active.
disable	Disables PIM on the local switch interface.
enable	Enables PIM on the local switch interface.
hellointerval <seconds>	Specifies how long to wait (in seconds) before the PIM switch sends out the next hello message to neighboring switches. The default is 30 seconds.
info	Displays current PIM configuration settings on the local switch interface.
interface-type <active|passive>	Specifies whether the selected interface is active or passive. You can change the state of a PIM interface after you create the interface but only if you disable PIM on the interface. The default is active.
joinprune-interval <seconds>	Specifies how long to wait (in seconds) before the PIM switch sends out the next join/prune message to its upstream neighbors. The default is 60 seconds.

config ip pim mode ssm

Use this command to configure PIM-SSM.

Syntax

config ip pim mode <sparse|ssm>

Parameters

None

Default

None

Related commands

None

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config ip pim mbr enable

Use this command to enable a PIM MBR.

Syntax

config ip pim mbr enable

Parameters

Variable	Value
disable	Disables PIM MBR on the switch.
enable	Enables PIM MBR on the switch.
info	Displays the current PIM MBR configuration setting.

Default

None

Related commands

Variable	Value
disable	Disables MBR on specific interface.
info	Displays current level parameter settings and next level directories.

config ip pim interface virtual-neighbor add

Use this command to configure the PIM interface virtual neighbor.

Syntax

config ip pim interface <ipaddr> virtual-neighbor add <ipaddr>

Parameters

Variable	Value
add <ipaddr>	Adds the virtual neighbor on the local switch interface. • **ipaddr** is the IP address of the selected interface.
ipaddr	Indicates the IP address of the selected interface.

Default

None

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Related commands

Variable	Value
delete <ipaddr>	Deletes PIM virtual neighbor entries. **ipaddr** is the IP address of the selected interface.
info	Displays current virtual neighbor settings on the local switch interface.

config ip pim candrp add grp

Use this command to configure a candidate rendezvous point.

Syntax

config ip pim candrp add grp <value> mask <value> rp <value>

Parameters

Variable	Value
add grp <value> mask <value> rp <value>	Adds a candidate RP to the RP Set. • **add grp <value>** is the IP address of the multicast group. When combined with the group mask, it identifies the prefix that the local router uses to advertise itself as a C-RP router. • **mask <value>** is the address mask of the multicast group. When combined with the group address, it identifies the prefix that the local router uses to advertise itself as a C-RP router. • **rp <value>** is the IP address of the C-RP router. This address must be one of the local PIM-SM enabled interfaces.
delete grp <value> mask <value>	Deletes a candidate RP from the RP set. • **delete grp <value>** is the IP address of the multicast group. When combined with the group mask, it identifies the prefix that the local router uses to advertise itself as a C-RP router. • **mask <value>** is the address mask of the multicast group. When combined with the group address, it identifies the prefix

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Variable	Value
	that the local router uses to advertise itself as a C-RP router.
info	Displays current RP configuration settings on the local router interface.

Default

None

Related commands

Variable	Value
delete grp <value> mask <value>	Deletes a candidate RP from the RP set. • **delete grp <value>** is the IP address of the multicast group. When combined with the group mask, it identifies the prefix that the local router uses to advertise itself as a C-RP router. • **mask <value>** is the address mask of the multicast group. When combined with the group address, it identifies the prefix that the local router uses to advertise itself as a C-RP router.
info	Displays current RP configuration settings on the local router interface.

config ip pim static-rp

Use this command to enable static RP.

Syntax

config ip pim static-rp enable
config ip pim static-rp add grp <value> mask <value> rp <value>

Parameters

Variable	Value
add grp <value> mask <value> rp <value>	Adds a static RP entry to the RP set. • **grp <value>** is the IP address of the multicast group. When combined with the group mask, it identifies the range of the multicast addresses that the RP handles. • **mask <value>** is the address mask of the multicast group. When combined with the

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Variable	Value
	group address, it identifies the range of the multicast addresses that the RP handles. • **rp <value>** is the IP address of the static RP.
delete grp <value> mask <value> rp <value>	Deletes a static RP entry from the RP set. • **grp <value>** is the IP address of the multicast group. When combined with the group mask, it identifies the range of the multicast addresses that the RP handles. • **mask <value>** is the address mask of the multicast group. When combined with the group address, it identifies the range of the multicast addresses that the RP handles. • **rp <value>** is the IP address of the static RP.
disable	Disables static RP on the switch.
enable	Enables static RP on the switch.
info	Displays current PIM settings on the switch.

Default

None

Related commands

Variable	Value
delete <value> mask <value> rp <value>	Deletes static RP entries.
disable	Disables static-RP.
enable	Enables static-RP.
info	Displays current level parameter settings and next level directories.

config ip pim candbsr interface

Use this command to configure a candidate BSR.

Syntax

config ip pim candbsr interface <ipaddr> enable preference <value>

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Parameters

Variable	Value
enable preference <value>	Enables the C-BSR on this interface and configures its preference value to become a BSR. The C-BSR with the highest BSR preference and address is the preferred BSR. The default is –1, which indicates that the current interface is not a C-BSR.
ipaddr	Indicates the IP address of the selected interface.

Default

None

Related commands

Variable	Value
disable	Disables the C-BSR on this interface.
info	Displays the C-BSR preference setting for this interface.

config ip pim disable

Use this command to disable PIM.

Syntax

config ip pim disable
config ip pim enable

Parameters

None

Default

None

Related commands

None

config ip igmp ssm dynamic-learning

Use this command to configure Storage Service Module (SSM) dynamic learning and range group.

Syntax

config ip igmp ssm dynamic-learning <enable|disable>

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Parameters

Variable	Value
dynamic-learning **<enable|disable>**	Enables the dynamic learning of SSM channel (S,G) pairs from IGMPv3 reports. As new SSM channels are learned, they appear in the SSM channel table.

Default

None

Related commands

Variable	Value
dynamic-learning **<enable|disable>**	Enables the dynamic learning of SSM channel (S,G) pairs from IGMPv3 reports. As new SSM channels are learned, they appear in the SSM channel table. The default is enable.
info	Displays the SSM range and the status of the SSM channel table entries.
ssm-grp-range group <value> mask <value>	Defines the SSM range. The SSM range parameter extends the default SSM range of 232/8 to include an IP multicast address. You can configure existing applications without having to change their group configurations. • **group <value>** is an IP multicast address within the range of 224.0.1.0 and 239.255.255.255. The default is 232.0.0.0. • **mask <value>** is the IP address mask of the multicast group. The default is 255.0.0.0.

config ip igmp interface access-control

Use this command to configure multicast access control.

Syntax

config ip igmp interface <ipaddr> access-control <name>

Parameters

Variable	Value
ipaddr	Specifies the IP address of the selected interface.

Default

None

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Related commands

Variable	Value
create <HostAddress> <HostMask> <deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both>	Creates an access control group entry for a specific IGMP interface. • **HostAddress** is the IP address of the host. • **HostMask** is the subnet mask used to determine the host or hosts covered by this configuration. You can use the host subnet mask to restrict access to a portion of the network for the host. • **deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both** indicates the action you want for the specified IGMP interface. For example, if you specify deny-both, the interface denies both transmitted and received traffic.
delete <HostAddress> <HostMask>	Deletes the access control group entry for the specified IGMP interface. • **HostAddress** is the IP address of the host. • **HostMask** is the subnet mask used to determine the host or hosts covered by this configuration.
info	Displays the settings for the access-control parameter.
mode <HostAddress> <HostMask> <deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both>	Changes the access control group configuration. • **HostAddress** is the IP address of the host. • **HostMask** is the subnet mask used to determine the host or hosts covered by this configuration. • **deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both** indicates the action you want for the specified IGMP interface. For example, if you specify deny-both, the interface denies both transmitted and received traffic.
name	Specifies the name of the access policy from 1–64 characters.

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config ip igmp fast-leave-mode

Use this command to configure fast leave mode.

Syntax

config ip igmp fast-leave-mode <one-user|multiple-user>

Parameters

Variable	Value
one-user|multiple-user	**one-user** removes all group members on a fast leave enabled interface port after receiving the first leave message from a member. This behavior is the same as the conventional fast leave process. **multiple-user** removes from the group only the IGMP member who sent the leave message. Traffic is not stopped if other receivers exist on the interface port.

Default

Multiple-user is the default.

Related commands

Variable	Value
generate-trap <enable|disable>	Sets IGMP trap.
generate-log <enable|disable>	Sets IGMP log.
info	Displays current level parameter settings and next level directories.

config ip igmp interface stream-limit

Use this command to enable multicast stream limitation on an interface.

Syntax

config ip igmp interface <ipaddr> stream-limit enable

Parameters

Variable	Value
ipaddr	Specifies the IP address in the {a.b.c.d} format.

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Default

None

Related commands

Variable	Value
info	Displays stream limitation on interface.
disable	Disables stream limitation on interface
max-streams <integer>	Specifies the maximum number of streams allowed on interface.

config ip igmp interface stream-limit-members

Use this command to configure multicast stream limitation members on an interface.

Syntax

config ip igmp interface <ipaddr> stream-limit-members enable <ports> max-streams <value>

Parameters

Variable	Value
enable <ports> max-streams <value>	Enables stream limitation and configures the maximum number of allowed streams for the specified ports on this interface. The number of allowed streams cannot exceed the maximum number for the interface. The range is from 0–65535 and the default is 4.
ipaddr	Indicates the IP address of the selected interface.

Default

The default is 4.

Related commands

Variable	Value
enable <ports> max-streams <value>	Enables stream limitation and configures the maximum number of allowed streams for the specified ports on this interface. The number of allowed streams cannot exceed the maximum number for the interface. The range is from 0–65535 and the default is 4.
disable <ports>	Disables stream limitation for the specified ports on this interface.

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Variable	Value
info	Displays information about the stream limit members set on individual ports for this interface.
set <ports> max-streams <value>	Configures the maximum number of allowed streams for the specified ports on this interface. The range is from 0–65535 and the default is 4.

config ip igmp interface

Use this command to configure Internet Group Management Protocol (IGMP) on an interface.

Syntax

config ip igmp interface <ipaddr>

Parameters

Variable	Value
ipaddr	Indicates the IP address of the selected interface.

Default

None

Related commands

Variable	Value
compatibility-mode enable <true|false>	Enables or disables v2-v3 compatibility mode. The default value is false, which means IGMPv3 is not compatible with IGMPv2.
dynamic-downgrade-version enable <true|false>	Configures if the Ethernet Routing Switch 8600 downgrades the version of IGMP to handle older query messages. If the switch downgrades, the host with only IGMPv3 capability does not work. If you do not configure the switch to downgrade the version of IGMP, the switch logs a warning. The default value is true, which means the switch downgrades to the oldest version of IGMP on the network.
fast-leave <enable|disable>	Enables or disables the fast leave option on the interface. The default is disable.

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Variable	Value
flush <mrouter|sender|grp-member> [<SenderAddress>] [<GroupAddress>]	Flushes the specified table.
info	Displays the access list of the IGMP interface.
ipaddr	Indicates the IP address of the selected interface.
last-memb-query-int <1/10_seconds>	The maximum response time (in tenths of a second) that is inserted into group-specific queries sent in response to leave group messages. This value is also the time between group-specific query messages. This value is not configurable for IGMPv1. Decreasing the value reduces the time to detect the loss of the last member of a group. **1/10_seconds** is an integer in the range from 0–255, and the default is 10 tenths of a second. Nortel recommends that you configure this value between 3–10 (equal to 0.3–1.0 seconds).
proxy-snoop **<enable|disable>**	Enables or disables the Layer 3 proxy-snoop option. The default is disable.
query-interval <seconds>	Configures the frequency (in seconds) at which the interface transmits host query packets. **seconds** is an integer in the range from 1–65535 with a default of 125.

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Variable	Value
query-max-resp <1/10_seconds>	The maximum response time (in tenths of a second) advertised in IGMPv2 general queries on this interface. This value is not configurable for IGMPv1. Smaller values allow a router to prune groups faster. **1/10_seconds** is an integer value with a range of 0–255, and the default is 100 tenths of a second (equal to 10 seconds). **ATTENTION** You must configure this value lower than the query-interval.
robustval <integer>	Use this variable to tune for the expected packet loss of a network. **integer** is an integer value with a range of 2–255 seconds. The default value is 2 seconds. Increase the value if you expect the network to experience packet loss.
router-alert **<enable|disable>**	When enabled, this parameter instructs the router to ignore IGMP packets that do not contain the router alert IP option. When disabled (default setting), the router processes IGMP packets regardless of whether the router alert IP option is set. **ATTENTION** To maximize your network performance, Nortel recommends that you set this parameter according to the version of IGMP currently in use: • IGMPv1—Disable • IGMPv2—Enable • IGMPv3—Enable
snoop <enable|disable>	Enables or disables the Layer 3 snoop option. The default is disable.

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Variable	Value
ssm-snoop <enable|disable>	Enables or disables support for PIM-SSM on the snoop interface. **ATTENTION** SSM-snoop assumes that only one source for each group exists on the network. Traffic for all sources for a group are permitted on a port that receives an IGMPv3 join. The default is disable.
version <integer>	Configures the version of IGMP that you want to configure on this interface. For IGMP to function correctly, all routers on a LAN must use the same version. **integer** is an integer value with a value of 1, 2 or 3. The default value is 2 (IGMPv2).

config ip igmp interface mrdisc mrdisc-enable

Use this command to enable multicast router discovery.

Syntax

config ip igmp interface <ipaddr> mrdisc mrdisc-enable enable

Parameters

Variable	Value
info	Displays information about the multicast route discovery on the interface.
ipaddr	Indicates the IP address of the selected interface.
mrdisc-enable **<enable|disable>**	Enables or disables the multicast route discovery option.

Default

The default is disable.

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Related commands

Variable	Value
info	Displays information about the multicast route discovery on the interface.
max-advertisement-interval <seconds>	Configures the maximum number (in seconds) between successive advertisements. The range is 2–180 and the default is 20. For this change to take effect, you must save the configuration and reset the switch.
max-initial advertisement-interval <seconds>	Configures the maximum number (in seconds) between successive initial advertisements. The range is 2–180 and the default is 2. For this change to take effect, you must save the configuration and reset the switch.
max-initial-advertisements <integer>	Configures the maximum number of initial multicast advertisements after initialization. The range is 2–15 and the default is 3. For this change to take effect, you must save the configuration and reset the switch.
min-advertisement-interval <seconds>	Configures the minimum number (in seconds) between successive advertisements. The range is 3–180 and the default is 15. For this change to take effect, you must save the configuration and reset the switch.

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Variable	Value
mrdisc-enable **<enable|disable>**	Enables or disables the multicast route discovery option. The default is disable.
neighbor-dead-interval <seconds>	Configures the multicast router discovery dead interval—the number of seconds the multicast route neighbors for the switch must wait before assuming that the multicast router is down. **seconds** is a value from 1–59. The default is 30.

config ip igmp interface static-members

Use this command to configure interface static members.

Syntax

config ip igmp interface <ipaddr> static-members <FromGroupAddress-ToGroupAddress>

Parameters

Variable	Value
FromGroupAddress-ToGroupAddress	Indicates the IP address range {a.b.c.d[-w.x.y.z]} of the selected multicast group.
ipaddr	Indicates the IP address of the selected interface.

Default

None

Related commands

Variable	Value
add <ports> <static|blocked>	Adds a static-member entry to the IGMP interface. • **ports** is the port or list of ports to which you want to redirect the multicast stream for this multicast group. • **static|blocked** configures the route to static or blocked.

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Variable	Value
create <ports> <static|blocked>	Creates static members on the interface. • **ports** is the port or list of ports to which you want to redirect the multicast stream for this multicast group. • **static|blocked** configures the route to static or blocked.
delete	Deletes the static members on the interface.
info	Displays information about the static members of the VLAN.
remove <ports> <static|blocked>	Removes slots/ports from the static members of a protocol-based VLAN. • **ports** is the port or list of ports you want to remove from the multicast stream. • **static|blocked** configures the multicast entry to static or blocked.

config ip igmp ssm-channel delete group

Use this command to delete each entry in the SSM channel table.

Syntax

config ip igmp ssm ssm-channel delete group <GroupAddress>

Parameters

None

Default

None

Related commands

Variable	Value
create group <value> source <value>	Creates a SSM channel entry.
disable <all or group> [Group Address <Group Address>]	Disables specific or all source specific multicast table entries.
enable <all or group> [Group Address <Group Address>]	Enables specific or all source specific multicast table entries
info	Displays current level parameter settings and next level directories.

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config ip igmp ssm ssm-grp-range group

Use this command to configure the new IP multicast group address.

Syntax

config ip igmp ssm ssm-grp-range group <value> mask <value>

Parameters

Variable	Value
group <mask>	Specifies a group mask to use when the switch distributes multicast traffic over a multilink trunk.
mask <value>	Specifies a address mask in the {a.b.c.d} format.

Default

The default is 255.255.255.255.

Related commands

None

config ip igmp ssm ssm-channel

Use this command to configure the SSM channel table.

Syntax

config ip igmp ssm ssm-channel

Parameters

None

Default

None

Related commands

Variable	Value
create group <value> source <value>	Creates a static SSM channel table entry by specifying the group and source IP addresses. • **group <value>** is an IP multicast address within the SSM range defined by **ssm-grp-range group**. • **source <value>** is an IP host address that sends traffic to the group.

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Variable	Value
delete group <value>	Deletes the SSM channel table entry that you specify. • **value** is the IP multicast address of the table entry you want to delete.
disable <all or group> [<GroupAddress>]	Disables the administrative state for all static entries in the SSM channel table (all) or for a specific entry (group). This setting does not affect the dynamically learned entries. This state determines whether the switch uses the static entry or saves it for future use. The default is enable for each entry. • **all** refers to all the static entries in the SSM channel table. • **group** requires the GroupAddress of the entry you want to disable.
enable <all or group> [<GroupAddress>]	Enables the administrative state for all static entries in the SSM channel table (all) or for a specific entry (group). This setting does not affect the dynamically learned entries. This state determines whether the switch uses the static entry or saves it for future use. The default is enable for each entry. • **all** refers to all the static entries in the SSM channel table. • **group** requires the GroupAddress of the entry you want to disable.
info	Displays the SSM range and the status of the SSM channel table entries.

config ip mroute resource-usage

Use this command to configure the resource usage counter for multicast streams.

Syntax

config ip mroute resource-usage
config ip mroute resource-usage send-Trap-And-Log enable

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Parameters

Variable	Value
send-Trap-And-Log <enable|disable>	Configures the notification method for sending both a trap message and a log message after the threshold level is exceeded. **ATTENTION** You can only set one notification type.

Default

The default is disable.

Related commands

Variable	Value
egress-Threshold <integer>	Configures the egress record threshold (S,G). A notification message is sent if this value is exceeded. **integer** is a value between 0–32767. The default it 0.
ingress-Threshold <integer>	Configures the ingress record threshold (peps). A notification message is sent if this value is exceeded. • **integer** is a value between 0–32767. The default is 0.
info	Displays the current configuration for the record usage counter.
trap-Msg-Only <enable|disable>	Configures the notification method for sending only a trap message after the threshold level is exceeded. The default is disable.
log-Msg-Only <enable|disable>	Configures the notification method for sending only a log message after the threshold level is exceeded. The default is disable.

config ip mroute

Use this command to display multicast routes.

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Syntax

config ip mroute info

Parameters

None

Default

None

Related commands

Variable	Value
stats <enable|disable>	IP Multicast stats control commands. **enable|disable** controls IPMC statistics {disable|enable}.

config ip mroute interface ttl

Use this command to configure a multicast route on an interface.

Syntax

config ip mroute interface <ipaddr> ttl <ttl>

Parameters

Variable	Value
ipaddr	Indicates the IP address of the selected interface.
ttl <ttl>	Configures the datagram time-to-live (TTL) threshold for the interface. The interface does not forward IP multicast datagrams with a TTL less than this threshold. The range (in seconds) is 1–255. The default is 1.

Default

The default is 1.

Related commands

Variable	Value
info	Displays information about the multicast route interface.
ttl <ttl>	Configures the datagram time-to-live (TTL) threshold for the interface. The interface does not forward IP multicast datagrams with a TTL less than this threshold. The range (in seconds) is 1–255.

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config ip mroute resource-usage egress-Threshold

Use this command to set alias port name.

Syntax

config ip mroute resource-usage egress-Threshold <integer>

Parameters

Variable	Value
<integer>	Specifies the IP Multicast Egress Threshold Count in the range of 0 to 32767.

Default

None

Related commands

Variable	Value
ingress-Threshold <integer>	Specifies the threshold for multicast ingress records.
info	Displays current level parameter settings and next level directories.
send-Trap-And-Log <enable|disable>	Enables send trap and log.
trap-Msg-Only <enable|disable>	Enables send trap only.
log-Msg-Only <enable|disable>	Enables log MSG only.

config ip mroute static-source-group

Use this command to configure multicast static source groups.

Syntax

config ip mroute static-source-group <GroupAddress> create <SourceSubnet> <SrcSubnetMask>

Parameters

Variable	Value
create <SourceSubnet> <SrcSubnetMask>	Creates a new static multicast source-group entry. You cannot create duplicate groups. • **SourceSubnet** is the multicast source address for this static source-group entry.

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Variable	Value
	How you configure the source address depends on the protocol and mode you use. • **SrcSubnetMask** is the subnet mask of the source for this static source-group entry.

Default

None

Related commands

Variable	Value
delete <SourceSubnet> <SrcSubnetMask>	Deletes the source-group entry from the static source-group table. • **SourceSubnet** is the multicast source address for this static source-group entry. • **SrcSubnetMask** is the subnet mask of the source for this static source-group entry.
info	Displays information about the source-group entry.

config sys mcast-smlt square-smlt

Use this command to delete a policy enable square-SMLT.

Syntax

config sys mcast-smlt square-smlt <enable\|disable>

Parameters

Variable	Value
square-smlt <enable|disable>	Enables or disables square-SMLT configuration. The default is disable.

Default

None

Related commands

Variable	Value
info	Displays the current square-SMLT configuration.

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config sys mcast-software-forwarding

Use this command to enable software forwarding.

Syntax

config sys mcast-software-forwarding enable

config sys vrf <vrfName> mcast-software-forwarding enable

Parameters

Variable	Value
enable	Enables IP multicast software forwarding. The default is disable.

Default

None

Related commands

Variable	Value
disable	Disables IP multicast software forwarding. This setting is the default.
info	Displays the current configuration information.

config sys mcast-mlt-distribution

Use this command to enable multicast flow distribution.

Syntax

config sys mcast-mlt-distribution enable

Parameters

Variable	Value
enable	Enables multicast flow distribution over MLT globally.

Default

The default is disable.

Related commands

Variable	Value
disable	Disables multicast flow distribution over MLT. This setting is the default.
grp-mask <grp-mask>	Specifies a group mask to use when the switch distributes multicast traffic over a multilink trunk. The default is 255.255.255.255.

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Variable	Value
info	Displays the current configuration information.
redistribution <enable|disable>	Enables or disables the multicast MLT redistribution feature. The default is disabled.
src-mask <src-mask>	Specifies a source mask to use when the switch distributes multicast traffic over a multilink trunk. The default is 255.255.255.255. **ATTENTION** Ensure that the mask values for grp-mask and src-mask are contiguous.

config mlt mcast-distribution

Use this command to enable multicast flow distribution.

Syntax

config mlt <mltid> mcast-distribution enable

Parameters

Variable	Value
enable	Enables multicast flow distribution on the specified multilink trunk.

Default

None

Related commands

Variable	Value
disable	Disables multicast flow distribution on the specified multilink trunk. This setting is the default.
mltid	Specifies the MLT ID, in the range of 1–32.

config ip pgm state enable

Use this command to configure PGM globally.

Syntax

config ip pgm state enable

Parameters

None

Default

None

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Related commands

Variable	Value
info	Displays current PGM settings on the switch.
max-rexmit-state <integer>	Configures the maximum number of retransmit state entries that the switch can create. Each entry uses a unique NAK sequence number. The range is 0–2147483647 and the default value is 200 entries.
max-sessions <integer>	Configures the maximum number of source path state sessions allowed on the switch. The range is 0–2147483647 and the default value is 100 sessions.
nnak-generate <enable|disable>	When enabled, the DLR that receives redirected NAKs, where it uses the retransmitted data (RDATA), sends an NNAK to the original source. The default is enable.
state <enable|disable>	Enables or disables PGM globally on the switch. The default is disable.
session-life-time <integer>	Specifies the length of idle time (in seconds) before a session times out. Idle time is when the switch does not receive source path messages (SPM) from the upstream routers. The range is 0–2147483647 and the default value is 300 seconds.

config ip pgm interface state enable

Use this command to configure PGM on an interface.

Syntax

config ip pgm interface <ipaddr> state enable

Parameters

Variable	Value
ipaddr	Indicates the IP address of the selected interface.
state <enable|disable>	Modifies the current state (enable or disable) of PGM on the selected interface.

Default

The default is disable.

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Related commands

Variable	Value
info	Displays current PGM settings on the selected interface.
max-nak-rdata-int <integer>	Specifies how long to wait for RDATA, in milliseconds (ms), after receiving an NCF. The range is 1–2147483647 and the default value is 10 000 ms.
max-nak-re-xmit-cnt <integer>	Configures the maximum number of NAK retransmission packets allowed for each second. The range is 1–2147483647 and the default value is 2.
nak-eliminate-int <integer>	Specifies the length of time (in milliseconds) during which a network element (NE) eliminates duplicate NAKs. After this interval expires, the NE suspends NAK elimination until the first duplicate arrives. After this NAK is forwarded, the NE eliminates duplicate NAKs for the specified interval. You must configure this parameter lower than **max-nak-rdata-int**. The range is 0–2147483647 and the default value is 5000 ms.
nak-re-xmit-int <integer>	Specifies how long to wait for a NAK confirmation (NCF), in milliseconds, before retransmitting the NAK. The range is 100–2147483647 and the default value is 1000 ms.
state <enable|disable>	Modifies the current state (enable or disable) of PGM on the selected interface. The default is disable.

config ip static-mroute create

Use this command to create a multicast static route entry.

Syntax

config ip static-mroute create <ipaddr/mask> rpf <value> [preference <value>]

Parameters

Variable	Value
ipaddr/mask	Specifies the IP address and the network mask for the route. Use the format a.b.c.d/x or a.b.c.d/x.x.x.x.

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Variable	Value
preference <value>	Specifies a preference value from the range 1–255. The default is 1.
rpf <value>	Specifies the IP address of the Reverse Path Forwarding (RPF) neighbor.
[vrf <value>] [vrfids <value>]	Specifies a VRF name or a range of VRF IDs to include in the show command results.

Default

None

Related commands

None

config ip static-mroute enable

Use this command to enable a route in the route table.

Syntax

config ip static-mroute enable <ipaddr/mask> rpf <value>
config ip static-mroute disable <ipaddr/mask> rpf <value>

Parameters

Variable	Value
ipaddr/mask	Specifies the IP address and the network mask for the route. Use the format a.b.c.d/x or a.b.c.d/x.x.x.x
rpf <value>	Specifies the IP address of the RPF neighbor
[vrf <value>] [vrfids <value>]	Specifies a VRF name or a range of VRF IDs to include in the show command results

Default

Variable	Value
create <ipaddr/mask> rpf <value> [preference <value>]	Adds static mroute entries.
delete <ipaddr/mask> rpf <value>	Deletes static mroute entries.
disable <ipaddr/mask> rpf <value>	Disables static mroute entries.

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Variable	Value
info	Displays current level parameter settings and next level directories.
preference <preference> <ipaddr/mask> rpf <value>	Modifies static mroute preference.

Related commands

None

config ip static-mroute preference

Use this command to modify the administrative distance of a route in the route table.

Syntax

config ip static-mroute preference <value> <ipaddr/mask> rpf <value>
config ip static-mroute delete <ipaddr/mask> rpf <value>

Parameters

Variable	Value
ipaddr/mask	Specifies the IP address and the network mask for the route. Use the format a.b.c.d/x or a.b.c.d/x.x.x.x
rpf <value>	Specifies the IP address of the RPF neighbor
[vrf <value>] [vrfids <value>]	Specifies a VRF name or a range of VRF IDs to include in the show command results

Default

None

Related commands

None

config ip static-mroute

Use this command to view the route table configuration.

Syntax

config ip static-mroute info
show ip mroute rpf <ipaddr> [vrf <value>] [vrfids <value>]

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Parameters

Variable	Value
ipaddr/mask	Specifies the IP address and the network mask for the route. Use the format a.b.c.d/x or a.b.c.d/x.x.x.x
rpf <value>	Specifies the IP address of the RPF neighbor
[vrf <value>] [vrfids <value>]	Specifies a VRF name or a range of VRF IDs to include in the show command results

Default

None

Related commands

None

config vlan ip igmp stream-limit

Use this command to enable multicast stream limitation on a VLAN.

Syntax

config vlan <vid> ip igmp stream-limit enable

Parameters

Variable	Value
enable	Enables stream limitation on this VLAN.
disable	Disables stream limitation on this VLAN.
info	Displays information about the stream limits set on this VLAN.
max-streams <integer>	Configures the maximum number of allowed streams on this VLAN. The range is from 0–65535 and the default is 4.
vid	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.

Default

None

Related commands

Variable	Value
disable	Disables stream limitation on interface.

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Variable	Value
info	Displays stream limitation on interface.
max-streams <integer>	Specifies the maximum number of streams allowed on interface. **integer** is the maximum number of streams for each interface in the range of 0 to 65535.

config vlan ip igmp stream-limit-members

Use this command to configure multicast stream limitation members on a VLAN.

Syntax

config vlan <vid> ip igmp stream-limit-members enable <ports> max-streams <value>

Parameters

Variable	Value
enable <ports> max-streams <value>	Enables stream limitation and configures the maximum number of allowed streams for the specified ports on this VLAN. The number of allowed streams cannot exceed the maximum number for the VLAN. The range is from 0–65535, and the default is 4.
disable <ports>	Disables stream limitation for the specified ports on this VLAN.
info	Displays information about the stream limit members set on individual ports for this VLAN.
set <ports> max-streams <value>	Configures the maximum number of allowed streams for the specified ports on this VLAN. The range is from 0–65535 and the default is 4.
vid	Specifies a VLAN ID from 1–4093.

Default

Variable	Value
disable <ports>	Disables stream limitation on interface ports.
info	Displays stream limitation on interface ports.
set <ports> max-stream <value>	Modifies stream limitation on interface ports.

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Related commands

None

config vlan static-mcastmac

Use this command to configure Layer 2 multicast MAC filtering.

Syntax

config vlan <vid> static-mcastmac

Parameters

Variable	Value
<vid>	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

Variable	Value
add mac <value> [port <value>] [mlt <value>]	Adds VLAN static multicast MAC entries.
add-mlt mid <value>	Adds MLT ID to VLAN static multicast MAC entries.
add-ports <ports> mac <value>	Adds ports to VLAN static multicast MAC entries.
delete mac <value>	Deletes VLAN static multicast MAC entries.
delete-mlt <mid> mac <value>	Deletes MLT ID from VLAN static multicast MAC entries.
delete-ports <ports> mac <value>	Deletes ports from VLAN static multicast MAC entries.
info	Shows current-level parameter settings and next-level directories.

config vlan ip dvmrp default-listen

Use this command to apply the default route policy.

Syntax

config vlan <vid> ip dvmrp default-listen <enable|disable> default-supply <enable|disable> default-supply-metric <cost>

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Parameters

Variable	Value
default-listen <enable|disable>	Learns the default route over the specified VLAN if this feature is enabled on the VLAN. The options are enable and disable. The default setting is enable.
default-supply <enable|disable>	Generates and advertises only the default route if this feature is enabled on the VLAN. No other route is advertised to the neighbors on this VLAN. The options are enable and disable. The default setting is disable.
default-supply-metric <cost>	Advertises the specified metric over the VLAN if you configure the VLAN to supply the default route. The range is 1–31 hops. The default setting is 1 hop.
interface-type <active|passive>	Specifies the interface type as active or passive. The default is active.
vid	Specifies a VLAN ID from 1–4092.

Default

None

Related commands

Variable	Value
advertise-self <enable|disable>	Advertises the local network if set to enable. The default is enable.
create <active|passive>	Enables DVMRP on a specific interface of a specific interface type. • **active** is an active interface type. • **passive** is a passive interface type. The default is active.
disable	Disables DVMRP on a specific interface.
enable	Enables DVMRP on a specific interface.
in-policy <policy_name>	Specifies the DVRMP route in-policy. • **policy_name** is a policy name that uses a string length of 0–64.
info	Shows the current-level parameter settings and next-level directories.
interface-type <active|passive>	Specifies the interface type as active or passive. The default is active.

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Variable	Value
metric <cost>	Specifies the DVMRP route metric. • **cost** is the metric value with a range of 1–31. The default is 1.
out-policy <policy_name>	Specifies the DVRMP route out-policy. • **policy_name** is a policy name that uses a string length of 0–64.

config vlan ip pim

Use this command to enable PIM on a VLAN.

Syntax

config vlan <vid> ip pim enable
show vlan info pim <vid> [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vid	Identifies a VLAN ID from 1–4092.

Default

None

Related commands

Variable	Value
create <active|passive>	Enables PIM on a specific VLAN with a specific type. • **active** accepts PIM control transmitted and received traffic. • **passive** prevents PIM control traffic from transmitting or receiving, thereby reducing the load on a system. This feature is useful when a high number of PIM interfaces exist and connect to end users, not to other switches. The default is active.
disable	Disables PIM on the selected VLAN.
enable	Enables PIM on the selected VLAN.

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Variable	Value
hellointerval <seconds>	Specifies how long to wait (in seconds) before the PIM switch sends out the next hello message to neighboring switches. The default is 30 seconds.
info	Displays current PIM configuration settings on the selected VLAN.
interface-type <active|passive>	Specifies whether the selected interface is active or passive. You can change the state of a PIM interface after you create it but only if you disable PIM on the interface.
joinprune-interval <seconds>	Specifies how long to wait (in seconds) before the PIM switch sends out the next join/prune message to its upstream neighbors. The default is 60 seconds.

config vlan ip dvmrp

Use this command to enable DVMRP on a VLAN.

Syntax

config vlan <vid> ip dvmrp enable

Parameters

Variable	Value
vid	Specifies a VLAN ID from 1–4092.

Default

None

Related commands

Variable	Value
advertise-self <enable|disable>	Enables or disables the advertisement of local routes for the selected VLAN to other switches on the network. The default is enable.
create <active|passive>	Configures the interface type: active or passive. The default is active.
default-listen <enable|disable>	Learns the default route over the specified VLAN if this feature is enabled on the interface. The default setting is enable.

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Variable	Value
default-supply <enable|disable>	Generates and advertises the default route if this feature is enabled on the VLAN. The default setting is disable.
default-supply-metric <cost>	Advertises the specified metric over the VLAN if you configure the VLAN to supply the default route. The range is 1–31 hops. The default setting is 1 hop.
disable	Disables DVMRP on the VLAN.
enable	Enables DVMRP on the VLAN.
in-policy <policy_name>	Applies a DVMRP accept policy. • **policy_name** is a policy name that uses a string length of 0–64 characters.
info	Displays DVMRP settings on the VLAN.
interface-type <active|passive>	Configures an interface as active or passive. The default is active.
metric <cost>	Configures the DVMRP route metric. • **cost** is the maximum number of hops with a value of 1–31. The default is 1.
out-policy <policy_name>	Applies a DVMRP accept policy. • **policy_name** is a policy name that uses a string length of 0–64.

config vlan ip igmp

Use this command to configure IGMP on a VLAN.

Syntax

config vlan <vid> ip igmp

Parameters

Variable	Value
vid	Identifies the VLAN by VLAN ID from 1–4094.

Default

None

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Related commands

Variable	Value
compatibility-mode enable <true|false>	Enables or disables v2-v3 compatibility mode. The default value is false, which means IGMPv3 is not compatible with IGMPv2.
del-mrouter <ports>	Deletes multicast router ports.
dynamic-downgrade-version enable <true|false>	Configures if the Ethernet Routing Switch 8600 downgrades the version of IGMP to handle older query messages. If the switch downgrades, the host with only IGMPv3 capability does not work. If you do not configure the switch to downgrade the version of IGMP, the switch logs a warning. The default value is true, which means the switch downgrades to the oldest version of IGMP on the network.
fast-leave <enable|disable>	Prevents a port from receiving a leave message from a member of a group. Normal IGMP behavior is skipped. The default is disable.
flush <mrouter|sender|grp-member> [<SenderAddress>] [<GroupAddress>]	Flushes the specified table.
info	Displays IGMP settings on the VLAN.
last-memb-query-int <1/10_seconds>	The maximum response time (in tenths of a second) that is inserted into group-specific queries sent in response to leave group messages. This value is also the time between group-specific query messages. This value is not configurable for IGMPv1. Decreasing the value reduces the time to detect the loss of the last member of a group. **1/10_seconds** is the range from 0–255 and the default is 10 tenths of a second. Nortel recommends that you configure this value between 3 and 10 (equal to 0.3 – 1.0 seconds).
mrouter <ports>	Adds multicast router ports.
proxy-snoop <enable|disable>	Enables or disables the proxy-snoop option globally for the VLAN. The default is disable.

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Variable	Value
query-interval <seconds>	Configures the frequency (in seconds) at which the host query packets are transmitted on the VLAN. **seconds** is the range from 1–65535. The default value is 125 seconds.
query-max-resp <1/10_seconds>	The maximum response time (in tenths of a second) advertised in IGMPv2 general queries on this interface. This value is not configurable for IGMPv1. Smaller values allow a router to prune groups faster. **1/10_seconds** is an integer value with a range of 0–255, and the default is 100 tenths of a second (equal to 10 seconds). **ATTENTION** You must configure this value lower than the query-interval.
robustval <integer>	Use this parameter to tune for the expected packet loss of a network. **integer** is an integer value with a range of 2–255 seconds. The default value is 2 seconds. Increase the value if you expect the network to experience packet loss.
router-alert <enable|disable>	When enabled, this parameter instructs the router to ignore IGMP packets that do not contain the router alert IP option. When disabled (default setting), the router processes IGMP packets regardless of whether the router alert IP option is set. **ATTENTION** To maximize your network performance, Nortel recommends that you set this parameter according to the version of IGMP currently in use: • IGMPv1—Disable • IGMPv2—Enable • IGMPv3—Enable
snoop <enable|disable>	Enables or disables the snoop option for the VLAN. The default is disable.

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Variable	Value
ssm-snoop <enable|disable>	Enables or disables support for PIM Source Specific multicast (SSM) on the snoop interface. The default is disable.
version <integer>	Configures the version of IGMP that you want to configure on this interface. For IGMP to function correctly, all routers on a LAN must use the same version. **integer** is an integer value with a value of 1, 2, or 3. The default value is 2 (IGMPv2).

config vlan ip dvmrp out-policy

Use this command to apply a DVMP announce policy.

Syntax

config vlan <vid> ip dvmrp out-policy <policy-name>
config vlan <vid> ip dvmrp out-policy ""

Parameters

Variable	Value
ipaddr	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

None

config vlan ip dvrmp in-policy

Use this command to apply an accept policy to VLAN.

Syntax

config vlan <vid> ip dvmrp in-policy <policy-name>
config vlan <vid> ip dvmrp in-policy ""

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Parameters

Variable	Value
""	Indicates the policy used in the current session. If you do not enter a name, you delete the policy. **ATTENTION** If you delete an accept policy from an interface, VLAN, or port, you change the configuration; you do not delete the policy itself.
policy name	Specifies the name of the accept policy you create.
vid	Specifies the number of the VLAN.

Default

None

Related commands

None

config vlan ip dvmrp advertise-self

Use this command to apply the advertisement of local networks policy over a VLAN.

Syntax

config vlan <vid> ip dvmrp advertise-self enable

Parameters

Variable	Value
enable	Enables the advertisement of local routes over the selected port to other switches on the network.
disable	Disables the advertisement of local routes over the selected port to other switches on the network.
port	Specifies the number of the port.

Default

None

Related commands

None

config vlan ip pim candbsr enable preference

Use this command to configure a candidate BSR on a VLAN.

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Syntax

config vlan <vid> ip pim candbsr enable preference <value>

Parameters

Variable	Value
enable preference <value>	Enables the C-BSR on this interface and configures its preference value to become a BSR. The C-BSR with the highest BSR preference and address is the preferred BSR. The default is –1, which indicates that the current interface is not a C-BSR.
vid	Specifies a VLAN ID from 1–4092.

Default

None

Related commands

Variable	Value
disable	Disables the C-BSR on this interface. The C-BSR with the highest BSR preference and address is the preferred BSR. The default is –1, which indicates that the current interface is not a C-BSR.
info	Displays the C-BSR preference setting for this interface.

config vlan ip igmp static-members

Use this command to configure IGMP static members on a VLAN.

Syntax

config vlan <vid> ip igmp static-members <FromGroupAddress -ToGroupAddress>

Parameters

Variable	Value
FromGroupAddress-ToGroupAddress	Indicates the IP address range {a.b.c.d[-w.x.y.z]} of the selected multicast group.
ipaddr	Indicates the IP address of the selected interface.

Default

None

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Related commands

Variable	Value
add <ports> <static|blocked>	Adds a static-member entry to the VLAN. • **ports** is the port or list of ports to which you want to redirect the multicast stream for this multicast group. • **static|blocked** configures the route to static or blocked.
create <ports> <static|blocked>	Creates a static member entry on the VLAN. • **ports** is the port or list of ports to which you want to redirect the multicast stream for this multicast group. • **static|blocked** configures the route to static or blocked.
delete	Deletes a static-member entry from the VLAN.
FromGroupAddress-ToGroupAddress	Indicates the IP address or range of the selected multicast group in the format {a.b.c.d[-w.x.y.z]}.
info	Displays information about the static members of the VLAN.
remove <ports> <static|blocked>	Removes a port from the static-member entry to the VLAN. • **ports** is the port or list of ports to which you want to redirect the multicast stream for this multicast group. • **static|blocked** configures the route to static or blocked.

config vlan static-mcastmac

Use this command to configure Layer 2 multicast MAC filtering.

Syntax

config vlan <vid> static-mcastmac

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Parameters

Variable	Value
<vid>	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

Variable	Value
add mac <value> [port <value>] [mlt <value>]	Adds VLAN static multicast MAC entries.
add-mlt mid <value>	Adds MLT ID to VLAN static multicast MAC entries.
add-ports <ports> mac <value>	Adds ports to VLAN static multicast MAC entries.
delete mac <value>	Deletes VLAN static multicast MAC entries.
delete-mlt <mid> mac <value>	Deletes MLT ID from VLAN static multicast MAC entries.
delete-ports <ports> mac <value>	Deletes ports from VLAN static multicast MAC entries.
info	Shows current-level parameter settings and next-level directories.

config vlan ip igmp access-control

Use this command to configure multicast access control for a VLAN.

Syntax

config vlan <vid> ip igmp access-control <name>

Parameters

Variable	Value
name	Configures the name of the access policy from 1–64 characters.
vid	Specifies a VLAN ID from 1–4092.

Default

None

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Related commands

Variable	Value
create <HostAddress> <HostMask> <deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both>	Creates an access control group entry for a specified VLAN. • **HostAddress** is the IP address of the host. • **HostMask** is the subnet mask used to determine the host or hosts covered by this configuration. You can use the host subnet mask to restrict access to a portion of the host network. • **deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both** indicates the action you want for the specified VLAN. For example, if you specify deny-both, the VLAN denies both transmitted and received traffic.
delete <HostAddress> <HostMask>	Deletes the access control group entry for the specified VLAN. • **HostAddress** is the IP address of the host. • **HostMask** is the subnet mask used to determine the host or hosts covered by this configuration.
info	Displays the settings for the access-control parameter.
mode <HostAddress> <HostMask> <deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both>	Changes the access control group configuration. • **HostAddress** is the IP address of the host. • **HostMask** is the subnet mask used to determine the host or hosts covered by this configuration. • **deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both** indicates the action you want for the specified VLAN. For example, if you specify deny-both, the VLAN denies both transmitted and received traffic.

config vlan ip igmp fast-leave-members

Use this command to configure IGMP fast leave members on a VLAN.

Syntax

config vlan ip igmp fast-leave-members enable <ports>

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Parameters

Variable	Value
enable <ports>	Enables members to join a fast leave group on a port on the VLAN. • **ports** is the port or list of ports that you want to join the fast leave group.
vid	Specifies a VLAN ID from 1–4 092.

Default

None

Related commands

Variable	Value
disable <ports>	Prevents a port from receiving a leave message from a member of a group. Normal IGMP behavior is skipped.
enable <ports>	Enables members to join a fast leave group on a port on the VLAN. **ports** is the port or list of ports that you want to join the fast leave group.
info	Displays information about the fast leave members of the VLAN.

config vlan ip pgm state

Use this command to configure PGM on a VLAN.

Syntax

config vlan <vid> ip pgm state enable

Parameters

Variable	Value
state <enable|disable>	Modifies the current state (enable or disable) of PGM on the selected VLAN. The default is disable.
vid	Specifies a VLAN ID from 1–4092.

Default

The default is disable.

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Related commands

Variable	Value
info	Displays current PGM settings on the selected VLAN.
max-nak-rdata-int <integer>	Specifies how long to wait for RDATA, in milliseconds (ms), after receiving an NCF. The range is 1–2147483647 and the default value is 10 000 ms.
max-nak-re-xmit-cnt <integer>	Configures the maximum number of NAK retransmission packets allowed for each second. The range is 1–2147483647 and the default value is 2.
nak-eliminate-int <integer>	Specifies the length of time (in milliseconds) during which a network element (NE) eliminates duplicate NAKs. After this interval expires, the NE suspends NAK elimination until the first duplicate arrives. After this NAK is forwarded, the NE eliminates duplicate NAKs for the specified interval. You must configure this parameter lower than **max-nak-rdata-int**. The range is 0–2147483647 and the default value is 5000 ms.
nak-re-xmit-int <integer>	Specifies how long to wait for a NAK confirmation (NCF), in milliseconds, before retransmitting the NAK. The range is 100–2147483647 and the default value is 1000 ms.

config ip route-policy

Use this command to create a DVMRP policy.

Syntax

config ip route-policy <policy-name> seq <seq_number> createconfig ip route-policy <policy-name> seq <seq_number> action <permit|deny>config ip route-policy <policy-name> seq <seq_number> enable

Parameters

Variable	Value
policy-name	Indicates the name of the specified policy, which is a string length from 1–64 characters.
seq_number	Indicates the number of the specified policy, which is a number from 1–65535.

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Variable	Value
set-origin-egp-as <origin-egp-as> [clear]	Indicates the remote autonomous system number. This variable is applicable to BGP only.
set-preference <pref-value> [clear]	Setting the preference greater than zero specifies the route preference value to assign to the routes that match this policy. This applies to accept policies only. • **pref-value** configures the preference value from 0–255. The default is 0. If the default is configured, the global preference value is used. • **[clear]** removes the configured value for **set-preference**.

Default

None

Related commands

Variable	Value
action <permit|deny>	Specifies the action to take when a policy matches a specific route. Permit accepts the route and deny ignores the route.
create	Creates a route policy with a policy name and a sequence number. **ATTENTION** When you create a route policy in the CLI, the system internally generates the ID using an automated algorithm. When you create a route policy in Device Manager, you can manually assign the ID number.
delete	Deletes a route policy with a policy name and a sequence number.
disable	Disables a route policy with a policy name and a sequence number.
enable	Enables a route policy with a policy name and a sequence number.

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Variable	Value
info	Displays current configuration information about this policy sequence number.
match-as-path <as-list> [clear]	If configured, the switch matches the as-path attribute of the Border Gateway Protocol (BGP) routes against the contents of the specified as-lists. This field is used only for BGP routes and ignored for all other route types. • **as-list** specifies the list IDs of up to four as-lists, separated by commas. • **[clear]** removes the configured value for **match-as-path**.
match-community <community-list> [clear]	If configured, the switch matches the community attribute of the BGP routes against the contents of the specified community-lists. This field is used only for BGP routes and ignored for all other route types. • **community-list** specifies the list IDs of up to four defined community-lists, separated by commas. • **[clear]** removes the configured value for **match-community**.
match-community-exact <enable|disable> [clear]	When disabled, **match-community** results in a match when the community attribute of the BGP routes matches an entry of a community list specified in **match-community**. When enabled, **match-community** results in a match when the community attribute of the BGP routes matches all of the entries of all the community lists specified in **match-community**.
match-interface <prefix-list> [clear]	If configured, the switch matches the IP address of the interface from which the Routing Information Protocol (RIP) route was discovered against the contents of the

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Variable	Value
	specified prefix list. This field is used only for RIP routes and ignored for all other route types. • **prefix-list** specifies the names of up to four defined prefix lists, separated by commas. • **[clear]** removes the configured value for **match-interface**.
match-metric <metric> [clear]	If configured, the switch matches the metric of the incoming advertisement or existing route against the specified value. If the value is 0, this field is ignored. • **metric** is 1–65535. The default is 0. • **[clear]** removes the configured value for **match-metric**.
match-network <prefix-list> [clear]	If configured, the switch matches the destination network against the contents of the specified prefix lists. • **prefix-list** specifies the names of up to four defined prefix lists, separated by commas. • **[clear]** removes the configured value for **match-network**.
match-next-hop <prefix-list> [clear]	If configured, matches the next-hop IP address of the route against the contents of the specified prefix list. This field applies only to non-local routes. • **prefix-list** specifies the names of up to four defined prefix lists, separated by a comma. • **[clear]** removes the configured value for **match-next-hop**.
match-protocol <protocol_name> [clear]	If configured, matches the route policy to the protocol from which the route is learned. This field is used only for RIP announcement purposes.

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Variable	Value
match-route-src <prefix-list> [clear]	If configured, matches the next-hop IP address for RIP, BGP, and DVMRP routes and advertising router IDs for Open Shortest Path First (OSPF) routes against the contents of the specified prefix list. This option is ignored for all other route types. • **prefix-list** specifies the names of up to four defined prefix lists, separated by a comma. • **[clear]** removes the configured value for **match-route-src**.
match-route-type <route-type>	Configures a specific route-type to match (applies only to OSPF routes). • **route-type** External-1 and External-2 specifies OSPF routes of the specified type only (other values are ignored).
match-tag <tag> [clear]	Specifies a list of tags that is used during the match criteria process. Contains one or more tag values. • **tag** is a value from 0–256. • **[clear]** removes the configured values for **match-tag**.
name <policy_name>	Renames a policy after its creation. This command changes the name field for all sequence numbers under the policy.
policy-name	Indicates the name of the specified policy, which is a string length from 1–64 characters.
seq_number	Indicates the number of the specified policy, which is a number from 1–65535.
set-as-path <as-list-id> [clear]	If configured, the switch adds the as-number of the as-list to the BGP routes that match this policy. • **as-list-id** specifies the list ID of up to four defined as-lists, separated by a comma. • **[clear]** removes the configured value for **set-as-path**.

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Variable	Value
set-as-path-mode <tag|prepend> [clear]	**prepend** is the default configuration. The switch prepends the as-number of the as-list specified in set-as-path to the old as-path attribute of the BGP routes that match this policy.
set-automatic-tag <enable|disable> [clear]	Configures the tag automatically. This option is used for BGP routes only.
set-community <community-list> [clear]	If configured, the switch adds the community number of the community list to the BGP routes that match this policy. • **community-list** specifies the list ID of up to four defined community lists, separated by a comma. • **[clear]** removes the configured value for **set-community**.
set-community-mode <additive|none> [clear]	Configures the community mode. • **additive**—the switch prepends the community number of the community list specified in set-community to the old community path attribute of the BGP routes that match this policy. • **none**—the switch removes the community path attribute of the BGP routes that match this policy. • **[clear]** removes the configured value for **set-community-mode**.
set-injectlist <prefix-list> [clear]	If configured, the switch replaces the destination network of the route that matches this policy with contents of the specified prefix list. • **prefix-list** specifies one prefix list by name. • **[clear]** removes the configured value for **set-injectlist**.
set-local-pref <pref-value> [clear]	A value used during a route decision process in the BGP protocol. Applicable to BGP only.

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Variable	Value
set-mask <ipaddr>	If configured, the switch configures the mask of the route that matches this policy. This applies only to RIP accept policies. • **ipaddr** is a valid contiguous IP mask.
set-metric <metric-value> [clear]	If configured, the switch configures the metric value for the route while announcing a redistribution. The default is 0. If the default is configured, the original cost of the route is advertised into OSPF; for RIP, the original cost of the route or default-import-metric is used.
set-metric-type <metric-type> [clear]	If configured, sets the metric type for the routes to announce into the OSPF domain that matches this policy. The default is type 2. This variable is applicable only for OSPF announce policies.
set-nssa-pbit <enable|disable>	Configures the not-so-stubby-area (NSSA) translation P bit. This variable is applicable only to OSPF announce policies.
set-next-hop <ipaddr> [clear]	Specifies the IP address of the next-hop router. Ignored for DVMRP routes.
set-origin <origin> [clear]	If configured, the switch changes the origin path attribute of the BGP routes that match this policy to the specified value.
set-origin-egp-as <origin-egp-as> [clear]	Indicates the remote autonomous system number. This variable is applicable to BGP only.
set-preference <pref-value> [clear]	Setting the preference greater than zero specifies the route preference value to assign to the routes that match this policy. This applies to accept policies only. • **pref-value** configures the preference value from 0–255. The default is 0. If the default is configured, the global preference value is used. • **[clear]** removes the configured value for **set-preference**.

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Variable	Value
set-tag <tag> [clear]	Configures the tag of the destination routing protocol. If you do not specify a tag, the switch forwards the tag value in the source routing protocol. A value of zero indicates that this parameter is not set.
set-weight <weight> [clear]	The weight value for the routing table. For BGP, this value overrides the weight configured through NetworkTableEntry, FilterListWeight, or NeighborWeight. Used for BGP only. A value of zero indicates that this parameter is not set.

config ip prefix-list

Use this command to create an IP prefix list.

Syntax

config ip prefix-list <prefix-list-name>

Parameters

Variable	Value
prefix-list-name	Indicates the name of the specified prefix list, which is a string length from 1–64 characters.

Default

None

Related commands

Variable	Value
add-prefix <ipaddr|mask> [maskLenFrom <value>] [maskLenTo <value>]	Adds a prefix entry to the prefix list. • **ipaddr|mask** is the IP address and mask. • **maskLenFrom <value>** is the lower boundary of the mask length. The default is the mask length. • **maskLenTo <value>** is the higher boundary of the mask length. The default is the mask length. **ATTENTION** Lower boundaries and higher boundaries of the mask lengths

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Variable	Value
	together can define a range of networks.
delete	Deletes the prefix list.
info	Displays all of the prefixes in a list.
name <name>	Renames the specified prefix list. The name can contain 1–64 characters.
prefix-list-name	Indicates the name of the specified prefix list, which is a string length from 1–64 characters.
remove-prefix <ipaddr/mask>	Removes a prefix entry from the prefix list. • **ipaddr/mask** is the IP address and mask.

config ip vrf

Use this command to create and remove a Protocol Independent Multicast (PIM) instance on a VRF.

Syntax

config ip vrf <vrfName> pim create
config ip vrf <vrfName> pim delete

Parameters

Variable	Value
vrfName	Specifies the name of the VRF instance, a string length from 0–16 characters.

Default

None

Related commands

None

show ip dvmrp neighbor

Use this command to display information about the configured DVMRP neighbors.

Syntax

show ip dvmrp neighbor

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Parameters
None

Default
None

Related commands

Variable	Value
`info`	Displays DVMRP information.
`interface`	Displays DVMRP interface.
`next-hop`	Displays DVMRP next-hops.
`route`	Displays DVMRP routes.
`show-all [file <value>]`	Displays all DVMRP information.

show ip dvmrp route
Use this command to view DVMRP routes.

Syntax
`show ip dvmrp route`

Parameters
None

Default
None

Related commands

Variable	Value
`info`	Displays DVMRP information.
`interface`	Displays DVMRP interface.
`neighbor`	Displays DVMRP neighbor.
`next-hop`	Displays DVMRP next-hops.
`show-all [file <value>]`	Displays all DVMRP information.

show ip dvmrp info
Use this command to view DVMRP information.

Syntax
`show ip dvmrp info`

Parameters
None

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Default

None

Related commands

Variable	Value
interface	Displays DVMRP interface.
neighbor	Displays DVMRP neighbor.
next-hop	Displays DVMRP next-hops.
route	Displays DVMRP routes.
show-all [file <value>]	Displays all DVMRP information.

show ip dvmrp interface

Use this command to view DVMRP interfaces.

Syntax

show ip dvmrp interface

Parameters

None

Default

None

Related commands

Variable	Value
info	Displays DVMRP information.
neighbor	Displays DVMRP neighbor.
next-hop	Displays DVMRP next-hops.
route	Displays DVMRP routes.
show-all [file <value>]	Displays all DVMRP information.

show vlan info dvmrp

Use this command to display DVMRP route policy information for the DVMRP VLAN configurations on the switch.

Syntax

show vlan info dvmrp

Parameters

None

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Default
None

Related commands
None

show ip igmp access
Use this command to display information about the Internet Group Management Protocol (IGMP) multicast access control groups.

Syntax
show ip igmp access [vrf <value>] [vrfids <value>]

Parameters
None

Default
None

Related commands
None

show ip igmp cache
Use this command to display information about the IGMP cache.

Syntax
show ip igmp cache [vrf <value>] [vrfids <value>]

Parameters
None

Default
None

Related commands
None

show ip igmp info
Use this command to display IGMP info.

Syntax
show igmp info [vrf <value>] [vrfids <value>]

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Parameters

Variable	Value
`vrf <value>`	Specifies the VRF name. The string length ranges from 0 to 32.
`vrfids <value>`	Specifies the VRF ID Range.

Default

Non

Related commands

None

show ip igmp group

Use this command to display information about the IGMP group.

Syntax

```
show ip igmp group [vrf <value>] [vrfids <value>]
```

Parameters

None

Default

None

Related commands

None

show ip igmp interface

Use this command to display information about the interfaces where IGMP is enabled.

Syntax

```
show ip igmp interface [vrf <value>] [vrfids <value>]
```

Parameters

None

Default

None

Related commands

None

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show ip igmp mrdisc

Use this command to display information about the IGMP multicast discovery routes.

Syntax

show ip igmp mrdisc [vrf <value>] [vrfids <value>]

Parameters

None

Default

None

Related commands

None

show ip igmp snoop-trace

Use this command to view multicast group trace information for IGMP snoop.

Syntax

show ip igmp snoop-trace [src <value>] [grp <value>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
src <value>	Specify the IP address in the {a.b.c.d} format.
grp <value>	Specify the IP address in the {a.b.c.d} format.

Default

None

Related commands

None

show ports info dvmrp

Use this command to display DVMRP route policy information for the DVMRP port configurations on the switch.

Syntax

show ports info dvmrp [port <value>]

Parameters

None

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Default

None

Related commands

None

show vlan info all

Use this command to display information about all the VLANs on the switch.

Syntax

show vlan info all [<vid>] [port <value>] [by <value>]

Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

show vlan info ports

Use this command to display VLAN port data.

Syntax

show vlan info ports [<vid>]

Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

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show ports info igmp

Use this command to display information about the specified port or for all ports.

Syntax

show ports info igmp [vlan value>] [ports <value>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.
vrf <value>	Specifies the VRF name. The string length ranges from 0 to 32.
vrfids <value>	Specifies the VRF ID Range.

Default

None

Related commands

None

show ip igmp router-alert

Use this command to display the status of IGMP router alert.

Syntax

show ip igmp router-alert [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length ranges from 0 to 32.
vrfids <value>	Specifies the VRF ID Range.

Default

None

Related commands

None

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show ip igmp sender

Use this command to display information about the IGMP senders.

Syntax

show ip igmp sender [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length ranges from 0 to 32.
vrfids <value>	Specifies the VRF ID Range.

Default

None

Related commands

None

show ip igmp show-all

Use this command to view all IGMP information.

Syntax

show ip igmp show-all [file <value>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length ranges from 0 to 32.
vrfids <value>	Specifies the VRF ID Range.

show ip igmp snoop

Use this command to display the status of IGMP snoop.

Syntax

show ip igmp snoop [vrf <value>] [vrfids <value>]

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Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length ranges from 0 to 32.
vrfids <value>	Specifies the VRF ID Range.

Default

None

Related commands

None

show ip igmp static

Use this command to display information about the static and blocked ports for the IGMP-enabled interfaces.

Syntax

show ip igmp static [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length ranges from 0 to 32.
vrfids <value>	Specifies the VRF ID Range.

Default

None

Related commands

None

show vlan info igmp

Use this command to view VLAN IP IGMP information.

Syntax

show vlan info igmp [<vid>] [vrf <value>] [vrfids <value>]

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Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length ranges from 0 to 32.
vrfids <value>	Specifies the VRF ID Range.

Default

None

Related commands

None

show vlan info static-mcastmac

Use this command to display the Layer 2 multicast MAC filters.

Syntax

show vlan info static-mcastmac [<vid>]

Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

show ip arp static-mcastmac

Use this command to display Layer 3 multicast MAC ARP data.

Syntax

show ip arp static-mcastmac [<ip address>] [-s <value>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
ip address	Specifies the IP address in the {a.b.c.d} format.

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Variable	Value
vrf <value>	Specifies the VRF name. The string length ranges from 0 to 32.
vrfids <value>	Specifies the VRF ID Range.

Default

None

Related commands

None

show ip arp show-all

Use this command to show all ARP information.

Syntax

show ip arp show-all [file <value>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
[file <value>]	Specifies the filename /pcmcia/<file>| /flash/<file>. The string length ranges from 1 to 99.
[vrf <value>]	Specifies the VRF name {string length 0..32}.
[vrfids <value>]	Specifies the VRF ID range.

Default

None

Related commands

None

show ip as-list

Use this command to display AS-list.

Syntax

show ip as-list [<listid>] [file <value>] [vrf <value>] [vrfids <value>]

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Parameters

Variable	Value
[<listid>]	Lists ID in the range of 1 to 1024.
[vrf <value>]	Specifies the VRF name {string length 0..32}.
[vrfids <value>]	Specifies the VRF ID range.

Default

None

Related commands

None

show ip community-list

Use this command to display community-list.

Syntax

show ip community-list [<listid>] [file <value>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
[<listid>]	Lists ID in the range of 1 to 1024.
[vrf <value>]	Specifies the VRF name {string length 0..32}.
[vrfids <value>]	Specifies the VRF ID range.

Default

None

Related commands

None

show sys mcast-mlt-distribution

Use this command to show the multicast MultiLink Trunking (MLT) distribution configuration.

Syntax

show sys mcast-mlt-distribution

Parameters

None

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Default

None

Related commands

None

show ip mroute route

Use this command to display information about the multicast routes set up on the switch.

Syntax

show ip mroute route [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length is 0 to 32.
vrfids <value>	Specifies the VRF ID range.

Default

None

Related commands

None

show ip mroute next-hop

Use this command to display information about the next hop for the multicast routes set up on the switch.

Syntax

show ip mroute next-hop [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length is 0 to 32.
vrfids <value>	Specifies the VRF ID range.

Default

None

Related commands

None

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show ip mroute interface

Use this command to display information about the multicast routes set up on the switch for a specific interface.

Syntax

show ip mroute interface [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length is 0 to 32.
vrfids <value>	Specifies the VRF ID range.

Default

None

Related commands

None

show ip igmp mrdisc-neighbors

Use this command to display information about the IGMP multicast router discovery neighbors.

Syntax

show ip igmp mrdisc-neighbors [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length is 0 to 32.
vrfids <value>	Specifies the VRF ID range.

Default

None

Related commands

None

show ip pgm global

Use this command to display the PGM global status on the switch.

Syntax

show ip pgm global

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Parameters

None

Default

None

Related commands

Variable	Value
`global`	Displays PGM global information.
`retransmit`	Displays PGM retransmit information.
`session`	Displays PGM session.
`show-all [file <value>]`	Displays PGM information.

show ip pim active-rp

Use this command to display information about the active rendezvous point (RP) for all groups or a specific group.

Syntax

`show ip pim active-rp [<grp>] [vrf <value>] [vrfids <value>]`

Parameters

Variable	Value
`vrf <value>`	Specifies the VRF name. The string length is 0 to 32.
`vrfids <value>`	Specifies the VRF ID range.

Default

None

Related commands

None

show ip pim bsr

Use this command to display information about the bootstrap router (BSR) for this PIM-SM domain.

Syntax

`show ip pim bsr [vrf <value>] [vrfids <value>]`

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Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length is 0 to 32.
vrfids <value>	Specifies the VRF ID range.

Default

None

Related commands

None

show ip pim interface

Use this command to display information about the PIM-SM interface setup on the switch.

Syntax

show ip pim interface [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length is 0 to 32.
vrfids <value>	Specifies the VRF ID range.

Default

None

Related commands

None

show ip pim mode

Use this command to show the PIM mode (SM or SSM).

Syntax

show ip pim mode [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length is 0 to 32.
vrfids <value>	Specifies the VRF ID range.

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Default

None

Related commands

show ip pim neighbor

Use this command to display information about the neighboring routers configured with PIM-SM.

Syntax

show ip pim neighbor [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length is 0 to 32.
vrfids <value>	Specifies the VRF ID range.

Default

None

Related commands

None

show ip pim mroute

Use this command to display information from the route table.

Syntax

show ip pim mroute [src <value>] [group <value>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length is 0 to 32.
vrfids <value>	Specifies the VRF ID range.

Default

None

Related commands

None

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show ip pim rp-set

Use this command to display information about the RPs for this PIM-SM domain.

Syntax

show ip pim rp-set [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length is 0 to 32.
vrfids <value>	Specifies the VRF ID range.

Default

None

Related commands

None

show ip pgm interface config

Use this command to display PGM interface configuration.

Syntax

show ip pgm interface config

Parameters

None

Default

None

Related commands

None

show ip pgm interface error general

Use this command to display PGM interface general error statistics.

Syntax

show ip pgm interface error general

Parameters

None

Default

None

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Related commands

Variable	Value
nak	Displays the PGM interface NAK error statistics.

show ip pgm interface stat general

Use this command to display PGM interface general statistics.

Syntax

show ip pgm interface stat general

Parameters

None

Default

None

Related commands

Variable	Value
nak	Displays the PGM interface NAK statistics.
parity	Displays the PGM interface parity statistics.

show ip igmp stream-limit-interface

Use this command to display information about the interfaces where multicast stream limitation is enabled.

Syntax

show ip igmp stream-limit-interface [vrf <value>] [vrfids <value>]
show ip igmp stream-limit-port [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
ipaddr	Indicates the IP address of the selected interface.

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Variable	Value
max-streams <integer>	Configures the maximum number of allowed streams on this interface. The range is from 0–65535 and the default is 4.
[vrf <value>] [vrfids <value>]	Specifies the name of a VRF or a range of VRF IDs to include in the show command output. If you do not specify a VRF name or range of VRF IDs, the command results show for the Global Router.

Default

None

Related commands

Variable	Value
enable	Enables stream limitation on this interface.
disable	Disables stream limitation on this interface.
info	Displays information about the stream limits set on this interface.

show ip dvmrp next-hop

Use this command to display information about the DVMRP next hops.

Syntax

show ip dvmrp next-hop

Parameters

None

Default

None

Related commands

Variable	Value
info	Displays DVMRP information.
interface	Displays DVMRP interface.
neighbor	Displays DVMRP neighbor.
route	Displays DVMRP routes.
show-all [file <value>]	Displays all DVMRP information.

show ip igmp ssm-channel

Use this command to display the list of SSM channels.

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Syntax

show ip igmp ssm-channel [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length ranges from 0 to 32.
vrfids <value>	Specifies the VRF ID range.

Default

None

Related commands

None

show ip igmp ssm-global

Use this command to display the SSM group range and the status of dynamic learning.

Syntax

show ip igmp ssm-global [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length ranges from 0 to 32.
vrfids <value>	Specifies the VRF ID range.

Default

None

Related commands

None

show ip pim static-rp

Use this command to display the static RP table.

Syntax

show ip pim static-rp [vrf <value>] [vrfids <value>]

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Parameters

Variable	Value
`vrf <value>`	Specifies the VRF name. The string length ranges from 0 to 32.
`vrfids <value>`	Specifies the VRF ID range.

Default

None

Related commands

None

show ip mroute static-source-group

Use this command to display information about the static source groups on the current interface.

Syntax

```
show ip mroute static-source-group [<GroupAddress>] [vrf <value>] [vrfids <value>]
```

Parameters

Variable	Value
`vrf <value>`	Specifies the VRF name. The string length ranges from 0 to 32.
`vrfids <value>`	Specifies the VRF ID range.

Default

None

Related commands

None

show ip static-mroute info

Use this command to display static-route information.

Syntax

```
show ip static-mroute info [ip <value>] [vrf <value>] [vrfids <value>]
```

Parameters

Variable	Value
`ip <value>`	Specifies the net (1.2. = 1.2.0.0) {a.b.c.d}.

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Variable	Value
vrf <value>	Specifies the VRF name. The string length ranges from 0 to 32.
vrfids <value>	Specifies the VRF ID range.

Default
None

Related commands
None

show sys mcast-software-forwarding
Use this command to show the software forwarding configuration.

Syntax
show sys mcast-software-forwarding

Parameters
None

Default
None

Related commands
None

show ip pim virtual-neighbor
Use this command to display the virtual neighbor.

Syntax
show ip pim virtual-neighbor [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string value ranges from 0 to 32.
vrfids <value>	Specifies the VRF ID.

Default
None

Related commands
None

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IPv6 Routing commands

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config sys net6-mgmt ipv6 add

Use this command to assign an IPv6 address to the management port.

Syntax

config sys net6-mgmt ipv6 [add|del] <IPv6addr/prefix-len> [cpu-slot <value>]

Parameters

Variable	Value
IPv6 address/prefix length	Specifies the IPv6 address and prefix length to assign to the port.
slot-id	Specifies the number of the slot where the port is located. If a slot ID is not specified, the address is configured for the current SF/CPU.

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Default

None

Related commands

Variable	Value
`info`	Displays current level parameter settings and next level directories.
`route [add|del] <IPv6addr/prefix-len> [cpu-slot <value>]`	Adds or deletes a route.

config sys net6-mgmt route add

Use this command to configure the management route.

Syntax

`config sys net6-mgmt route add <network IPv6 address> <network gateway>`

Parameters

Variable	Value
`network gateway`	Specifies the IPv6 address of the gateway.
`network IPv6 address`	Specifies the IPv6 address of the network to add.

Default

None

Related commands

None

config vlan create

Use this command to create a VLAN.

Syntax

`config vlan <vid> create`

Parameters

Variable	Value
`<vid>`	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

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Related commands

Variable	Value
byport <sid> [name <value>] [color <value>]	Creates a port-based VLAN. • **sid** is the spanning tree group ID from 1 to 64 characters. • **name <value>** is the name of the VLAN from 0 to 64 characters. • **color <value>** is the color of the VLAN (0 to 32). The color attribute is used by Optivity software to display the VLAN.
byprotocol <sid> <ip|ipx802dot3|ipx802dot2|ipxSnap|ipxEthernet2|appleTalk|declat|decOther|sna802dot2|snaEthernet2|netBios|xns|vines|ipV6|usrDefined|rarp|PPPoE> [<pid>] [name <value>] [color <value>] [encap <value>]	Creates a protocol-based VLAN. • **sid** is the spanning tree ID ranging from 1 to 64. • **ip|ipx802dot3|ipx802dot2|ipxSnap|ipxEthernet2|appleTalk|decLat|decOther|sna802dot2|snaEthernet2|netBios|xns|vines|ipV6|usrDefined|rarp| PPPoE** specifies the protocol. • **pid** is a user-defined protocol ID number in hexadecimal format (0 to 65535). • **name <value>** is the name of the VLAN ranging from 0 to 64 characters. • **color <value>** is the color of the VLAN (0 to 32). The color attribute is used by Optivity software to display the VLAN. • **encap <value>** is the frame encapsulation method.
bysrcmac <sid> [name <value>] [color <value>]	Creates a VLAN by MAC-source address. • **sid** is the spanning tree ID 1 to 64. • **name <value>** is the name of the VLAN from 0 to 64 characters. • **color <value>** is the color of the VLAN (0 to 32). The color attribute is used by Optivity software to display the VLAN.

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Variable	Value
	This command is available only for the Nortel Ethernet Routing Switch 8600.
info	Shows information about the specified VLAN.
<vid>	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.

config vlan ipv6 create

Use this command to configure a VLAN as an IPv6 VLAN to use IPv6 routing on the VLAN.

Syntax

config vlan <vlan ID> ipv6 create [link-local <value>] [descr <value>] [addr <value>] [addr-type <value>] [admin <value>] [mcast <value>] [mtu <value>] [reachable-time <value>] [retransmit-timer <value>]

Parameters

Variable	Value
vlan id	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

Variable	Value
addr	Specifies the IPv6 address and prefix length in the format address/prefix length.
addr-type	1—unicast, 2—anycast
admin <enable|disable>	Enables or disables the administrative state of the interface.
delete [addr <value>] [all] [interface]	Deletes one of the following: • addr <value> • all • interface

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Variable	Value
descr	Views or updates the description for the interface.
info	Displays information about the configuration.
link-local	Specifies a numeric identifier for the interface.
mcast <enable|disable>	Enables or disables MLD.
mtu <mtu>	Configures the maximum transmission unit for the interface.
reachable-time <reachable-time>	Configures the time, in milliseconds, a neighbor is considered reachable after receiving a reachability confirmation.
retransmit-timer <retransmit-timer>	Configures the time, in milliseconds, between retransmissions of Neighbor Solicitation messages to a neighbor when resolving the address or when probing the reachability of a neighbor.

config vlan ipv6 create addr

Use this command to assign an IPv6 address to the VLAN to enable IPv6 routing on the VLAN.

Syntax

config vlan <vlan id> ipv6 create addr <ipv6 address>

Parameters

Variable	Value
ipv6 address	Specifies the IPv6 address to add to the VLAN.
vlan id	Specifies the ID of the VLAN, from 1 to 4094.

Default

None

Related commands

None

config vlan ipv6 admin

Use this command to set the administrative status to enable the IPv6 VLAN.

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Syntax

config vlan <vid> ipv6 admin enable

Parameters

Variable	Value
vid	Specifies the ID of the VLAN, from 1 to 4094.

Default

The default value is 1.

Related commands

None

config ethernet ipv6 create addr

Use this command to assign an IPv6 address to a brouter port on a VLAN to customize the IPv6 VLAN configuration.

Syntax

config ethernet <slot/port> ipv6 create addr <ipv6 address> vlan <vlan id>

Parameters

Table 1
Variable defintions

Variable	Value
ipv6 address	Specifies the IPv6 address to add to the port.
slot/port	Identifies the slot and port location.
vlan id	Specifies the ID of the VLAN, from 1 to 4094.

Default

The default value is 1.

Related commands

Variable	Value
delete [addr <value>] [all] [interface]	Deletes **config ether ipv6** command.

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Variable	Value
admin <enable|disable> [<vid>]	Enables or disables **config ether ipv6 admin** command.
info	Displays **config ether ipv6 info** command.
mcast <enable|disable>	Configures **ether ipv6 multicast** command. **enable|disable** enables or disables multicast admin status for the interface.
mtu <mtu>	Configures **ether ipv6 mtu** command. **mtu** is the MTU for IPv6 interface {1280..1500 or 9600}.
reachable-time <reachable-time>	Configures **ether ipv6 nd reachable-time** command. **reachable-time** is the reachable time in milliseconds {0..3600000}.
retransmit-timer <retransmit-timer>	Configures **ether ipv6 nd retransmit-timer** command. **retransmit-timer** is the retransmit timer in milliseconds {0..3600000}.

config ethernet ipv6 admin

Use this command to enable the brouter port by setting the administrative status.

Syntax

config ethernet <slot/port> ipv6 admin enable

Parameters

Variable	Value
slot/port	Specifies the ethernet slot/port.

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Default

None

Related commands

None

config ipv6 icmp error-interval

Use this command to configure the ICMP rate.

Syntax

config ipv6 icmp-error-interval <milliseconds>

Parameters

Variable	Value
milliseconds	Specifies the ICMP error interval time. The range is from 0 to 2147483647.

Default

None

Related commands

None

config ethernet ipv6 nd-prefix

Use this command to configure discovery prefixes for a brouter port.

Syntax

config ethernet <slot/port> ipv6 nd-prefix <prefix/prefix length> create
config vlan <vlan id> ipv6 nd-prefix <prefix/prefix length> create

Parameters

Variable	Value
create	Creates discovery prefixes and configures the following options: • on-link-flag: if set, onlink determination uses the prefix. This value is placed in the L-bit field in the prefix information option. It is a 1-bit flag. • auto-flag: if set, the prefix is used for autonomous address configuration. • eui: (1) Extended Unique Identifier (EUI) not used, (2) EUI with Universal/Local bit

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Variable	Value
	(U/L) complement enabled, (3) EUI used without U/L. • no-advertise: if true, the prefix is not advertised. If false, the prefix is advertised.
prefix/prefix length	Specifies the IP address and prefix.
slot/port	Specifies the slot and port location of the Brouter port.
vlan id	Specifies the ID of the VLAN from 1 to 4094.

Default

None

Related commands

default	Select one of the values to use as the default value. This is a bitmask field; using all the bits means that all the options revert to default values: • (0) valid-life • (1) preferred-life • (3) no-advertise
delete	Deletes the prefix.
infinite	If set, the prefix does not expire.
info	Subcontext commands.
no-advertise	Modify whether the prefix is advertised. The true setting prevents prefix advertisement.
pref-life	The number of seconds that the prefix can accept and use new connections.
valid-life	The number of seconds that the prefix advertised in the neighbor advertisement is valid. During the valid lifetime, existing connections can be used. New connections cannot be opened.

config ethernet ipv6 nd

Use this command to route advertisement to discover potential default routers in a network and to discover link information.

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Syntax

```
config ethernet <slot/port> ipv6 nd
config vlan<vlan id> ipv6 nd
```

Parameters

Variable	Value
slot/port	Specifies the slot and port location of the Brouter port.
vlan id	Specifies the ID of the VLAN from 1 to 4094.

Default

None

Related commands

Variable	Value
dad-ns <dad-ns-number>	Specifies the configuration ether IPv6 ND dad-ns command.
default [max-interval] [min-interval] [life-time] [hop-limit] [managed-flag] [other-config-flag] [dad-ns-num] [all]	Specifies the configuration ether IPv6 ND dad-ns command.
hop-limit <hop-limit>	Specifies the configuration ether IPv6 ND hop-limit command.
info	config ether ipv6 nd info command
life-time <0 | 4..9000>	Specifies the configuration ether IPv6 ND life-time command.
managed-flag <true|false>	Specifies the configuration ether IPv6 ND managed-flag command.
other-stateful <true|false>	Specifies the configuration ether IPv6 ND other-stateful command.
route-advertisement <true|false>	Specifies the configuration ether IPv6 ND route-advertisement command.
rtr-advert [min <value>] [max <value>]	Specifies the configuration ether IPv6 ND RTR-advert command.

config ipv6 neighbor add ports

Use this command to add static entries to the neighbor cache.

Syntax

```
config ipv6 neighbor add ports <value> ipv6addr <value> mac
<value> vlanid <value>
```


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Parameters

Variable	Value
ipv6 address	Specifies the IPv6 address in hexadecimal colon format {string length 0..128}
mac address	Specifies the MAC address in the following format: {0x00:0x00:0x00:0x 00:0x00:0x00}
slot/port	Specifies the slot and port location to add a neighbor for a brouter port.
vlan id	Specifies the ID of the VLAN to add a neighbor for a VLAN.

Default

None

Related commands

Variable	Value
delete <ipv6addr> [vlanid <value>] [port <value>]	Adds static entries to the neighbor cache.
info	Displays the current-level parameter settings and the next-level directories.

config ipv6 forwarding disable

Use this command to set alias port name.

Syntax

config ipv6 forwarding disable

Parameters

Variable	Value
<ports>	Specifies the port list in the slot/port format.
<name>	Sets alias port name. The string length ranges from 0 to 64.

Default

None

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Related commands

Variable	Value
`enable`	Enables IPv6 forwarding.
`info`	Specifies the IPv6 forwarding information.

config ipv6 icmp-error-quota

Use this command to configure IPv6 ICMP error quota command.

Syntax

`config ipv6 icmp-error-quota <quota>`

Parameters

Variable	Value
`<quota>`	Specifies the ICMP error message number in the range of 0 to 2000000.

Default

None

Related commands

None

config ipv6 icmp-redirect-msg

Use this command to configure IPv6 ICMP redirect message command.

Syntax

`config ipv6 icmp-redirect-msg <enable|disable>`

Parameters

Variable	Value
`<enable|disable>`	Enables or disables the ICMP redirect message administrator status.

Default

None

Related commands

None

config ipv6 icmp-redirect-msg

Use this command to configure IPv6 ICMP redirect message command.

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Syntax

config ipv6 icmp-redirect-msg <enable|disable>

Parameters

Variable	Value
<enable|disable>	Enables or disables the ICMP redirect message administrator status.

Default

None

Related commands

None

config sys net6-mgmt ipv6 del

Use this command to assign multiple addresses to the Ethernet SF/CPU slot.

Syntax

config sys net6-mgmt ipv6 del <IPv6 address/prefix length> cpu-slot <slot-id>

Parameters

Variable	Value
IPv6 address/prefix length	Specifies the IPv6 address and prefix length to delete from the port.
slot-id	Specifies the number of the slot where the port is located. If a slot ID is not specified, the address is deleted from the current SF/CPU.

Default

None

Related commands

None

config vlan ipv6 delete addr

Use this command to delete an IPv6 address.

Syntax

config vlan <vlan id> ipv6 delete addr <Ipv6 address>
config ethernet <slot/port> ipv6 delete addr <IPv6 address>

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Parameters

Variable	Value
`IPv6 address`	Specifies the IPv6 address to delete.
`slot/port`	Specifies the slot and port location of the brouter port from which you can delete the IPv6 address.
`vlan id`	Specifies the ID of the VLAN from which you can delete the IPv6 address.

Default

None

Related commands

None

config vlan ipv6 delete interface

Use this command to delete an IPv6 interface.

Syntax

```
config vlan <vlan id> ipv6 delete interface
config ethernet <ports> ipv6 delete [addr <value>] [all]
interface
```

Parameters

Variable	Value
`slot/port`	Specifies the slot and port location of the brouter port from which you can delete the IPv6 interface.
`vlan id`	Specifies the ID of the VLAN from which you can delete the IPv6 interface.

Default

None

Related commands

None

config vlan ipv6

Use this command to modify interface parameters to update configured settings for VLAN or brouter port parameters.

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Syntax

config vlan <vlan id> ipv6
config ethernet <slot/port> ipv6

Parameters

Variable	Value
vlan id	Specifies the VLAN ID. The range is between 1 and 4094.
slot/port	Specifies the slot/port.

Default

The default value is 1.

Related commands

Variable	Value
admin	Enables or disables the interface.
create	Creates an interface and configures the following: • link-local • descr: modify the description for the interface. • addr: modify the IPv6 address for the interface. • addr-type: unicast/anycast
delete	Deletes one of the following: • addr • all • interface
mcast	Enables or disables the multicast administrative status of the interface.
mtu	Configures the maximum transmission unit in bytes for the interface.
reachable-time	Configures the time (in milliseconds) a neighbor is considered reachable after receiving a reachability confirmation.
retransmit-timer	Configures the time (in milliseconds) between retransmissions of Neighbor Solicitation messages to a neighbor when resolving the address or when probing the reachability of a neighbor.

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Variable	Value
slot/port	Specifies the slot and port location of the brouter port.
vlan id	Specifies the ID of the VLAN from 1 to 4094.

config sys net6-mgmt route del

Use this command to delete a management route.

Syntax

```
config sys net6-mgmt route del <network IPv6 address>
<network gateway>
```

Parameters

Variable	Value
network gateway	Specifies the IPv6 address of the gateway.
network IPv6 address	Specifies the IPv6 address of the network to delete.

Default

None

Related commands

None

config vlan ipv6 nd-prefix

Use this command to delete a neighbor discovery prefix to remove it from the configuration.

Syntax

```
config vlan <vlan id> ipv6 nd-prefix <ipv6addr-prefix>
delete
config ethernet <slot/port> ipv6 nd-prefix <prefix/length>
delete
```

Parameters

Variable	Value
prefix/length	Specifies the IP address and prefix.
slot/port	Specifies the slot and port location of the brouter port.
vlan id	Specifies the ID of the VLAN from 1 to 4094.

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Default

None

Related commands

Variable	Value
create [on-link-flag <value>] [auto-flag <value>] [eui <value>] [no-advertis <valu>]	Specifies the configuration VLAN IPv6 ND-prefix create command.
default [valid-life] [pref-life] [no-advertise]	Specifies the configuration VLAN IPv6 ND-prefix default command.
delete	Specifies the configuration VLAN IPv6 ND-prefix delete command.
infinite	Specifies the configuration VLAN IPv6 ND-prefix infinite command.
info	Specifies the configuration VLAN IPv6 ND-prefix information command.
no-advertise <true|false>	Specifies the configuration VLAN IPv6 ND-prefix no-advertise command.
pref-life <pref-life>	Specifies the configuration VLAN IPv6 ND-prefix pref-life command.
valid-life <valid-life>	Specifies the configuration VLAN IPv6 ND-prefix valid-life command.

config ipv6 neighbor delete

Use this command to remove an entry from the neighbor cache to delete it from the static configuration.

Syntax

config ipv6 neighbor delete <ipv6addr> [vlanid <value>] [port <value>]

Parameters

Variable	Value
ipv6 address	Specifies the IPv6 address in hexadecimal colon format (string length 0 to 128).
slot/port	Specifies the slot and port location to remove a neighbor for a brouter port.
vlan id	Specifies the ID of the VLAN to remove a neighbor for a VLAN.

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Default

None

Related commands

None

config ipv6 static-route

Use this command to configure static routes.

Syntax

config ipv6 static-route

Parameters

None

Default

None

Related commands

Variable	Value
create <ipv6addr-prefix> cost <value> [next-hop <value>] port <value> [vlan <value>] [tunnel <value>] [preference <value>]	Adds a static or default route to the switch. • **ipv6addr-prefix** is the IP address and prefix for the route destination as a string 0–46 characters. • **cost <value>** is the metric of the route in the range of 1–65535. • **next-hop <value>** is the IP address of the next-hop router; the next router at which packets must arrive on this route. The string length is 0–46 characters. • **port <value>** is the slot/port number. • **vlan <value>** is the VLAN ID in the range of 1–4094. • **tunnel <value>** configures the tunnel ID in the range of 1–2147477248. • **preference <value>** configures the preference value in the range of 1–255.

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Variable	Value
delete <ipv6addr-prefix> [next-hop <value>] [port <value>] [vlan <value>] [tunnel <value>]	Deletes a static route. • **ipv6addr-prefix** is the IP address and prefix for the route destination as a string 0–46 characters. • **next-hop <value>** is the IP address of the next-hop router; the next router at which packets must arrive on this route. The string length is 0–46 characters. • **port <value>** is the slot/port number. • **vlan <value>** is the VLAN ID in the range of 1–4094. • **tunnel <value>** is the tunnel ID value in the range 1–2147477248. When you select a tunnel, you must provide the VLAN, port, and next hop. You must configure an IPv6 tunnel before entering this value.
disable <ipv6addr-prefix> [next-hop <value>] [port <value>] [vlan <value>] [tunnel <value>]	Disables a static route. • **ipv6addr-prefix** is the IP address and prefix for the route destination as a string 0–46 characters. • **next-hop <value>** is the IP address of the next hop router; the next router at which packets must arrive on this route. The string length is 0–46 characters. • **port <value>** is the slot/port number. • **vlan <value>** is the VLAN ID in the range of 1–4094. • **tunnel <value>** is the tunnel ID value in the range of 1–2147483647. When you select a tunnel, you must provide the VLAN, port, and next hop. You must configure an IPv6 tunnel first.

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Variable	Value
enable <ipv6addr-prefix> [next-hop <value>] [port <value>] [vlan <value>] [tunnel <value>]	Enables a static route. • **ipv6addr-prefix** is the IP address and prefix for the route destination as a string 0–46 characters. • **next-hop <value>** is the IP address of the next-hop router; the next router at which packets must arrive on this route. The string length is 0–46 characters. • **port <value>** is the slot/port number. • **vlan <value>** is the VLAN ID in the range of 1–4094. • **tunnel <value>** is the tunnel ID value in the range of 1–2147477248. When you select a tunnel, you must provide the VLAN, port, and next hop. You must configure an IPv6 tunnel first.
info	Displays characteristics of the created static route.
preference <preference> <ipv6addr-prefix> [next-hop <value>] [port <value>] [vlan <value>] [tunnel <value>]	Modifies static route preference. • **preference** configures the route preference in the range of 1–255. • **ipv6addr-prefix** is the IP address and prefix for the route destination as a string 0–46 characters. • **next-hop <value>** is the IP address of the next-hop router; the next router at which packets must arrive on this route. The string length is 0–46 characters. • **port <value>** is the slot/port number. • **vlan <value>** is the VLAN ID in the range of 1–4094. • **tunnel <value>** is the tunnel ID value in the range of 1–2147483647. When you select a tunnel, you must provide the VLAN, port, and next hop. You must configure an IPv6 tunnel before you enter this value. **ATTENTION** A black hole route is a route with an invalid next hop, so the switch drops data packets destined to this network. When you specify a

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Variable	Value
	route preference, be sure that you configure the preference value appropriately so that when the black hole route is used, it is elected as the best route.

config ipv6 ospf

Use this command to configure OSPF global parameters.

Syntax

config ipv6 ospf

Parameters

None

Default

None

Related commands

Variable	Value
as-boundary-router <enable|disable>	Enables or disables the OSPF Autonomous System boundary router. The default is disable.
disable	Globally disables OSPF on the switch.
enable	Globally enables OSPF on the switch.
info	Displays the current OSPF configuration on the switch.
router-id <RTR_ADDR>	Configures the OSPF router ID IPv4 address. **<RTR_ADDR>** is the IPv4 address in dotted decimal format {a.b.c.d}.

config ipv6 ospf area

Use this command to configure OSPF areas.

Syntax

config ipv6 ospf area <ipaddr>

Parameters

Variable	Value
ipaddr	Specifies the area ID in IP address format {a.b.c.d}.

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Default

None

Related commands

Variable	Value
create [<type>] [stub-metric <value>] [translator <value>]	Creates IPV6 OSPF area entries.
delete	Deletes IPV6 OSPF area entries.
import-summaries <true|false>	Imports summary option for this area.
info	Displays current level parameter settings and next level directories.
nssa <true|false>	Configures area for NSSA.
stub <true|false>	Imports external option for an area.
stub-metric <cost>	Specifies stub default metric for a stub area.

config ipv6 ospf area range

Use this command to configure an OSPF area ranges.

Syntax

config ipv6 ospf area <ipaddr> range <ipv6addr-prefix>

Parameters

Variable	Value
ipaddr	Specifies the address of an OSPF area. Use dotted decimal notation to specify the area name.
ipv6addr-prefix	Configures the IPv6 address range of an OSPF area. The string length is 0–255 characters.

Default

None

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Related commands

Variable	Value
advertise-metric <cost> lsa-type <value>	Specifies the advertise metric value and LSA type. • **cost** is the advertise metric vlaue in the range 0–65535. • **value** is the LSA type as either **inter-area-prefix-link** or **nssa-extlink**.
advertise-mode <advertise|no-advertise>	Specifies the area range advertise mode as **advertise** or **no-advertise**.
delete lsa-type <value>	Deletes an LSA type. • **value** is the LSA type as either **inter-area-prefix-link** or **nssa-link**.
create advertise-mode <value> lsa-type <value> [advertise-metric <value>]	Creates an advertise mode for a range of IPv6 area addresses. • **create advertise-mode <value>** is **advertise** or **no-advertise**. • **lsa-type <value> value** is the LSA type as either **inter-area-prefix-link** or **nssa-extlink**. • **advertise-metric <value>** is the advertise metric 0–65535.
info	Displays OSPF range characteristics.

config ipv6 ospf area virtual-interface

Use this command to configure OSPF area virtual interfaces.

Syntax

config ipv6 ospf area <ipaddr> virtual-interface <ipaddr>

Parameters

Variable	Value
ipaddr	Specifies the address of an OSPF area. Use dotted decimal notation to specify the area name.

Default

None

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Related commands

Variable	Value
create	Creates a virtual interface for an area.
dead-interval <seconds>	Specifies the dead interval, in seconds, as a range 1–4095.
delete	Deletes a virtual interface for an area.
hello-interval <seconds>	Specifies the hello interval, in seconds, at which hello packets send between switches for a virtual interface in an OSPF area. The range is 1–65535.
info	Displays OSPF virtual interface characteristics.
ipaddr	Specifies the address of an OSPF area. Use dotted decimal notation to specify the area name.
retransmit-interval <seconds>	Configures the retransmit interval for the OSPF interface, the number of seconds between link-state advertisement retransmissions. • **seconds** is an integer between 1–1800.
transit-delay <seconds>	Configures the transit delay time for the OSPF interface, the estimated time in seconds it takes to transmit a link-state update packet over the interface. • **seconds** is an integer between 1–1800.

config ipv6 ospf interface

Use this command to configure an OSPF interface.

Syntax

config ipv6 ospf interface <interface-id>

Parameters

None

Default

None

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Related commands

Variable	Value
admin-status <enable|disable>	Configures the state (enabled or disabled) of the OSPF interface.
create <area> [priority <value>] [metric <value>] [retransmit-interval <value>] [transi t-delay <value>] [hello-interval <value>] [dead-interval <value>] [type <value>]	Creates an OSPF interface. • **<area>** is the area ID (0–2147483647) or area IP address (0.0.0.0–255.255.255.255) {a.b.c.d}. • **priority <value>** is the priority in the range 0–255. • **metric <value>** is the metric in the range 0–65535. • **retransmit-interval <value>** is the retransmit interval in the range 1–1800 seconds. • **transit-delay <value>** is the transmit interval in the range 1–1800 seconds. • **hello-interval <value>** is the hello interval in the range 1–65535 seconds. • **dead-interval <value>** is the dead interval in the range 1–4095 seconds. • **type <st|nbma|p2p|p2mp>** is the type of interface where 1 is ethernet, 2 is nbma, 3 is p2p, 4 is lookback, and 5 is p2mp.
dead-interval <seconds>	Configures the OSPF dead interval for the interface. • **seconds** is the number of seconds the switch OSPF neighbors wait before determining that this OSPF router is down. The range is from 1–2147483647. This value must be at least four times the hello interval value. The default is 40.
delete	Deletes an OSPF interface.

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Variable	Value
hello-interval <seconds>	Configures the OSPF hello interval for the interface. • **seconds** is the number of seconds between hello packets sent on this interface. The range is 1–65535. The default is 10. **ATTENTION** When you change the hello interval values, you must save the configuration file and reboot the switch for the values to be restored and checked for consistency.
info	Displays OSPF characteristics for the interface.
interface-id	Specifies the interface ID number in the range 0–4095.
metric <metric>	Configures the OSPF metric for the interface. The switch advertises the metric in router link advertisements. • **metric** is the range 0–65535.
poll-interval <seconds>	Configures the polling interval for the OSPF interface in seconds. • **seconds** is between 0–2147483647.
priority <priority>	Configures the OSPF priority for the interface during the election process for the designated router. The interface with the highest priority number is the designated router. The interface with the second-highest priority becomes the backup designated router. If the priority is 0, the interface cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. • **priority** is in the range 0–255. The default is 1.

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Variable	Value
retransmit-interval <seconds>	Configures the retransmit interval for the OSPF interface, the number of seconds between link-state advertisement retransmissions. • **seconds** is an integer between 1–1 800.
transit-delay <seconds>	Configures the transit delay time for the OSPF interface, the estimated time in seconds it takes to transmit a link-state update packet over the interface. • **seconds** is an integer between 1–1 800.

config ipv6 ospf redistribute

Use this command to configure OSPF direct redistribution.

Syntax

config ipv6 ospf redistribute direct

Parameters

None

Default

None

Related commands

Variable	Value
disable	Disables an OSPF direct redistribution policy. The default value is disable.
enable	Enables an OSPF direct redistribution policy.
info	Displays information about the OSPF direct redistribution policy settings.

config ipv6 ospf redistribute static

Use this command to configure OSPF static redistribution.

Syntax

config ipv6 ospf redistribute static

Parameters

None

Default

None

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Related commands

Variable	Value
disable	Disables an OSPF static redistribution policy. The default value is disable.
enable	Enables an OSPF static redistribution policy.
info	Displays information about the OSPF static redistribution policy settings.

config ethernet ipv6 ospf

Use this command to configure port-based OSPFv3 parameters.

Syntax

config ethernet <ports> ipv6 ospf

Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
admin-status <enable|disable>	Configures the state (enabled or disabled) of the OSPF interface.
create <area> [priority <value>] [metric <value>] [retransmit-interval <value>] [transit-delay <value>] [hello-interval <value>] **[dead-interval <value>] [type <value>]**	Creates an OSPF interface. • **<area>** is the area ID (0–2147483647) or area IP address (0.0.0.0 to 255.255.255.255) {a.b.c.d}. • **priority <value>** is the priority in the range 0–255. • **metric <value>** is the metric in the range 0–65535. • **retransmit-interval <value>** is the retransmit interval in the range 1–1800 seconds. • **transit-delay <value>** is the transit delay in the range 1–1800 seconds.

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Variable	Value
	• **hello-interval <value>** is the hello interval in the range 1–65535 seconds. • **dead-interval <value>** is the dead interval in the range 0–4095 seconds. • **type <st|nbma|p2p|p2mp>** is the type of interface where 1 is ethernet, 2 is nbma, 3 is p2p, 4 is lookback, and 5 is p2mp.
dead-interval <seconds>	Configures the OSPF dead interval for the interface. • **seconds** is the number of seconds the switch OSPF neighbors wait before determining that this OSPF router is down. The range is from 1–4095. This value must be at least four times the Hello interval value. The default is 40.
delete	Deletes an OSPF interface.
hello-interval <seconds>	Configures the OSPF hello interval for the interface. • **seconds** is the number of seconds between hello packets sent on this interface. The range is 1–65535. The default is 10. **ATTENTION** When you change the hello interval values, you must save the configuration file and reboot the switch for the values to be restored and checked for consistency.
info	Displays OSPF characteristics on the port.

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Variable	Value
metric <cost>	Configures the OSPF metric for the interface. The switch advertises the metric in router link advertisements. **cost** is the range 0–65535.
poll-interval <seconds>	Configures the polling interval for the OSPF interface in seconds. • **seconds** is between 0–2147483647.
<ports>	Specifies the port or range of ports to configure in the slot/port format.
priority <priority>	Configures the OSPF priority for the interface during the election process for the designated router. The interface with the highest priority number is the designated router. The interface with the second-highest priority becomes the backup designated router. If the priority is 0, the interface cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. The range is 0–255. The default is 1.
retransmit-interval <seconds>	Configures the retransmit interval for the OSPF interface; the number of seconds between link-state advertisement retransmissions. • **seconds** is an integer between 1–1800.
transit-delay <seconds>	Configures the transit delay time for the OSPF interface, the estimated time, in seconds, required to transmit a link-state update packet over the interface. • **seconds** is an integer between 1–1800.

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config ethernet ipv6 ospf nbmanbr

Use this command to configure port-based OSPF neighbor parameters.

Syntax

config ethernet <ports> ipv6 ospf nbma-nbr <ipv6address>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.
ipv6address	Specifies the IPv6 address of the neighbor as a string of 0–43.

Default

None

Related commands

Variable	Value
create <priority>	Creates a neighbor priority. The range is 0–255. The default is 1.
delete	Deletes an OSPF NBMA neighbor.
info	Displays OSPF characteristics on the port.
priority <priority>	Configures the OSPF priority for the interface during the election process for the designated router. The interface with the highest priority number is the designated router. The interface with the second-highest priority becomes the backup designated router. If the priority is 0, the interface cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. The range is 0–255. The default is 1.

config vlan ipv6 ospf

Use this command to configure OSPF parameters for a VLAN.

Syntax

config vlan <vid> ipv6 ospf

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Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

The default is 1.

Related commands

Variable	Value
admin-status <enable|disable>	Configures the state (enabled or disabled) of the OSPF interface.
create <area> [priority <value>] [metric <value>] [retransmit-interval <value>] [transit-delay <value>] [hello-interval <value>] [dead-interval <value>] [type <value>]	Creates an OSPF interface. • **<area>** is the area IP address (0.0.0.0 to 255.255.255.255) {a.b.c.d}. • **priority <value>** is the priority in the range 0–255. • **metric <value>** is the metric in the range 0–65535. • **retransmit-interval <value>** is the retransmit interval in the range 1–1800 seconds. • **transit-delay <value>** is the transit delay in the range 1–1800 seconds. • **hello-interval <value>** is the hello interval in the range 1–65535 seconds. • **dead-interval <value>** is the dead interval in the range 1–4095 seconds. • **type <st|nbma|p2p|p2mp>** is the type of interface where 1 is ethernet, 2 is nbma, 3 is p2p, 4 is lookback, and 5 is p2mp.
dead-interval <seconds>	Configures the OSPF dead interval for the interface. • **seconds** is the number of seconds the switch OSPF neighbors wait before determining that this OSPF router is down. The range is 1–4095. This value must be at least four times the hello interval value. The default is 40.
delete	Deletes an OSPF interface.

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Variable	Value
hello-interval <seconds>	Configures the OSPF hello interval for the interface. • **seconds** is the number of seconds between hello packets sent on this interface. The range is 1–65535. The default is 10. **ATTENTION** When you change the hello interval values, you must save the configuration file and reboot the switch for the values to be restored and checked for consistency.
info	Displays OSPF characteristics on the VLAN.
metric <metric>	Configures the OSPF metric for the interface. The switch advertises the metric in router link advertisements. • **metric** is the range 0–65535.
poll-interval <seconds>	Configures the polling interval for the OSPF interface in seconds. • **seconds** is 0–2147483647.
priority <priority>	Configures the OSPF priority for the interface during the election process for the designated router. The interface with the highest priority number is the designated router. The interface with the second-highest priority becomes the backup designated router. If the priority is 0, the interface cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. • **priority** is in the range 0–255. The default is 1.
retransmit-interval <seconds>	Configures the retransmit interval for the OSPF interface; the number of seconds between link-state advertisement retransmissions. • **seconds** is an integer between 1–1800.
transit-delay <seconds>	Configures the transit delay time for the OSPF interface, the estimated time, in seconds, required to transmit a link-state update packet over the interface. • **seconds** is an integer between 1–1800.

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config vlan ipv6 ospf nbma-nbr

Use this command to configure OSPF neighbor parameters for a VLAN.

Syntax

config vlan <vid> ipv6 ospf nbma-nbr <ipv6address>

Parameters

Variable	Value
ipv6address	Specifies the IPv6 address of the neighbor as a string of 0–43.
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

Variable	Value
create <priority>	Creates a neighbor priority. **priority** is in the range 0–255. The default is 1.
delete	Deletes an OSPF NBMA neighbor.
info	Displays OSPF characteristics on the port.
priority <priority>	Configures the OSPF priority for the interface during the election process for the designated router. The interface with the highest priority number is the designated router. The interface with the second-highest priority becomes the backup designated router. If the priority is 0, the interface cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. **priority** is in the range 0–255. The default is 1.

config ipv6 tunnel create vlan

Use this command to configure a tunnel for an IPv6 VLAN to communicate through an IPv4 network.

Syntax

config ipv6 tunnel <value> create vlan <vlan id> mode 2
config ipv6 tunnel <value> create port <slot/port> mode 2

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Parameters

Variable	Value
slot/port	Specifies the port or range of ports to configure in the slot/port format.
vlan id	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

Variable	Value
encaps-limit	The address of the local endpoint of the tunnel (for example, the source address used in the outer IP header). If the address is unknown, the value is 0.0.0.0 for IPv4 or :: for IPv6. The type of this object is given by tunnelIfAddressType.
flow-label	The method used to set the IPv6 Flow Label value. This object need not be present in rows where tunnelIfAddressType indicates the tunnel is not over IPv6. A value of –1 indicates that a traffic conditioner is invoked and more information can be available in a traffic conditioner MIB. Any other value indicates that the Flow Label field is set to the indicated value.
hop-limit	Configures the maximum number of hops that a packet can make before it is dropped.
interface-id	A unique value to identify an ipv6 interface. For the brouter port it is the ifindex of the port and in the case of the vlan it is the ifindex of the vlan.
local-address	Configures the local address for the tunneled device.
mode	• Enter 1 for manual, where local and remote addresses are configured. • Enter 2 for sixToFour, where the remote addresses autoconfigure.
remote-address	Configures the address for the device that is tunneled to.

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Variable	Value
security	—
TOS	The method used to set the high 6 bits (the differentiated services codepoint) of the IPv4 TOS or IPv6 Traffic Class in the outer IP header. A value of -1 indicates that the bits are copied from the payload's header. A value of -2 indicates that a traffic conditioner is invoked and more information can be available in a traffic conditioner MIB module. A value between 0 and 63 inclusive indicates that the bit field is set to the indicated value.

config ipv6 tunnel create local-addr

Use this command to configure the tunnel at the source.

Syntax

config ipv6 tunnel <tunnel id> create local-addr <source ipv4 address> ipv6addr <source ipv6 address/prefix length> remote-address <remote ipv4 address>
config ipv6 tunnel <tunnel id> create local-addr <remote ipv4 address> ipv6 addr <remote ipv6 address/prefix length> remote-address <source ipv4 address>

Parameters

Variable	Value
create [local addr <value>] [ipv6addr <value>] [remote-address <value>]	Creates the tunnel for a VLAN or brouter port. • **local addr <value>** configures the address for the local device. • **ipv6addr <value>** configures the local address for the tunneled device in IPv6/prefix-length format. • **remote-address <value>** configures the address for the device that is tunneled to in IPv4 or IPv6/prefix-length format.

Default

None

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Related commands

Variable	Value
delete	Deletes the tunnel.
hop-limit <value>	Configures the maximum number of hops that a packet can make before it is dropped. • **value** is in the range 0–255.
info	Displays the current settings for the command.
tunnel id	Specifies the ID number of the tunnel in the range of 1–2147483647.

config ipv6 tunnel

Use this command to configure an OSPF on a tunnel.

Syntax

config ipv6 tunnel <tunnel-id> ospf

Parameters

Variable	Value
tunnel-id	Specifies the ID number of the tunnel in the range of 1–2147477248.

Default

None

Related commands

Variable	Value
admin-status <enable|disable>	Configures the state (enabled or disabled) of the OSPF interface.
create <area> [priority <value>] [metric <value>] [retransmit-interval <value>] [transi t-delay <value>] [hello-interval <value>] [dead-interval <value>] [type <value>]	Creates an OSPF interface. • **<area>** is the area IP address (0.0.0.0 to 255.255.255.255) {a.b.c.d}. • **priority <value>** is the priority in the range 0–255. • **metric <value>** is the metric in the range 0–65535. • **retransmit-interval <value>** is the retransmit interval in the range 1–1800 seconds. • **transit-delay <value>** is the transit delay in the range 1–1800 seconds.

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Variable	Value
	• **hello-interval <value>** is the hello interval in the range 1–65535 seconds. • **dead-interval <value>** is the dead interval in the range 1–4095 seconds.
dead-interval <seconds>	Configures the OSPF dead interval for the interface. • **seconds** is the number of seconds the switch OSPF neighbors wait before determining that this OSPF router is down. The range is from 1-4095. This value must be at least four times the Hello interval value. The default is 40.
delete	Deletes an OSPF interface.
hello-interval <seconds>	Configures the OSPF hello interval for the interface. • **seconds** is the number of seconds between hello packets sent on this interface. The range is 1–65535. The default is 10. **ATTENTION** When you change the hello interval values, you must save the configuration file and reboot the switch for the values to be restored and checked for consistency.
info	Displays OSPF characteristics for the interface.
metric <metric>	Configures the OSPF metric for the interface. The switch advertises the metric in router link advertisements. • **metric** is the range 0–65535.
poll-interval <seconds>	Configures the polling interval for the OSPF interface in seconds. • **seconds** is between 0 –2147483647.

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Variable	Value
priority <priority>	Configures the OSPF priority for the interface during the election process for the designated router. The interface with the highest priority number is the designated router. The interface with the second-highest priority becomes the backup designated router. If the priority is 0, the interface cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. • **priority** is in the range 0–255. The default is 1.
retransmit-interval <seconds>	Configures the retransmit interval for the OSPF interface; the number of seconds between link-state advertisement retransmissions. • **seconds** is an integer between 1–1800.
transit-delay <seconds>	Configures the transit delay time for the OSPF interface, the estimated time in seconds required to transmit a link-state update packet over the interface. • **seconds** is an integer between 1–1,800.

config ipv6 tunnel delete

Use this command to delete a configured tunnel .

Syntax

config ipv6 tunnel <tunnel ID> delete

Parameters

Variable	Value
delete	Deletes an OSPF interface.
tunnel-id	Specifies the ID number of the tunnel in the range of 1–2147477248.

Default

None

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Related commands

Variable	Value
admin-status <enable|disable>	Configures the state (enabled or disabled) of the OSPF interface.
create <area> [priority <value>] [metric <value>] [retransmit-interval <value>] [transi t-delay <value>] [hello-interval <value>] [dead-interval <value>] [type <value>]	Creates an OSPF interface. • **<area>** is the area IP address (0.0.0.0 to 255.255.255.255) {a.b.c.d}. • **priority <value>** is the priority in the range 0–255. • **metric <value>** is the metric in the range 0–65535. • **retransmit-interval <value>** is the retransmit interval in the range 1–1800 seconds. • **transit-delay <value>** is the transit delay in the range 1–1800 seconds. • **hello-interval <value>** is the hello interval in the range 1–65535 seconds. • **dead-interval <value>** is the dead interval in the range 1–4095 seconds.
dead-interval <seconds>	Configures the OSPF dead interval for the interface. • **seconds** is the number of seconds the switch OSPF neighbors wait before determining that this OSPF router is down. The range is from 1-4095. This value must be at least four times the Hello interval value. The default is 40.
hello-interval <seconds>	Configures the OSPF hello interval for the interface. • **seconds** is the number of seconds between hello packets sent on this interface. The range is 1–65535. The default is 10. **ATTENTION** When you change the hello interval values, you must save the configuration file and reboot the switch for the values to be restored and checked for consistency.

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Variable	Value
info	Displays OSPF characteristics for the interface.
metric <metric>	Configures the OSPF metric for the interface. The switch advertises the metric in router link advertisements. • **metric** is the range 0–65535.
poll-interval <seconds>	Configures the polling interval for the OSPF interface in seconds. • **seconds** is between 0 –2147483647.
priority <priority>	Configures the OSPF priority for the interface during the election process for the designated router. The interface with the highest priority number is the designated router. The interface with the second-highest priority becomes the backup designated router. If the priority is 0, the interface cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. • **priority** is in the range 0–255. The default is 1.
retransmit-interval <seconds>	Configures the retransmit interval for the OSPF interface; the number of seconds between link-state advertisement retransmissions. • **seconds** is an integer between 1–1800.
transit-delay <seconds>	Configures the transit delay time for the OSPF interface, the estimated time in seconds required to transmit a link-state update packet over the interface. • **seconds** is an integer between 1–1,800.

config ipv6 mcast

Use this command to enable the multicast router.

Syntax

config ipv6 mcast <enable|disable>

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Parameters

Variable	Value
enable|disable	Specifies the global multicast administration status.

Default

None

Related commands

None

config vlan ipv6 mcast

Use this command to enable a VLAN for multicast routing.

Syntax

config vlan <vid> ipv6 mcast <enable|disable>

Parameters

Variable	Value
enable|disable	Specifies the global multicast administration status.
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

config ethernet ipv6 mld

Use this command to configure MLD on a brouter port to customize the configuration.

Syntax

config ethernet <ports> ipv6 mld

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

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Default

None

Related commands

Variable	Value
info	Displays the current VLAN MLD configuration setting.
last-memb-query-int <seconds>	Configures the query interval time in 1/10 of a second for the last member. • **seconds** is in the range 0–65535.
query-interval <seconds>	Configures the query interval time in 1/10 of a second. • **seconds** is in the range 0–65535.
query-maxresp <1seconds>	The maximum query response time advertised in MLD queries on this interface. • **seconds** is in the range 0–65535.
robustval <integer>	Configures the robustness value. • **integer** is in the range 0–65535.
version <1|2>	Configures the version of MLD to version 1 or version 2.

config ethernet ipv6 mcast

Use this command to configure multicasting on a brouter port to enable MLD on the port.

Syntax

config ethernet <ports> ipv6 mcast <enable|disable>

Parameters

Variable	Value
enable|disable	Specifies multicast administration status for the interface.
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

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Related commands

Variable	Value
info	Displays the current brouter port MLD configuration setting.
last-memb-query-int <seconds>	Configures the query interval time in 1/10 of a second for the last member. • **seconds** is in the range 0–65535.
query-interval <seconds>	Configures the query interval time in 1/10 of a second. • **seconds** is in the range 0–65535.
query-maxresp <1seconds>	The maximum query response time advertised in MLD queries on this interface. • **seconds** is in the range 0–65535.
robustval <integer>	Configures the robustness value. • **integer** is in the range 0–65535.
version <1|2>	Configures the version of MLD to version 1 or version 2.

config filter act

Use this command to delete a policy, to configure an Access Control Template (ACT), and to create, delete, apply, and specify attributes.

Syntax

config filter act <act-id>

Parameters

Variable	Value
act-id	Specifies an ACT ID in the range 1–4096.

Default

None

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Related commands

Variable	Value
apply	Applies or commits the ACT. After the switch issues the command, you can only make changes to the ACT by first deleting it if no Access Control Lists (ACL) are associated with the ACT.
arp <arp-attributes>	Specifies the permitted ARP attributes for the ACT template. The list of allowed attributes must be separated by commas and includes: [none | operation]
create [name <value>]	Creates an ACT. **Name <value>** is an optional parameter that specifies a descriptive name for the ACT using 0–32 characters. If you do not enter a name, a default name is generated, for example, ACT-1 for act-id = 1. **ATTENTION** In the Nortel Ethernet Routing Switch 8600, act-id acts as an index to the ACT table. Thus, you can change the name at any time, even after you apply it.
delete	Deletes an ACT only when no ACLs are associated with the ACT.
ethernet <ethernet-attributes>	Specifies the permitted Ethernet attributes for the ACT template. The list of allowed attributes must be separated by commas and includes: [none | srcMac, dstMac, etherType, [portvlan], vlanTagPrio]. **ATTENTION** 1. You can select port or vlan-id, but not both. 2. If you select none: — The entry deletes the Ethernet node. — The entry prevents you from selecting any other attribute choices.
info	Information about the ACTs that you created.

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Variable	Value
ip <ip-attributes>	Specifies the permitted IP attributes for the ACT template. The list of allowed attributes must be separated by commas and includes: [none | srcIp, dstIp, ipFragFlag, ipOptions, ipProtoType, dscp].
ipv6 <ipv6-attributes>	Specifies the permitted IPv6 for the ACT template. The list of allowed attributes must be separated by commas and includes: [none | srcIpv6, dstIpv6, nextHdr]
name <value>	Specifies a name for the ACT. **<value>** is an optional parameter that specifies a name for the ACT using 0–32 characters.
protocol <protocol-attributes>	Specifies the permitted protocol attributes for the ACT template. The list of allowed attributes must be separated by commas and includes: [none | tcpSrcPort, udpSrcPort, tcpDstPort, udpDstPort, tcpFlags, icmpMsgFlags]

config filter act pattern

Use this command to create a template for patterns within an ACT.

Syntax

config filter act <act-id> pattern <pattern-name>

Parameters

Variable	Value
patter-name	Specifies a pattern name with a range 0–32 characters.
act-id	Specifies an ACT ID in the range of 1–4096.

Default

None

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Related commands

Variable	Value
add <base> <offset> <length>	Adds a template for patterns you create. Options include: • base: the base and the offset together determine the beginning of the pattern. Permitted values for the base include the following: — ether-begin — mac-dst-begin — mac-src-begin — ethTypeLen-begin — arp-begin — ip-hdr-begin — ip-options-begin — ip-payload-begin — ip-tos-begin — ip-proto-begin — ip-src-begin — ip-dst-begin — ipv6-hdr-begin — tcp-begin — tcp-srcport-begin — tcp-dstport-begin — tcp-flags-end — udp-begin — udp-srcport-begin — udp-dstport-begin — ether-end — ip-hdr-end — icmp-msg-begin — tcp-end — udp-end • offset: the number of bits from the base where the pattern starts. • length: the length in bits of the user-defined field from 1–56.

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Variable	Value
info	Displays information about the template patterns you created under an ACT.
name <pattern-name>	Renames the pattern with a new name that you define. Each of the three patterns must use a unique name.

config filter act apply

Use this command to apply the ACT.

Syntax

config filter act <act id> apply

Parameters

Variable	Value
act-id	Specifies an ACT ID in the range of 1–4096.

Default

None

Related commands

Variable	Value
add <base> <offset> <length>	Adds a template for patterns you create. Options include: • base: the base and the offset together determine the beginning of the pattern. Permitted values for the base include the following: — ether-begin — mac-dst-begin — mac-src-begin — ethTypeLen-begin — arp-begin — ip-hdr-begin — ip-options-begin — ip-payload-begin — ip-tos-begin — ip-proto-begin — ip-src-begin — ip-dst-begin

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Variable	Value
	— ipv6-hdr-begin — tcp-begin — tcp-srcport-begin — tcp-dstport-begin — tcp-flags-end — udp-begin — udp-srcport-begin — udp-dstport-begin — ether-end — ip-hdr-end — icmp-msg-begin — tcp-end — udp-end • offset: the number of bits from the base where the pattern starts. • length: the length in bits of the user-defined field from 1–56.
info	Displays information about the template patterns you created under an ACT.
name <pattern-name>	Renames the pattern with a new name that you define. Each of the three patterns must use a unique name.

config filter acl

Use this command to configure ACL to create lists of rules for the ACT.

Syntax

config filter acl <acl-id>

Parameters

Variable	Value
act-id	Specifies an ACT ID in the range of 1–4096.

Default

None

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Related commands

Variable	Value
create <type> act <value> [pktType <value>] [name <value>]	Creates an ACL only when you associate an ACT with that ACL. Options include: • **<type>**—type of ACL: inVlan, outVlan, inPort, or outPort. • **act <value>**—an ACT ID from 1–4096. • **pktType <value>**—Layer 3 packet type (ipv4 or ipv6) • **name <value>**—an optional parameter that specifies a descriptive name for the ACL using 0–32 characters.
delete	Deletes an ACL. Removes all VLANs or brouter ports under this ACL and deletes all ACEs. It does not delete the ACTs.
disable	Disables the ACL state, and all associated ACEs.
enable	Enables the ACL state, and all associated ACEs. Enable is the default.
info	Displays information related to the ACL.
name <value>	Renames an ACL.

config filter acl set

Use this command to set global and default actions for an ACL to apply the configuration globally.

Syntax

config filter acl <acl-id> set

Parameters

Variable	Value
acl-id	Specifies an ACL ID in the range of 1–4096.

Default

None

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Related commands

Variable	Value
default-action <value>	Specifies the default action when no ACEs match. Permitted options include [deny | permit], with a default of permit.
global-action <value>	Specifies the global action for the matching ACEs. Permitted options include [none | mirror | count | mirror-count|ipfix|mirror-ipfix|count-ipfix|mirror-count-ipfix]. The default is none.
info	Displays the status of the global and default actions.

config filter acl vlan

Use this command to associate or remove VLANs for a particular ACL.

Syntax

config filter acl <acl-id> vlan

Parameters

Variable	Value
acl-id	Specifies an ACL ID in the range of 1–4096.

Default

None

Related commands

add <vid> [<vid2-vid3>]	Associates a VLAN or a VLAN list with a particular ACL. **<vid>** is a list of VLANs separated by a comma or a range of VLANs specified as low-high [vlan-id -vlan-id].
info	Displays the ACL VLAN status.
remove <vid> [<vid2-vid3>]	Removes a VLAN or VLAN list from a particular ACL. **<vid>** is a list of VLANs separated by a comma, or a range of VLANs specified as low-high [vlan-id -vlan-id].

config filter acl port

Use this command to associate or remove ports for a particular ACL.

Syntax

config filter acl <acl-id> port

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Parameters

Variable	Value
acl-id	Specifies an ACL ID in the range 1–4096.

Default

None

Related commands

Variable	Value
add <ports>]	Associates a port or a port list with a particular ACL. **<ports>** is a list of ports separated by a comma or a range of ports specified as low-high [slot/port-slot/port].
info	Displays the ACL port status.
remove <ports>	Removes a port or a port list from a particular ACL. **<ports>** is a list of ports separated by a comma or a range of ports specified as low-high [slot/port-slot/port].

config filter acl ace

Use this command to add an ACE with IP header attributes as match criteria.

Syntax

config filter acl <acl-id> ace <ace-id> ipv6

Parameters

Variable	Value
ace-id	Specifies an ACE ID in the range 1–1000.
acl-id	Specifies an ACL ID in the range 1–4096.

Default

None

Related commands

Variable	Value
delete <ipv6-attributes>	Deletes the specified IPv6 ACE attributes.

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Variable	Value
dst-ipv6 <ace-op> <dst-ipv6-list>	Specifies the following: • an operator for a field match condition (eq) • the list of destination IPv6 addresses separated by commas
info	Displays the current-level parameter setting and the next-level directories.
nxt-hdr <ace-op> <nxt-hdr>	Specifies the following: • an operator for a field match condition (eq | ne) • the next header value
src-ipv6 <ace-op> <src-ipv6-list>	Specifies the following: • an operator for a field match condition (eq) • the list of source IPv6 addresses separated by commas

trace ipv6 base off

Use this command to deactivate trace for the IPv6 base.

Syntax

trace ipv6 base off [info] [error] [pkt] [warn] [debug] [nbr] [icmp] [ipclient] [all]

Parameters

Variable	Value
info	INFO IPv6 base trace category.
error	ERROR IPv6 base trace category.
pkt	PKT IPv6 base trace category.
warn	WARN IPv6 base trace category.
debug	DEBUG IPv6 base trace category.
nbr	NBR IPv6 base trace category.
icmp	ICMP IPv6 base trace category.
ipclient	IPCLIENT IPv6 base trace category.
all	All IPv6 base trace categories.

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Default

None

Related commands

Variable	Value
`on [info] [error] [pkt] [warn] [debug] [nbr] [icmp] [ipclient] [all]`	Activates trace for the IPv6 base.
`info`	Displays current IPv6 base trace settings.

trace ipv6 forwarding on

Use this command to activate trace for the IPv6 forwarding.

Syntax

```
trace ipv6 forwarding on [info] [error] [pkt] [warn] [debug]
[all]
```

Parameters

Variable	Value
`info`	INFO IPv6 base trace category.
`error`	ERROR IPv6 base trace category.
`pkt`	PKT IPv6 base trace category.
`warn`	WARN IPv6 base trace category.
`debug`	DEBUG IPv6 base trace category.
`all`	All IPv6 base trace categories.

Default

None

Related commands

Variable	Value
`on [info] [error] [pkt] [warn] [debug] [all]`	Displays current IPv6 base trace settings.
`info`	Displays current IPv6 forwarding trace settings.

trace ipv6 transport on

Use this command to activate trace for the IPv6 forwarding.

Syntax

```
trace ipv6 transport on [common] [tcp] [udp] [all]
```


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Parameters

Variable	Value
`debug`	DEBUG IPv6 base trace category
`all`	All IPv6 base trace categories

Default

None

Related commands

Variable	Value
`off [info] [error] [pkt] [warn] [debug] [all]`	Deactivates trace for the IPv6 forwarding.
`info`	Displays current IPv6 forwarding trace settings.

trace ipv6 nd on

Use this command to activate trace for the IPv6 forwarding.

Syntax

```
trace ipv6 nd on [common] [tcp] [udp] [all]
```

Parameters

None

Default

None

Related commands

Variable	Value
`off [info] [error] [pkt] [warn] [debug] [all]`	Deactivates trace on the network.
`info`	Display current level parameter settings and next level directories.

trace ipv6 ospf on

Use this command to activate trace on the network.

Syntax

```
trace ipv6 ospf on [info] [warn] [error] [config] [import] [adj]
[spf] [pkt] [lsa] [all]
```


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Parameters

Variable	Value
info	INFO IPv6 base trace category.
error	ERROR IPv6 base trace category.
pkt	PKT IPv6 base trace category.
warn	WARN IPv6 base trace category.
debug	DEBUG IPv6 base trace category.
nbr	NBR IPv6 base trace category.
icmp	ICMP IPv6 base trace category.
ipclient	IPCLIENT IPv6 base trace category.
all	All IPv6 base trace categories.

Default

None

Related commands

Variable	Value
on [info] [warn] [error] [config] [import] [adj] [spf] [pkt] [lsa] [all]	Deactivates trace on the network.
info	Displays current level parameter settings and next level directories.

trace ipv6 rtm on

Use this command to activate trace on the network.

Syntax

trace ipv6 rtm on [info] [warn] [error] [update] [fib] [debug] [redist] [change-list] [all]

Parameters

Variable	Value
info	Trace RTM information.
warn	Trace RTM warn.
error	Trace RTM error.
update	Trace RTM update.
fib	Trace RTM FIB.
debug	Trace RTM debug.
redist	Trace RTM redistribute.

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Variable	Value
change-list	Trace RTM change-list.
all	Trace RTM all.

Default

None

Related commands

Variable	Value
off [info] [warn] [error] [update] [fib] [debug] [redist] [change-list] [all]	Deactivates trace on the network.
info	Displays current level parameter settings and next level directories.

ping

Use this command to ping a device.

Syntax

ping <HostName/ipv4address/ipv6address> [scopeid <value>] [datasize <value>] [count <value>] [-s] [-I <value>] [-t <value>] [-d]

Parameters

Variable	Value
count <value>	Configures the number of times to ping. For IPv4/IPv6, the range is 1–9999. **ATTENTION** To specify a count for the ping operation, you must also specify a size. For example: **ping 8888:0:0:0:0:0:0:1 count 10**
-d	Configures ping debugging (for IPv4/IPv6).
datasize <value>	Configures the size of ping data sent in bytes, for IPv4: 16–4076, for IPv6: 16-65487.
HostName/ipv6address	Specifies the host name or IPv6 (x:x:x:x:x:x:x:x) address {string length 1–256}.

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Variable	Value
`-I <value>`	Configures the interval between transmissions in seconds (1–60).
`-s`	Configures the continuous ping at the interval rate defined by the `[-I]` parameter (for IPv4/IPv6)
`scopeid <value>`	Configures the circuit ID (for IPv6) (1–9999).
`-t <value>`	Configures the no answer timeout value (IPv4/IPv6) {1–120}.

Default

None

Related commands

None

show ipv6 info

Use this command to display IPv6 information command.

Syntax

`show ipv6 info`

Parameters

None

Default

None

Related commands

None

show ipv6 info command

Use this command to display IPv6 information command.

Syntax

`show ipv6 info command [<interface-index>]`

Parameters

None

Default

None

Related commands

None

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show ipv6 interface ifstats

Use this command to display IPv6 interface statistic information command.

Syntax

show ipv6 interface ifstats [<interface-index>]

Parameters

Variable	Value
<interface-index>	Displays exact V6 interface information in the range of 1 to 4094.

Default

None

Related commands

None

show ipv6 interface info

Use this command to display IPv6 interface information command. command.

Syntax

show ipv6 interface info [<interface-index>]

Parameters

Variable	Value
<interface-index>	Displays exact V6 interface information in the range of 1 to 4094.

Default

None

Related commands

None

show ipv6 mld interface

Use this command to display IPv6 MLD interface command.

Syntax

show ipv6 mld interface [port <value>] [vlan <value>] [detail]

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Parameters

Variable	Value
port <value>	Specifies the port list in the slot/port format.
vlan <value>	Specifies the VLAN ID in the range of 1 to 4094.

Default

None

Related commands

None

show ipv6 neighbor info

Use this command to display IPv6 MLD interface command.

Syntax

show ipv6 neighbor info [addr <value>] [type <value>] [port <value>]

Parameters

Variable	Value
addr <value>	Specifies the IPv6 string. Example: • addr 100—Displays all the entries with IPv6 address starting with 100, the remaining bytes in the address string are ignored. • addr 100:1—Displays all entries with IPv6 address starting with 100:1 the remaining bytes in the address string are ignored. • addr 100::1—This is an exact match. It displays the information for the entry with IPv6 address 100:0:0:0:0:0:0:1.
port <value>	Displays the neighboring entries with specific brouter port number in the {slot/port} format.
type <value>	Displays the neighboring entries with specific type of mapping {other|dynamic|static|local}.

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Default

None

Related commands

None

show ipv6 ospf redistribute info

Use this command to display IPv6 redistribute information.

Syntax

show ipv6 ospf redistribute info

Parameters

None

Default

None

Related commands

None

show ipv6 ospf

Use this command to verify OSPF.

Syntax

show ipv6 ospf info

show ipv6 addr info [ip <value>] [vlan <value>] [port <value>] [tunnel-id <value>]

Parameters

Variable	Value
[ip <value>]	Specifies the IPv6 address string.
[vlan <value>]	Displays address entries with specific VLAN ID. The value ranges from 1 to 4094.
[port <value>]	Displays address entries with specific brouter port number.
[tunnel-id <value>]	Displays address entries with specific tunnel ID. The value ranges from 1 to 2147477248.

Default

None

Related commands

Variable	Value
area	

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Variable	Value
ase [metric-type <type>]	
info	
interface	
int-timers	
lsdb [scope <value>] [port <value>] [vlan <value>] [tunnel <value>] [area <value>] [lsatype <value>] [adv_rtr <value>] [lsid <value>] [detail]	
neighbor	
range	
stats	

show ipv6 route info

Use this command to display desired route entries.

Syntax

```
show ipv6 route info [dest <value>] [valn <value>] [port <value>]
[tunnel-id <value>] [next-hop <value>]
```

Parameters

Variable	Value
<ports>	Specifies the port list in the slot/port format.
<name>	Sets alias port name. The string length ranges from 0 to 64.

Default

None

Related commands

None

show ipv6 tcp info

Use this command to display IPv6 TCP information command.

Syntax

```
show ipv6 tcp info
```

Parameters

None

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Default

None

Related commands

Variable	Value
connections [<ipv6addr>] [<local-port#>] [<ipv6addr>] [<remote-port#>]	Displays IPv6 TCP connection information command. • **ipv6addr** is the local_addr {string length 0..128}. • local-port#**local-port#** .ix=cS_PORTLIST {slot/port}. • **ipv6addr** remote_addr {string length 0..128}. • **remote-port#** .ix=cS_PORTLIST {slot/port}.
listener-info [<ipv6addr>] [<local-port#>]	Display IPv6 TCP listener info command.

show ipv6 udp info

Use this command to display IPv6 TCP information command.

Syntax

show ipv6 udp info

Parameters

None

Default

None

Related commands

Variable	Value
endpoints [local_addr <ipv6addr>] [<local-port#>] [remote_addr <ipv6addr>] [<remote-port#>]	Displays IPv6 UDP endpoint info command.

show ipv6 nd-prefix info

Use this command to verify neighbor discovery by using the following command. In a successful configuration, the IPv6 VLAN 2 and brouter port 7/1 prefixes display in the output.

Syntax

show ipv6 nd-prefix info [vlanid <value>] [detail]

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Parameters

None

Default

None

Related commands

None

show ipv6 tunnel

Use this command to show general tunnel information.

Syntax

show ipv6 tunnel info [<tunnel-id> <value>] [local <value>] [remote <value>]

Parameters

Variable	Value
tunnel-id	Specifies the ID number of the tunnel in the range 1-2147477248.
local <value>	Specifies the local address in the {a.b.c.d} format.
remote <value>	Specifies the remote address in the {a.b.c.d} format.

Default

None

Related commands

None

show ipv6 tunnel interface

Use this command to show IPv6 tunnel interface information.

Syntax

show ipv6 tunnel interface [<tunnel-id> <value>] [local <value>] [remote <value>]

Parameters

Variable	Value
tunnel-id	Specifies the ID number of the tunnel in the range 1-2147477248.

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Variable	Value
local <value>	Specifies the local address in the {a.b.c.d} format.
remote <value>	Specifies the remote address in the {a.b.c.d} format.

Default

None

Related commands

Variable	Value
dest <value>	Specifies the IPv6 address string Example: • dest 100—Displays all entries with IPv6 address starting with 100, the remaining bytes in the address string is ignored. • dest 100:1—Displays all entries with IPv6 address starting with 100:1, the remaining bytes in the address string is ignored. • dest 100::1—This is an exact match. It displays the information for the entry with IPv6 address 100:0:0:0:0:0:0:1.
	Displays route entries with specific
	Displays route entries with specific brouter port number {slot/port}
	Displays route entries with specific tunnel id {1..2147477248}

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IP VPN commands

This chapter describes the Ethernet Routing Switch 8600 IP VPN commands.

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config ip vrf create

Use this command to create a VRF.

Syntax

config ip vrf <vrfName> create [id <value>]

Parameters

Variable	Value
create [id <value>]	Creates a new VRF instance. **id <value>** is the desired ID for the VRF and it ranges from 1 to 255.

Default

None

Related commands

Variable	Value
alternative-route {enable|disable}	Enables or disables the alternative route feature.

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Variable	Value
[id <value>]	Assigns an ID from 1–255. If you do not specify a VRF ID, the system automatically generates one using the lowest available ID. The ID must be valid and not already in use.
default-ttl <seconds>	Configures the default time-to-live for the VRF.
delete	Deletes a VRF instance.
ecmp {enable|disable}	Enables or disables Equal Cost MultiPath (ECMP) for the VRF.
ecmp-1-pathlist prefix-list-name	Configures a prefix list to specify routes with one ECMP path. Specify a prefix list name to specify routes with many ECMP paths.
ecmp-2-pathlist prefix-list-name	Configures a prefix list to specify routes with two ECMP paths. Specify a prefix list name to specify routes with more than two ECMP paths.
ecmp-3-pathlist prefix-list-name	Configures a prefix list to specify routes with three ECMP paths. Specify a prefix list name to specify routes with more than three ECMP paths.
ecmp-4-pathlist prefix-list-name	Configures a prefix list to specify routes with four ECMP paths. Specify a prefix list name to specify routes with more than four ECMP paths.
ecmp-max-path <integer>	Defines the maximum number of ECMP paths. The maximum number when r-mode equals false is from 1–4 . When r-mode equals true, the maximum number is from 1–8.
ecmp-pathlist-apply	Applies changes to all ECMP pathlist configurations.
icmp-redirect-msg {enable|disable}	Enables or disables the ability to send ICMP destination redirect messages.
icmp-unreach-msg {enable|disable}	Enables or disables the ability to send ICMP destination unreachable messages.
info	Shows current-level parameter settings and next-level directories.
ip-supernet {enable|disable}	Enables or disables the switch supernet IP route with a netmask less than 8 bits.

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Variable	Value
max-routes <max-routes>	Specifies the maximum number of routes allowed for the VRF from 0–250000.
max-routes-trap {enable|disable}	Enables the generation of the VRF maximum routes exceeded traps.
more-specific-non-local-route {enable|disable}	Enables or disables inserting more specific non-local routes into the routing table.
name <name>	Renames the VRF instance.
vrf <vrfName>	Creates a new VRF instance by assigning a name from 1–16 characters. Valid characters include letters, numbers, the hyphen (-), and the underscore (_). VRF names are not case sensitive.
vrf-trap {enable|disable}	Enables or disables the generation of the VrfUp and VrfDown traps.

config ip vrf ipvpn create

Use this command to create an IP VPN instance in the VRF.

Syntax

config ip vrf <vrfName> ipvpn create

Parameters

<vrfName>	Specifies the name of the VRF instance.

Default

None

Related commands

Variable	Value
delete	Deletes IP VPN node.
enable	Enables IP VPN status.
disable	Disables IP VPN status.
info	Displays the VRF IP VPN configurations.

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Variable	Value
`rd <as-num:assigned-num|ipaddr:assigned-num>`	Specifies the IP VPN route-distinguisher configuration command.
`rt <add|remove> <import|export|both> <as-num:assigned-num|ipaddr:assigned-num>`	Specifies the IP VPN route-target configuration command.

config ip vrf ipvpn rd

Use this command to configure the route distinguisher.

Syntax

`config ip vrf <vrfName> ipvpn rd {<as-num>:<assigned-num>|<ipaddr>:<assigned-num>}`

Parameters

Variable	Value
`rt <add|remove> <import|export|both> {<as-num>:<assigned-num>|<ipaddr>:<assigned-num>}`	Defines one or more import or export policies that must be met for routes received from remote PEs to be installed into the VRF routing table and for routes from the VRF routing table to be redistributed to remote PEs. The route target is a 6-byte value that can be encoded in one of the following ways: • Type 0—<as-num>:<assigned-num> as-num is the assigned autonomous system (AS) number of the PE in the range 0–65535; assigned-num is an assigned 4-byte value in the range 0–2147483647. • Type 1—<ipaddr>:<assigned-num> ipaddr is an IPv4 address in the assigned prefix range of the PE; assigned-num is an assigned 2-byte value in the range 0–65535.

Default

None

Related commands

`<vrfName>`	Specifies the name of the VRF instance.

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config ip vrf ipvpn enable

Use this command to enable IP VPN on a VRF.

Syntax

config ip vrf <vrfName> ipvpn enable

Parameters

Variable	Value
enable	Enables the IP VPN feature on the VRF.

Default

None

Related commands

Variable	Value
disable	Disables the IP VPN feature on the VRF.
enable	Enables the IP VPN feature on the VRF.
info	Shows current-level parameter settings and next-level directories.
<vrfName>	Specifies the name of the VRF instance.

config ip vrf ipvpn rt add both

Use this command to specify a single route target for import and export on the VRF.

Syntax

config ip vrf <vrfName> ipvpn rt add both {<as-num>:<assigned-num>|<ipaddr>:<assigned-num>}

Parameters

Variable	Value
rt <add|remove> <import|export|both> {<as-num>:<assigned-num>|<ipaddr>:<assigned-num>}	Defines one or more import or export policies that must be met for routes received from remote PEs to be installed into the VRF routing table and for routes from the VRF routing table to be redistributed to remote PEs. The route target is a 6-byte value that can be encoded in one of the following ways: • Type 0—<as-num>:<assigned-num>

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Variable	Value
	as-num is the assigned autonomous system (AS) number of the PE in the range 0–65535; assigned-num is an assigned 4-byte value in the range 0–2147483647. • Type 1—<ipaddr>:<assigned-num> ipaddr is an IPv4 address in the assigned prefix range of the PE; assigned-num is an assigned 2-byte value in the range 0–65535.

Default

None

Related commands

Variable	Value
<vrfName>	Specifies the name of the VRF instance.

config ip vrf ipvpn rt add

Use this command to specify a single route target for import or export on the VRF.

Syntax

config ip vrf <vrfName> ipvpn rt add <import|export|both> {<as-num>:<assigned-num>|<ipaddr>:<assigned-num>}

Parameters

Variable	Value
rt <add|remove> <im port|export|both> {<as-num>:<assigned-num> |<ipaddr>:<assigned-num>}	Defines one or more import or export policies that must be met for routes received from remote PEs to be installed into the VRF routing table and for routes from the VRF routing table to be redistributed to remote PEs. The route target is a 6-byte value that can be encoded in one of the following ways: • Type 0—<as-num>:<assigned-num> as-num is the assigned autonomous system (AS) number of the PE in the range 0–65535; assigned-num is an

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Variable	Value
	assigned 4-byte value in the range 0–2147483647. • Type 1—<ipaddr>:<assigned-num> ipaddr is an IPv4 address in the assigned prefix range of the PE; assigned-num is an assigned 2-byte value in the range 0–65535.

Default

None

Related commands

Variable	Value
rt <add|remove> <im port|export|both> {<as-num>:<assigned-num> |<ipaddr>:<assigned-num>}	Defines one or more import or export policies that must be met for routes received from remote PEs to be installed into the VRF routing table and for routes from the VRF routing table to be redistributed to remote PEs. The route target is a 6-byte value that can be encoded in one of the following ways: • Type 0—<as-num>:<assigned-num> as-num is the assigned autonomous system (AS) number of the PE in the range 0–65535; assigned-num is an assigned 4-byte value in the range 0–2147483647. • Type 1—<ipaddr>:<assigned-num> ipaddr is an IPv4 address in the assigned prefix range of the PE; assigned-num is an assigned 2-byte value in the range 0–65535.
<vrfName>	Specifies the name of the VRF instance.

config vlan vrf

Use this command to assign a VLAN interface to the VRF.

Syntax

config vlan <vlan-id> vrf <vrfName>

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Parameters

Variable	Value
slot/port	Specifies the slot and port number to associate with the VRF.
<vlan-id>	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.
<vrfName>	Specifies the name of the VRF instance to associate with the VLAN or port.

Default

The default is 1.

Related commands

None

config ethernet vrf

Use this command to assign a brouter port to the VRF.

Syntax

config ethernet <slot/port> vrf <vrfName>

Parameters

Variable	Value
slot/port	Specifies the slot and port number to associate with the VRF.
<vrfName>	Specifies the name of the VRF instance to associate with the VLAN or port.

Default

None

Related commands

None

config ip vrf ipvpn service-label-alloc-option

Use this command to configure the service label allocation.

Syntax

config ip vrf <vrfName> ipvpn service-label-alloc-option {per-vrf|per-vrf-per-nexthop}

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Parameters

Variable	Value
service-label-alloc-option {per-vrf|per-vrf-per-nexthop }	Configures the service label allocation scheme for locally generated service labels on routes that are exported from the VRF to remote PEs. Use **per-vrf** to enable ingress VRF IP forwarding information base (FIB) lookup for traffic that arrives from the core network. This scheme reduces the number of service labels distributed in the VPN network. Use **per-vrf-per-nexthop** to enable optimized IP VPN data path at tunnel exit. This scheme provides higher forwarding throughput than the **per-vrf** option.
<vrfName>	Specifies the name of the VRF instance.

Default

None

Related commands

Variable	Value
<vrfName>	Specifies the name of the VRF instance.

config ip bgp neighbor address-family

Use this command to configure an MP-BGP session between PE nodes.

Syntax

config ip bgp neighbor <nbr_ipaddr|peer-group-name> address-family vpnv4 enable

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Parameters

Variable	Value
address-family vpnv4 {enable|disable}	Configures BGP address families for IPv4 (BGP) and Layer 3 VPN (MP-BGP) support. Enable for VPN/VRF routes.
<nbr_ipaddr|peer-group-name>	Specifies the properties of a statically configured peer within a BGP group. Enter the neighbor IP address in a.b.c.d format for <nbr_ipaddr>, or the neighbor group name for <peer-group-name>.

Default

None

Related commands

None

config ip bgp neighbor ipvpn-lite-capability

Use this command to enable IP VPN-Lite.

Syntax

config ip bgp neighbor <nbr_ipaddr|peer-group-name> ipvpn-lite-capability enable

Parameters

Variable	Value
ipvpn-lite-capability {enable|disable}	Enables or disables the IP VPN-Lite feature.
<nbr_ipaddr|peer-group-name>	Specifies the properties of a statically configured peer within a BGP group. Enter the neighbor IP address in a.b.c.d format for <nbr_ipaddr>, or the neighbor group name for <peer-group-name>.

Default

None

Related commands

None

config ip vrf bgp create

Use this command to create a BGP instance on the VRF.

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Syntax

config ip vrf <vrfName> bgp create

Parameters

Variable	Value
create	Creates BGP instance for the VRF.

Default

None

Related commands

None

config ip vrf bgp neighbor

Use this command to configure IP BGP neighbor.

Syntax

config ip vrf <vrfName> bgp neighbor <nbr_ipaddr|peer-group-name> <peer-group-name> admin-state <enable|disable>

Parameters

Variable	Value
<nbr_ipaddr|peer-group-name>	Specifies the properties of a statically configured peer within a BGP group. Enter the neighbor IP address in a.b.c.d format for <nbr_ipaddr>, or the neighbor group name for <peer-group-name>.
<peer-group-name>	Specifies the name of the peer group to add to the VRF.
<vrfName>	Specifies the name of the VRF instance.

Default

None

Related commands

Variable	Value
connect-retry-interval <value> <add|del>	Specifies the configuration IP BGP neighbor connect-retry-interval command.
create	Specifies the configuration IP BGP neighbor create command.

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Variable	Value
delete	Specifies the configuration IP BGP neighbor delete command.
ebgp-multihop <enable|disable>	Specifies the configuration IP BGP neighbor EBGP-multihop command.
hold-time <value> <add|del>	Specifies the configuration IP BGP hold-time command.
info	Specifies the configuration IP BGP information command.
keepalive-time <value> <add|del>	Specifies the configuration IP BGP keepalive-time command.
max-prefix <value> <add|del>	Specifies the configuration IP BGP maximum prefix command.
MD5-authentication <enable|disable>	Specifies the configuration IP BGP neighbor MD5-authentication command.
neighbor-debug mask <value>	Displays a lists of mask.
nexthop-self <enable|disable>	Specifies the configuration IP BGP neighbor nexthop-self command.
originate-def-route <enable|disable>	Specifies the configuration IP BGP neighbor originate-def-route command.
password <password> <add|del>	Specifies the configuration IP BGP neighbor password command.
peer-group <peer-group-name> <add|del>	Specifies the configuration IP BGP neighbor peer-group command.
remote-as <asnum>	Specifies the configuration IP BGP neighbor remote-as command.
restart [soft-reconfiguration <value>]	Specifies the configuration IP BGP neighbor restart command.
route-advertisement-interval <value> <add|del>	Specifies the configuration IP BGP neighbor route_advertisement_interval command.
route-policy <add|del> route-map name <add|del>	Specifies the configuration IP BGP neighbor route-policy command.
send-community <enable|disable>	Specifies the configuration IP BGP neighbor send-community command.
soft-reconfiguration-in <enable|disable>	Specifies the configuration IP BGP neighbor soft-reconfiguration command.

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Variable	Value
stats-clear	Specifies the configuration IP BGP neighbor statistic clear command.
update-source-interface <ipaddr> <add|del>	Specifies the configuration IP BGP neighbor update-source-interface command.
weight <value> <add|del>	Specifies the configuration IP BGP neighbor weight command.

config ip vrf bgp neighbor as-override

Use this command to enable AS override for the BGP group.

Syntax

config ip vrf <vrfName> bgp neighbor <nbr_ipaddr\|peer-group-name> as-override enable

Parameters

Variable	Value
<nbr_ipaddr|peer-group-name>	Specifies the properties of a statically configured peer within a BGP group. Enter the neighbor IP address in a.b.c.d format for <nbr_ipaddr>, or the neighbor group name for <peer-group-name>.
<vrfName>	Specifies the name of the VRF instance.

Default

None

Related commands

None

config ip vrf bgp neighbor site-of-origin

Use this command to configure the site of origin.

Syntax

config ip vrf <vrfName> bgp neighbor <nbr_ipaddr\|peer-group-name> site-of-origin <as-num:assigned-num\|ipaddr:assigned-num> <add\|del>

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Parameters

Variable	Value
add|del	Adds or deletes the specified site of origin.
<as-num:assigned-num|ipaddr: assigned-num>	Specifies the site of origin in one of the two formats: • AS number:assigned number • IPv4 address:assigned number
<nbr_ipaddr|peer-group-name>	Specifies the properties of a statically configured peer within a BGP group. Enter the neighbor IP address in a.b.c.d format for <nbr_ipaddr>, or the neighbor group name for <peer-group-name>.
<vrfName>	Specifies the name of the VRF instance.

Default

None

Related commands

None

config ip vrf bgp neighbor allow-as-in

Use this command to configure allow-AS.

Syntax

config ip vrf <vrfName> bgp neighbor <nbr_ipaddr\|peer-grou p-name> allow-as-in <0–10>

Parameters

Variable	Value
<0–10>	Configures the number of times the local ASN can exist in the AS-PATH of a received route.
<nbr_ipaddr|peer-group-name>	Specifies the properties of a statically configured peer within a BGP group. Enter the neighbor IP address in a.b.c.d format for <nbr_ipaddr>, or the neighbor group name for <peer-group-name>.
<vrfName>	Specifies the name of the VRF instance.

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Default

None

Related commands

None

config ip vrf bgp neighbor remove-private-as

Use this command to enable remote-private-AS.

Syntax

config ip vrf <vrfName> bgp neighbor <nbr_ipaddr|peer-group-name> remove-private-as enable

Parameters

Variable	Value
{enable|disable}	Enables or disables the feature.
<nbr_ipaddr|peer-group-name>	Specifies the properties of a statically configured peer within a BGP group. Enter the neighbor IP address in a.b.c.d format for <nbr_ipaddr>, or the neighbor group name for <peer-group-name>.
<vrfName>	Specifies the name of the VRF instance.

Default

None

Related commands

None

config ip vrf bgp redistribute ospf apply

Use this command to apply OSPF route redistribution changes.

Syntax

config ip vrf <vrfName> bgp redistribute ospf apply [vrf-src <value>]

Parameters

Variable	Value
[vrf-src <value>]	Specifies the VRF name. The string length is in the range of 0 to 32.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

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Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies OSPF route redistribution changes.
create [vrf-src <value>]	Creates OSPF route redistribution.
delete [vrf-src <value>]	Deletes OSPF route redistribution.
disable [vrf-src <value>]	Disables OSPF route redistribution.
enable [vrf-src <value>]	Enables OSPF route redistribution.
info [vrf-src <value>]	Specifies OSPF route redistribution configuration information.
metric <metric-value> [vrf-src <value>]	Sets OSPF route redistribution metric.
metric-type <type1 | type2> [vrf-src <value>]	Sets OSPF route redistribution metric type.
route policy <policy name> [vrf-src <value>]	Sets OSPF route redistribution route policy (to delete the policy, enter blank string as policy name).
subnets <allow | supress> [vrf-src <value>]	Sets OSPF route redistribution subnet value.

config ip vrf bgp redistribute rip apply

Use this command to apply BGP route redistribution changes.

Syntax

config ip vrf <vrfName> bgp redistribute rip apply [vrf-src <value>]

Parameters

Variable	Value
[vrf-src <value>]	Specifies the VRF name. The string length is in the range of 0 to 32.
<vrfname>	Specifies the VRF name in the range of 0 to 32.

Default

None

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Related commands

Variable	Value
apply [vrf-src <value>]	Applies BGP route redistribution changes.
create [vrf-src <value>]	Creates BGP route redistribution.
delete [vrf-src <value>]	Deletes BGP route redistribution.
disable [vrf-src <value>]	Disables BGP route redistribution.
enable [vrf-src <value>]	Enables BGP route redistribution.
info [vrf-src <value>]	Specifies BGP route redistribution configuration information.
metric <metric-value> [vrf-src <value>]	Sets BGP route redistribution metric.
metric-type <type1 | type2> [vrf-src <value>]	Sets BGP route redistribution metric type.
route policy <policy name> [vrf-src <value>]	Sets BGP route redistribution route policy (to delete the policy, enter blank string as policy name).

config ip vrf bgp redistribute static apply

Use this command to apply BGP route redistribution changes.

Syntax

config ip vrf <vrfName> bgp redistribute static apply [vrf-src <value>]

Parameters

Variable	Value
<vrfname>	Specifies the VRF name in the range of 0 to 32.
[vrf-src <value>]	Specifies the VRF name. The string length is in the range of 0 to 32.

Default

None

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Related commands

Variable	Value
create [vrf-src <value>]	Creates BGP route redistribution.
delete [vrf-src <value>]	Deletes BGP route redistribution.
disable [vrf-src <value>]	Disables BGP route redistribution.
enable [vrf-src <value>]	Enables BGP route redistribution.
metric <metric-value> [vrf-src <value>]	Sets BGP route redistribution metric.
metric-type <type1|type2> [vrf-src <value>]	Sets BGP route redistribution metric type.
route policy <policy name> [vrf-src <value>]	Sets BGP route redistribution route policy (to delete the policy, enter blank string as policy name).
info [vrf-src <value>]	Specifies the BGP route redistribution configuration information.

config ip vrf arp add ports

Use this command to add ARP entries.

Syntax

config ip vrf <vrfName> arp add ports <value> ip <value> mac <value> [vlan <value>]

Parameters

Variable	Value
<vrfName>	Specifies the VRF name.
mac <value>]	Specifies the MAC address {0x00:0x00:0x00:0x00:0x00:0x00:0x00}.

Default

None

Related commands

Variable	Value
aging <minutes>	Adds ARP entries.
arpreqthreshold <integer>	Max number of Outstanding Unresolved ARP REQ.
delete <ipaddr>	Deletes ARP entries.
info	Displays current level parameter settings and next level directories.

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config ip vrf as-list create

Use this command to create AS-list.

Syntax

config ip vrf <vrfName> as-list <listid> create <memberId> <permit | deny> <as path>

Parameters

Variable	Value
<listid>	Specifies the list ID {1..1024}.
<vrfName>	Specifies the VRF name.

Default

None

Related commands

Variable	Value
delete [memberId <value>] [as-path <value>]	Deletes a VRF instance.
info	Displays current level parameter settings and next level directories.

config ip vrf circuitless-ip-int

Use this command to configure circuitless IP interface area.

Syntax

config ip vrf <vrfName> circuitless-ip-int <id> area <ipaddr>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
<vrfName>	Specifies the VRF name.
<id>	Specifies the circuitless IP interface id {1..256}.

Default

None

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Related commands

Variable	Value
create <ipaddr/mask>	Sets an IP address to a port.
delete [memberId <value>] [as-path <value>]	Deletes an IP address from a port.
info	Displays current level parameter settings and next level directories.
ipvpn-lite-capability <enable|disable>	Enables or disables IPVPN-lite capability on circuitless IP interface.
opsf <enable|disable>	Enables or disable OSPF on circuitless IP interface.
pim <enable|disable>	Enables or disable PIM on circuitless IP interface.

config ip vrf community-list

Use this command to add community to a list.

Syntax

config ip vrf <vrfName> community-list <list> add-community <memberId> <permit|deny> <community-string>

Parameters

Variable	Value
<community-string>	Specifies the community string <asnum:community-value> or <well-known community string>.
<memberId>	Specifies the member id in community-list {0..65535}.
<permit|deny>	Specifies the access mode to be set {permit|deny}.
<vrfName>	Specifies the VRF name.

Default

None

Related commands

Variable	Value
delete [memberId <value>] [as-path <value>]	Deletes a community list.
info	Displays current level parameter settings and next level directories.

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config ip vrf arp static-mcastmac

Use this command to configure Layer 3 multicast MAC filtering.

Syntax

config ip vrf <vrfName> arp static-mcastmac add mac <value> ip <value> vlan <value> [port <value>] [mlt <value>]

Parameters

Variable	Value
<vrfName>	Specifies the VRF name.
[port <value>]	Specifies the port list in the slot/port format.
[mlt <value>]	Specifies the multi-link trunking ID {string length 1..16}.

Default

None

Related commands

Variable	Value
delete <ipaddr>	Deletes static multicast MAC entries. • **ipaddr** is the IP address.
info	Displays current settings.

config ip vrf ospf create

Use this command to create an OSPF instance on the VRF.

Syntax

config ip vrf <vrfName> ospf create

Parameters

Variable	Value
<vrfName>	Specifies the name of the VRF.
create	Creates OSPF instance for the VRF.

Default

None

Related commands

None

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config ip vrf admin-state

Use this command to enable the OSPF administrative state.

Syntax

config ip vrf <vrfName> ospf admin-state enable

Parameters

Variable	Value
<vrfName>	Specifies of the name of the VRF.
enable	Sets OSPF administrative state.

Default

None

Related commands

None

config ip vrf ospf redistribute bgp create

Use this command to create a route redistribution instance.

Syntax

config ip vrf <vrfName> ospf redistribute bgp create [vrf-src <value>]

Parameters

Variable	Value
<vrfName>	Specifies of the name of the VRF.
vrf-src <value>	Specifies the VRF instance name to which you can apply redistribution. To redistribute routes from VRF 0, explicitly specify vrf-src 0. Otherwise, the command redistributes routes within the same VRF.

Default

None

Related commands

None

config ip vrf ospf redistribute bgp enable

Use this command to enable route redistribution.

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Syntax

config ip vrf <vrfName> ospf redistribute bgp enable [vrf-src <value>]

config ip vrf <vrfName> ospf redistribute bgp create [vrf-src <value>]

Parameters

Variable	Value
<vrfName>	Specifies of the name of the VRF.
vrf-src <value>	Specifies the VRF instance name to which to apply redistribution. To redistribute routes from VRF 0, explicitly specify vrf-src 0. Otherwise, the command redistributes routes within the same VRF.

Default

None

Related commands

None

config ip vrf ospf redistribute bgp apply

Use this command to apply the route redistribution changes.

Syntax

config ip vrf <vrfName> ospf redistribute bgp apply [vrf-src <value>]

Parameters

Variable	Value
<vrfName>	Specifies of the name of the VRF.
vrf-src <value>	Specifies the VRF instance name to which to apply redistribution. To redistribute routes from VRF 0, explicitly specify vrf-src 0. Otherwise, the command redistributes routes within the same VRF.

Default

None

Related commands

None

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config ip vrf rip create

Use this command to create an RIP instance on the VRF.

Syntax

config ip vrf <vrfName> rip create

Parameters

Table 2
Command parameters

Parameter	Description
create	Creates a new RIP instance.

Default

None

Related commands

None

config ip vrf rip enable

Use this command to enable RIP on the VRF.

Syntax

config ip vrf <vrfName> rip enable

Parameters

Table 3
Command parameters

Parameter	Description
enable	Enables RIP.
vrfName	Specifies of the name of the VRF.

Default

None

Related commands

None

config ip vrf rip redistribute bgp create

Use this command to create a route redistribution instance.

Syntax

config ip vrf <vrfName> rip redistribute bgp create [vrf-src <value>]

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Parameters

Variable	Value
vrfName	Specifies of the name of the VRF.
vrf-src <value>	Specifies the VRF instance name to which to apply redistribution. To redistribute routes from VRF 0, explicitly specify vrf-src 0. Otherwise, the command redistributes routes within the same VRF.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies RIP redistribution changes.
delete [vrf-src <value>]	Deletes RIP route redistribution.
enable [vrf-src <value>]	Enables RIP route distribution.
disable [vrf-src <value>]	Disables RIP route distribution.
info [vrf-src <value>]	RIP route redistribution configuration information.
metric <metric-value> [vrf-src <value>]	Sets the metric value for RIP redistribution.
route-policy [vrf-src <value>] [clear]	Sets the route policy for RIP redistribution.

config ip route-policy

Use this command to create a policy statement.

Syntax

config ip route-policy <WORD 0-32> seq <1-10> create

Parameters

Variable	Value
vrfName	Specifies of the name of the VRF.
vrf-src <value>	Specifies the VRF instance name to which to apply redistribution. To redistribute routes from VRF 0, explicitly specify vrf-src 0. Otherwise, the command redistributes routes within the same VRF.

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Default

None

Related commands

None

config ip route-policy action permit

Use this command to configure the route policy to accept BGP-learned routes.

Syntax

config ip route-policy <WORD 0-32> seq <1-10> action permit

Parameters

Variable	Value
<WORD 0-32>	Specifies the name of the route policy to create or apply.
<1-10>	Assigns a sequence number to the policy.

Default

None

Related commands

None

config ip route-policy match-vrf

Use this command to configure the route policy to accept routes from a specific source VRF.

Syntax

config ip route-policy <WORD 0-32> seq <1-10> match-vrf <vrfName>

Parameters

Variable	Value
<WORD 0-32>	Specifies the name of the route policy to create or apply.
<1-10>	Assigns a sequence number to the policy.

Default

None

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Related commands

Variable	Value
vrf <value>	Specifies the VRF name. The string length is from 0 to 32.
vrfids <values>	Specifies the VRF ID range.
clear	Removes condition.

config vlan ip rip out-policy

Use this command to assign the policy to the RIP interface.

Syntax

config vlan <vid> ip rip out-policy <WORD 0-32>
config ethernet <slot/port> ip rip out-policy <WORD 0-32

Parameters

Variable	Value
<WORD 0-32>	Specifies the name of the route policy to create or apply.
slot/port	Specifies the slot and port location for the RIP-enabled interface.
vid	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

None

config ip vrf static-route create

Use this command to configure a static route on the VRF.

Syntax

config ip vrf <vrfName> static-route create <ipaddr/mask> next-hop <value> cost <value> [preference <value>] [local-next-hop {true|false}] [next-hop-vrf <value>]

Parameters

Variable	Value
cost <value>	Configures the cost for the static route. The lower the cost, the more preferable the route.

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Variable	Value
<ipaddr/mask>	Specifies the destination IP address and mask length.
local-next-hop {true|false}	Enables or disables this option. True indicates that the static route becomes active only if the switch uses a local route to the network. False indicates that the static route becomes active if the switch uses a local route or dynamic route.
next-hop <value>	Configures the cost for the next hop.
next-hop-vrf <value>	Configures the next hop as a VRF by specifying a VRF name.
preference <value>	Configures the preference for the static route in the range 1–255. You can configure various preferences for multiple static routes to the same destination.

Default

None

Related commands

None

config ip vrf bgp restart soft-reconfiguration

Use this command to restart the BGP instance on the specified VRF.

Syntax

config ip vrf <vrfName> bgp restart soft-reconfiguration {in|out}

Parameters

Variable	Value
vrfname	Specifies the VRF name. The string length ranges from 0 to 32.

Default

None

Related commands

None

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ping

Use this command to verify reachability to a specified destination from the VRF.

Syntax

ping <IP address> vrf <value>

Parameters

Variable	Value
IP address	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

None

show ip vrf ipvpn

Use this command to display the configuration for IP VPN enabled VRFs.

Syntax

show ip vrf ipvpn info [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
[vrf <value>]	Specifies the VRF name. The string length is from 0 to 32.
[vrfids <value>]	Specifies the VRF ID range.

Default

None

Related commands

None

show ip vrf ipvpn rd

Use this command to display the configured route distinguisher for IP VPN enabled VRFs..

Syntax

show ip vrf ipvpn rd [vrf <value>] [vrfids <value>]

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Parameters

Variable	value
`[vrf <value>]`	Specifies the VRF name. The string length is from 0 to 32.
`[vrfids <value>]`	Specifies the VRF ID range.

Default

None

Related commands

None

show ip vrf ipvpn rt

Use this command to display the configured route target for IP VPN enabled VRFs.

Syntax

`show ip vrf ipvpn rt [vrf <value>] [vrfids <value>]`

Parameters

Variable	Value
`[vrf <value>]`	Specifies the VRF name. The string length is from 0 to 32.
`[vrfids <value>]`	Specifies the VRF ID range.

Default

None

Related commands

None

show ip bgp peer-group

Use this command to display BGP groups configured on the specified VRF or VRF IDs.

Syntax

`show ip bgp peer-group [vrf <value>] [vrfids <value>]`

Parameters

Variable	Value
`[vrf <value>]`	Specifies the VRF name. The string length is from 0 to 32.
`[vrfids <value>]`	Specifies the VRF ID range.

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Default

None

Related commands

None

show ip bgp route

Use this command to display BGP routes maintained by the specified VRF or VRF IDs.

Syntax

show ip bgp route [<prefix>] [longer-prefixes] [community <value>] [ip <value>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
<prfix>	Displays exact prefix a.b.c.d/len.
[longer-prefixes]	Displays all the more specified routes.
[community <value>]	Displays community attributes.
[ip <value>]	Displays specific net. For exampls, <1.2. = 1.2.0.0> [a.b.c.d}.
[vrf <value>]	Specifies the VRF name. The string length ranges from 0 to 32.
[vrfids <value>]	Specifies VRF ID range.

Default

None

Related commands

None

show ip bgp route-vpnv4

Use this command to display IP VPN BGP routes in a specified VRF or all VRFs.

Syntax

show ip bgp route-vpnv4 [<prefix>] [longer-prefixes] [community] [ip <value>] [ext-community] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
<prfix>	Displays exact prefix a.b.c.d/len.

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Variable	Value
[longer-prefixes]	Displays all the more specified routes.
[community <value>]	Displays community attributes.
[ip <value>]	Displays specific net. For exampls, <1.2. = 1.2.0.0> [a.b.c.d}.
[vrf <value>]	Specifies the VRF name. The string length ranges from 0 to 32.
[vrfids <value>]	Specifies VRF ID range.

Default

None

Related commands

None

show ip bgp neighbor

Use this command to display BGP neighbors for the specified VRF or VRF IDs.

Syntax

show ip bgp neighbor info [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
[vrf <value>]	Specifies the VRF name. The string length ranges from 0 to 32.
[vrfids <value>]	Specifies VRF ID range.

Default

None

Related commands

None

show ip bgp neighbor advertised-route

Use this command to display BGP routes advertised by the specified VRF or VRF IDs.

Syntax

show ip bgp neighbor advertised-route <ipaddr> [vrf <value>] [vrfids <value>]

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Parameters

Variable	Value
`<ipaddr>`	Specifies the IP address.
`[vrf <value>]`	Specifies the VRF name. The string length ranges from 0 to 32.
`[vrfids <value>]`	Specifies VRF ID range.

Default

None

Related commands

None

show ip bgp bgp dampened-paths

Use this command to display dampened BGP routes on the specified VRF or VRF IDs.

Syntax

`show ip bgp dampened-paths <ipaddr> [vrf <value>] [vrfids <value>]`

Parameters

Variable	Value
`<ipaddr>`	Specifies the IP address.
`[vrf <value>]`	Specifies the VRF name. The string length ranges from 0 to 32.
`[vrfids <value>]`	Specifies VRF ID range.

Default

None

Related commands

None

show ip bgp summary

Use this command to display summary BGP information for the specified VRF or VRF IDs.

Syntax

`show ip bgp summary [vrf <value>] [vrfids <value>]`

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Parameters

Variable	Value
`[vrf <value>]`	Specifies the VRF name. The string length ranges from 0 to 32.
`[vrfids <value>]`	Specifies VRF ID range.

Default

None

Related commands

None

show ip ospf ifstats

Use this command to display the interface statistics for the specific VRF or VRF IDs.

Syntax

```
show ip ospf ifstats [vrf <value>] [vrfids <value>]
```

Parameters

Variable	Value
`[vrf <value>]`	Specifies the VRF name. The string length ranges from 0 to 32.
`[vrfids <value>]`	Specifies VRF ID range.

Default

None

Related commands

None

show ip ospf info

Use this command to display OSPF general information for the specific VRF or VRF IDs.

Syntax

```
show ip ospf info [vrf <value>] [vrfids <value>]
```


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Parameters

Variable	value
`[vrf <value>]`	Specifies the VRF name. The string length ranges from 0 to 32.
`[vrfids <value>]`	Specifies VRF ID range.

Default

None

Related commands

None

show ip ospf interface

Use this command to display OSPF interface and virtual link summaries for the specified VRF or VRF IDs.

Syntax

`show ip ospf interface [vrf <value>] [vrfids <value>]`

Parameters

Variable	Value
`[vrf <value>]`	Specifies the VRF name. The string length ranges from 0 to 32.
`[vrfids <value>]`	Specifies VRF ID range.

Default

None

Related commands

None

show ip ospf neighbors

Use this command to display OSPF neighbors for the specified VRF or VRF IDs.

Syntax

`show ip ospf neighbors [vrf <value>] [vrfids <value>]`

Parameters

Variable	Value
`[vrf <value>]`	Specifies the VRF name. The string length ranges from 0 to 32.
`[vrfids <value>]`	Specifies VRF ID range.

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Default

None

Related commands

None

show ip ospf port-error

Use this command to display OSPF port error information for the specified VRF or VRF IDs.

Syntax

show ip ospf port-error [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
[vrf <value>]	Specifies the VRF name. The string length ranges from 0 to 32.
[vrfids <value>]	Specifies VRF ID range.

Default

None

Related commands

None

show ip ospf redistribute

Use this command to display the configuration for OSPF redistribution for all or specific VRFs.

Syntax

show ip ospf redistribute info [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
[vrf <value>]	Specifies the VRF name. The string length ranges from 0 to 32.
[vrfids <value>]	Specifies VRF ID range.

Default

None

Related commands

None

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show ip ospf show-all

Use this command to display all OSPF information for the specific VRF or VRF IDs.

Syntax

show ip ospf show-all [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
[vrf <value>]	Specifies the VRF name. The string length ranges from 0 to 32.
[vrfids <value>]	Specifies VRF ID range.

Default

None

Related commands

None

show ip ospf stats

Use this command to display OSPF packet statistics for the specified VRF.

Syntax

show ip ospf stats [vrf <value>] [vrfids <value>] [summary]

Parameters

Variable	Value
[summary]	Specifies the statics summary.
[vrf <value>]	Specifies the VRF name. The string length ranges from 0 to 32.
[vrfids <value>]	Specifies VRF ID range.

Default

None

Related commands

None

show ip rip interface

Use this command to display RIP interfaces on the specified VRF.

Syntax

show ip rip interface [vrf <value>] [vrfids <value>]

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Parameters

Variable	Value
`[vrf <value>]`	Specifies the VRF name. The string length ranges from 0 to 32.
`[vrfids <value>]`	Specifies VRF ID range.

Default

None

Related commands

Variable	Value
`info [vrf <value>] [vrfids <value>]`	Specifies the RIP global setting information.
`interface [<ipaddr>] [vrf <value>] [vrfids <value>]`	Specifies the RIP interface configuration information.
`redistribute [vrf <value>] [vrfids <value>]`	Specifies the RIP redistribution configuration information.
`show-all [file <value>] [vrf <value>] [vrfids <value>]`	Displays all RIP information.

config ip vrf info

Use this command to display configuration and operational information for the specified VRF.

Syntax

`config ip vrf <vrfName> info`

Parameters

Variable	Value
`info`	Shows current-level parameter settings and next-level directories.

Default

None

Related commands

Variable	Value
`disable`	Disable IP forwarding.
`enable`	Enable IP forwarding.

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show ip forwarding

Use this command to display forwarding table information for the specified VRF.

Syntax

show ip forwarding [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string value ranges from 0 to 32.

Default

None

Related commands

None

show ip route info

Use this command to display route table information for the specified VRF or VRF IDs.

Syntax

show ip route info [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
[vrf <value>]	Specifies the VRF name. The string length ranges from 0 to 32.
[vrfids <value>]	Specifies VRF ID range.

Default

None

Related commands

None

show ip route preference info

Use this command to set alias port name.

Syntax

show ip route preference info [vrf <value>] [vrfids <value>]

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Parameters

Variable	Value
`[vrf <value>]`	Specifies the VRF name {string length 0..32}.
`[vrf <value>]`	Specifies the VRF ID range.

Default

None

Related commands

None

show ip route info

Use this command to display a summary of route table information for the specified VRF or VRF IDs..

Syntax

```
show ip route info [ip <value>] [-s <value>] [alternative]
[vrf <value>] [vrfids <value>] count-summary
```

Parameters

Variable	Value
`[ip <value>]`	Specifies a specific net address.
`[-s <value>]`	Specifies a specific subnet {a.b.c.d/x | a.b.c.d/x.x.x.x | default} address.
`[alternative]`	Displays alternative routes.
`[vrf <value>]`	Specifies the VRF name. The string length ranges from 0 to 32.
`[vrfids <value>]`	Specifies VRF ID range.

Default

None

Related commands

Variable	Value
`show-all [file <value>] [vrf <value>] [vrfids <value>]`	Displays all route information.

show ip ecmp-1-pathlist

Use this command to display prefix-list of routes with 1 ECMP path.

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Syntax

show ip ecmp-1-pathlist [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
[vrf <value>]	Specifies the VRF name. The string length ranges from 0 to 32.
[vrfids <value>]	Specifies the VRF ID range.

Default

None

Related commands

Variable	Value
ecmp-2-pathlist	Displays prefix-list of routes with 2 ECMP path.
ecmp-3-pathlist	Displays prefix-list of routes with 3 ECMP path.
ecmp-4-pathlist	Displays prefix-list of routes with 3 ECMP path.

traceroute vrf

Use this command to trace the route to the remote host from the specified VRF.

Syntax

traceroute <IP address > vrf <value>

Parameters

Variable	Value
[vrf <value>]	Specifies the VRF name. The string length ranges from 0 to 32.

Default

None

Related commands

None

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IPX Routing commands

This chapter describes the Ethernet Routing Switch 8600 IPX Routing commands.

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config vlan ipx create

Use this command to configure an IPX VLAN interface.

Syntax

```
config vlan <vid> ipx create <IPX-network-number>
<vlan_id> [<encapsulation>] [mac-offset <value>] [tick
<value>]


config ethernet <ports> ipx create <IPX-network-number>
<vlan_id> [<encapsulation>] [mac-offset <value>] [tick
<value>]
```


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Parameters

Variable	Value
create <IPX-network-number> <vlan_id> <encapsulation> [mac_offset <value>] [tick <value>]	Creates a new IPX brouter port entry.
<encapsulation>	Specifies the encapsulation method used: • • ethernet-ii • snap • llc • raw
<IPX network-number>	Specifies the network address value.
[mac_offset <value>]	Specifies the value of the mac_offset optional parameter that you use to manually change the default Media Across Control (MAC) address for a logical or physical interface. The **value** is an integer in the range of 0 to 507. The default is the next available value.
<ports>	Specifies the port or range of ports to configure in the slot/port format.
[tick <value>]	Specifies the value that determines the best route for the IPX-routed VLAN. The lower the tick value, the better the route. Enter a tick value in the range of 1 to 32 767. If you enter a value larger than 32 767, an error message alerts you that the value is changed to 32 767, and a log message is generated. The default is 1.
vlan_id	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.

Default

None

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Related commands

Variable	Value
delete <IPX-network-number>	Deletes IPX network interface from a VLAN.
encapsulation <IPX-network-number> <encapsulation>	Modifies IPX encapsulation.
info	Displays current level parameter settings and next level directories.

config vlan ipx encapsulation

Use this command to modify a VLAN IPX encapsulation.

Syntax

config vlan <vid> ipx encapsulation <IPX-network-number> <encapsulation>

Parameters

Variable	Value
create <IPX-network-number> <vlan_id> <encapsulation> [mac_offset <value>] [tick <value>]	Creates a new IPX brouter port entry.
<encapsulation>	Specifies the encapsulation method used: • ethernet-ii • snap • llc • raw
<IPX network-number>	Specifies the network address value.
[mac_offset <value>]	Specifies the value of the mac_offset optional parameter that you use to manually change the default MAC address for a logical or physical interface. The **value** is an integer in the range of 0 to 507. The default is the next available value.
<ports>	Specifies the port or range of ports to configure in the slot/port format.

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Variable	Value
[tick <value>]	Specifies the value that determines the best route for the IPX-routed VLAN. The lower the tick value the better the route. Enter a tick value in the range of 1 to 32 767. If you enter a value larger than 32 767, an error message alerts you that the value is changed to 32 767, and a log message is generated. The default is 1.
vlan_id	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.

Default

None

Related commands

Variable	Value
action <action choice>	Specifies the VLAN action.
add-mlt <integer>	Adds MultiLink Trunk to a VLAN. **integer** is the MultiLink Trunk ID in the range of 1 to 256.
addDsapssap <DSA/SSAP values>	Adds Destination Service Access Point (DSAP) or Source Service Access Point (SSAP) to sna or usrdefined VLANs.
agetime <0|10...1000000>	Changes the dynamic VLAN membership agetime.
delete	Deletes a VLAN.
info	Shows the current-level parameter settings and next-level directories.
name <vname>	Specifies the name of a VLAN.
nlb-mode <disable|igmp-mcast|multicast|unicast>	Configures the Network Load Balancing (NLB) mode for a VLAN.
qos-level <integer>	Changes the QoS level for a VLAN.
removeDsapSsap <DSAP/SSAP values>	Removes DSAP or SSAP from sna or usrdefined VLANs.
vrf <vrfName>	Associates a Virtual Router and Forwarder (VRF) to a VLAN.

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Variable	Value
<IPX-network-number>	Specifies the IPX network number in the format 0x00000000 or 00:00:00:00.
<encapsulation>	Specifies the IPX frame encapsulation method used: • ethernet-ii • snap • llc • raw

config ipx forwarding

Use this command to configure IPX forwarding.

Syntax

config ipx forwarding

Parameters

None

Default

None

Related commands

Variable	Value
disable [<IPX-network-numbers >]	Disables IPX forwarding. Specifies the IPX network number {0x00000000 | 00:00:00:00 | <value> }
enable [<IPX-network-numbers >]	Enables IPX forwarding. Specifies the IPX network number {0x00000000 | 00:00:00:00 | <value> }
info	Displays the current IPX configuration forwarding information command output.

config ipx info

Use this command to view the current IPX configuration.

Syntax

config ipx info

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Parameters

None

Default

None

Related commands

None

config ipx rip default-delay

Use this command to configure the IPX RIP.

Syntax

config ipx rip default-delay <default-timer>

Parameters

Variable	Value
<default-timer>	Specifies the delay-timer in milli-seconds. The range is from 1 to 1000.

Default

None

Related commands

Variable	Value
default-delay<default-timer>	Configures the delay timer default values in milliseconds (ms). **delay-timer** specifies the range from 1 to 1 000 ms the default is 50 ms.
default-hold-multiplier<hold-multiplier>	Configures the hold multiplier default value. **hold-multiplier** specifies the range from 1 to 2 147 483 647. The default is 3.
default-interval<interval-timer>	Configures the interval timer default values in seconds. **interval-timer** specifies the range from 1 to 2147483647 and the default value is 60 seconds.
hold-multiplier <IPX-network-number> <hold-multiplier>	Sets hold-multipler.
info	Shows the current-level parameter settings and next-level directories.

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Variable	Value
state <IPX-network-number> <on|off>	Changes the RIP state. I**IPX-network-number** specifies the IPX network number.
update-delay <on|off>	Configures the update delay timer.
update-interval <on|off>	Configures the update interval timer.

config ipx sap create

Use this command to configure IPX SAP.

Syntax

config ipx sap create <service-type> <service-name> <IPX-host> <socket-number> <hop-count>

Parameters

Variable	Value
hop-count	Specifies the hop count in the range of 1 to 15.
IPX-host	Specifies the IPX address net.
service-type	Specifies the service-type in the {0x0..0xffff} format.
service-name	Specifies the service name. The string length ranges from 1 to 47.

Default

None

Related commands

Variable	Value
create <service-type> <service-name> <IPX-host> <socket-number> <hop-count>	Creates a static Service Access Point (SAP) entry.
default-delay <delay-timer>	Configures the default delay-timer.
default-hold-multiplier <hold-multiplier>	Configures the default hold-multipler.
default-interval <interval-timer>	Configures the default interval timer.
delete <service-name>	Deletes a static SAP entry.
hold-multiplier IPX-network-number> <hold-multiplier>	Configures the RIP timing parameter.

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Variable	Value
info	Shows current-level parameter settings and next-level directories.
sapgnstiebeaker <alphabetical|round-robin>	Configures tie-breaker for equal cost SAPs.
state <IPX-network-number> <on|off>	Changes the SAP state.
update-delay <IPX-network-number> <on|off>	Configures update-delay timer.
update-interval <IPX-network-number> <interval-timer>	Configures update-interval timer.

config ipx set max-route

Use this command to configure an IPX set to determine how IPX operates.

Syntax

config ipx set max-route <max_entries>

Parameters

Variable	Value
max_entries	Specifies the maximum number of entry in the range of 128 to 8000.

Default

None

Related commands

Variable	Value
info	Shows the current-level parameter settings and next-level directories.
learnafterincrement <on|off>	Specifies the IPX RIP or SAP hop-count increment after configuring it to on or off.
max-route <max_entries>	Configures the IPX maximum number of routes.
max-sap <max_entries>	Configures the IPX maximum number of SAPs.
max-static-route <max_entries>	Configures the IPX maximum number of static routes.
max-static-sap <max_entries>	Configures the IPX maximum number of static SAPs.

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Variable	Value
netbios <on|off>	Configures the IPX netBIOS processing to on or off.
routing-method <tick|hop>	Configures the IPX routing method to tick or hop.

config ipx set routing-method

Use this command to enable the IPX routing method globally.

Syntax

config ipx set routing-method <tick|hop>

Parameters

Variable	Value
<tick|hop>	Configures the routing method to ticks or hops.

Default

The default value is ticks.

Related commands

None

config ipx static-route create

Use this command to configure an IPX static route.

Syntax

config ipx static-route create <IPX-network-number> <nexthop> <hop-count> <tick-count>

Parameters

Variable	Value
hop-count	Specifies the hop count in the range of 1 to 15.
IPX-network-number	Specifies the IPX network number.
nexthop	Specifies the next hop address net.
tick-count	Specifies the number of ticks in the range of 1 to 2147483647.

Default

None

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Related commands

Variable	Value
create <IPX-network-number> <nexthop> <hop-count> <tick-count>	Adds the static IPX network route.
delete <IPX-network-number>	Deletes the IPX network route.
info	Shows the current-level parameter settings and next-level directories.

config atm pvc 1483 ipx

Use this command to configure IPX on a single ATM PVC using 1483 encapsulation.

Syntax

config atm <ports> pvc 1483 ipx

Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config vlan ipx rsmlt

Use this command to configure VLAN IPX RSMLT.

Syntax

config vlan <vid> ipx rsmlt enable

Parameters

Variable	Value
enable	Enables RSMLT.

Default

None

Related commands

Variable	Value
enable	Enables RSMLT.

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Variable	Value
disable	Disables RSMLT.
hold-down timer	Configures the RSMLT hold-down timer.
holdup-timer	Configures RSMLT hold up timer.
info	Shows the current-level parameter settings and next-level directories.

config ethernet ipx in-policy

Use this command to create a RIP In or Out policy on an Ethernet interface.

Syntax

config ethernet <ports> ipx rip in-policy <IPX-network-number> <policy-name>

Parameters

Variable	Value
in-policy <IPX-network-number> <policy-name>	Specifies the name of the policy applied to a received RIP packet. • **IPX-network-number** is the name of the IPX interface to which the policy applies. • **policy-name** is the name of the policy group to apply to the interface. A blank policy-name erases a previously entered name.

Default

None

Related commands

Variable	Value
info	Displays the Ethernet IPX RIP interface policy characteristics.
out-policy <IPX-network-number> <policy-name>	Specifies the name of the policy applied to a received RIP packet. • **IPX-network-number** is the IPX address of the IPX interface to which the policy applies. • **policy-name** is the IPX address of the policy group to apply to the interface. A blank policy-name erases a previously entered name.

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config ethernet ipx sap in-policy

Use this command to configure a Service Advertisement Protocol (SAP) In or Out policy to determine which traffic is allowed on the IPX network.

Syntax

config ethernet <ports> ipx sap in-policy <IPX-network-number> <policy-name>

Parameters

Variable	Value
in-policy <IPX-network-number> <policy-name>	Specifies the name of the policy applied to a received RIP packet. • **IPX-network-number** is the name of the IPX interface to which the policy applies. • **policy-name** is the name of the policy group to apply to the interface. A blank policy-name erases a previously entered name.

Default

None

Related commands

Variable	Value
info	Displays the Ethernet IPX RIP interface policy characteristics.
out-policy <IPX-network-number> <policy-name>	Specifies the name of the policy applied to a received RIP packet. • **IPX-network-number** is the IPX address of the IPX interface to which the policy applies. • **policy-name** is the IPX address of the policy group to apply to the interface. A blank policy-name erases a previously entered name.

config ipx rip interface

Use this command to configure a RIP In or Out policy.

Syntax

config ipx rip interface <IPX-network-number>

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Parameters

Variable	Value
IPX-network-number	Specifies the IPX network number.

Default

None

Related commands

Variable	Value
in-policy <policy-name>	Specifies the name of the policy applied to a received RIP packet. **policy-name** is the name of the policy group to apply to the interface. A blank policy-name erases a previously entered name.
info	Shows the current-level parameter settings and next-level directories.
out-policy <policy-name>	Specifies the name of the policy applied to a received RIP packet. **policy-name** is the name of the policy group to apply to the interface. A blank policy-name erases a previously entered name.

config ipx sap interface

Use this command to configure a SAP In or Out policy on an interface to determine which traffic is allowed on the IPX network.

Syntax

config ipx sap interface <IPX-network-number> in-policy <policy-name>

Parameters

Variable	Value
in-policy <policy-name>	Specifies the name of the policy applied to a received SAP packet. **policy-name** is the name of the policy group to apply to the interface. A blank policy-name erases a previously entered name.
<IPX-network-number>	Specifies the IPX network number.

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Default

None

Related commands

Variable	Value
`info`	Shows the current-level parameter settings and next-level directories.
`out-policy <policy-name>`	Specifies the name of the policy applied to a received SAP packet . **policy-name** is the name of the policy group to apply to the interface. A blank policy-name erases a previously entered name.

config vlan ipx rip

Use this command to configure RIP In or Out policy on a VLAN interface.

Syntax

`config vlan <vid> ipx rip`

Parameters

Variable	Value
`vid`	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

Variable	Value
`info`	Displays the VLAN IPX RIP interface policy characteristics.
`in-policy <IPX-network-number> <policy-name>`	Specifies the name of the policy applied to a received RIP packet. • **IPX-network-number** is the IPX address of the IPX interface to which the policy applies. • **policy-name** is the name of the policy group to apply to the

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Variable	Value
	interface. A blank policy-name erases a previously entered name.
out-policy <IPX-network-number> <policy-name>	Specifies the name of the policy applied to a RIP packet received. • **IPX-network-number** is the IPX address of the IPX interface to which the policy applies. • **policy-name** is the name of the policy group to apply to the interface. A blank policy-name erases a previously entered name.

config vlan ipx sap in-policy

Use this command to configure a SAP In or Out policy on a VLAN interface.

Syntax

config vlan <vid> ipx sap in-policy <IPX-network-number> <policy-name>

Parameters

Variable	Value
in-policy <IPX-network-number> <policy-name>	Specifies the name of the policy applied to a received SAP packet. • **IPX-network-number** is the IPX address of the IPX interface to which the policy applies. • **policy-name** is the name of the policy group to apply to the interface. A blank policy-name erases a previously entered name.

Default

None

Related commands

Variable	Value
info	Displays the VAN IPX RIP interface policy characteristics.

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Variable	Value
in-policy <IPX-network-number> <policy-name>	Specifies the name of the policy applied to a received SAP packet. • **IPX-network-number** is the IPX address of the IPX interface to which the policy applies. • **policy-name** is the name of the policy group to apply to the interface. A blank policy-name erases a previously entered name.
out-policy <IPX-network-nu mber> <policy-name>	Specifies the name of the policy applied to a received SAP packet. • **IPX-network-number** is the IPX address of the IPX interface to which the policy applies. • **policy-name** is the name of the policy group to apply to the interface. A blank policy-name erases a previously entered name.

config ipx netlist

Use this command to configure an IPX netlist.

Syntax

config ipx netlist <netlistname> add-network <IPX network-number> [to <value>]

Parameters

Variable	Value
add-network <IPX network-numb er> [to <value>]	Creates a new entry in the network list. • **IPX-network-number** is the network address value. • **to <value>** used for a network range. If this optional parameter is not entered, the entry refers to a single network.
<IPX network-number> [<to <value>]	Removes an entry from the network list. If only one entry exists in the network list, removing this entry deletes the entire network list. • **IPX-network-number** is the network address value. • **to <value>** used for a network range. Used to delete a range of network addresses.

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Default

None

Related commands

Variable	Value
`delete`	Deletes an entire network list.
`info`	Displays the current network list characteristics.
`name <netlistname>`	Renames the network list.**netlistname** is the network list name. It is a character string from 0 to 15 bytes.
`remove-network`	Removes the network list.
`<IPX network-number> [<to <value> ]`	Removes an entry from the network list. If only one entry exists in the network list, removing this entry deletes the entire network list. • **IPX-network-number** is the network address value. • **to <value>** used for a network range. Used to delete a range of network addresses.

config ipx netlist add-network

Use this command to configure the IPX netlist add-network.

Syntax

`config ipx netlist <netlistname> add-network <IPX-network-number>`

Parameters

Variable	Value
`to <value>`	Indicates the range of IPX network addresses. This parameter is optional. The default value is NetAddr, in which case the entry refers to a single IPX network.
`<IPX-network-number>`	Indicates the IPX network number in the format 0x00000000, 00:00:00:00.
`<netlistname>`	Indicates the administratively assigned name for this list.

Default

None

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Related commands

None

config ipx route-policy

Use this command to configure IPX route policy.

Syntax

config ipx route-policy <policy-name> seq <seqnum> action <permit|deny>

Parameters

Variable	Value
action <permit|deny>	Modifies the processing of the RIP or SAP packet. The route or service is announced or accepted only if the action is configured to permit. The route or service is ignored if the value is configured to deny.

Default

The default value is permit.

Related commands

Variable	Value
action <permit|deny>	Modifies the processing of the RIP or SAP packet. The route or service is announced or accepted only if the action is configured to permit. The route or service is ignored if the value is configured to deny. The default value is permit.
create	Creates a new route policy.
delete	Deletes a route policy from the table.
disable	Disables (false) a route policy. If disabled, you cannot use the route policy. The default value is disable (false).
enable	Enables (true) a route policy.
info	Displays the route policy characteristics.

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Variable	Value
match-netlist <list-name/id> [clear]	Modifies the number of networks to which this policy can apply. The network list name or ID refers to the range of networks in the Network List Table. If not configured or if the Network List table entry is empty, this policy applies to all packets. You can configure a maximum of four network list for a policy. • **list-name/id** is the network list name or ID from the Network List table. • **clear** is an optional parameter that erases the value entered in the **<list-name/id>** parameter.
match-routesource <Route Source> [clear]	Modifies the route source of the packet. Use this field only for Announce policies. This field is not used by Accept policies. The default value is none (the route source field is not checked.) Accepted values are: • direct • nlsp • rip • static • any • **clear** is an optional parameter that erases what is entered in the **<Route Source>** parameter.
match-servlist <list-name id> [clear]	**ATTENTION** This field is valid only for SAP policies. Modifies the service types and service names to which this policy applies. The service list name or ID represents the service type and service name. If not configured, or if the Service List table entry is empty, this policy applies to all service types and service names.

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Variable	Value
	You can configure a maximum of four service lists for a policy. • **<list-name id>**is the service list name or ID in the Service List Table. • **clear** is optional parameter that erases the value entered in the **<list-name id>** parameter.
set-hops <hops_count>	Assigns the number of hops in announce policies. The hop count of the matching RIP or SAP route is updated with this value. If the value is 0, the hop count is not modified. This field applies only to policies. Enter a hop value in the range of 0 to 16. The default value is 0. **hops_count** is the number of hops.
set-ticks <tick_value>	Assigns the value used as ticks in RIP Announce policies. For RIP announce policies, the ticks of the route is updated with this value. If the value is 0, the ticks of the route is not modified. This field applies only to RIP Announce policies. Enter a tick value in the range of 0 to 2 147 483 647. The default value is 0.

config ipx servlist

Use this command to configure the IPX service list.

Syntax

config ipx servlist <servicename> add <service> <service-type>

Parameters

Variable	Value
add <service> <service-type>	Creates a new entry in the service list. • **service-list** is the service type value. If the value is configured to 0xFFFF, all service types are matched. Enter the value in decimal format.

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Variable	Value
	For example, a decimal 100 equals hexadecimal 0x0100. • **servicename** is the service name. If this value is not entered, an asterisk (*) is used as the default value. This is matched to any service name. You use an asterisk (*) to match wild card characters at the end of the service name. For example, Printer* matches to Printer1, Printer2, and Printern. Service Name matching is case-sensitive.

Default

None

Related commands

Variable	Value
add <service> <service-type>	Creates a new entry in the service list. • **service-list** is the service type value. If the value is configured to 0xFFFF, all service types are matched. Enter the value in decimal format. For example, a decimal 100 equals hexadecimal 0x0100. • **servicename** is the service name. If this value is not entered, an asterisk (*) is used as the default value. This is matched to any service name. You use an asterisk (*) to match wild card characters at the end of the service name. For example, Printer* matches to Printer1, Printer2, and Printern. Service Name matching is case-sensitive.
delete	Deletes a route policy from the table.
info	Displays the route policy characteristics.

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Variable	Value
name servlist-name	Renames the service list.
remove-service <servtype> [<servname>]	Removes a service type entry from the service list. If only one entry exists in the service list, removing this entry deletes the entire service list. • **servtype** is the service type value. • **<servname>** is the service name. If this value is not entered, an asterisk (*) is used as the default value. This is matched to any service name. You can use an asterisk (*) to match wild card characters at the end of the service name. For example: Printer* matches to Printer1, Printer2, and Printern. Service Name matching is case-sensitive.

config ipx list-policy

Use this command to show IPX list policies.

Syntax

show ipx list-policy [interface <value>]

Parameters

Variable	Value
interface <value>	Specifies the IPX interface.

Default

None

Related commands

None

config ipx network-list

Use this command to show IPX network list.

Syntax

show ipx network-list [listid] [network <value>]

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Parameters

Variable	Value
`listid`	Specifies the list ID in the range of 1 to 1000.
`network <value>`	Specifies the IPX network number.

Default

None

Related commands

None

show ipx route-policy

Use this command to show IPX route policy information.

Syntax

`show ipx route-policy [id <value>]`

Parameters

Variable	Value
`[id <value>]`	Specifies the IPX route policy ID in the range of 1 to 65535.

Default

None

Related commands

Variable	Value
`action`	Displays the processing of the RIP or SAP packet. The route or service is announced or accepted only if the action is configured to permit. The route or service is ignored if the value is configured to deny. The default value is permit.
`enable`	Displays the status of the route policy. The default is disable.
`Id`	Displays the unique identifier assigned when you create a netlist.

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Variable	Value
match-netlist	Displays the numbers of the networks to which this policy applies. Use the network list name or ID to refer to the range of networks in the Network List Table. If the value is not configured or if the Network List table entry is empty, this policy applies to all packets. You can configure a maximum of four network lists for a policy.
match-routesource	Displays the route source of the packet. Use this field only for Announce policies. This field is not used by Accept policies. The default value is none (the route source field is not checked). Accepted values are: • direct • nlsp • rip • static • any
match-servlist	Displays the service types and service names to which this policy is applied. Use the service list name or ID to represent the service type and service name. If the value is not set, or if the Service List table entry is empty, this policy applies to all service types and service names. You can set a maximum of four service lists for a policy.
Name	The network list name.
set-hops	Displays the number of hops in announce policies. The hop count of the matching RIP or SAP route is updated with this value. If the value is 0, the hop count is not modified. This field applies only to Announce policies. Enter a hop value with the range of 0 to 16. The default value is 0.

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Variable	Value
set-ticks	Displays the value used as ticks in RIP announce policies. For RIP Announce policies, the ticks of the route are updated with this value. If the value is 0, ticks of the route are not modified. This field applies only for RIP Announce policies. Enter a tick value in the range of 0 to 2 147 483 647. The default value is 0.
Seq	Displays the sequential sequence number assigned by the system.

show ipx service-list

Use this command to show IPX service-list command.

Syntax

show ipx service-list [listid] [service-type <value>] [service-name <value>]

Parameters

Variable	Value
[service-type <value>]	Specifies the type of service.
[service-name <value>]	Specifies the service name. The string length ranges from 1 to 47.

Default

None

Related commands

None

show vlan info rip

Use this command to show VLAN RIP information.

Syntax

show vlan info rip <vid>

Parameters

Variable	Value
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.
port <value>	Specifies the port list.

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Default

The default value is 1.

Related commands

None

show ports info ipx

Use this command to view the port information, IPX address, and encapsulation type.

Syntax

show ports info ipx [<ports>]

Parameters

Variable	Value
[ports <value>]	Displays information about the IPX brouter interface for the specified ports.
[vlan <value>]	Displays information about the IPX brouter interface for the ports in the specified VLAN.

Default

None

Related commands

None

show ipx circuit

Use this command to view the circuit configured for an IPX.

Syntax

show ipx circuit [<IPX-network-number>]

Parameters

Variable	Value
<IPX-network-number>	Specifies th IPX network number.

Default

None

Related commands

None

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show ipx config

Use this command to display the IPX configuration information for a specified IPX network interface.

Syntax

show ipx config [<IPX-network-number>]

Parameters

Variable	Value
<IPX-network-number>	Specifies th IPX network number.

Default

None

Related commands

None

show ipx default

Use this command to view the default values of the IPX parameters.

Syntax

show ipx default

Parameters

None

Default

None

Related commands

None

show ipx route

Use this command to view information about the IPX routes on the Ethernet Routing Switch 8600 or a specific IPX route.

Syntax

show ipx route [<IPX-network-number>] [<IPX-network-number>]

Parameters

Variable	Value
<IPX-network-number>	Specifies the IPX network number.

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Default

None

Related commands

None

show ipx sap

Use this command to view IPX SAP information.

Syntax

show ipx sap [<service-name>]

Parameters

Variable	Value
<service-name>	Specifies the service name substring in the length of 0 to 32.

Default

None

Related commands

None

show ipx stats

Use this command to view the IPX statistics and monitor performance for the specified IPX network number.

Syntax

show ipx stats [<IPX-network-number>]

Parameters

Variable	Value
<IPX-network-number>	Specifies the IPX network number.

Default

None

Related commands

Variable	Value
circuit [<IPX-network-number>]	Shows IPX circuit for IPX interface.
config [<IPX-network-number>]	Shows IPX configuration for IPX interface.

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Variable	Value
`default`	Shows IPX default parameters.
`list-policy [interface <ipxnetnum>]`	Lists RIP/SAP IN and OUT Policy.
`network-list [listid] [network <value>]`	Shows the existing network-list entries.
`route [<IPX-network-number>] [<IPX-network-number>]`	Shows IPX routing table.
`routingmethod`	Shows the existing routing method ticks/hops.
`sap [<service-name>]`	Shows SAP entries.
`service-list [service-type <value>] [service-name <value>]`	Shows the existing service-list entries.
`show-all [file <value>]`	Shows all IPX information.

show vlan info

Use this command to view VLAN IPX information for the specified VLAN.

Syntax

`show vlan info ipx [ <vid> ]`

Parameters

Variable	Value
`<vid>`	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

None

show ipx rsmlt

Use this command to view the IPX RSMLT information for the specified local or peer Ethernet Routing Switch 8600.

Syntax

`show ipx rsmlt info [<local/peer>]`

Parameters

None

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Default

None

Related commands

None

show port info atm 1483

Use this command to show IPv6 tunnel interface information.

Syntax

show port info atm 1483

Parameters

None

Default

None

Related commands

Variable	Value
all [vlan <value>] [port <value>]	Shows the ATM port information.
f5-oam [vlan <value>] [port <value>]	Shows the ATM PVC f5 oam statistics and status.
fdb [vlan <value>] [port <value>]	Shows the ATM Forwarding Database (FDB) information.
ports [vlan <value>] [port <value>]	Shows the ATM ports information.
pvc [vlan <value>] [port <value>]	Shows the ATM PVC information.
1483 [vlan <value>] [port <value>]	Shows the ATM PVC 1483 information.

trace ipx policy rip in-policy

Use this command to trace an IPX RIP In policy.

Syntax

trace ipx policy rip in-policy

Parameters

None

Default

None

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Related commands

Variable	Value
add **<IPX-network-number>**	This command activates trace support for an IPX interface. All RIP routes dropped by the interface due to the In policy display on the console. If no RIP In policy is assigned, an error message appears. • **IPX-network-number** is the IPX address of the IPX interface to which the trace applies.
delete **<IPX-network-number>**	This command removes the trace support from the interface. • **<IPX-network-number>** the IPX address of the IPX interface from which the trace is deleted.
info	This command displays the trace status of all interfaces to which a RIP In policy is assigned.

trace ipx policy rip out-policy add

Use this command to trace IPX policy RIP Out policy.

Syntax

trace ipx policy rip out-policy add <IPX-network-number>

Parameters

Variable	Value
add **<IPX-network-number>**	This command activates trace support for an IPX interface. All RIP routes dropped by the interface due to the Out policy display on the console. If no RIP Out policy is assigned, an error message appears. **IPX-network-number** is the IPX address of the IPX interface to which the trace applies.

Default

None

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Related commands

Variable	Value
add **<IPX-network-number>**	This command activates trace support for an IPX interface. All RIP routes are dropped by the interface due to the Out policy display on the console. If no RIP Out policy is assigned, an error message appears. **IPX-network-number** is the IPX address of the IPX interface to which the trace applies.
delete **<IPX-network-number>**	This command removes the trace support from the interface. **IPX-network-number** is the IPX address of the IPX interface from which the trace is deleted.
info	This command displays the trace status of all interfaces to which a RIP out-policy is assigned.

trace ipx policy sap in-policy add

Use this command to control trace support for SAP In policy routes.

Syntax

trace ipx policy sap in-policy add <IPX-network-number>

Parameters

Variable	Value
add **<IPX-network-number>**	This command activates trace support for an IPX interface. All SAP routes dropped by the interface due to the In policy display on the console. If no SAP In policy is assigned, an error message appears. • **IPX-network-number** is the IPX address of the IPX interface to which the trace applies.

Default

None

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Related commands

Variable	Value
add **<IPX-network-number>**	This command activates trace support for an IPX interface. All SAP routes dropped by the interface due to the In policy display on the console. If no SAP In policy is assigned, an error message appears. • **IPX-network-number** is the IPX address of the IPX interface to which the trace applies.
delete **<IPX-network-number>**	This command removes the trace support from the interface. **<IPX-network-number>** the IPX address of the IPX interface from which the trace is deleted.
info	This command displays the trace status of all interfaces to which a SAP In policy is assigned.

trace ipx policy sap out-policy add

Use this command to trace IPX SAP Out policy support for SAP Out policy routes.

Syntax

trace ipx policy sap out-policy add <IPX-network-number>

Parameters

Variable	Value
add **<IPX-network-number>**	This command activates trace support for an IPX interface. All SAP routes dropped by the interface due to the Out policy display on the console. If no SAP Out policy is assigned, an error message appears. **IPX-network-number** is the IPX address of the IPX interface to which the trace applies.

Default

None

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Related commands

Variable	Value
add **<IPX-network-number>**	This command activates trace support for an IPX interface. All SAP routes dropped by the interface due to the Out policy display on the console. If no SAP Out policy is assigned, an error message appears. **IPX-network-number** is the IPX address of the IPX interface to which the trace applies.
delete **<IPX-network-number>**	This command removes the trace support from the interface. **IPX-network-number** is the IPX address of the IPX interface from which the trace is deleted.

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IGAP commands

This chapter describes the Ethernet Routing Switch 8600 IGAP commands.

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config vlan ip create

Use this command to configure the IP routing operation.

Syntax

config vlan <vid> ip create <ipaddr/mask> [mac_offset <value>]

Parameters

Variable	Value
<vid>	Specifies the VLAN id. The range is between 1 and 4094.
ipaddr/mask	Indicates the IP address and mask assigned to the VLAN.
mac_offset <value>	Indicates the Media Access Control (MAC) address you want to assign to this VLAN. This is an optional parameter that, if used, replaces the default MAC address.

Default

The default value is 1.

Related commands

None

config vlan ip igmp version 2

Use this command to set the version of IGMP on each VLAN to version 2.

Syntax

config vlan <vid> ip igmp version 2

Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure..

Default

None

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Related commands

None

config ip pim mode sparse

Use this command to enable PIM-SM globally on the switch.

Syntax

config ip pim mode sparse

Parameters

None

Default

None

Related commands

None

config vlan vid ip pim

Use this command to enable PIM-SM on the VLAN.

Syntax

config vlan <vid> ip pim enable

Parameters

Variable	Value
<vid>	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

config ip igmp interface igap

Use this command to configure IGAP on the interface at IP address {a.b.c.d}.

Syntax

config ip igmp interface {a.b.c.d} igap enable

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Parameters

Variable	Value
{a.b.c.d}	Specifies the IP address.

Default

None

Related commands

Variable	Value
accounting <enable|disable>	Enables or disables accounting on the specified interface. The default is enable.
authentication <enable|disable>	Enables or disables authentication on the specified interface. The default is enable.
clear-counters	Clears the IGAP counters for this interface.
disable	Disables IGAP on this interface.
enable	Enables IGAP on this interface.
info	Indicates information about the IGAP interface.

config ip igmp interface authentication

Use this command to enable authentication on the interface.

Syntax

config ip igmp interface {a.b.c.d} igap authentication enable

Parameters

Variable	Value
{a.b.c.d}	Specifies the IP address.

Default

None

Related commands

None

config ip igmp interface igap accounting

Use this command to enable accounting on the interface.

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Syntax

config ip igmp interface {a.b.c.d} igap accounting enable
config ip igmp inteface {a.b.c.d} igap info

Parameters

Variable	Value
{a.b.c.d}	Specifies the IP address.

Default

None

Related commands

None

config vlan ip igmp igap

Use this command to configure IGAP on a VLAN.

Syntax

config vlan <vid> ip igmp igap enable

Parameters

Variable	Value
<vid>	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.

Default

None

Related commands

Variable	Value
accounting <enable|disable>	Enables or disables accounting on this VLAN.
authentication <enable|disable>	Enables or disables authentication on this VLAN.
clear-counters	Clears the IGAP counters for this VLAN.
disable	Disables IGAP on this VLAN.
enable	Enables IGAP on this VLAN.
info	Indicates IGAP settings on the VLAN.

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config vlan ip igmp igap authentication

Use this command to enable authentication.

Syntax

config vlan <vid> ip igmp igap authentication enable

Parameters

Variable	Value
<vid>	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.

Default

None

Related commands

None

config vlan ip igmp igap accounting

Use this command to enable accounting.

Syntax

config vlan <vid> ip igmp igap accounting enable
config vlan <vid> ip igmp igap info

Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

config ip igmp igap clear-counters

Use this command to clear all IGAP counters .

Syntax

config ip igmp igap clear-counters

Parameters

None

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Default

None

Related commands

Variable	Value
accounting <enable|disable>	Enables or disables accounting on this VLAN.
authentication <enable|disable>	Enables or disables authentication on this VLAN.
clear-counters	Clears the IGAP counters for this VLAN.
disable	Disables IGAP on this VLAN.
enable	Enables IGAP on this VLAN.
info	Indicates IGAP settings on the VLAN.

config ip igmp interface igap clear-counters

Use this command to clear counters on a specific interface.

Syntax

config ip igmp interface <ipaddr> igap clear-counters

Parameters

Variable	Value
ipaddr	Specifies the IP address of the interface.
policy_name	Specifies the name of the Announce policy you create.

Default

None

Related commands

None

config vlan ip igmp igap clear-counters

Use this command to clear counters on a specific VLAN.

Syntax

config vlan <vid> ip igmp igap clear-counters

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Parameters

Variable	Value
policy_name	Specifies the name of the announce policy you create.

Default

None

Related commands

none

config radius mcast-addr-attr-value

Use this command to set the multicast address attribute.

Syntax

config radius mcast-addr-attr-value <value>

Parameters

Variable	Value
mcast-addr-attr-value <value>	Indicates an integer assigned to the multicast address attribute, which must be in the range of 0 to 255.
auth-info-attr-value <value>	Indicates an integer assigned to the authorization information attribute, which must be in the range of 0 to 255.

Default

The default value is 90.

Related commands

Variable	Value
mcast-addr-attr-value <value>	Indicates an integer assigned to the multicast address attribute, which must be in the range of 0 to 255. The default value is 90.
auth-info-attr-value <value>	Indicates an integer assigned to the authorization information attribute, which must be in the range of 0 to 255.

config radius auth-info-attr-value

Use this command to set the authentication information attribute.

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Syntax

config radius auth-info-attr-value <value>

Parameters

Variable	Value
mcast-addr-attr-value <value>	Indicates an integer assigned to the multicast address attribute, which must be in the range of 0 to 255. The default value is 90.
auth-info-attr-value <value>	Indicates an integer assigned to the authorization information attribute, which must be in the range of 0 to 255.

Default

None

Related commands

Variable	Value
mcast-addr-attr-value <value>	Indicates an integer assigned to the multicast address attribute, which must be in the range of 0 to 255. The default value is 90.
auth-info-attr-value <value>	Indicates an integer assigned to the authorization information attribute, which must be in the range of 0 to 255.

config radius igap-timeout-log-fsize

Use this command to set the maximum size of the RADIUS time-out log file.

Syntax

config radius igap-timeout-log-fsize <value>

Parameters

Variable	Value
vendorname	A two-character name representing the vendor. **nr** represents a specific Nortel project.

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Variable	Value
nasIPaddress	Identifies the Network Access Server (NAS) by its IP address. **ATTENTION** When there are less than three digits in an octet such as 10 and 1, leading zeroes fill in to make up the 12 digits. If the Ethernet Routing Switch 8600 cannot determine the NAS IP address, create a file corresponding to NAS IP address 0.0.0.0 such as: 7672 MAR-17-2003 11:42:20 /pcmcia/ nr_000000000000_rac_01.log.
type	Three characters that represent the type of log.
version	Two digits that represent the version number.

Default

None

Related commands

None

config radius server create

Use this command to add an IGAP-enabled RADIUS server.

Syntax

config radius server create <ipaddr> secret <value> usedby igap

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
secret <value>	Specifies the secret key. The string length is between 0 and 32.

Default

None

Related commands

Variable	Value
acct-enable <value>	Enables the server account. This value is either true or false.

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Variable	Value
acct-port <value>	Indicates the server account udp port. The value ranges form 1 to 65 536.
enable <value>	Enables the server. This value is either true or false.
port <value>	Server udp port and its value ranges from 1 to 65 536.
priority <value>	Specifies the server priority and ranges from 1 to 10.
retry <value>	Maximum number of retries. The allowed retries range from 0 to 6.
source-ip <value>	IP address {a.b.c.d}.
timeout <value>	No answer time-out value and the value ranges form 1 to 20.

config radius server delete

Use this command to delete an IGAP-enabled RADIUS server.

Syntax

config radius server delete <ipaddr> usedby igap

Parameters

Variable	Value
<ipaddr>	Indicates the IP address of the selected interface.

Default

None

Related commands

None

config radius server set

Use this command to set IGAP-enabled RADIUS server parameters.

Syntax

config radius server set <ipaddr> usedby igap

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Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
secret <value>	Specifies the secret key. This value is a string in the range of 0 to 32 characters.

Default

None

Related commands

Variable	Value
acct-port <value>	Indicates the server account UDP port. The value ranges from 1 to 65 536.
acct-enable <value>	Enables the server account. This value is either true or false.
enable <value>	Enables the server. This value is either true or false.
port <value>	Server UDP port and its value ranges from 1 to 65 536.
priority <value>	Specifies the server priority and ranges from 1 to 10.
retry <value>	Maximum number of retries. The allowed retries range from 0 to 6.
source-ip <value>	IP address {a.b.c.d}.
timeout <value>	No answer time-out value and the value ranges from 1 to 20.

show ip igmp igap

Use this command to view IGAP interface information.

Syntax

show ip igmp igap

Parameters

None

Default

None

Related commands

None

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show ip igmp igap-group

Use this command to view IGAP group information.

Syntax

show ip igmp igap-group [count] [memb-subnet <value>] [grp <value>]

Parameters

Variable	Value
count	Shows the number of entries in the IGAP group.
grp <value>	Indicates the IP address of the group.
memb-subnet <value>	Indicates the IP address and network mask of the IGAP group.

Default

None

Related commands

None

show ip igmp igap-counters

Use this command to troubleshoot IGAP network connectivity.

Syntax

show ip igmp igap-counters [vlan <value>]

Parameters

Variable	Value
vlan <value>	Indicates the ID number of the VLAN.

Default

None

Related commands

None

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Link Aggregation and MLT commands

This chapter describes the Ethernet Routing Switch 8600 Link Aggregation and MLT commands.

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config lacp

Use this command to configure global Link Aggregation Control Protocol (LACP) parameters.

Syntax

config lacp

Parameters

None

Default

None

Related commands

Variable	Value
aggr-wait-time <milliseconds>	Sets the aggregation wait time (in milliseconds) for a specific port type.
disable	Disables LACP for a specific port type.
enable	Enables LACP for a specific port type.
fast-periodic-time <milliseconds>	Sets the fast-periodic time (in milliseconds) for a specific port type.
info	Shows the current-level parameter settings and next-level directories.
smlt-sys-id <BaseMac>	Sets LACP SMLT system ID globally.
system-priority <integer>	Sets system priority for a specific port-type. • **integer** is the system priority value. The integer value ranges from 0 to 65535.

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Variable	Value
slow-periodic-time<milliseconds>	Sets the slow periodic time globally. **milliseconds** is the slow periodic time value.
timeout-scale <integer>	Sets a time-out scale for a specific port type. The default value is 3, and the value ranges from 2 to 10.

config

Use this command to configure LACP on a port.

Syntax

config {ethernet|pos} <portList> lacp

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
aggregation <true|false>	Sets individual port or aggregation for this port. • **true** sets the port as aggregation . • **false** sets the port as individual.
aggr-wait-time <milliseconds>	Sets the aggregation wait time (in milliseconds) for this port.
disable	Disables LACP for this port.
enable	Enables LACP for this port.
fast-periodic-time <milliseconds>	Sets the fast-periodic time (in milliseconds) for this port.
info	Shows the current-level parameter settings and next-level directories.
key <integer>	Sets LACP aggregation key for this port. You can use a default key only for individual ports.
mode <active|passive>	Sets active or passive mode for this port.

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Variable	Value
partner-key <int>	The LACP partner administrative key. The integer value ranges from 0 to 65535.
partner-port <int>	Sets the port-partner administrative port value. The integer value ranges from 0 to 65535.
partner-port-priority <int>	Sets the port-partner administrative port priority value. The integer value ranges from 0 to 65535.
partner-state <0x00–0xff>	Sets the partner administrative state bitmask. Specify the partner administrative state bitmap in the range 0x00–0xff. The bit to state mapping is Exp, Def, Dis, Col, Syn, Agg, Time, and Act. For example, to set the two partner-state parameters • Act = true • Agg = true Specify a value of 0x05 (bitmap = 00000101).
partner-system-id <mac>	Sets the partner administrative system ID. • **mac** is the LACP partner administrative system ID MAC address in the format: 0x00:0x00:0x00:0x00:0x00:0x00.
partner-system-priority <int>	Sets the partner administrative system priority value. • **int** is the LACP partner administrative system priority. The integer value ranges from 0 to 65535.
port-priority <integer>	Sets the port priority. The default value is 32768. • **integer** is the port priority value. The integer value ranges from 0 to 65535.
<portList>	Specifies the slot and port number, or a list of ports in the format: {slot/port[-slot/port][,...]}
slow-periodic-time <milliseconds>	Sets the slow periodic time (in milliseconds) for a specific port type.

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Variable	Value
system-priority <integer>	Sets system priority for this port. • **integer** is the system priority value. The integer value ranges from 0 to 65535.
timeout {long|short}	Sets the time-out value to either long or short for this port.
timeout-scale <integer>	Sets a time-out scale for this port. The default value is 3, and the value ranges from 2 to 10.

config mlt

Use this command to configure an MLT.

Syntax

config mlt <mid>

Parameters

Variable	Value
mid	Specifies the maximum number of MLTs that can be created without r-mode.

Default

None

Related commands

Variable	Value
create	Creates a LAG.
cp-limit {enable|disable} [multicast-limit <value>] [broadcast-limit <value>]	Sets the control packet rate limit. • **enable|disable** enables or disables control packet rate limit. To re-enable the ports, issue the command **config ethernet slot/port state disable**, and then **enable**. • **multicast-limit <value>** is the multicast control frame rate. • **broadcast-limit <value>** is the broadcast frame rate.
delete	Deletes a LAG.

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Variable	Value
info	Shows current settings for the specified LAG.
mcast-distribution {enable|disable}	Enables or disables multicast distribution per LAG. Multicast distribution is disabled by default. For more information, see *Nortel Ethernet Routing Switch 8600 Configuration — IP Multicast Routing Protocols* (NN46205-501) .
name <string>	Names a LAG. **string** is the name, from 0 to 20 characters.
ntstg {enable|disable}	Enables or disables NTSTG.
perform-tagging {enable|disable}	Enables or disables tagging on a link aggregation port.
svlan-porttype {uni|nni|normal}	Sets the port type to normal, uni, or nni.

config mlt add

Use this command to add an existing VLAN to a link aggregation configuration.

Syntax

config mlt <mid> add

Parameters

Variable	Value
mid	Specifies the maximum number of MLTs that can be created without r-mode is.

Default

None

Related commands

Variable	Value
info	Shows ports and VLANs added to the LAG.

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Variable	Value
ports <ports>	Adds ports to the LAG. • **<ports>** is the port number or a list of ports you want to add to the LAG. If the port you are configuring already has an SMLT ID on it, you cannot add it to the LAG.
vlan <vid>	Adds an existing VLAN to the LAG. • **<vid>** is the VLAN ID or a list of VLAN IDs you want to add to the LAG. The range is 1–4094.

config mlt remove

Use this command to remove ports from an MLT LAG.

Syntax

config mlt <mid> remove

Parameters

Variable	Value
mid	Specifies the maximum number of MLTs that can be created without r-mode.

Default

None

Related commands

Variable	Value
info	Shows the ports and VLANs removed from the MLT.
ports <ports>	Removes ports from the MLT. • **ports** is the port number or a list of ports you want to remove from the MLT.
vlan <vid>	Removes a VLAN from the MLT. • **vid** is the VLAN ID or a list of VLAN IDs you want to remove from the LAG. The range is 1–4094.

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config mlt lacp

Use this command to configure LACP on an MLT.

Syntax

config mlt <mlt id> lacp

Parameters

Variables	Value
mlt id	Specifies the maximum number of MLTs that can be created without r-mode.

Default

None

Related commands

Variables	Value
clear-link-aggrgate	Clears link aggregation for a specific MLT. Using clear-link-aggrgate is equivalent to disabling and re-enabling LACP on the multilink trunk.
disable	Disables LACP for a specific MLT. When disabled, the multilink trunk functions as a legacy multilink trunk.
enable	Enables LACP for a specific MLT.
info	Shows current-level parameter settings and next-level directories.
key <integer>	Sets LACP aggregator key for a specific MLT. • **integer** is the LACP key. **ATTENTION** If you set the key to 0, any LACP-enabled port with a non-matching key will be allowed to join the LAG.
<mlt id>	Specifies the MLT ID.
system-priority <integer>	Sets LACP system priority for a specific MLT. • **integer** is the system priority within the range 0–65535.

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config mlt smlt

Use this command to create a SMLT from an existing MLT.

Syntax

config mlt <mid> smlt

Parameters

Variable	Value
mlt id	Specifies the maximum number of MLTs that can be created without r-mode.

Default

None

Related commands

Variable	Value
create smlt-id <value>	Creates a split MultiLink trunk from an existing MultiLink trunk. • **value** is an integer value with a range of 1 to 32 (1 to 256 for R modules in R mode). The value must match the peer switch SMLT-ID. If the split MultiLink trunk ID already exists on a single port split MultiLink trunk., you cannot assign it to an MLT-based split MultiLink trunk.
delete	Deletes an existing SMLT.
info	Shows ports and VLANs added to the MultiLink trunk.
<mid>	Specifies the MLT ID.

config mlt ist

Use this command to create an IST.

Syntax

config mlt <mid> ist

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Parameters

Variable	Value
mlt id	Specifies the maximum number of MLTs that can be created without r-mode.

Default

None

Related commands

Variable	Value
create ip <value> vlan-id <value>	Creates an IST from an existing MLT. • **ip value** is a peer IP address • **vlan-id <value>** is an integer value. The peer IP address is the IP address of the IST VLAN on the other aggregation switch.
delete	Deletes an existing IST. You must disable an IST before you can delete it.
disable	Disables an existing IST.
enable	Enables an existing IST.
info	Shows current-level parameter settings and next-level directories.
<mid>	Specifies the MLT ID.

config mlt ist create

Use this command to create an IST from an existing MLT.

Syntax

config mlt <mlt-id> ist create ip <value> vlan-id <value>

Parameters

Variable	Value
ip<value>	Specifies the IP address of the peer switch

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Variable	Value
`<mlt-id>`	Specifies the MLT ID.
`vlan-id<value>`	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.

Default

None

Related commands

None

config mlt ist enable

Use this command to enable and disabe an IST.

Syntax

`config mlt <mlt-id> ist <enable|disable>`

Parameters

Variable	Value
`<mlt-id>`	Specifies the MLT ID.

Default

None

Related commands

None

config mlt ist delete

Use this command to delete an IST.

Syntax

`config mlt <mlt-id> ist delete`

Parameters

Variable	Value
`<mlt-id>`	Specifies the MLT ID.

Default

None

Related commands

None

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config ethernet smlt

Use this command to configure a single port SMLT.

Syntax

config ethernet <port> smlt <smltid>

Parameters

Variable	Value
smltid	Specifies the SMLT ID in the range of 1 to 512.

Default

None

Related commands

Variable	Value
create	Creates a single port SMLT.
delete	Deletes a single port SMLT.
info	Shows the port SMLT information.
<port>	Specifies the port number

config sys set smlt-on-single-cp

Use this command to configure SMLT-on-Single-CPU.

Syntax

config sys set smlt-on-single-cp <enable|disable> [timer <value>]

Parameters

Variable	Value
enable|disable	Enables or disables SMLT on single CP feature.
timer<value>	Sets the SMLT-on-Single-CPU feature time-out value.

Default

None

Related commands

Variable	Value
disable	Disables the SMLT-on-Single-CPU feature.

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Variable	Value
enable	Enables the SMLT-on-Single-CPU feature.
time-out	Determines when the Input/Output (I/O) modules port link status goes down after the single CPU becomes non-operational. The parameter is a numerical value from 1 to 3. If not set, the default value 3 is used. **ATTENTION** A timer value of one relates to approximately three seconds of detection time and a timer value of three relates to approximately nine seconds of detection time.

config sys set hash-calc getmltindex traffic-type

Use this command to display the MLT port calculated by the MLT hash algorithm.

Syntax

config sys set hash-calc getmltindex traffic-type {non-ip|ipv4|ipv6} dest-val <value> src-val <value> mltID <value> [src-port <value>] [dst-port <value>]

Parameters

Variable	Value
dest-val <value>	Specifies the destination IP or MAC address (string length from 1–1536). The source and destination addresses cannot have the same value.
dst-port <value>	Specifies the TCP or UDP destination port in the range 0–65535.
src-port <value>	Specifies the TCP or UDP source port in the range 0–65535.
src-val <value>	Specifies the source IP or MAC address (string length from 1–1536). The source and destination addresses cannot have the same value.

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Variable	Value
mltID <value>	Specifies the MLT ID in the range 1–256.
traffic-type {non-ip|ipv4|ipv6}	Specifies the traffic type: One of non-ip, ipv4, or ipv6.

Default

None

Related commands

Variable	Value
getEcmpRoute src-ip <value> dest-ip <value> [vrf <value>]	Determines the ECMP route.

config vlacp enable

Use this command to enable the Virtual Link Aggregation Control Protocol (VLACP) globally.

Syntax

config vlacp <enable\|disable>

Parameters

None

Default

None

Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.

config vlacp

Use this command to configure VLACP on a port.

Syntax

config {ethernet\|pos} <portlist> vlacp

Parameters

Variable	Value
portlist	Specifies the portlist to configure in the slot/port format.

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Default

None

Related commands

Variable	Value
disable	Disables VLACP for a specific port type.
enable	Enables VLACP for a specific port type.
ethertype <integer>	Sets the VLACP protocol identification for this port. • **integer** is the ethertype value, an integer value in the range of 1 and 65535.
fast-periodic-time <milliseconds>	Sets the fast periodic time (in milliseconds) for a specific port type.
info	Shows current-level parameter settings and next-level directories.
macaddress <mac>	Sets the multicast MAC address used for the VLACPDU. • **mac** is the MAC address in the following format: 0x00:0x00:0x00:0x00:0x00:0x00
<portlist>	Specifies the slot and port number, or a list of ports in the format: {slot/port[-slot/port][,...]}
slow-periodic-time <milliseconds>	Sets the slow periodic time (in milliseconds) for a specific port type.
timeout {long|short}	Sets the port to use the long or short time-out: • **long** sets the port to use the timeout-scale value multiplied by the slow-periodic-time. • **short** sets the port to use the timeout-scale value multiplied by the fast-periodic-time.

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Variable	Value
	For example, if you specify a short time-out, set the timeout-scale value to 3, and the fast-periodic-time to 400 ms, the timer expires within 1000 to 1200 ms.
timeout-scale <integer>	Sets a time-out scale for a specific port-type (where timeout-scale = periodic-time x timeout-scale). The default value is 3. • **integer** is the time-out scale, an integer value in the range 2 to 10.

show lacp info

Use this command to display global LACP configuration information.

Syntax

show lacp info

Parameters

None

Default

None

Related commands

None

show vlacp info

Use this command to display VLACP global information.

Syntax

show vlacp info

Parameters

None

Default

None

Related commands

None

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show ports info lacp

Use this command to determine the LACP parameters and to ensure your configuration is correct.

Syntax

show ports info lacp

Parameters

None

Default

None

Related commands

Variable	Value
actor-admin [vlan <value>] [port <value>]	Shows port LACP actor administrative information. • **vlan value** is the VLAN ID. • **port value** is the port or port list.
actor-oper [vlan <value>] [port <value>]	Shows port LACP actor operational information. • **vlan value** is the VLAN ID. • **port value** is the port or port list.
all [vlan <value>] [port <value>]	Shows all port LACP information. • **vlan value** is the VLAN ID. • **port value** is the port or port list.
extension [vlan <value>] [port <value>]	Shows port LACP timer information. • **vlan value** is the VLAN ID. • **port value** is the port or port list.
partner-admin [vlan <value>] [port <value>]	Shows port LACP partner administrative information. • **vlan value** is the VLAN ID. • **port value** is the port or port list.
partner-oper [vlan <value>] [port <value>]	Shows port LACP partner operational information. • **vlan value** is the VLAN ID. • **port value** is the port or port list.

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show mlt lacp

Use this command to view MLT LACP configuration information for aggregators.

Syntax

show mlt lacp info <ifindex>

Parameters

Variable	Value
ipaddr	Specifies the ifindex in the range of 64 to 6399.

Default

None

Related commands

None

show mlt show-all

Use this command to display MLT information.

Syntax

show mlt show-all [file <value>]

Parameters

Variable	Value
<value>	Specifies the file name to which the output is directed.

Default

None

Related commands

None

show mlt error collision

Use this command to display information about collision errors.

Syntax

show mlt error collision [<mid>]

Parameters

Variable	Value
<mid>	Specifies the MLT ID.

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Default

None

Related commands

None

show mlt error main

Use this command to display information about Ethernet errors.

Syntax

show mlt error main [<mid>]

Parameters

Variable	Value
<mid>	Specifies the MLT ID.

Default

None

Related commands

None

show mlt info

Use this command to display the status of MultiLinkTrunking for the switch or for the specified MLT ID.

Syntax

show mlt info [<mid>]

Parameters

Variable	Value
<mid>	Specifies the MLT ID.

Default

None

Related commands

None

show mlt info

Use this command to display IST status.

Syntax

show mlt info [<mid>]

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Parameters

Variable	Value
`<mid>`	Specifies the MLT ID.

Default

None

Related commands

None

show smlt

Use this command to display SMLT status.

Syntax

`show smlt`

Parameters

None

Default

None

Related commands

None

show ports info smlt

Use this command to display all ports configured for single port SMLT.

Syntax

`show ports info smlt [<vlan <value>] [port <value>]`

Parameters

Variable	Value
`vlan <value>`	Specifies the VLAN ID. The range is between 1 and 4094.
`port <value>`	Specifies the port.

Default

The default value is 1.

Related commands

None

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show ports info config

Use this command to display a port configured for Single Port SMLT.

Syntax

show ports info config [<vlan <value>] [port <value>]

Parameters

Variable	Value
port <value>	Specifies a port or list of ports.
vlan <value>	Specifies a VLAN ID or list of VLAN IDs.

Default

None

Related commands

None

show ports info vlacp

Use this command to display VLACP port configuration.

Syntax

show ports info vlacp [vlan <value>] [port <value>]

Parameters

Variable	Value
vlan <value>	Specifies the VLAN ID.
port <value>	Specifies the portlist to configure in the slot/port format.

Default

None

Related commands

None

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MPLS services commands

This chapter describes the Ethernet Routing Switch 8600 Multiprotocol Label Switching (MPLS) services commands.

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config ethernet

Use this command to assign an IP address to all MPLS trunk ports.

Syntax

config ethernet <ports> ip create <ipaddr/mask> <vid> [mac_offset <value>]

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.
ipaddr/mask	Specifies the IP address and subnet mask for this port.

Default

None

Related commands

Variable	Value
delete <ipaddr>	Deletes an IP address from a port.

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Variable	Value
info	Displays current level parameter settings and next level directories.
Rvs-Path-Chk <enable|disable> [mode <value>]	Enables or disable Reverse Path Checking. **[mode <value>]** is the mode for reverse path checking {exist-only|strict}.

config ethernet ip ospf

Use this command to enable OSPF on all MPLS trunk ports.

Syntax

config ethernet <ports> ip ospf enable

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.
ipaddr/mask	Specifies the IP address and subnet mask for this port

Default

None

Related commands

None

config ip circuitless-ip-int

Use this command to define a CLIP address on the switch .

Syntax

config ip circuitless-ip-int <id> create <ipaddr/mask>

Parameters

Variable	Value
id	Specifies a value for the CLIP address in the range 1–32.
ipaddr/mask	Specifies the IP address and mask in the following formats: • a.b.c.d/x • a.b.c.d/x.x.x.x • default

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Default

None

Related commands

Variable	Value
id	Specifies a value for the CLIP address in the range 1–32.
ipaddr/mask	Specifies the IP address and mask in the following formats: • a.b.c.d/x • a.b.c.d/x.x.x.x • default

config ip circuitless-ip-int ospf

Use this command to configure OSPF on the CLIP.

Syntax

config ip circuitless-ip-int <id> ospf enable

Parameters

Variable	Value
id	Specifies a value for the CLIP address in the range 1–32.
ipaddr/mask	Specifies the IP address and mask in the following formats: • a.b.c.d/x • a.b.c.d/x.x.x.x • default

Default

None

Related commands

Variable	Value
id	Specifies a value for the CLIP address in the range 1–32
ipaddr/mask	Specifies the IP address and mask in the following formats: • a.b.c.d/x • a.b.c.d/x.x.x.x • default

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config ip ospf router-id

Use this command to configure the OSPF router ID with the same address as the CLIP.

Syntax

config ip ospf router-id <ipaddr>

Parameters

Variable	Value
ipaddr	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

None

config ip ospf enable

Use this command to enable OSPF.

Syntax

config ip ospf enable

Parameters

None

Default

None

Related commands

None

config mpls router-id

Use this command to specify the CLIP address that you want the switch to use as the router ID.

Syntax

config mpls router-id <ipaddr> [-y]

Parameters

Variable	Value
ipaddr	Specifies the IP address in the [a.b.c.d} format.

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Default

None

Related commands

None

config mpls ldp state

Use this command to configure Label Distribution Protocol (LDP) globally.

Syntax

config mpls ldp state enable

Parameters

None

Default

None

Related commands

Variable	Value
egress-policy info	Shows information about the egress policy and how routes are distributed.
egress-policy redist-connected <enable|disable>	The Ethernet Routing Switch 8600 is the egress router for connected routes that are advertised into LDP. This setting determines how those prefixes are redistributed. When redist-connected is enabled, the router acts as the egress router for all connected routes. When redist-connected is disabled, the router acts as the egress router for loopback addresses only. The default is enable.
hello-holdtime <seconds>	Specifies the interval (in seconds) that the system remembers an LDP neighbor without receiving a Hello message. The timer restarts to this value whenever the system receives a Hello message from a peer. If the timer expires before another Hello message is received, the system terminates the Hello adjacency. Changes to this setting do not affect existing LDP sessions. **seconds** is a number between 5–65535. The default hold time is 15 seconds.

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Variable	Value
info	Shows information about the current LDP settings.
loop-detect-hop-count-limit <disable|integer_range>	Specifies the maximum number of hops permitted in a Label Request message. The router assumes the path is a loop if the hop count parameter exceeds this value. Then the router does not respond with a Label Mapping message, and it does not propagate the Label Request. Changes to this setting do not affect existing LDP sessions. The allowed range of values is disable or an integer from 1–255. The default is disable.
loop-detect-path-vector-limit <disable|integer_range>	Specifies the maximum path vector length permitted in a Label Request message. The router assumes the path is a loop if the vector length is equal to or greater than this value (or if the router LSR ID is present in the path vector. Then the router does not respond with a Label Mapping message, and it does not propagate the Label Request. Changes to this setting do not affect existing LDP sessions. The allowed range of values is disable or an integer from 1–255. The default is disable.
path-vector-limit-traps <enable|disable>	Sets an SNMP trap when paths meet or exceed the path vector limit. The default is disable.
php <implicit-null|explicit-null|disabled> [-y]	Defines how LDP supports Penultimate Hop Popping (PHP). The default is implicit-null. • **implicit-null** causes the upstream LSR to pop the label stack if it is the penultimate (next-to-last) hop in the MPLS network. • **explicit-null** causes the upstream LSR to treat this label value like a normal label before sending the packet to the egress router. However, when the egress router receives a packet with this label, it automatically pops off the label stack entry and classifies and forwards the packet based on the next inner label. If there is no

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Variable	Value
	inner label, it uses the encapsulated packet header. • **disabled** does not specify PHP behavior to upstream routers, and distributes labels in the normal range of 2064-524288. All LDP sessions restart when you change this setting, and the new value takes effect immediately. The default is disabled.
session-keepalive <seconds>	Specifies the interval (in seconds) between LDP keepalive messages sent to neighbors or interfaces. The allowed range is 15–65535 seconds, and the default is 5.
state <enable|disable>	Administratively disables or enables LDP. The default is disable.
status-traps <enable|disable>	Sets an SNMP trap when there is an LDP status change. The default is disable.
threshold-traps <enable|disable>	Sets an SNMP trap when the session exceeds the threshold. The default is disable.

config ethernet ip mpls

Use this command to configure LDP for Ethernet.

Syntax

config ethernet <ports> ip mpls

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
info	Shows the global MPLS information

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Variable	Value
ldp hello-holdtime {global | <seconds>} [-y]	Configures the period of time (in seconds) that an interface remembers an LDP neighbor without receipt of an LDP hello message from that neighbor. **global** means the interface will use the same value as the currently configured value for global LDP Hello Holdtime. **seconds** is any number between 5–65535. The default hold time is global.
ldp import-policy <all | host-only> [-y]	Configures the LDP import policy behavior. If set to host-only: • Host routes (/32 routes) are active. The data path for host routes is programmed. • Non-host routes (non /32 routes) are retained but inactive. The data path for nonhost routes is not programmed. If set to all, all routes with valid IGP routes are active. The default import policy behavior is all.
ldp info	Shows the LDP information for the specified interface
ldp session-keepalive {global | <seconds>} [-y]	Configures the LDP Session Keepalive on the interface. **global** means the interface will use the same value as the currently configured value or global LDP Session Keepalive. **seconds** is any number between 15–65535. The default setting for session-keepalive is global.
ldp state <enable | disable>	Indicates whether or not LDP is enabled on the interface.

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Variable	Value
ldp transport-address <interface|router-id> [-y]	Configures the transport address of the LDP LSP. If no interface is specified, the switch uses MPLS router-ID for the transport address.
mtu <bytes> [-y]	Sets the maximum transmission size of frames for all the ports on the chassis. The supported range is between 64–9600. The default MTU is 1500.

config vlan ip mpls

Use this command to configure LDP for VLANs.

Syntax

config vlan <vid> ip mpls

Parameters

Variable	Value
<vid>	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

Variable	Value
info	Shows the global MPLS information
ldp hello-holdtime {global|<seconds>} [-y]	Configures the period of time (in seconds) that an interface remembers an LDP neighbor without receipt of an LDP hello message from that neighbor. **global** means the interface will use the same value as the currently configured value for global LDP Hello Holdtime. **seconds** is any number between 5–65535. The default hold time is global.
ldp import-policy <all|host-only|none> [-y]	Configures the LDP import policy behavior. If set to host-only, only the host can import policies. If set to all, all VLANs can import policies. The default import policy behavior is all.

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Variable	Value
ldp info	Shows the LDP information for the specified VLAN
ldp session-keepalive {global|<seconds>} [-y]	Configures the LDP Session Keepalive on the interface. **global** means the interface will use the same value as the currently configured value or global LDP Session Keepalive. **seconds** is any number between 15–65535. The default setting for session-keepalive is global.
ldp state <enable|disable>	Indicates whether or not LDP is enabled on the VLAN
ldp transport-address <interface|router-id> [-y]	Configures the transport address of the LDP LSP. If no interface is specified, the switch uses MPLS router-ID for the transport address.
mtu <bytes> [-y]	Sets the maximum transmission size of frames for all the ports on the chassis. The supported range is between 64–9600. The default MTU is 1500.

config vlan ip mpls rsvp hello-interval

Use this command to specify RSVP Hello Interval.

Syntax

config vlan <vid> ip mpls rsvp hello-interval {global|<seconds>}

Parameters

Variable	Value
<vid>	Specifies the VLAN ID in the range of 1 to 4094.

Default

None

Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.

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Variable	Value
message-bundling <enable|disable|global>	Enables, disables, or resets message-bundling on the interface.
refresh-interval {global|<seconds>}	Refresh intervals. **{global|<seconds>}** refresh intervals in seconds <global | 1..65535>.
refresh-multiplier {global|<integer>}	Refresh multiplier. **{global|<integer>}** refresh intervals in seconds <global | 1..255>.
refresh-reduction <enable|disable|global>	Refresh reduction.
state <enable|disable>	Enables or disables RSVP at the specified interface. **<enable|disable>** enables or disables a feature.

config mpls rsvp

Use this command to configure Resource ReSerVation Protocol (RSVP) globally.

Syntax

config mpls rsvp

Parameters

None

Default

None

Related commands

Variable	Value
hello-interval <seconds>	Configures the RSVP hello interval (in seconds). The range is from 0–65535 seconds, and the default is 10. When set to 0, no hellos are sent.
info	Shows the current RSVP configuration information

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Variable	Value
message-bundling <enable|disable>	Bundles messages from different interfaces that are going to the same final destination. The default is enable.
php <implicit-null|explicit-null|disabled>	Configures penultimate hop pop support on the node. The default is disabled.
refresh-interval <seconds>	Configures the RSVP refresh interval (in seconds). The range is from 1–65535 seconds, and the default is 30.
refresh-multiplier <integer>	Configures the refresh multiplier (in seconds). When the node receives a ResvErr message, this value multiplied times the refresh interval determines how long to set the blockade timer. (For more information, see RFC 2205.) The range of values is from 1–255, and the default is 3.
refresh-reduction <enable|disable>	Configures whether or not to send RSVP summary refresh messages. The default is enable.
state <enable|disable>	Administratively enables or disables RSVP. When set to disable, it brings down RSVP on the whole switch. The default is disable.
tunnel-traps <enable|disable>	Configures whether or not to send trap messages when RSVP LSPs change their state.

config ethernet ip mpls

Use this command to configure RSVP for Ethernet.

Syntax

config ethernet <ports> ip mpls

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

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Related commands

Variable	Value
info	Shows the current RSVP configuration information for this interface.
mtu <bytes>	Sets the maximum transmission size of frames for all the ports on the chassis. The supported range is between 64–9600. The default MTU is 1500.
rsvp hello-interval {global | <seconds>}	Configures the RSVP hello interval (in seconds). The range is global or a value from 1–65535 seconds. The default is global.
rsvp info	Shows the current RSVP configuration information.
rsvp message-bundling <enable | disable | global >	Bundles messages from different interfaces that are going to the same final destination. The default is global.
rsvp refresh-interval {global | <seconds>}	Configures the RSVP refresh interval (in seconds). The range is from 1–65535 seconds, and the default is global.
rsvp refresh-multiplier {global | <integer>}	Configures the refresh multiplier (in seconds). When the node receives a ResvErr message, this value multiplied times the refresh interval determines how long to set the blockade timer. (For more information, see RFC 2205.) The range of values is from 1–255, and the default is global.
rsvp refresh-reduction <enable | disable | global >	Configures whether or not to send RSVP summary refresh messages. The default is global.
rsvp state <enable | disable>	Administratively enables or disables RSVP. When set to disable, it brings down RSVP on this interface only. The default is disable.

config vlan ip mpls

Use this command to configure RSVP for VLANs.

Syntax

config vlan <vid> ip mpls

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Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

Variable	Value
info	Shows the current RSVP configuration information for this VLAN.
mtu <bytes>	Sets the maximum transmission size of frames for all the ports on the chassis. The supported range is between 64–9600. The default MTU is 1500.
rsvp hello-holdtime {global | <seconds>}	Configures the RSVP hello interval (in seconds). The range is global or a value from 1–65535 seconds. The default is global.
rsvp info	Shows the current RSVP configuration information.
rsvp message-bundling <enable | disable | global>	Bundles messages from different interfaces that are going to the same final destination. The default is enable.
rsvp refresh-interval {global | <seconds>}	Configures the RSVP refresh interval (in seconds). The range is from 1–65535 seconds, and the default is global.
rsvp refresh-multiplier {global | <integer>	Configures the refresh multiplier (in seconds). When the node receives a ResvErr message, this value multiplied times the refresh interval determines how long to set the blockade timer. (For more information, see RFC 2205.) The range of values is from 1–255, and the default is global.

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Variable	Value
rsvp refresh-reduction <enable|disable|global>	Configures whether or not to send RSVP summary refresh messages. The default is global.
rsvp state <enable|disable>	Administratively enables or disables RSVP. When set to disable, it brings down RSVP on this VLAN only. The default is disable.

config mpls rsvp resource

Use this command to configure RSVP LSP resource.

Syntax

config mpls rsvp resource <tunnel_resource_index> create <bandwidth_value (Kbps)>

Parameters

Variable	Value
<tunnel_resource_index>	Enter a value from 1–255.

Default

None

Related commands

Variable	Value
create <bandwidth_value (Kbps)>	Enter a value from 1–2147483647.
delete	Deletes the specified resource.
info	Shows the current RSVP resource information.

config mpls rsvp explicit-path

Use this command to configure RSVP explicit paths.

Syntax

config mpls rsvp explicit-path <name> delete
config mpls rsvp explicit-path <name> hop <hop_index> address <ipaddr> [type <value>]
config mpls rsvp explicit-path <name> hop <hop_index> type <strict\|loose>

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Parameters

Variable	Value
hop <hop_index> address <ipaddr> [type <strict|loose>]	Defines the hops in the explicit path. Enter a hop index and address to create an entry in the hop table. Repeat this command as often as necessary to configure the whole path. • **hop <hop_index>** specifies the index value assigned to this hop. The index determines the order of the hop in the list of configured hops (lower to higher). For example, the path goes to hop 1, and then hop 2. **ATTENTION** After configuring an explicit path for an enabled LSP primary or secondary path, do not change the explicit path. Disable the LSP primary or secondary path before modifying the explicit path. • **address <ipaddr>** specifies the IP address of this hop. **type <strict|loose>** enables you to specify a strict or loose hop. This is an optional parameter.
hop <hop_index> delete	Deletes this specified hop in the explicit path
hop <hop_index> info	Provides information regarding the hops in this path.
hop <hop_index> type <strict|loose>	Specifies whether the hop follows a loose (default) or strict path. • **strict** refers to a strictly-defined path where the path from the previous router to this router must be direct. • **loose** refers to a loosely-defined path where the path from the previous router to this router does not have to be direct and can include other routers.

Default

None

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Related commands

ame	Value
`delete`	Deletes this explicit path
`info`	Displays current information for this explicit path

config mpls rsvp explicit-path hop

Use this command to display explicit-path hop information.

Syntax

`config mpls rsvp explicit-path <name> hop <hop index> info`

Parameters

Variable	Value
`hop <hop_index> info`	Provides information regarding the hops in this path.

Default

None

Related commands

ame	Value
`delete`	Deletes this explicit path
`info`	Displays current information for this explicit path

config mpls rsvp lsp

Use this command to configure RSVP label switched paths.

Syntax

`config mpls rsvp lsp <lsp-name> create destination <ipaddr> [source <ipaddr>] [tunnel-id <value>]`

Parameters

Variable	Value
`create destination <ipaddr> [source <ipaddr>] [tunnel-id <value>]`	Creates an LSP. By default, the LSP uses the router ID as the source IP address.

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Variable	Value
destination <ipaddr> [-y]	Specifies the destination IP address of the egress node. This is required to create the LSP. **ATTENTION** If you change the destination IP address, it rebuilds the LSP. Therefore, you must confirm the change.
<lsp-name>	Names the LSP with a string from 0–32 characters
source <ipaddr> [-y]	Specifies the source IP address of the ingress node. This is an optional setting. If you do not specify a source, the source defaults to the router ID. **ATTENTION** If you change the destination IP address, it rebuilds the LSP. Therefore, you must confirm the change.

Default

None

Related commands

Variable	Value
bandwidth <tunnel_resource_index>	Specifies the value of the LSP resource index, which determines how much bandwidth the LSP can use. The range of values for the index is from 0–255. A value of 0 indicates that this LSP uses a best effort approach. Primary and secondary LSPs use this bandwidth value by default.
create destination <ipaddr> [source <ipaddr>] [tunnel-id <value>]	Creates an LSP. By default, the LSP uses the router ID as the source IP address.
delete	Deletes the specified LSP, including the primary and secondary LSPs
description <string>	Provides an optional description for the LSP using a string from 0–32 characters.

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Variable	Value
destination <ipaddr> [-y]	Specifies the destination IP address of the egress node. This is required to create the LSP. **ATTENTION** If you change the destination IP address, it rebuilds the LSP. Therefore, you must confirm the change.
fast-reroute <enable|disable> [-y}	Enables or disables Fast Rerouting of the RSVP LSP. This flag permits any hop to reroute the LSP when a fault is detected downstream. This mechanism enables the router to reroute traffic for fast service restoration. The default is disable. **ATTENTION** Fast Rerouting rebuilds the LSP. Therefore, you must confirm the change.
info	Displays current information for this LSP
<lsp-name>	Names the LSP with a string from 0–32 characters
source <ipaddr> [-y]	Specifies the source IP address of the ingress node. This is an optional setting. If you do not specify a source, the source defaults to the router ID. **ATTENTION** If you change the destination IP address, it rebuilds the LSP. Therefore, you must confirm the change.
state <enable|disable>	Enable brings up the LSP; disable brings down the LSP

config mpls rsvp lsp primary

Use this command to configure a primary LSP.

Syntax

config mpls rsvp lsp <lsp-name> primary create

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Parameters

Variable	Value
<lsp-name>	Specifies the LSP name. The string length ranges from 0 to 32.

Default

None

Related commands

Variable	Value
primary bandwidth <tunnel_resource_index>	Specifies the value of the LSP resource index, which determines how much bandwidth the primary LSP can use. The range of values for the index is from 0–255. A value of 0 indicates that this path uses the bandwidth value of the primary LSP. You can override the bandwidth by specifying an LSP resource index value. Once configured, this path always uses the configured bandwidth resource value even if the LSP bandwidth resource value changes. Primary and secondary LSPs use the LSP's bandwidth value by default.
create destination <ipaddr> [source <ipaddr>] [tunnel-id <value>]	Creates a primary LSP. By default, the LSP uses the router ID as the source IP address.
delete	Deletes this primary LSP.
explicit-path <explicit_path_name>	Specifies the name of an explicit path for this primary LSP to use.
primary info	Displays current information for this LSP.
primary record-route <enable|disable>	Checks whether or not RSVP can retain a record of this LSP after it is signaled.
primary state <enable|disable>	Enable brings up this primary LSP; disable brings down the LSP.

config mpls rsvp lsp secondary

Use this command to configure a LSP bandwidth.

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Syntax

config mpls rsvp lsp <lsp-name> secondary <tunnel resource index>

Parameters

Variable	Value
<lsp-name>	Specifies the LSP name. The string length ranges from 0 to 32.
<tunnel resource index>	Specifies the tunnel resource index in the range of 0 to 255.

Default

None

Related commands

Variable	Value
create	Applies RSVP to secondary LSP.
delete	Deletes RSVP to secondary LSP.
explicit-path <explicit_path _name>	Sets the explicit-path for RSVP secondary LSP.
secondary info	Displays current information for this LSP.
secondary record-route <enable|disable>	Enable or disable record-route.

config mpls rsvp static-ip

Use this command to configure a RSVP static FEC.

Syntax

config mpls rsvp static-ip create <ipaddr/mask> lsp <name>

Parameters

Variable	Value
create <ipaddr/mask> lsp <value>	Creates a static path. • **<ipaddr/mask>** • **value** is the name of the LSP.

Default

None

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Related commands

Variable	Value
delete <ipaddr/mask>	Deletes the static path
info	Displays current information for this static path

config mpls statistics transmit disable

Use this command to disable transmit statistics.

Syntax

config mpls statistics transmit disable

Parameters

None

Default

None

Related commands

Variable	Value
enable	Enables transmit statistics.
start-label <label#>	Specifies the MPLS start label.
info	Transmits MPLS statistics information.

switchover mpls rsvp lsp

Use this command to switchover MPLS RSVP LSP.

Syntax

switchover mpls rsvp lsp <lsp name>

Parameters

Variable	Value
<lsp name>	Specifies the RSVP LSP name {string length 1..32}.

Default

None

Related commands

None

show mpls statistics transmit

Use this command to transmit statistics.

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Syntax

show mpls statistics transmit [label <value>] [port <value>]

Parameters

Variable	Value
label <value>	Specifies the label for MPLS statistics in the range of 0 to 1048575.
port <value>	Specifies the port list for MPLS statistics.

Default

None

Related commands

None

show mpls

Use this command to show MPLS global information.

Syntax

show mpls info

Parameters

None

Default

None

Related commands

None

show mpls ftn

Use this command to display the FTN (Federal Transit Network), FEC (Forward Equivalence Class), or NHLFE (Next Hop Label Forwarding Entry) table information.

Syntax

show mpls ftn info [<ipaddress/mask>] [count-summary]

Parameters

Variable	Value
<ipaddress/mask>	Specifies the IP address and network mask.

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Default

None

Related commands

None

show mpls ilm

Use this command to display the Incoming Label Map table.

Syntax

show mpls ilm info [min-in-label <value>] [max-in-label <value>] [count-summary]

Parameters

Variable	Value
min-in-label <value>	Specifies the minimum incoming label range of 16 to 1048575
max-in-label <value>	Specifies the maximum incoming label range of 16 to 1048575

Default

None

Related commands

None

show mpls ldp statistics

Use this command to show commands to display statistics.

Syntax

show mpls ldp statistics [Peer IpAddress] [detail]
show mpls rsvp statistics [port <value>] [vlan <value>]
show mpls statistics receive [label <value>] [port <value>]
show mpls statistics info receive
show mpls statistics info transmit

Parameters

None

Default

None

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Related commands

Variable	Value
discovery [vlan <value>] [port <value>]	Specifies the IDP discovery information.
info	Displays global level IDP parameter settings.
interface [<port>] [detail] [vlan <value>]	Displays MPLS IDP interface information.
path [Fec address <a.b.c.d/x | a.b.c.d/x.x.x.x | default>] [min-local-label <value>] [max-local-label <value>]	Specifies the IDP path information.
peer-address [Peer IpAddress]	Specifies the IDP peer-address information.
route [destination address/mask]	Specifies the IDP route information.
session [Peer IpAddress]	Specifies the IDP session information.
show-all [file <value>]	Displays all MPLS IDP information.
summary	Specifies IDP instance general information.

show mpls rsvp info

Use this command to display global information that applies to all RSVP interfaces.

Syntax

show mpls rsvp info

Parameters

None

Default

None

Related commands

None

show mpls rsvp interface

Use this command to display information about a specific RSVP interface.

Syntax

show mpls rsvp interface [vlan <value>] [port <value>]

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Parameters

Variable	Value
port <value>>	Displays the slot/port number for this interface
vlan <value>	Displays the VLAN associated with this interface

Default

None

Related commands

None

show mpls rsvp lsp

Use this command to display information about all LSPs or for a specifically defined LSP.

Syntax

show mpls rsvp interface [vlan <value>] [port <value>]show mpls rsvp lsp [name <value>]

Parameters

Variable	Value
name <value>	Specifies the name of a specific LSP session.

Default

None

Related commands

None

show mpls rsvp neighbor

Use this command to display information about a learned neighbor.

Syntax

show mpls rsvp neighbor [detail]

Parameters

Variable	Value
detail	Displays all available information.

Default

None

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Related commands

None

show mpls rsvp paths

Use this command to display information about RSVP paths, including ones that are not currently operational.

Syntax

show mpls rsvp paths [name <lsp-name>] [type <ingress|transition|egress>] [detail] [disabled}

Parameters

Variable	Value
detail	Displays all available information about LDP interfaces
disabled	Displays information about LSPs that are not operational
type <ingress|transition|egress>	Displays information about three types of LSPs: egress, ingress, and transit
name <lsp-name>	Displays the RSVP FEC information for the specified LSP

Default

None

Related commands

None

show mpls rsvp explicit-path

Use this command to display the specific hops in the explicit path of the LSP.

Syntax

show mpls rsvp explicit-path [<explicit-path name>]

Parameters

Variable	Value
<explicit-path name>	Specifies the name of an explicit path.

Default

None

Related commands

None

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show mpls rsvp resource

Use this command to display the bandwidth used by RSVP.

Syntax

show mpls rsvp resource

Parameters

None

Default

None

Related commands

None

show mpls rsvp show-all

Use this command to display all of the RSVP information.

Syntax

show mpls rsvp show-all [file <value>]

Parameters

Variable	Value
file <value>	Defines the path and file name for a specific file such as one stored on a PCMCIA card.

Default

None

Related commands

None

show mpls rsvp static-ip

Use this command to display information about RSVP LSPs that are statically mapped to a destination IP address and mask.

Syntax

show mpls rsvp static-ip [<lsp name>]

Parameters

Variable	Value
<lsp name>	Specifies the name of a specific LSP session.

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Default

None

Related commands

None

show mpls rsvp summary

Use this command to display general information about all the RSVP activity on the switch.

Syntax

show mpls rsvp summary

Parameters

None

Default

None

Related commands

None

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Multicast Source Discovery Protocols commands

This chapter describes the Ethernet Routing Switch 8600 Multicast Source Discovery Protocols commands.

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config ip msdp

Use this command to enable MSDP.

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Syntax

config ip msdp <enable|disable>

Parameters

None

Default

None

Related commands

None

config ip msdp

Use this command to display configuration information about MSDP.

Syntax

config ip msdp info

Parameters

None

Default

None

Related commands

None

config ip msdp originator-id create

Use this command to create the originator ID.

Syntax

config ip msdp originator-id create <orig-address>
config ip msdp originator-id delete

Parameters

Variable	Value
<orig-address>	Specifies the IP address to be used as the originator ID in the {a.b.c.d} format.

Default

None

Related commands

None

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config ip msdp originator-id

Use this command to display configuration information about the originator ID.

Syntax

config ip msdp originator-id info

Parameters

None

Default

None

Related commands

None

config ip msdp peer

Use this command to create a peer.

Syntax

config ip msdp peer <peer-address> create

Parameters

Variable	Value
<peer-address>	Specifies the IP address of the router that is the MSDP peer in the {a.b.c.d} format.

Default

None

Related commands

None

config ip msdp peer connect-source

Use this command to specify the source IP address to initiate the MSDP connection.

Syntax

config ip msdp peer <peer-address> connect-source <local-address>

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Parameters

Variable	Value
`<peer-address>`	Specifies the IP address of the router that is the MSDP peer in the {a.b.c.d} format.
`<local-address>`	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

None

config ip msdp peer remote-as

Use this command to specify the autonomous system number of the MSDP peer.

Syntax

`config ip msdp peer <peer-address> remote-as <as-number>`
`config ip msdp peer <peer-address> create [connect-source <value>] [remote-as <value>]`

Parameters

Variable	Value
`<as-number>`	Specifies the autonomous system number.
`<peer-address>`	Specifies the IP address of the router that is the MSDP peer in the {a.b.c.d} format.

Default

None

Related commands

None

config ip msdp peer info

Use this command to display information about the peer configuration.

Syntax

`config ip msdp peer <peer-address> info`

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Parameters

Variable	Value
`<peer-address>`	Specifies the IP address of the router that is the MSDP peer in the {a.b.c.d} format.

Default

None

Related commands

None

config ip msdp peer description

Use this command to configure a peer.

Syntax

config ip msdp peer <peer-address> description <string>

Parameters

Variable	Value
`peer-address`	Specifies the IP address of the router that is the MSDP peer.
`string`	Specifies the text description, up to 255 characters, for the peer.

Default

None

Related commands

None

config ip msdp peer md5-authentication

Use this command to enable MD5 authentication.

Syntax

config ip msdp peer <peer-address> md5-authentication enable
config ip msdp peer <peer-address> md5-authentication disable

Parameters

Variable	Value
`peer-address`	Specifies the IP address of the router that is the MSDP peer.

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Default

None

Related commands

None

config ip msdp peer password

Use this command to configure the MD5 authentication password.

Syntax

config ip msdp peer <peer-address> password <password>
config ip msdp peer <peer-address> password del

Parameters

Variable	Value
password	Specifies a case-sensitive password, up to 80 characters, for MD5 authentication.

Default

None

Related commands

None

config ip msdp peer sa-limit

Use this command to configure the SA limit.

Syntax

config ip msdp peer <peer-address> sa-limit <sa-limit>

Parameters

Variable	Value
peer-address	Specifies the IP address of the router that is the MSDP peer.
sa-limit	Specifies the maximum number of SA messages from an MSDP peer to keep in the SA cache. The valid values are from 0–6144.

Default

The default value is 6144.

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Related commands

None

config ip msdp peer ttl-threshold

Use this command to configure the TTL threshold.

Syntax

config ip msdp peer <peer-address> ttl-threshold <ttl-value>

Parameters

Variable	Value
peer-address	Specifies the IP address of the router that is the MSDP peer.
ttl-value	Specifies the time-to-live value, from 0–255. The default value is 0, which means that the router advertises all SA messages.

Default

The default value is 0.

Related commands

None

config ip msdp peer keepalive

Use this command to configure the interval at which to send keepalive messages.

Syntax

config ip msdp peer <peer-address> keepalive <keepalive-interval>

Parameters

Variable	Value
keepalive-interval	Specifies the interval, in seconds, at which the MSDP peer sends keepalive messages. The range is from 0–21845 seconds. A value of 0 indicates the router does not send keepalive messages after the peers establish the MSDP session. If you assign a value of 0, Nortel recommends that you configure holdtime-interval on the other side of the peer relationship as 0.

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Variable	Value
	To reset this value to the default and delete the current configuration, use the del option in the command **config ip msdp peer <peer-address> keepalive del**
peer-address	Specifies the IP address of the router that is the MSDP peer.

Default

The default is 60 seconds.

Related commands

None

config ip msdp peer holdtime

Use this command to configure the interval for which to wait for keepalive messages.

Syntax

config ip msdp peer <peer-address> holdtime <holdtime-interval>

Parameters

Variable	Value
peer-address	Specifies the IP address of the router that is the MSDP peer.
holdtime-interval	Specifies the interval, in seconds, at which the MSDP peer waits for keepalive messages from other peers before it declares them down. The range is from 0–65535 seconds. A value of 0 indicates the MSDP connection is not torn down due to the absence of messages from a peer. To reset this value to the default and delete the current configuration, use the del option in the command **config ip msdp peer <peer-address> holdtime del**

Default

The default is 75 seconds.

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Related commands

None

config ip msdp peer connect-retry

Use this command to configure the connect-retry period.

Syntax

config ip msdp peer <peer-address> connect-retry <connect-retry>

Parameters

Variable	Value
connect-retry	Specifies the interval, in seconds, at which the MSDP peer retries the connection, after the previous connection establishment to the peer fails. The range is from 1–65535 seconds. To reset this value to the default and delete the current configuration, use the del option in the command: **config ip msdp peer <peer-address> connect-retry del**
peer-address	Specifies the IP address of the router that is the MSDP peer.

Default

The default is 30 seconds.

Related commands

None

config ip msdp default-peer

Use this command to create a default peer.

Syntax

config ip msdp default-peer <peer-address> create [route-policy <value>]
config ip msdp default-peer <peer-address> delete

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Parameters

Variable	Value
peer-address	Specifies the IP address of the router that is the MSDP peer.
policy-name	Specifies the route policy name to associate with the default peer. To delete the route policy association, use the del option in the command: **config ip msdp default-peer <peer-address> route-policy <policy-name> del**

Default

None

Related commands

None

config ip msdp default-peer info

Use this command to display information about the default peer configuration.

Syntax

config ip msdp default-peer <peer-address> info

Parameters

Variable	Value
peer-address	Specifies the IP address of the router that is the MSDP peer.

Default

None

Related commands

None

config ip msdp default-peer route-policy

Use this command to change or delete the route policy associated with the default peer.

Syntax

config ip msdp default-peer <peer-address> route-policy [<policy-name>]

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Parameters

Variable	Value
peer-address	Specifies the IP address of the router that is the MSDP peer.
policy-name	Specifies the route policy name to associate with the default peer. To delete the route policy association, use the del option in the command: **config ip msdp default-peer <peer-address> route-policy <policy-name> del**

Default

None

Related commands

None

config ip msdp implicit-default-peer

Use this command to create an implicit default peer.

Syntax

config ip msdp implicit-default-peer <enable|disable>

Parameters

None

Default

None

Related commands

None

config ip msdp peer enable

Use this command to enable the peer.

Syntax

config ip msdp peer <peer-address> <enable|disable>

Parameters

Variable	Value
peer-address	Specifies the IP address of the router that is the MSDP peer.

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Default

None

Related commands

None

clear ip msdp peer

Use this command to clear the peer connection.

Syntax

clear ip msdp peer <peer-address>

Parameters

Variable	Value
peer-address	Specifies the IP address of the MSDP peer.

Default

None

Related commands

None

config ip msdp peer delete

Use this command to delete an MSDP peer.

Syntax

config ip msdp peer <peer-address> delete

Parameters

Variable	Value
peer-address	Specifies the IP address of the router that is the MSDP peer.

Default

None

Related commands

None

config ip access-list extended

Use this command to create an extended ACL with a prefix entry.

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Syntax

config ip access-list extended <name> add-prefix <ipaddr/mask> <ipaddr/mask>
config ip access-list extended <name> remove-prefix <ipaddr/mask> <ipaddr/mask>

Parameters

Variable	Value
extended-access-list	Specifies the name of the extended ACL to associate with the route policy.
ipaddr/mask	Specifies the IP address and mask for the source, and then the destination.
name	Specifies the name, up to 255 characters, for the extended ACL.

Default

None

Related commands

Variable	Value
clear	Clears the association between the extended ACL and the route policy.
policy-name	Specifies the route policy name (1–64 characters in length).
seq number	Specifies the integer sequence number in the range of 1–65535. A sequence number acts as an implicit preference; a lower sequence number takes preference.

config ip access-list extended delete

Use this command to delete an extended ACL and all associated prefix entries.

Syntax

config ip access-list extended <name> delete

Parameters

Variable	Value
name	Specifies the name, up to 255 characters, for the extended ACL.

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Default

None

Related commands

Variable	Value
clear	Clears the association between the extended ACL and the route policy.
extended-access-list	Specifies the name of the extended ACL to associate with the route policy.
policy-name	Specifies the route policy name (1–64 characters in length).
seq number	Specifies the integer sequence number in the range of 1–65535. A sequence number acts as an implicit preference; a lower sequence number takes preference.

config ip route-policy

Use this command to associate an extended ACL with a route policy.

Syntax

config ip route-policy <policy-name> seq <seq number> match-extended-prefix <extended-access-list> [clear]

Parameters

Variable	Value
policy-name	Specifies the route policy name (1–64 characters in length).

Default

None

Related commands

Variable	Value
clear	Clears the association between the extended ACL and the route policy.
extended-access-list	Specifies the name of the extended ACL to associate with the route policy.
seq number	Specifies the integer sequence number in the range of 1–65535. A sequence number acts as an implicit preference; a lower sequence number takes preference.

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config ip access-list extended

Use this command to display configuration information about extended ACLs.

Syntax

config ip access-list extended <name> info

Parameters

Variable	Value
<name>	Specifies the name, up to 255 characters, for the extended ACL.

Default

None

Related commands

config ip msdp redistribute create

Use this command to enable the redistribution filter.

Syntax

config ip msdp redistribute create [route-policy <value>]

Parameters

Variable	Value
policy name	Specifies the name of the optional route policy to create or modify. You do not need to create a route policy to use the redistribution filter.

Default

None

Related commands

None

config ip msdp redistribute delete

Use this command to disable the redistribution function.

Syntax

config ip msdp redistribute delete

Parameters

None

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Default

None

Related commands

None

config ip msdp redistribute route-policy

Use this command to delete a route policy associated with the redistribution.

Syntax

config ip msdp redistribute route-policy [<policy name>] del

Parameters

Variable	Value
policy name	Specifies the name of the optional route policy to create or modify. You do not need to create a route policy to use the redistribution filter.

Default

None

Related commands

None

config ip msdp redistribute apply

Use this command to apply the changes to the redistribution filter.

Syntax

config ip msdp redistribute apply

Parameters

None

Default

None

Related commands

None

config ip msdp redistribute info

Use this command to display configuration information about the redistribution filter.

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Syntax

config ip msdp redistribute info

Parameters

None

Default

None

Related commands

None

config ip msdp peer sa-filter create

Use this command to create the filter.

Syntax

config ip msdp peer <peer-address> sa-filter <in|out> create [route-policy <value>]

Parameters

Variable	Value
<in|out>	Creates or modifies an inbound or outbound SA filter for this peer.
peer-address	Specifies the IP address of the router that is the MSDP peer.

Default

None

Related commands

None

config ip msdp peer sa-filter route-policy

Use this command to delete a route policy associated with the filter.

Syntax

config ip msdp peer <peer-address> sa-filter <in|out> route-policy <policy name> del

Parameters

Variable	Value
<in|out>	Creates or modifies an inbound or outbound SA filter for this peer.
peer-address	Specifies the IP address of the router that is the MSDP peer.

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Default

None

Related commands

None

config ip msdp sa-filter delete

Use this command to delete the filter.

Syntax

config ip msdp peer <peer-address> sa-filter <in|out> delete

Parameters

Variable	Value
<in|out>	Creates or modifies an inbound or outbound SA filter for this peer.
peer-address	Specifies the IP address of the router that is the MSDP peer.

Default

None

Related commands

None

config ip msdp sa-filter info

Use this command to display configuration information about SA filters.

Syntax

config ip msdp peer <peer-address> sa-filter <in|out> info

Parameters

Variable	Value
<in|out>	Creates or modifies an inbound or outbound SA filter for this peer.
peer-address	Specifies the IP address of the router that is the MSDP peer.

Default

None

Related commands

None

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config ip msdp mesh-group peer add

Use this command to add the MSDP peer to a mesh group.

Syntax

```
config ip msdp mesh-group <mesh-name> peer add
<peer-address>
config ip msdp mesh-group <mesh-name> peer delete
<peer-address>
```

Parameters

Variable	Value
mesh-name	Specifies the mesh group ID; the name of the mesh group from 1–64 characters.
peer-address	Specifies the IP address of the MSDP router that is the peer.

Default

None

Related commands

None

config ip msdp mesh-group info

Use this command to display configuration information about mesh groups.

Syntax

```
config ip msdp mesh-group <mesh-name> info
```

Parameters

Variable	Value
mesh-name	Specifies the mesh group ID; the name of the mesh group from 1–64 characters.

Default

None

Related commands

None

config ip msdp mesh-group peer

Use this command to display configuration information about a mesh group peer.

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Syntax

config ip msdp mesh-group <mesh-name> peer info

Parameters

Variable	Value
mesh-name	Specifies the mesh group ID; the name of the mesh group from 1–64 characters.

Default

None

Related commands

None

config ip msdp sa-cache

Use this command to clear the SA cache.

Syntax

config ip msdp sa-cache [peer <value>] [source <value>] [group <value>] [rp <value>]

Parameters

Variable	Value
group <value>	Optionally clears the SA entries that match the specified group range, in the format group-address/prefix-len.
peer <value>	Optionally clears only the entries the router learns from the peer address you specify.
rp <value>	Optionally clears the SA cache entries that match the specified RP address.
source <value>	Optionally clears the SA cache entries that match the specified source range in the format source-address/prefix-len.

Default

None

Related commands

None

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show ip msdp peer

Use this command to display peer information.

Syntax

```
show ip msdp peer [<peer-address>] [<accepted-sas|advertised-sas>]
```

Parameters

Variable	Value
`accepted-sas|advertised-sas`	Optionally shows either the SA messages MSDP accepts from or advertises to the peer. If you do not select one of these options, the results of this command show all MSDP peer information.
`peer-address`	Optionally specifies the IP address of the MSDP peer. If you do not specify an IP address, the results of this command show all MSDP peers.

Default

None

Related commands

None

show ip msdp sa-cache

Use this command to display the SA cache.

Syntax

```
show ip msdp sa-cache [local] [source <value>] [group <value>] [rp <value>]

show ip msdp peer [<peer-address>] [<accepted-sas|advertised-sas>]
```

Parameters

Variable	Value
`local`	Shows the local SA cache. If you do not use this variable, the results show the foreign cache by default.
`group <value>`	Optionally shows all cache entries that match the group address.

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Variable	Value
rp <value>	Optionally shows all cache entries that match the rendezvous point address.
source <value>	Optionally shows all cache entries that match the source address.

Default

None

Related commands

None

show ip msdp count

Use this command to display the MSDP count.

Syntax

show ip msdp count [<as-number>]

Parameters

Variable	Value
as-number	Optionally shows the MSDP count for a specific autonomous system, from 0–65535. If you do not specify an autonomous system number, the command results show global information.

Default

None

Related commands

None

show ip msdp summary

Use this command to display the MSDP summary.

Syntax

show ip msdp summary

Parameters

None

Default

None

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Related commands

None

show ip msdp rpf-peer

Use this command to display the RPF peer.

Syntax

show ip msdp rpf-peer <rp-address>

Parameters

Variable	Value
rp-address	Specifies the RP address of the multicast group for which you request the upstream RPF peer.

Default

Delete

Related commands

None

show ip msdp mesh-group

Use this command to display the mesh group.

Syntax

show ip msdp mesh-group [<mesh-group-name>]

Parameters

Variable	Value
mesh-group-name	Optionally specifies the name of a specific mesh group, from 1–64 characters, to include in the command results. If you do not specify a mesh group name, the results include all mesh groups.

Default

None

Related commands

None

show ip msdp sa-check source group

Use this command to display the SA check.

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Syntax

show ip msdp sa-check source <value> group <value> rp <value> [peer <value>]

Parameters

Variable	Value
group <value>	Specifies the group address as part of the received SA message.
peer <value>	Optionally checks whether the router can receive (S, G, RP) entries from this peer address. If you do not specify the peer address, the router uses the RPF peer calculated by using the RP address as the peer to validate the (S, G, RP) information. If you do specify the peer address, the router compares the RPF peer calculated by using the RP address against the peer address and if a match exists, the router validates the (S, G, RP) by using the peer inbound filter.
rp <value>	Specifies the RP address of the multicast group for which you request the upstream RPF peer.
source <value>	Specifies the source address as part of the received SA message.

Default

None

Related commands

None

show ip access-list extended

Use this command to display extended ACLs.

Syntax

show ip access-list extended [<name>]

Parameters

Variable	Value
name	Optionally specifies the name of an extended ACL, up to 255 characters, to include in the command results. If you do not specify a name, the command results include all ACLs.

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Default

None

Related commands

None

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OSPF and RIP

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config ethernet ip rip

Use this command to define the cost for the port (link).

Syntax

config ethernet <ports> ip rip cost <cost>

Parameters

Variable	Value
cost <cost>	Indicates the RIP cost for this interface. **<cost>** is an integer in the range of 1 to 15.
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

The default is 1.

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Related commands

Variable	Value
advertise-when-down <enable|disable>	Enables or disables AdvertiseWhenDown. If enabled, the network on this interface is advertised as up, even if the port is down. The default is disabled. When you configure a port with no link and enable advertise-when-down, it does not advertise the route until the port is active. Then the route is advertised even when the link is down. To disable advertising based on link status, this parameter must be disabled.
auto-aggr <enable|disable>	Enables or disables automatic route aggregation on the port. When enabled, the router switch automatically aggregates routes to their natural mask when they are advertised on an interface in a different class network. The default is disable.
cost <cost>	Configures the RIP cost for this port (link).
default-listen <enable|disable>	Enables or disables the switch to accept the default route learned through RIP on this interface. The default is disabled.
default-supply <enable|disable>	Enables or disables default route advertisements. Configure the value to true if a default route must be advertised out this interface. The default is false. The default route is advertised only if it exists in the routing table.
disable	Disables RIP on the port.
enable	Enables RIP on the port.
holddown <seconds>	Configures the RIP holddown timer value, the length of time (in seconds) that RIP continues to advertise a network after determining that it is unreachable. **<seconds>** is an integer from 0 to 360, with a default of 120.
in-policy <policy name>	Configures the port RIP in-policy. The policy name for inbound filtering on this RIP interface. This policy determines whether to learn a route on this interface. It also specifies the parameters of the route when it is added to the routing table. **<policy name>** is a string of length 0 to 64 characters.
info	Displays RIP characteristics on the port.

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Variable	Value
listen <enable|disable>	Enables or disables DefaultListen. If enabled, the switch listens for a default route without listening for all routes. Specifies that the routing switch learns RIP routes through this interface. The default is enable.
manualtrigger	Manually forces a RIP update.
out-policy <policy name>	Configures the port RIP out-policy. The policy name for outbound filtering on this RIP interface. This policy determines whether to advertise a route from the routing table on this interface. This policy also specifies the parameters of the advertisement. **<policy name>** is a string of length 0 to 64 characters.
poison <enable|disable>	Enables or disables Poison Reverse. If you enable poison, Poison Reverse is enabled. If you disable poison, Split Horizon is enabled. By default, Split Horizon is enabled. If Split Horizon is enabled, IP routes learned from an immediate neighbor are not advertised back to the neighbor. If Poison Reverse is enabled, the RIP updates sent to a neighbor from which a route is learned are poisoned with a metric of 16. Therefore, the receiver neighbor ignores this route because the metric 16 indicates infinite hops in the network. These mechanisms prevent routing loops.
supply <enable|disable>	**enable** specifies that the switch advertises RIP routes through the port. The default is enable.
timeout <seconds>	Configures the RIP time-out interval. **<seconds>** is the time-out interval as an integer from 15 to 259 200.
trigger <enable|disable>	Enables or disables automatically triggered updates for RIP.

config ethernet ip rip in-policy

Use this command to define in policies for filtering inbound RIP packets.

Syntax

config ethernet <ports> ip rip in-policy <policy name>

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Parameters

Variable	Value
in-policy <policy name>	Configures the port RIP in-policy. The policy name for inbound filtering on this RIP interface. This policy determines whether to learn a route on this interface. It also specifies the parameters of the route when it is added to the routing table. **<policy name>** is a string of length 0 to 64 characters.
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
advertise-when-down <enable|disable>	Enables or disables AdvertiseWhenDown. If enabled, the network on this interface is advertised as up, even if the port is down. The default is disabled. When you configure a port with no link and enable advertise-when-down, it does not advertise the route until the port is active. Then the route is advertised even when the link is down. To disable advertising based on link status, this parameter must be disabled.
auto-aggr <enable|disable>	Enables or disables automatic route aggregation on the port. When enabled, the router switch automatically aggregates routes to their natural mask when they are advertised on an interface in a different class network. The default is disable.
cost <cost>	Configures the RIP cost for this port (link).
default-listen <enable|disable>	Enables or disables the switch to accept the default route learned through RIP on this interface. The default is disabled.
default-supply <enable|disable>	Enables or disables default route advertisements. Configure the value to true if a default route must be advertised out this interface. The default is false. The default route is advertised only if it exists in the routing table.

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Variable	Value
disable	Disables RIP on the port.
enable	Enables RIP on the port.
holddown <seconds>	Configures the RIP holddown timer value, the length of time (in seconds) that RIP continues to advertise a network after determining that it is unreachable. **<seconds>** is an integer from 0 to 360, with a default of 120.
in-policy <policy name>	Configures the port RIP in-policy. The policy name for inbound filtering on this RIP interface. This policy determines whether to learn a route on this interface. It also specifies the parameters of the route when it is added to the routing table. **<policy name>** is a string of length 0 to 64 characters.
info	Displays RIP characteristics on the port.
listen <enable|disable>	Enables or disables DefaultListen. If enabled, the switch listens for a default route without listening for all routes. Specifies that the routing switch learns RIP routes through this interface. The default is enable.
manualtrigger	Manually forces a RIP update.
out-policy <policy name>	Configures the port RIP out-policy. The policy name for outbound filtering on this RIP interface. This policy determines whether to advertise a route from the routing table on this interface. This policy also specifies the parameters of the advertisement. **<policy name>** is a string of length 0 to 64 characters.
poison <enable|disable>	Enables or disables Poison Reverse. If you enable poison, Poison Reverse is enabled. If you disable poison, Split Horizon is enabled. By default, Split Horizon is enabled. If Split Horizon is enabled, IP routes learned from an immediate neighbor are not advertised back to the neighbor. If Poison Reverse is enabled, the RIP updates sent to a neighbor from which a route is learned are poisoned with a metric of 16. Therefore, the receiver neighbor ignores this route because the metric 16 indicates infinite hops in the network. These mechanisms prevent routing loops.

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Variable	Value
supply <enable|disable>	**enable** specifies that the switch advertises RIP routes through the port. The default is enable.
timeout <seconds>	Configures the RIP time-out interval. **<seconds>** is the time-out interval as an integer from 15 to 259 200.
trigger <enable|disable>	Enables or disables automatically triggered updates for RIP.

config ethernet ip rip out-policy

Use this command to define out policies for filtering outbound RIP packets.

Syntax

config ethernet <ports> ip rip out-policy <policy name>

Parameters

Variable	Value
out-policy <policy name>	Configures the port RIP out-policy. The policy name for outbound filtering on this RIP interface. This policy determines whether to advertise a route from the routing table on this interface. This policy also specifies the parameters of the advertisement. **<policy name>** is a string of length 0 to 64 characters.
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
advertise-when-down <enable|disable>	Enables or disables AdvertiseWhenDown. If enabled, the network on this interface is advertised as up, even if the port is down. The default is disabled. When you configure a port with no link and enable advertise-when-down, it does not advertise the route until the port is active.

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Variable	Value
	Then the route is advertised even when the link is down. To disable advertising based on link status, this parameter must be disabled.
auto-aggr <enable|disable>	Enables or disables automatic route aggregation on the port. When enabled, the router switch automatically aggregates routes to their natural mask when they are advertised on an interface in a different class network. The default is disable.
cost <cost>	Configures the RIP cost for this port (link).
default-listen <enable|disable>	Enables or disables the switch to accept the default route learned through RIP on this interface. The default is disabled.
default-supply <enable|disable>	Enables or disables default route advertisements. Configure the value to true if a default route must be advertised out this interface. The default is false. The default route is advertised only if it exists in the routing table.
disable	Disables RIP on the port.
enable	Enables RIP on the port.
holddown <seconds>	Configures the RIP holddown timer value, the length of time (in seconds) that RIP continues to advertise a network after determining that it is unreachable. **<seconds>** is an integer from 0 to 360, with a default of 120.
in-policy <policy name>	Configures the port RIP in-policy. The policy name for inbound filtering on this RIP interface. This policy determines whether to learn a route on this interface. It also specifies the parameters of the route when it is added to the routing table. **<policy name>** is a string of length 0 to 64 characters.
info	Displays RIP characteristics on the port.

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Variable	Value
listen <enable|disable>	Enables or disables DefaultListen. If enabled, the switch listens for a default route without listening for all routes. Specifies that the routing switch learns RIP routes through this interface. The default is enable.
manualtrigger	Manually forces a RIP update.
poison <enable|disable>	Enables or disables Poison Reverse. If you enable poison, Poison Reverse is enabled. If you disable poison, Split Horizon is enabled. By default, Split Horizon is enabled. If Split Horizon is enabled, IP routes learned from an immediate neighbor are not advertised back to the neighbor. If Poison Reverse is enabled, the RIP updates sent to a neighbor from which a route is learned are poisoned with a metric of 16. Therefore, the receiver neighbor ignores this route because the metric 16 indicates infinite hops in the network. These mechanisms prevent routing loops.
supply <enable|disable>	**enable** specifies that the switch advertises RIP routes through the port. The default is enable.
timeout <seconds>	Configures the RIP time-out interval. **<seconds>** is the time-out interval as an integer from 15 to 259 200.
trigger <enable|disable>	Enables or disables automatically triggered updates for RIP.

config ethernet ip rip enable

Use this command to enable RIP on the port.

Syntax

config ethernet <ports> ip rip enable

Parameters

Variable	Value
port <value>	**<value>** specifies the slot/port you want to show.
vlan <value>	**<value>** specifies the ID of the VLAN.

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Default

None

Related commands

Variable	Value
advertise-when-down <enable|disable>	Enables or disables AdvertiseWhenDown. If enabled, the network on this interface is advertised as up, even if the port is down. The default is disabled. When you configure a port with no link and enable advertise-when-down, it does not advertise the route until the port is active. Then the route is advertised even when the link is down. To disable advertising based on link status, this parameter must be disabled.
auto-aggr <enable|disable>	Enables or disables automatic route aggregation on the port. When enabled, the router switch automatically aggregates routes to their natural mask when they are advertised on an interface in a different class network. The default is disable.
cost <cost>	Configures the RIP cost for this port (link).
default-listen <enable|disable>	Enables or disables the switch to accept the default route learned through RIP on this interface. The default is disabled.
default-supply <enable|disable>	Enables or disables default route advertisements. Configure the value to true if a default route must be advertised out this interface. The default is false. The default route is advertised only if it exists in the routing table.
disable	Disables RIP on the port.
enable	Enables RIP on the port.
holddown <seconds>	Configures the RIP holddown timer value, the length of time (in seconds) that RIP continues to advertise a network after determining that it is unreachable. **<seconds>** is an integer from 0 to 360, with a default of 120.

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Variable	Value
in-policy <policy name>	Configures the port RIP in-policy. The policy name for inbound filtering on this RIP interface. This policy determines whether to learn a route on this interface. It also specifies the parameters of the route when it is added to the routing table. **<policy name>** is a string of length 0 to 64 characters.
info	Displays RIP characteristics on the port.
listen <enable|disable>	Enables or disables DefaultListen. If enabled, the switch listens for a default route without listening for all routes. Specifies that the routing switch learns RIP routes through this interface. The default is enable.
manualtrigger	Manually forces a RIP update.
out-policy <policy name>	Configures the port RIP out-policy. The policy name for outbound filtering on this RIP interface. This policy determines whether to advertise a route from the routing table on this interface. This policy also specifies the parameters of the advertisement. **<policy name>** is a string of length 0 to 64 characters.
poison <enable|disable>	Enables or disables Poison Reverse. If you enable poison, Poison Reverse is enabled. If you disable poison, Split Horizon is enabled. By default, Split Horizon is enabled. If Split Horizon is enabled, IP routes learned from an immediate neighbor are not advertised back to the neighbor. If Poison Reverse is enabled, the RIP updates sent to a neighbor from which a route is learned are poisoned with a metric of 16. Therefore, the receiver neighbor ignores this route because the metric 16 indicates infinite hops in the network. These mechanisms prevent routing loops.
supply <enable|disable>	**enable** specifies that the switch advertises RIP routes through the port. The default is enable.
timeout <seconds>	Configures the RIP time-out interval. **<seconds>** is the time-out interval as an integer from 15 to 259 200.
trigger <enable|disable>	Enables or disables automatically triggered updates for RIP.

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config ethernet action triggerRipUpdate

Use this command to force a RIP update for a port.

Syntax

config ethernet <slot/port> action triggerRipUpdate

Parameters

Variable	Value
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.
<slot/port>	Specifies the slot and port number.

Default

The default value is 1.

Related commands

None

config ethernet ip ospf area

Use this command to configure the OSPF interface area IP address for the port.

Syntax

config ethernet <ports> ip ospf area <ipaddr>

Parameters

Variable	Value
area <ipaddr>	Configures the OSPF identification number for the area, typically formatted as an IP address.

Default

None

Related commands

Variable	Value
advertise-when-down <enable|disable>	Enables or disables AdvertiseWhenDown. If enabled, the network on this interface is advertised as up, even if the port is down. The default is disabled. When you configure a port with no link and enable advertise-when-down, the route is not advertised until the port is active. Then the route is advertised

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Variable	Value
	even when the link is down. To disable advertising based on link status, this parameter must be disabled.
area <ipaddr>	Configures the OSPF identification number for the area, typically formatted as an IP address.
authentication-key <string>	Configures the authentication key for the port (OSPF interface). **<string>** specifies the key as a simple password with eight characters.
authentication-type <auth-type>	Configures the OSPF authentication type for the port: none, simple password, or MD5 authentication. If simple, all OSPF updates the interface receives must contain the authentication key that is specified by the area authentication-key command. If MD5, they must contain the MD5 key.
dead-interval <seconds>	Configures the router OSPF dead interval—the number of seconds the OSPF neighbors of a switch must wait before assuming that the OSPF router is down. **<seconds>** is a value from 1 to 2147836437; the default is 40. The value must be at least four times the Hello interval.
disable	Disables OSPF on the port.
enable	Enables OSPF on the port.
hello-interval <seconds>	Configures the OSPF Hello interval, which is the number of seconds between Hello packets sent on this interface. **<seconds>** is a value from 1 to 65535. The default is 10.
info	Displays OSPF characteristics of the port.
interface-type <if-type>	Specifies the type of OSPF interface. **<if-type>** is the OSPF interface type: broadcast, NBMA, or passive.
metric <cost>	Configures the OSPF metric associated with this interface and advertised in router link advertisements. **<cost>** is in the range from 0 to 65535; the default is 0.

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Variable	Value
poll-interval <seconds>	Configures the OSPF poll interval. **<seconds>** is in the range of 0 to 2147483647. The default is 120.
priority <integer>	Configures the OSPF priority for the port during the election process for the designated router. The port with the highest priority number is the best candidate for the designated router. If you configure the priority to 0, the port cannot become either the designated router or a backup designated router. **<integer>** is from 0 to 255. The default is 1.

config ethernet ip ospf authentication-type

Use this command to configure the authentication key.

Syntax

config ethernet <ports> ip ospf authentication-type <auth-type>
config ethernet <ports> ip ospf authentication-key <string>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet ip ospf interface-type

Use this command to specify the interface.

Syntax

config ethernet <ports> ip ospf interface-type <if-type>

Parameters

Variable	Value
interface-type <if-type>	Specifies the type of OSPF interface. **<if-type>** is the OSPF interface type: broadcast, NBMA, or passive.

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Default

None

Related commands

Variable	Value
advertise-when-down <enable|disable>	Enables or disables AdvertiseWhenDown. If enabled, the network on this interface is advertised as up, even if the port is down. The default is disabled. When you configure a port with no link and enable advertise-when-down, the route is not advertised until the port is active. Then the route is advertised even when the link is down. To disable advertising based on link status, this parameter must be disabled.
area <ipaddr>	Configures the OSPF identification number for the area, typically formatted as an IP address.
authentication-key <string>	Configures the authentication key for the port (OSPF interface). **<string>** specifies the key as a simple password with eight characters.
authentication-type <auth-type>	Configures the OSPF authentication type for the port: none, simple password, or MD5 authentication. If simple, all OSPF updates the interface receives must contain the authentication key that is specified by the area authentication-key command. If MD5, they must contain the MD5 key.
dead-interval <seconds>	Configures the router OSPF dead interval—the number of seconds the OSPF neighbors of a switch must wait before assuming that the OSPF router is down. **<seconds>** is a value from 1 to 2147836437; the default is 40. The value must be at least four times the Hello interval.
disable	Disables OSPF on the port.
enable	Enables OSPF on the port.
hello-interval <seconds>	Configures the OSPF Hello interval, which is the number of seconds between Hello packets sent on this interface. **<seconds>** is a value from 1 to 65535. The default is 10.
info	Displays OSPF characteristics of the port.

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Variable	Value
metric <cost>	Configures the OSPF metric associated with this interface and advertised in router link advertisements. **<cost>** is in the range from 0 to 65535; the default is 0.
poll-interval <seconds>	Configures the OSPF poll interval. **<seconds>** is in the range of 0 to 2147483647. The default is 120.
priority <integer>	Configures the OSPF priority for the port during the election process for the designated router. The port with the highest priority number is the best candidate for the designated router. If you configure the priority to 0, the port cannot become either the designated router or a backup designated router. **<integer>** is from 0 to 255. The default is 1.

config ethernet ip ospf

Use this command to ensure that OSPF is configured correctly.

Syntax

config ethernet <ports> ip ospf info
show ports info ospf [vlan <value>] [port <value>]

Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet ip ospf enable

Use this command to enable OSPF on the port.

Syntax

config ethernet <ports> ip ospf enable

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Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ip rip default-import-metric

Use this command to define the default-import-metric for the switch.

Syntax

config ip rip default-import-metric <metric>

Parameters

Variable	Value
default-import-metric <metric>	Configures the value of the default import metric to import a route into RIP domain. For announcing OSPF internal routes into RIP domain, if the policy does not specify a metric value, this value is used. For OSPF external routes, the external cost is used. **<metric>** configures the RIP Default Import Metric as an integer with a range of 0 to 15 and a default value is 8.
domain <value>	Changes RIP configuration domain. **value** is the domain value in the range of 0 to 39321.

Default

Default value is 8

Related commands

Variable	Value
disable	Globally disables RIP on the switch.
enable	Globally enables RIP on the switch.

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Variable	Value
holddown <seconds>	Configures the RIP hold-down timer value, which is the length of time (in seconds) that RIP continues to advertise a network after determining that it is unreachable. **<seconds>** is an integer from 0 to 360, with a default of 120.
info	Displays the global RIP configuration settings.
timeout <seconds>	Configures the RIP time-out interval. **<seconds>** is an integer from 15 to 259200.
updatetime <seconds>	Configures the RIP update timer. The update time is the time interval between RIP updates. **<seconds>** is an integer from 0 to 360, with a default of 30 seconds.

config ip rip enable

Use this command to enable RIP globally.

Syntax

config ip rip enable

Parameters

Variable	Value
enable	Globally enables RIP on the switch.

Default

None

Related commands

Variable	Value
default-import-metric <metric>	Configures the value of the default import metric to import a route into RIP domain. For announcing OSPF internal routes into RIP domain, if the policy does not specify a metric value, this value is used. For OSPF external routes, the external cost is used. **<metric>** configures the RIP Default Import Metric as an integer with a range of 0 to 15 and a default value 8.

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Variable	Value
disable	Globally disables RIP on the switch.
holddown <seconds>	Configures the RIP hold-down timer value, which is the length of time (in seconds) that RIP continues to advertise a network after determining that it is unreachable. **<seconds>** is an integer from 0 to 360, with a default of 120.
info	Displays the global RIP configuration settings.
timeout <seconds>	Configures the RIP time-out interval. **<seconds>** is an integer from 15 to 259200.
updatetime <seconds>	Configures the RIP update timer. The update time is the time interval between RIP updates. **<seconds>** is an integer from 0 to 360, with a default of 30 seconds.

config ip rip interface

Use this command to define the cost for this interface.

Syntax

config ip rip interface <ipaddr> cost <cost>

Parameters

Variable	Value
ipaddr	Specifies the IP address in the {a.b.c.d} format.
cost <cost>	Indicates the RIP cost for this interface. **<cost>** is an integer in the range of 1 to 15.

Default

The default is 1.

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Related commands

Variable	Value
auto-aggr <enable|disable>	Enables or disables automatic route aggregation on this interface. When enabled, the switch automatically aggregates routes to their natural mask when they are advertised on an interface. The default is disabled. (This configuration does not change the mask for all routes; instead it aggregates only the routes with a mask length longer than the natural mask.)
default-listen <enable|disable>	Enables or disables the switch to accept the default route learned through RIP on this interface. The default is disabled.
default-supply <enable|disable>	Enables or disables an advertisement of a default route on this interface. This command takes effect only if a default route exists in the routing table.
disable	Disables RIP on the interface. The default is disabled.
enable	Enables RIP on the interface.
holddown <seconds>	Configures the RIP hold-down timer for the interface in seconds. The range is 0 to 360. The default is 120.
in-policy <policy name>	Specifies the policy name for inbound filtering on this RIP interface. This policy determines whether to learn a route on this interface. It also specifies the parameters of the route when it is added to the routing table.
info	Displays the RIP configuration on this interface.
listen <enable|disable>	Enables or disables the switch ability to learn routes from this interface.
out-policy <policy name>	Specifies the policy name for outbound filtering on this RIP interface. This policy determines whether to advertise a route from the routing table on this interface. This policy also specifies the parameters of the advertisement.

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Variable	Value
poison <enable|disable>	Configures whether (enabled) or not (disabled) RIP routes on the interface learned from a neighbor are advertised back to the neighbor. If disabled, split horizon is invoked and IP routes learned from an immediate neighbor are not advertised back to the neighbor. If enabled, the RIP updates sent to a neighbor from which a route is learned, are poisoned with a metric of 16. Therefore, the receiver neighbor ignores this route because the metric 16 indicates infinite hops in the network.
receive-mode <mode>	Indicates which RIP update version is accepted on this interface. **<mode>** is rip1, rip2, or rip1orrip2. The default is rip1OrRip2.
send-mode <mode>	Indicates which RIP update version the router sends from this interface. ripVersion1 implies sending RIP updates that comply with RFC 1058. rip1Compatible implies broadcasting RIP2 updates using RFC 1058 route sub-assumption rules. The default is rip1Compatible. **<mode>** is notsend, rip1, rip2, or rip1comp.
supply <enable|disable>	Enables or disables the switch ability to send RIP updates from this interface.
timeout <seconds>	Configures the time-out interval in seconds. The interval is from 15 to 259200 s. The default is 180 s.
trigger <enable|disable>	Enables or disables automatic triggered updates for RIP on this interface.

config ip rip interface in-policy

Use this command to define in policies for filtering inbound RIP packets.

Syntax

config ip rip interface <ipaddr> in-policy <policy name>

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Parameters

Variable	Value
in-policy <policy name>	Specifies the policy name for inbound filtering on this RIP interface. This policy determines whether to learn a route on this interface. It also specifies the parameters of the route when it is added to the routing table.

Default

None

Related commands

Variable	Value
auto-aggr <enable|disable>	Enables or disables automatic route aggregation on this interface. When enabled, the switch automatically aggregates routes to their natural mask when they are advertised on an interface. The default is disabled. (This configuration does not change the mask for all routes; instead, it aggregates only the routes with a mask length longer than the natural mask.)
cost <cost>	Indicates the RIP cost for this interface. **<cost>** is an integer in the range of 1 to 15. The default is 1.
default-listen <enable|disable>	Enables or disables the switch to accept the default route learned through RIP on this interface. The default is disabled.
default-supply <enable|disable>	Enables or disables an advertisement of a default route on this interface. This command takes effect only if a default route exists in the routing table.
disable	Disables RIP on the interface. The default is disabled.
enable	Enables RIP on the interface.
holddown <seconds>	Configures the RIP hold-down timer for the interface in seconds. The range is 0 to 360. The default is 120.
info	Displays the RIP configuration on this interface.
listen <enable|disable>	Enables or disables the switch ability to learn routes from this interface.

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Variable	Value
out-policy <policy name>	Specifies the policy name for outbound filtering on this RIP interface. This policy determines whether to advertise a route from the routing table on this interface. This policy also specifies the parameters of the advertisement.
poison <enable|disable>	Configures whether (enabled) or not (disabled) RIP routes on the interface learned from a neighbor are advertised back to the neighbor. If disabled, split horizon is invoked and IP routes learned from an immediate neighbor are not advertised back to the neighbor. If enabled, the RIP updates sent to a neighbor from which a route is learned are poisoned with a metric of 16. Therefore, the receiver neighbor ignores this route because the metric 16 indicates infinite hops in the network.
receive-mode <mode>	Indicates which RIP update version is accepted on this interface. **<mode>** is rip1, rip2, or rip1orrip2. The default is rip1OrRip2.
send-mode <mode>	Indicates which RIP update version the router sends from this interface. ripVersion1 implies sending RIP updates that comply with RFC 1058. rip1Compatible implies broadcasting RIP2 updates using RFC 1058 route subassumption rules. The default is rip1Compatible. **<mode>** is notsend, rip1, rip2, or rip1comp.
supply <enable|disable>	Enables or disables the switch ability to send RIP updates from this interface.
timeout <seconds>	Configures the time-out interval in seconds. The interval is from 15 to 259200 s. The default is 180 s.
trigger <enable|disable>	Enables or disables automatic triggered updates for RIP on this interface.

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config ip rip interface out-policy

Use this command to define out policies for filtering outbound RIP packets.

Syntax

config ip rip interface <ipaddr> out-policy <policy name>

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.
out-policy <policy name>	Specifies the policy name for outbound filtering on this RIP interface. This policy determines whether to advertise a route from the routing table on this interface. This policy also specifies the parameters of the advertisement.

Default

None

Related commands

Variable	Value
auto-aggr <enable|disable>	Enables or disables automatic route aggregation on this interface. When enabled, the switch automatically aggregates routes to their natural mask when they are advertised on an interface. The default is disabled. (This configuration does not change the mask for all routes; instead, it aggregates only the routes with a mask length longer than the natural mask.)
cost <cost>	Indicates the RIP cost for this interface. **<cost>** is an integer in the range of 1 to 15. The default is 1.
default-listen <enable|disable>	Enables or disables the switch to accept the default route learned through RIP on this interface. The default is disabled.
default-supply <enable|disable>	Enables or disables an advertisement of a default route on this interface. This command takes effect only if a default route exists in the routing table.
disable	Disables RIP on the interface. The default is disabled.
enable	Enables RIP on the interface.

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Variable	Value
holddown <seconds>	Configures the RIP hold-down timer for the interface in seconds. The range is 0 to 360. The default is 120.
in-policy <policy name>	Specifies the policy name for inbound filtering on this RIP interface. This policy determines whether to learn a route on this interface. It also specifies the parameters of the route when it is added to the routing table.
info	Displays the RIP configuration on this interface.
listen <enable|disable>	Enables or disables the switch ability to learn routes from this interface.
poison <enable|disable>	Configures whether (enabled) or not (disabled) RIP routes on the interface learned from a neighbor are advertised back to the neighbor. If disabled, split horizon is invoked and IP routes learned from an immediate neighbor are not advertised back to the neighbor. If enabled, the RIP updates sent to a neighbor from which a route is learned, are poisoned with a metric of 16. Therefore, the receiver neighbor ignores this route because the metric 16 indicates infinite hops in the network.
receive-mode <mode>	Indicates which RIP update version is accepted on this interface. **<mode>** is rip1, rip2, or rip1orrip2. The default is rip1OrRip2.
send-mode <mode>	Indicates which RIP update version the router sends from this interface. ripVersion1 implies sending RIP updates that comply with RFC 1058. rip1Compatible implies broadcasting RIP2 updates using RFC 1058 route subassumption rules. The default is rip1Compatible. **<mode>** is notsend, rip1, rip2, or rip1comp.
supply <enable|disable>	Enables or disables the switch ability to send RIP updates from this interface.
timeout <seconds>	Configures the time-out interval in seconds. The interval is from 15 to 259200 s. The default is 180 s.
trigger <enable|disable>	Enables or disables automatic triggered updates for RIP on this interface.

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config ip rip interface enable

Use this command to enable RIP on the interface.

Syntax

config ip rip interface <ipaddr> enable

Parameters

Variable	Value
enable	Enables RIP on the interface.
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

Variable	Value
auto-aggr <enable|disable>	Enables or disables automatic route aggregation on this interface. When enabled, the switch automatically aggregates routes to their natural mask when they are advertised on an interface. The default is disabled. (This configuration does not change the mask for all routes; instead it aggregates only the routes with a mask length longer than the natural mask.)
cost <cost>	Indicates the RIP cost for this interface. **<cost>** is an integer in the range of 1 to 15. The default is 1.
default-listen <enable|disable>	Enables or disables the switch to accept the default route learned through RIP on this interface. The default is disabled.
default-supply <enable|disable>	Enables or disables an advertisement of a default route on this interface. This command takes effect only if a default route exists in the routing table.
disable	Disables RIP on the interface. The default is disabled.
holddown <seconds>	Configures the RIP hold-down timer for the interface in seconds. The range is 0 to 360. The default is 120.

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Variable	Value
in-policy <policy name>	Specifies the policy name for inbound filtering on this RIP interface. This policy determines whether to learn a route on this interface. It also specifies the parameters of the route when it is added to the routing table.
info	Displays the RIP configuration on this interface.
listen <enable|disable>	Enables or disables the switch ability to learn routes from this interface.
out-policy <policy name>	Specifies the policy name for outbound filtering on this RIP interface. This policy determines whether to advertise a route from the routing table on this interface. This policy also specifies the parameters of the advertisement.
poison <enable|disable>	Configures whether (enabled) or not (disabled) RIP routes on the interface learned from a neighbor are advertised back to the neighbor. If disabled, split horizon is invoked and IP routes learned from an immediate neighbor are not advertised back to the neighbor. If enabled, the RIP updates sent to a neighbor from which a route is learned are poisoned with a metric of 16. Therefore, the receiver neighbor ignores this route because the metric 16 indicates infinite hops in the network.
receive-mode <mode>	Indicates which RIP update version is accepted on this interface. **<mode>** is rip1, rip2, or rip1orrip2. The default is rip1OrRip2.
send-mode <mode>	Indicates which RIP update version the router sends from this interface. ripVersion1 implies sending RIP updates that comply with RFC 1058. rip1Compatible implies broadcasting RIP2 updates using RFC 1058 route subassumption rules. The default is rip1Compatible. **<mode>** is notsend, rip1, rip2, or rip1comp.
supply <enable|disable>	Enables or disables the switch ability to send RIP updates from this interface.

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Variable	Value
timeout <seconds>	Configures the time-out interval in seconds. The interval is from 15 to 259200 s. The default is 180 s.
trigger <enable|disable>	Enables or disables automatic triggered updates for RIP on this interface.

config ip rip redistribute

Use this command to configure the redistribution of routes to RIP.

Syntax

config ip rip redistribute <ospf|bgp|static|direct|rip> create [vrf-src <value>]

Parameters

Variable	Value
create [vrf-src <value>]	Creates the RIP route redistribution instance.
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source). Although RIP and direct are present in the list of source protocols, it is possible to redistribute these routes only in case of inter-VRF redistribution.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
delete [vrf-src <value>]	Deletes the RIP route redistribution instance.
disable [vrf-src <value>]	Disables the RIP route redistribution instance.
enable [vrf-src <value>]	Enables the RIP route redistribution instance.
info [vrf-src <value>]	Shows information about the RIP route redistribution instance.

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Variable	Value
metric <metric-value> [vrf-src <value>]	Configures the metric to apply to redistributed routes.
route-policy <policy name> [vrf-src <value>]	Configures the route policy to apply to redistributed routes.

config ip rip redistribute route-policy

Use this command to apply a route policy.

Syntax

config ip rip redistribute <ospf|bgp|static|direct|rip> route-policy <policy name> [vrf-src <value>]

Parameters

Variable	Value
route-policy <policy name>	Configures the route policy to apply to redistributed routes.
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source). Although RIP and direct are present in the list of source protocols, it is possible to redistribute these routes only in case of inter-VRF redistribution. See the following procedure for interVRF redistribution.
vrf-src <value>	Specifies the source VRF instance by name. This parameter is not required for redistribution within the same VRF.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
create [vrf-src <value>]	Creates the RIP route redistribution instance.
delete [vrf-src <value>]	Deletes the RIP route redistribution instance.
disable [vrf-src <value>]	Disables the RIP route redistribution instance.

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Variable	Value
enable [vrf-src <value>]	Enables the RIP route redistribution instance.
info [vrf-src <value>]	Shows information about the RIP route redistribution instance.
metric <metric-value> [vrf-src <value>]	Configures the metric to apply to redistributed routes.

config ip rip redistribute enable

Use this command to enable the redistribution.

Syntax

config ip rip redistribute <ospf|bgp|static|direct|rip> enable [vrf-src <value>]

Parameters

Variable	Value
enable [vrf-src <value>]	Enables the RIP route redistribution instance.
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source). Although RIP and direct are present in the list of source protocols, it is possible to redistribute these routes only in case of inter-VRF redistribution. See the following procedure for interVRF redistribution.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
create [vrf-src <value>]	Creates the RIP route redistribution instance.
delete [vrf-src <value>]	Deletes the RIP route redistribution instance.
disable [vrf-src <value>]	Disables the RIP route redistribution instance.
info [vrf-src <value>]	Shows information about the RIP route redistribution instance.

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Variable	Value
metric <metric-value> [vrf-src <value>]	Configures the metric to apply to redistributed routes.
route-policy <policy name> [vrf-src <value>]	Configures the route policy to apply to redistributed routes.

config ip rip redistribute apply

Use this command to apply the redistribution.

Syntax

config ip rip redistribute <ospf|bgp|static|direct|rip> apply [vrf-src <value>]

Parameters

Variable	Value
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source). Although RIP and direct are present in the list of source protocols, it is possible to redistribute these routes only in case of inter-VRF redistribution. See the following procedure for interVRF redistribution.
apply [vrf-src <value>]	Applies the redistribution configuration. Changes do not take effect until you apply them.

Default

None

Related commands

Variable	Value
create [vrf-src <value>]	Creates the RIP route redistribution instance.
delete [vrf-src <value>]	Deletes the RIP route redistribution instance.
disable [vrf-src <value>]	Disables the RIP route redistribution instance.
enable [vrf-src <value>]	Enables the RIP route redistribution instance.
info [vrf-src <value>]	Shows information about the RIP route redistribution instance.
metric <metric-value> [vrf-src <value>]	Configures the metric to apply to redistributed routes.
route-policy <policy name> [vrf-src <value>]	Configures the route policy to apply to redistributed routes.

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config ip ospf router-id

Use this command to configure the OSPF router ID IP address.

Syntax

config ip ospf router-id <ipaddr>

Parameters

Variable	Value
router-id <ipaddr>	Configures the OSPF router ID IP address. **ipaddr** is the IP address in a.b.c.d format.

Default

None

Related commands

Variable	Value
admin-state <enable|disable>	Globally enables or disables the administrative status of OSPF. The default is disable.
as-boundary-router <enable|disable>	Enables or disables ASBR status. If enabled, the router acts as an OSPF Autonomous System boundary router. The default is disable.
auto-vlink <enable|disable>	Enables or disables the automatic creation of OSPF virtual links when required. The default is disable.
default-metric [ethernet <value>] [fast-ethernet <value>] [gig-ethernet <value>] [ten-gig-ethernet <value>]	Configures the OSPF default metrics. The range is 1 to 65535. • **ethernet <value>** is for 10 Mbit/s Ethernet (default is 100). • **fast-ethernet <value>** is for 100 Mbit/s (Fast) Ethernet (default is 10). • **gig-ethernet <value>** is for Gigabit (gig) Ethernet (default is 1). • **ten-gig-ethernet <value>** is for 10 Gigabit (ten-gig) Ethernet (default is 1).
disable	Globally disables OSPF on the router or VRF instance.
enable	Globally enables OSPF on the router or VRF instance.

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Variable	Value
holddown <seconds>	Configures the OSPF hold-down timer value in seconds. **<seconds>** is the range of seconds from 3 to 60; the default is 10.
info	Displays the current OSPF configuration on the router or VRF instance.
rfc1583-compatibility <enable|disable>	Enables or disables the RFC 1583 compatibility mode. The default is disable.
spf-run	Forces SPF calculation updates.
trap <enable|disable>	Enables or disables the router to issue OSPF traps. The default is disable.

config ip ospf enable

Use this command to enable OSPF for the switch.

Syntax

config ip ospf enable

Parameters

Variable	Value
enable	Globally enables OSPF on the router or VRF instance.

Default

None

Related commands

Variable	Value
admin-state <enable|disable>	Globally enables or disables the administrative status of OSPF. The default is disable.
as-boundary-router <enable|disable>	Enables or disables ASBR status. If enabled, the router acts as an OSPF Autonomous System boundary router. The default is disable.
auto-vlink <enable|disable>	Enables or disables the automatic creation of OSPF virtual links when required. The default is disable.

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Variable	Value
default-metric [ethernet <value>] [fast-ethernet <value>] [gig-ethernet <value>] [ten-gig-ethernet <value>]	Configures the OSPF default metrics. The range is 1 to 65535. • **ethernet <value>** is for 10 Mbit/s Ethernet (default is 100). • **fast-ethernet <value>** is for 100 Mbit/s (Fast) Ethernet (default is 10). • **gig-ethernet <value>** is for Gigabit (gig) Ethernet (default is 1). • **ten-gig-ethernet <value>** is for 10 Gigabit (ten-gig) Ethernet (default is 1).
disable	Globally disables OSPF on the router or VRF instance.
holddown <seconds>	Configures the OSPF hold-down timer value in seconds. **<seconds>** is the range of seconds from 3 to 60; the default is 10.
info	Displays the current OSPF configuration on the router or VRF instance.
rfc1583-compatibility <enable|disable>	Enables or disables the RFC 1583 compatibility mode. The default is disable.
router-id <ipaddr>	Configures the OSPF router ID IP address. **<ipaddr?** is the IP address in a.b.c.d format.
spf-run	Forces SPF calculation updates.
trap <enable|disable>	Enables or disables the router to issue OSPF traps. The default is disable.

config ip ospf admin-state

Use this command to allow OSPF routing to operate.

Syntax

config ip ospf admin-state enable

Parameters

Variable	Value
admin-state <enable|disable>	Globally enables or disables the administrative status of OSPF.

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Default

The default is disable.

Related commands

Variable	Value
as-boundary-router <enable|disable>	Enables or disables ASBR status. If enabled, the router acts as an OSPF Autonomous System boundary router. The default is disable.
auto-vlink <enable|disable>	Enables or disables the automatic creation of OSPF virtual links when required. The default is disable.
default-metric [ethernet <value>] [fast-ethernet <value>] [gig-ethernet <value>] [ten-gig-ethernet <value>]	Configures the OSPF default metrics. The range is 1 to 65535. • **ethernet <value>** is for 10 Mbit/s Ethernet (default is 100). • **fast-ethernet <value>** is for 100 Mbit/s (Fast) Ethernet (default is 10). • **gig-ethernet <value>** is for Gigabit (gig) Ethernet (default is 1). • **ten-gig-ethernet <value>** is for 10 Gigabit (ten-gig) Ethernet (default is 1).
disable	Globally disables OSPF on the router or VRF instance.
enable	Globally enables OSPF on the router or VRF instance.
holddown <seconds>	Configures the OSPF hold-down timer value in seconds. **<seconds>** is the range of seconds from 3 to 60; the default is 10.
info	Displays the current OSPF configuration on the router or VRF instance.
rfc1583-compatibility <enable|disable>	Enables or disables the RFC 1583 compatibility mode. The default is disable.
router-id <ipaddr>	Configures the OSPF router ID IP address. **<ipaddr?** is the IP address in a.b.c.d format.

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Variable	Value
spf-run	Forces SPF calculation updates.
trap <enable|disable>	Enables or disables the router to issue OSPF traps. The default is disable.

config ip ospf interface create

Use this command to create the OSPF interface.

Syntax

config ip ospf interface <ipaddr> create [<if-type>]

Parameters

Variable	Value
create	Creates a OSPF interface.

Default

None

Related commands

Variable	Value
add-message-digest-key <md5-key-id> md5-key <value>	Adds an Message Digest 5 (MD5) key to the interface. At most, you can configure two MD5 keys for an interface. Multiple MD5 key configurations are used for MD5 transitions that do not bring down an interface. • **<md5-key-id>** is the ID for the message digest key {1 to 255} • **<value>** is an alphanumeric password of up to 16 bytes {string length 0 to 16}.
admin-status <enable|disable> [<if-type>]	Configures the state (enabled or disabled) of the OSPF interface. **<if-type>** is the OSPF interface type (broadcast, nbma, or passive).
area <ipaddr>	Specifies the interface OSPF area. The area name is not related to an IP address. **<ipaddr>** is a dotted-decimal notation to specify the area name. The default is 0.0.0.0.
authentication-key <authentication-key>	Configures the simple password authentication key for the OSPF interface. **<authentication-key>** is a string of up to eight characters that specifies the key.

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Variable	Value
authentication-type <auth-type>	Configures the OSPF authentication type for the interface. The default is none. **<auth-type>** is none, simple password, or MD5 authentication. If simple, all OSPF updates received by the interface must contain the authentication key specified by the interface authentication-key command. If MD5, they must contain the MD5 key.
change-primary-md5-key <md5-key-id>	Changes the primary key used to encrypt outgoing packets. **<md5-key-id>** is the ID for the message digest key {1 to 255}
create [<broadcast|nbma|passive>]	Creates an OSPF interface of the specified type.
dead-interval <seconds>	Configures the OSPF dead interval for the interface. **<seconds>** is the number of seconds the switch OSPF neighbors wait before assuming that this OSPF router is down. The range is from 1 to 2147483647. This value must be at least four times the Hello interval value. The default is 40.
delete	Deletes an OSPF interface.
delete-message-digest-key <md5-key-id>	Deletes the specified MD5 key ID.
hello-interval <seconds>	Configures the OSPF Hello interval for the interface. • **<seconds>** is the number of seconds between Hello packets sent on this interface. The range is 1 to 65535. The default is 10. When you change the Hello interval values, save the configuration file and reboot the switch. After reboot, the values are restored and checked for consistency.
info	Displays OSPF characteristics for the interface.
interface-type <if-type>	Specifies the type of OSPF interface. • **<if-type>** is the OSPF interface type: broadcast, nbma, or passive.

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Variable	Value
metric <metric>	Configures the OSPF metric for the interface. The switch advertises the metric in router link advertisements. • **<metric>** is the range 0 to 65535. The default is 10.
mtu-ignore <enable|disable>	Configures the mtu-ignore flag (enabled or disabled) for the interface. The default is disable. To allow the Ethernet Routing Switch 8600 to accept OSPF DBD packets with a different MTU size, enable mtu-ignore. Incoming OSPF database description (DBD) packets are dropped if their MTU size is greater than 1500 bytes.
poll-interval <seconds>	Configures the polling interval for the OSPF interface in seconds. • **<seconds>** is from 1 to 2147483647. The default is 120.
priority <priority>	Configures the OSPF priority for the interface during the election process for the designated router. The interface with the highest priority number is the designated router. The interface with the second highest priority becomes the backup designated router. If the priority is 0, the interface cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. The range is 0 to 255. The default is 1.

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Variable	Value
retransmit-interval <seconds>	Configures the retransmit interval for the OSPF interface, the number of seconds between link-state advertisement retransmissions. • **<seconds>** is an integer from 1 to 3600. The default is 5.
transit-delay <seconds>	Configures the transit delay time for the OSPF interface, the estimated time in seconds required to transmit a link-state update packet over the interface. • **<seconds>** is an integer from 1 to 3600. The default is 1.

config ip ospf interface

Use this command to configure other interface parameters.

Syntax

config ip ospf interface <ipaddr> info

Parameters

Variable	Value
ipaddr	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

None

config ip ospf interface admin-status

Use this command to allow OSPF routing to operate on the interface.

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Syntax

config ip ospf interface <ipaddr> admin-status <enable|disable> [<if-type>]

Parameters

Variable	Value
admin-status <enable|disable> [<if-type>]	Configures the state (enabled or disabled) of the OSPF interface.**if-type** is the OSPF interface type (broadcast, nbma, or passive).

Default

None

Related commands

Variable	Value
add-message-digest-key <md5-key-id> md5-key <value>	Adds an Message Digest 5 (MD5) key to the interface. At most, you can configure two MD5 keys for an interface. Multiple MD5 key configurations are used for MD5 transitions that do not bring down an interface. • **<md5-key-id>** is the ID for the message digest key {1 to 255} • **<value>** is an alphanumeric password of up to 16 bytes {string length 0 to 16}.
admin-status <enable|disable> [<if-type>]	Configures the state (enabled or disabled) of the OSPF interface. **<if-type>** is the OSPF interface type (broadcast, nbma, or passive).
area <ipaddr>	Specifies the interface OSPF area. The area name is not related to an IP address. **<ipaddr>** is a dotted-decimal notation to specify the area name. The default is 0.0.0.0.
authentication-key <authentication-key>	Configures the simple password authentication key for the OSPF interface. **<authentication-key>** is a string of up to eight characters that specifies the key.

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Variable	Value
authentication-type <auth-type>	Configures the OSPF authentication type for the interface. The default is none. **<auth-type>** is none, simple password, or MD5 authentication. If simple, all OSPF updates received by the interface must contain the authentication key specified by the interface authentication-key command. If MD5, they must contain the MD5 key.
change-primary-md5-key <md5-key-id>	Changes the primary key used to encrypt outgoing packets. **<md5-key-id>** is the ID for the message digest key {1 to 255}
create [<broadcast|nbma|passive>]	Creates an OSPF interface of the specified type.
dead-interval <seconds>	Configures the OSPF dead interval for the interface. **<seconds>** is the number of seconds the switch OSPF neighbors wait before assuming that this OSPF router is down. The range is from 1 to 2147483647. This value must be at least four times the Hello interval value. The default is 40.
delete	Deletes an OSPF interface.
delete-message-digest-key <md5-key-id>	Deletes the specified MD5 key ID.
hello-interval <seconds>	Configures the OSPF Hello interval for the interface. • **<seconds>** is the number of seconds between Hello packets sent on this interface. The range is 1 to 65535. The default is 10. When you change the Hello interval values, save the configuration file and reboot the switch. After reboot, the values are restored and checked for consistency.
info	Displays OSPF characteristics for the interface.
interface-type <if-type>	Specifies the type of OSPF interface. • **<if-type>** is the OSPF interface type: broadcast, nbma, or passive.

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Variable	Value
metric <metric>	Configures the OSPF metric for the interface. The switch advertises the metric in router link advertisements. • **<metric>** is the range 0 to 65535. The default is 10.
mtu-ignore <enable|disable>	Configures the mtu-ignore flag (enabled or disabled) for the interface. The default is disable. To allow the Ethernet Routing Switch 8600 to accept OSPF DBD packets with a different MTU size, enable mtu-ignore. Incoming OSPF database description (DBD) packets are dropped if their MTU size is greater than 1500 bytes.
poll-interval <seconds>	Configures the polling interval for the OSPF interface in seconds. • **<seconds>** is from 1 to 2147483647. The default is 120.
priority <priority>	Configures the OSPF priority for the interface during the election process for the designated router. The interface with the highest priority number is the designated router. The interface with the second highest priority becomes the backup designated router. If the priority is 0, the interface cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. The range is 0 to 255. The default is 1.
retransmit-interval <seconds>	Configures the retransmit interval for the OSPF interface, the number of seconds between link-state advertisement retransmissions. • **<seconds>** is an integer from 1 to 3600. The default is 5.
transit-delay <seconds>	Configures the transit delay time for the OSPF interface, the estimated time in seconds required to transmit a link-state update packet over the interface. • **<seconds>** is an integer from 1 to 3600. The default is 1.

config ip ospf area create

Use this command to create an OSPF area.

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Syntax

config ip ospf area <ipaddr> create

Parameters

Variable	Value
create	Creates an OSPF area.

Default

None

Related commands

Variable	Value
create	Creates an OSPF area.
delete	Deletes an OSPF area.
import-summaries <true|false>	Enables or disables the ability to import summary advertisements into a stub area. This parameter must be used only if stub is true.
info	Displays OSPF area characteristics.
nssa <true|false>	Specifies a NSSA (true or false). An NSSA prevents flooding of normal route advertisements into the area by replacing them with a default route.
stub <true|false>	Configures the import external option for this area as stub or not stub (true|false). A stub area has only one exit point (router interface) from the area.
stub-metric <stub-metric>	Specifies the stub area default metric, which is the cost from 0 to 16777215. This is the metric applied at the indicated type of service.

config ip ospf area info

Use this command to ensure that the configuration is correct.

Syntax

config ip ospf area <ipaddr> info
show ip ospf area [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.

Default

None

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Related commands

None

config ip ospf area range

Use this command to configure an OSPF area range.

Syntax

config ip ospf area <ipaddr> range <ipaddr/mask> create advertise-mode <value> lsa-type <value> [advertise-metric <value>]

Parameters

Variable	Value
create advertis e-mode <value> lsa-type <value> [advertise-metric <value>]	Creates an OSPF area range with the specified IP address and advertising mode. If you configure the range as lsa-type nssa-extlink then you cannot configure the advertise-metric. • **advertise-mode <mode>** is the mode value (summarize, suppress, or no-summarize) • **lsa-type <value>** is the LSA-type (summary-link or nssa-extlink) • **advertise-metric <value>** is the cost in the range of 0 to 65535

Default

None

Related commands

Variable	Value
advertise-metric <cost> lsa-type <value>	Changes the advertised metric cost value of the OSPF area range. • **<cost>** is an integer value in the range 0 to 65535, which represents the metric cost value for the OSPF area range. • **<value>** is the LSA type (summary-link or nssa-extlink)
advertise-mode <mode> lsa-type <value>	Changes the advertisement mode of the range. • **<mode>** is the mode (summarize, suppress, or no-summarize) • **<value>** is the LSA type (summary-link or nssa-extlink)

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Variable	Value
create advertise-mode <value> lsa-type <value> [advertise-metric <value>]	Creates an OSPF area range with the specified IP address and advertising mode. If you configure the range as lsa-type nssa-extlink then you cannot configure the advertise-metric. • **advertise-mode <mode>** is the mode value (summarize, suppress, or no-summarize) • **lsa-type <value>** is the LSA-type (summary-link or nssa-extlink) • **advertise-metric <value>** is the cost in the range of 0 to 65535
delete lsa type <value>	Deletes an OSPF area range. **lsa type <value>** is the LSA type (summary-link or nssa-extlink).
info	Displays information about the OSPF area range settings.

config ip ospf area range

Use this command to ensure that the configuration is correct.

Syntax

config ip ospf area <ipaddr> range <ipaddr/mask> info

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

None

config ip ospf router-id

Use this command to enable the automatic virtual links feature for the router.

Syntax

config ip ospf router-id <ipaddr> auto-vlink enable

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Parameters

Variable	Value
<ipaddr>	Specifies the IP address of the OSPF router.

Default

None

Related commands

None

config ip ospf area virtual-interface

Use this command to create an OSPF area virtual interface.

Syntax

config ip ospf area <ipaddr> virtual-interface <nbr> create

Parameters

Variable	Value
<ipaddr>	Specifies the IP adrress in the {a.b.c.d} format.

Default

None

Related commands

Variable	Value
add-message-digest-key <md5-key-id> md5-key <value>	Adds an MD5 key to the interface. At most, you can configure two MD5 keys for an interface. • **md5-key-id** is the ID for the message digest key {1 to 255} • **value** is an alphanumeric password of up to 16 bytes {string length 0 to 16}
authentication-key <authentication-key>	Configures the authentication key. **authentication-key** is a string that specifies the key with up to eight characters.

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Variable	Value
authentication-type <auth-type>	Configures the OSPF authentication type for the OSPF area. **auth-type** is none, simple password, or MD5 authentication. If simple, all OSPF updates received by the interface must contain the authentication key specified by the area authentication-key command. If MD5, they must contain the MD5 key. The default is none.
change-primary-md5-key <md5-key-id>	Changes the primary key used to encrypt outgoing packets. **md5-key-id** is the ID for the message digest key {1 to 255}
create	Creates a virtual interface area identifier.
dead-interval <seconds>	Configures the dead interval for the virtual interface, the number of seconds that a router Hello packets are not seen before its neighbors declare the router down. **seconds** is an integer from 1 to 214783647. This value must be at least four times the Hello interval value. The default is 60.
delete	Deletes the virtual interface.
delete-message-digest-key <md5-key-id>	Deletes the specified MD5 key ID.
hello-interval <seconds>	Configures the Hello interval on the virtual interface for the length of time (in seconds) between the Hello packets that the router sends on the interface. **seconds** is a value from 1 to 65535. The default is 10.
info	Displays current OSPF area virtual interface information.

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Variable	Value
retransmit-interval <seconds>	Configures the retransmit interval for the virtual interface, the number of seconds between link-state advertisement retransmissions. **seconds** is an integer from 1 to 3600.
transit-delay <seconds>	Configures the transmit delay for the virtual interface, the estimated number of seconds required to transmit a link-state update over the interface. **seconds** is an integer from 1 to 3600.

config ip ospf area virtual-interface

Use this command to ensure that the configuration is correct.

Syntax

config ip ospf area <ipaddr> virtual-interface <nbr> info

Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

Variable	Value
add-message-digest-key <md5-key-id> md5-key <value>	Adds an MD5 key to the interface. At most, you can configure two MD5 keys for an interface. • **md5-key-id**is the ID for the message digest key {1 to 255} • **value** is an alphanumeric password of up to 16 bytes {string length 0 to 16}
authentication-key <authentication-key>	Configures the authentication key. **authentication-key** is a string that specifies the key with up to eight characters.

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Variable	Value
authentication-type <auth-type>	Configures the OSPF authentication type for the OSPF area. **auth-type** is none, simple password, or MD5 authentication. If simple, all OSPF updates received by the interface must contain the authentication key specified by the area authentication-key command. If MD5, they must contain the MD5 key. The default is none.
change-primary-md5-key <md5-key-id>	Changes the primary key used to encrypt outgoing packets. **md5-key-id**is the ID for the message digest key {1 to 255}
create	Creates a virtual interface area identifier.
dead-interval <seconds>	Configures the dead interval for the virtual interface, the number of seconds that a router Hello packets are not seen before its neighbors declare the router down. seconds is an integer from 1 to 214783647. This value must be at least four times the Hello interval value. The default is 60.
delete	Deletes the virtual interface.
delete-message-digest-key <md5-key-id>	Deletes the specified MD5 key ID.
hello-interval <seconds>	Configures the Hello interval on the virtual interface for the length of time (in seconds) between the Hello packets that the router sends on the interface. **seconds** is a value from 1 to 65535. The default is 10.
info	Displays current OSPF area virtual interface information.

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Variable	Value
retransmit-interval <seconds>	Configures the retransmit interval for the virtual interface, the number of seconds between link-state advertisement retransmissions. **seconds** is an integer from 1 to 3600.
transit-delay <seconds>	Configures the transmit delay for the virtual interface, the estimated number of seconds required to transmit a link-state update over the interface. **seconds** is an integer from 1 to 3600.

config ip ospf host-route

Use this command to create a host route.

Syntax

config ip ospf host-route <ipaddr> create [metric <value>]

Parameters

Variable	Value
create [metric <value>]	Creates an OSPF host route for the IP address and configures the metric (cost) for the host route. **value** is from 1 to 65535.

Default

None

Related commands

Variable	Value
delete	Deletes an OSPF host route for the IP address.
info	Displays the current OSFP host route configuration on the switch.

config ip ospf host-route

Use this command to ensure that the configuration is correct.

Syntax

config ip ospf host-route <ipaddr> info
show ip ospf host-route [vrf <value>] [vrfids <value>]

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Parameters

Variable	Value
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

None

config ip ospf neighbour create

Use this command to create an NBMA OSPF neighbor.

Syntax

config ip ospf neighbor <ipaddr> create <priority>

Parameters

Variable	Value
create <priority>	Creates an OSPF neighbor and assigns a priority level. **priority** is a value from 0 to 255.

Default

None

Related commands

Variable	Value
delete	Deletes an OSPF NBMA neighbor.
info	Displays information about the OSPF neighbor settings.
priority <priority>	Changes the priority level of the neighbor. **priority** is a value from 0 to 255.

config ip ospf neighbor

Use this command to ensure that the configuration is correct.

Syntax

config ip ospf neighbor <ipaddr> info
show ip ospf neighbors

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Parameters

Variable	Value
<ipaddr>	Specifies te IP address in the {a.b.c.d} format.

Default

None

Related commands

None

config ip ospf accept adv-rtr

Use this command to apply an acceptance policy.

Syntax

config ip ospf accept adv-rtr <ipaddr> create

Parameters

Variable	Value
create	Creates an OSPF acceptance policy.

Default

None

Related commands

Variable	Value
apply	Applies the acceptance settings.
create	Creates an OSPF acceptance policy.
delete	Deletes an OSPF acceptance policy.
disable	Disables an OSPF acceptance policy.
enable	Enables an OSPF acceptance policy.
info	Shows information about the OSPF acceptance policy. If the metric type is any, the command output indicates 0.

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Variable	Value
metric-type <type1|type2|any>	Configures the metric type as Type 1, Type 2, or any.
route-policy <policy name> [vrf-src <value>] [clear]	Configures the acceptance route policy name. Use clear to clear the policy from the OSPF • policy name is a string of 0 to 64 characters. A black string deletes the policy. • **vrf-src <value>** specifies the VRF ID of the source.

config ip ospf accept adv-rtr metric-type

Use this command to configure the type of metric that is accepted.

Syntax

config ip ospf accept adv-rtr <ipaddr> metric-type <type1|type2|any>

Parameters

Variable	Value
metric-type <type1|type2|any>	Configures the metric type as Type 1, Type 2, or any.

Default

None

Related commands

Variable	Value
apply	Applies the acceptance settings.
create	Creates an OSPF acceptance policy.
delete	Deletes an OSPF acceptance policy.
disable	Disables an OSPF acceptance policy.
enable	Enables an OSPF acceptance policy.

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Variable	Value
info	Shows information about the OSPF acceptance policy. If the metric type is any, the command output indicates 0.
route-policy <policy name> [vrf-src <value>] [clear]	Configures the acceptance route policy name. Use clear to clear the policy from the OSPF • **policy name** is a string of 0 to 64 characters. A black string deletes the policy. • **vrf-src <value>** specifies the VRF ID of the source.

config ip ospf accept adv-rtr

Use this command to ensure that the OSPF route acceptance policies configuration is correct.

Syntax

config ip ospf accept adv-rtr <ipaddr> info

Parameters

Variable	Value
info	Shows information about the OSPF acceptance policy. If the metric type is any, the command output indicates 0.

Default

None

Related commands

None

config ip ospf accept apply

Use this command to apply a configured OSPF route acceptance policy.

Syntax

config ip ospf accept apply

Parameters

Variable	Value
apply	Applies the acceptance settings.

Default

None

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Related commands

Variable	Value
create	Creates an OSPF acceptance policy.
delete	Deletes an OSPF acceptance policy.
disable	Disables an OSPF acceptance policy.
enable	Enables an OSPF acceptance policy.
info	Shows information about the OSPF acceptance policy. If the metric type is any, the command output indicates 0.
metric-type <type1|type2|any>	Configures the metric type as Type 1, Type 2, or any.
route-policy <policy name> [vrf-src <value>] [clear]	Configures the acceptance route policy name. Use clear to clear the policy from the OSPF • **policy name** is a string of 0 to 64 characters. A black string deletes the policy. • **vrf-src <value>** specifies the VRF ID of the source.

config ip ospf redistribute create

Use this command to configure the redistribution of routes to OSPF.

Syntax

config ip ospf redistribute <ospf\|bgp\|static\|direct\|rip> create [vrf-src <value>]

Parameters

Variable	Value
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source).
vrf-src <value>	Specifies the source VRF instance. This parameter is not required for redistribution within the same VRF.

Default

None

Related commands

Variable	Value
apply [vrf-src <vrf-name>]	Applies the redistribution configuration. Changes do not take effect until you apply them.

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Variable	Value
create [vrf-src <vrf-name>]	Creates the OSPF route redistribution instance.
delete [vrf-src <vrf-name>]	Deletes the OSPF route redistribution instance.
disable [vrf-src <vrf-name>]	Disables the OSPF route redistribution instance.
enable [vrf-src <vrf-name>]	Enables the OSPF route redistribution instance.
info [vrf-src <vrf-name>]	Shows information about the OSPF route redistribution instance.
metric <metric-value> [vrf-src <vrf-name>]	Configures the metric to apply to redistributed routes.
metric-type <type 1|type2> [vrf-src <vrf-name>]	Specifies a type 1 or a type 2 metric. For metric type 1, the cost of the external routes is equal to the sum of all internal costs and the external cost. For metric type 2, the cost of the external routes is equal to the external cost alone.
subnets <allow|suppress> [vrf-src <vrf-name>]	Allows or suppresses external subnet route advertisements when routes are redistributed into an OSPF domain.
route-policy <policy name> [vrf-src <vrf-name>] [clear]	Configures the route policy to apply to redistributed routes.

config ip ospf redistribute route-policy

Use this command to apply a route policy.

Syntax

config ip ospf redistribute <ospf|bgp|static|direct|rip> route-policy <policy name> [vrf-src <value>]

Parameters

Variable	Value
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source).
vrf-src <value>	Specifies the source VRF instance. This parameter is not required for redistribution within the same VRF.

Default

None

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Related commands

Variable	Value
apply [vrf-src <vrf-name>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
create [vrf-src <vrf-name>]	Creates the OSPF route redistribution instance.
delete [vrf-src <vrf-name>]	Deletes the OSPF route redistribution instance.
disable [vrf-src <vrf-name>]	Disables the OSPF route redistribution instance.
enable [vrf-src <vrf-name>]	Enables the OSPF route redistribution instance.
info [vrf-src <vrf-name>]	Shows information about the OSPF route redistribution instance.
metric <metric-value> [vrf-src <vrf-name>]	Configures the metric to apply to redistributed routes.
metric-type <type 1|type2> [vrf-src <vrf-name>]	Specifies a type 1 or a type 2 metric. For metric type 1, the cost of the external routes is equal to the sum of all internal costs and the external cost. For metric type 2, the cost of the external routes is equal to the external cost alone.
subnets <allow|suppress> [vrf-src <vrf-name>]	Allows or suppresses external subnet route advertisements when routes are redistributed into an OSPF domain.
route-policy <policy name> [vrf-src <vrf-name>] [clear]	Configures the route policy to apply to redistributed routes.

config ip ospf redistribution enable

Use this command to enable the redistribution to OSPF.

Syntax

config ip ospf redistribute <ospf\|bgp\|static\|direct\|rip> enable [vrf-src <value>]

Parameters

Variable	Value
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source).
vrf-src <value>	Specifies the source VRF instance. This parameter is not required for redistribution within the same VRF.

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Default

None

Related commands

Variable	Value
apply [vrf-src <vrf-name>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
create [vrf-src <vrf-name>]	Creates the OSPF route redistribution instance.
delete [vrf-src <vrf-name>]	Deletes the OSPF route redistribution instance.
disable [vrf-src <vrf-name>]	Disables the OSPF route redistribution instance.
enable [vrf-src <vrf-name>]	Enables the OSPF route redistribution instance.
info [vrf-src <vrf-name>]	Shows information about the OSPF route redistribution instance.
metric <metric-value> [vrf-src <vrf-name>]	Configures the metric to apply to redistributed routes.
metric-type <type 1|type2> [vrf-src <vrf-name>]	Specifies a type 1 or a type 2 metric. For metric type 1, the cost of the external routes is equal to the sum of all internal costs and the external cost. For metric type 2, the cost of the external routes is equal to the external cost alone.
subnets <allow|suppress> [vrf-src <vrf-name>]	Allows or suppresses external subnet route advertisements when routes are redistributed into an OSPF domain.
route-policy <policy name> [vrf-src <vrf-name>] [clear]	Configures the route policy to apply to redistributed routes.

config ip ospf redistribute apply

Use this command to apply the OSPF redistribution.

Syntax

config ip ospf redistribute <ospf|bgp|static|direct|rip> apply [vrf-src <value>]

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Parameters

Variable	Value
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source).
vrf-src <value>	Specifies the source VRF instance. This parameter is not required for redistribution within the same VRF.

Default

None

Related commands

Variable	Value
apply [vrf-src <vrf-name>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
create [vrf-src <vrf-name>]	Creates the OSPF route redistribution instance.
delete [vrf-src <vrf-name>]	Deletes the OSPF route redistribution instance.
disable [vrf-src <vrf-name>]	Disables the OSPF route redistribution instance.
enable [vrf-src <vrf-name>]	Enables the OSPF route redistribution instance.
info [vrf-src <vrf-name>]	Shows information about the OSPF route redistribution instance.
metric <metric-value> [vrf-src <vrf-name>]	Configures the metric to apply to redistributed routes.
metric-type <type 1|type2> [vrf-src <vrf-name>]	Specifies a type 1 or a type 2 metric. For metric type 1, the cost of the external routes is equal to the sum of all internal costs and the external cost. For metric type 2, the cost of the external routes is equal to the external cost alone.
subnets <allow|suppress> [vrf-src <vrf-name>]	Allows or suppresses external subnet route advertisements when routes are redistributed into an OSPF domain.
route-policy <policy name> [vrf-src <vrf-name>] [clear]	Configures the route policy to apply to redistributed routes.

config ip ospf spf-run

Use this command to force the router to update its shortest-path calculations.

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Syntax

config ip ospf spf-run

Parameters

None

Default

None

Related commands

None

config ip vrf rip redistribute

Use this command to configure the redistribution of routes from a VRF to RIP.

Syntax

config ip vrf <dst-vrf> rip redistribute <ospf|bgp|static|direct|rip> create [vrf-src <value>]

Parameters

Variable	Value
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source).
dst-vrf <value>	Specifies the destination VRF instance.
vrf-src <value>	Specifies the source VRF instance. This parameter is not required for redistribution within the same VRF.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
create [vrf-src <value>]	Creates the RIP route redistribution instance.
delete [vrf-src <value>]	Deletes the RIP route redistribution instance.
disable [vrf-src <value>]	Disables the RIP route redistribution instance.
enable [vrf-src <value>]	Enables the RIP route redistribution instance.

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Variable	Value
info [vrf-src <value>]	Shows information about the RIP route redistribution instance.
metric <metric-value> [vrf-src <value>]	Configures the metric to apply to redistributed routes.
route-policy <policy name> [vrf-src <value>] [clear]	Selects the route policy to apply to redistributed routes.

config ip vrf rip redistribute route-policy

Use this command to apply a route policy.

Syntax

config ip vrf <dst-vrf> rip redistribute <ospf|bgp|static|direct|rip> route-policy <policy name> [vrf-src <value>]

Parameters

Variable	Value
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source).
route-policy <policy name> [vrf-src <value>] [clear]	Selects the route policy to apply to redistributed routes.
vrf-src <value>	Specifies the source VRF instance. This parameter is not required for redistribution within the same VRF.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
create [vrf-src <value>]	Creates the RIP route redistribution instance.
delete [vrf-src <value>]	Deletes the RIP route redistribution instance.
disable [vrf-src <value>]	Disables the RIP route redistribution instance.

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Variable	Value
enable [vrf-src <value>]	Enables the RIP route redistribution instance.
info [vrf-src <value>]	Shows information about the RIP route redistribution instance.
metric <metric-value> [vrf-src <value>]	Configures the metric to apply to redistributed routes.

config ip vrf rip redistribute enable

Use this command to enable the redistribution.

Syntax

config ip vrf <dst-vrf> rip redistribute <ospf|bgp|static|direct|rip> enable [vrf-src <value>]

Parameters

Variable	Value
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source).
dst-vrf <value>	Specifies the destination VRF instance.
vrf-src <value>	Specifies the source VRF instance. This parameter is not required for redistribution within the same VRF.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
create [vrf-src <value>]	Creates the RIP route redistribution instance.
delete [vrf-src <value>]	Deletes the RIP route redistribution instance.
disable [vrf-src <value>]	Disables the RIP route redistribution instance.
enable [vrf-src <value>]	Enables the RIP route redistribution instance.
info [vrf-src <value>]	Shows information about the RIP route redistribution instance.

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Variable	Value
metric <metric-value> [vrf-src <value>]	Configures the metric to apply to redistributed routes.
route-policy <policy name> [vrf-src <value>] [clear]	Selects the route policy to apply to redistributed routes.

config ip vrf rip redistribute apply

Use this command to apply the redistribution.

Syntax

config ip vrf <dst-vrf> rip redistribute <ospf|bgp|static|direct|rip> apply [vrf-src <value>]

Parameters

Variable	Value
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source).
dst-vrf <value>	Specifies the destination VRF instance.
vrf-src <value>	Specifies the source VRF instance. This parameter is not required for redistribution within the same VRF.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
create [vrf-src <value>]	Creates the RIP route redistribution instance.
delete [vrf-src <value>]	Deletes the RIP route redistribution instance.
disable [vrf-src <value>]	Disables the RIP route redistribution instance.
enable [vrf-src <value>]	Enables the RIP route redistribution instance.
info [vrf-src <value>]	Shows information about the RIP route redistribution instance.

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Variable	Value
metric <metric-value> [vrf-src <value>]	Configures the metric to apply to redistributed routes.
route-policy <policy name> [vrf-src <value>] [clear]	Selects the route policy to apply to redistributed routes.

config ip vrf ospf router-id

Use this command to enable the automatic virtual links feature for a VRF.

Syntax

config ip vrf <vrfName> ospf router-id <ipaddr> auto-vlink enable

Parameters

Variable	Value
<ipaddr>	Specifies the IP address of the OSPF router.
vrf <vrfName>	**<vrfName>** specifies the VRF by name.

Default

None

Related commands

None

config ip vrf ospf redistribute

Use this command to configure the redistribution of routes from a VRF to RIP.

Syntax

config ip vrf <dst-vrf> ospf redistribute <ospf|bgp|static|direct|rip> create [vrf-src <value>]

Parameters

Variable	Value
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source).
dst-vrf <value>	Specifies the destination VRF instance.
vrf-src <value>	Specifies the source VRF instance. This parameter is not required for redistribution within the same VRF.

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Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
create [vrf-src <value>]	Creates the OSPF route redistribution instance.
delete [vrf-src <value>]	Deletes the OSPF route redistribution instance.
disable [vrf-src <value>]	Disables the OSPF route redistribution instance.
enable [vrf-src <value>]	Enables the OSPF route redistribution instance.
info [vrf-src <value>]	Shows information about the OSPF route redistribution instance.
metric <metric-value> [vrf-src <value>]	Configures the metric to apply to redistributed routes.
metric-type <type1|type2> [vrf-src <value>]	Specifies a type 1 or a type 2 metric. For metric type 1, the cost of the external routes is equal to the sum of all internal costs and the external cost. For metric type 2, the cost of the external routes is equal to the external cost alone.
route-policy <policy name> [vrf-src <value>] [clear]	Configures the route policy to apply to redistributed routes.
subnets <allow|supress> [vrf-src <value>]	Allows or suppresses external subnet route advertisements when routes are redistributed into an OSPF domain.

config ip vrf ospf redistribute

Use this command to apply a route policy.

Syntax

config ip vrf <dst-vrf> ospf redistribute <ospf|bgp|static|direct|rip> route-policy <policy name> [vrf-src <value>]

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Parameters

Variable	Value
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source).
dst-vrf <value>	Specifies the destination VRF instance.
vrf-src <value>	Specifies the source VRF instance. This parameter is not required for redistribution within the same VRF.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
create [vrf-src <value>]	Creates the OSPF route redistribution instance.
delete [vrf-src <value>]	Deletes the OSPF route redistribution instance.
disable [vrf-src <value>]	Disables the OSPF route redistribution instance.
enable [vrf-src <value>]	Enables the OSPF route redistribution instance.
info [vrf-src <value>]	Shows information about the OSPF route redistribution instance.
metric <metric-value> [vrf-src <value>]	Configures the metric to apply to redistributed routes.
metric-type <type1|type2> [vrf-src <value>]	Specifies a type 1 or a type 2 metric. For metric type 1, the cost of the external routes is equal to the sum of all internal costs and the external cost. For metric type 2, the cost of the external routes is equal to the external cost alone.
route-policy <policy name> [vrf-src <value>] [clear]	Configures the route policy to apply to redistributed routes.
subnets <allow|supress> [vrf-src <value>]	Allows or suppresses external subnet route advertisements when routes are redistributed into an OSPF domain.

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config ip vrf ospf redistribute enable

Use this command to enable the redistribution.

Syntax

config ip vrf <dst-vrf> ospf redistribute <ospf|bgp|static|direct|rip> enable [vrf-src <value>]

Parameters

Variable	Value
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source).
dst-vrf <value>	Specifies the destination VRF instance.
vrf-src <value>	Specifies the source VRF instance. This parameter is not required for redistribution within the same VRF.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
create [vrf-src <value>]	Creates the OSPF route redistribution instance.
delete [vrf-src <value>]	Deletes the OSPF route redistribution instance.
disable [vrf-src <value>]	Disables the OSPF route redistribution instance.
enable [vrf-src <value>]	Enables the OSPF route redistribution instance.
info [vrf-src <value>]	Shows information about the OSPF route redistribution instance.
metric <metric-value> [vrf-src <value>]	Configures the metric to apply to redistributed routes.
metric-type <type1|type2> [vrf-src <value>]	Specifies a type 1 or a type 2 metric. For metric type 1, the cost of the external routes is equal to the sum of all internal costs and the external cost. For metric type 2, the cost of the external routes is equal to the external cost alone.

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Variable	Value
route-policy <policy name> [vrf-src <value>] [clear]	Configures the route policy to apply to redistributed routes.
subnets <allow|supress> [vrf-src <value>]	Allows or suppresses external subnet route advertisements when routes are redistributed into an OSPF domain.

config ip vrf ospf redistribute apply

Use this command to apply the redistribution interVRF for OSPF.

Syntax

config ip vrf <dst-vrf> ospf redistribute <ospf\|bgp\|static\|direct\|rip> apply [vrf-src <value>]

Parameters

Variable	Value
<ospf|bgp|static|direct|rip>	Specifies the type of routes to be redistributed (the protocol source).
dst-vrf <value>	Specifies the destination VRF instance.
vrf-src <value>	Specifies the source VRF instance. This parameter is not required for redistribution within the same VRF.

Default

None

Related commands

Variable	Value
apply [vrf-src <value>]	Applies the redistribution configuration. Changes do not take effect until you apply them.
create [vrf-src <value>]	Creates the OSPF route redistribution instance.
delete [vrf-src <value>]	Deletes the OSPF route redistribution instance.
disable [vrf-src <value>]	Disables the OSPF route redistribution instance.
enable [vrf-src <value>]	Enables the OSPF route redistribution instance.
info [vrf-src <value>]	Shows information about the OSPF route redistribution instance.

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Variable	Value
metric <metric-value> [vrf-src <value>]	Configures the metric to apply to redistributed routes.
metric-type <type1|type2> [vrf-src <value>]	Specifies a type 1 or a type 2 metric. For metric type 1, the cost of the external routes is equal to the sum of all internal costs and the external cost. For metric type 2, the cost of the external routes is equal to the external cost alone.
route-policy <policy name> [vrf-src <value>] [clear]	Configures the route policy to apply to redistributed routes.
subnets <allow|supress> [vrf-src <value>]	Allows or suppresses external subnet route advertisements when routes are redistributed into an OSPF domain.

config ip vrf ospf spf-run

Use this command to force a VRF to update its shortest-path calculations.

Syntax

config ip vrf <vrfName> ospf spf-run

Parameters

Variable	Value
<vrfName>	Specifies the VRF name. The string length is from 0 to 32.

Default

None

Related commands

None

config vlan ip rip in-policy

Use this command to define in policies for filtering inbound RIP packets.

Syntax

config vlan <vid> ip rip in-policy <policy name>

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Parameters

Variable	Value
policy name	Specifies the policy name. The string length is 0 to 64.
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

The default is 1.

Related commands

None

config vlan ip rip out-policy

Use this command to define out policies for filtering outbound RIP packets.

Syntax

config vlan <vid> ip rip out-policy <policy name>

Parameters

Variable	Value
policy name	Specifies the policy name. The string length is 0 to 64.
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

The default is 1.

Related commands

None

config vlan ip rip enable

Use this command to enable RIP on the port.

Syntax

config vlan <vid> ip rip enable

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Parameters

Variable	Value
`vid`	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

config vlan action triggerRipUpdate

Use this command to force a RIP update for a port or VLAN.

Syntax

`config vlan <vid> action triggerRipUpdate`

Parameters

Variable	Value
`<vid>`	Specifies the VLAN ID. The range is between 1 and 4094.
`<slot/port>`	Specifies the slot and port number.

Default

The default value is 1.

Related commands

None

config vlan ip ospf area

Use this command to configure the OSPF interface area ID for the VLAN.

Syntax

`config vlan <vid> ip ospf area <ipaddr>`

Parameters

Variable	Value
`area <ipaddr>`	Configures the OSPF interface area ID for the VLAN.

Default

None

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Related commands

Variable	Value
advertise-when-down <enable|disable>	Enables or disables AdvertiseWhenDown. If enabled, the network on this interface is advertised as up, even if no ports in the VLAN are active. The default is disabled. When you create a VLAN with no active ports and enable advertise-when-down, the route is not advertised until a port is active. Then the route is advertised even when the link is down. To disable advertising based on link status, disable this parameter.
area <ipaddr>	Configures the OSPF interface area ID for the VLAN.
authentication-key <string>	Configures the authentication key (password) for the VLAN. Used with authentication-type simple. **<string>** is key of up to eight characters.
authentication-type <auth-type>	Configures the OSPF authentication type for the VLAN. The default is none. **<auth-type>** is none, simple password, or MD5 authentication. If simple, all OSPF updates that the VLAN receives must contain the authentication key specified by the area authentication-key command. If MD5, all OSPF updates must contain the MD5 key.
dead-interval <seconds>	Configures the OSPF dead interval for the VLAN. The dead interval is the number of seconds the switch OSPF neighbors must wait before assuming that this OSPF router is down. **<seconds>** is the range from 1 to 2147483647. This value must be at least four times the Hello interval value. The default is 40.
disable	Disables OSPF on the VLAN.
enable	Enables OSPF on the VLAN.
hello-interval <seconds>	Configures the OSPF Hello interval for the VLAN. The Hello interval is the number of seconds between Hello packets sent on this VLAN. **<seconds>** is the range 1 to 65535. The default is 10.

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Variable	Value
info	Displays OSPF characteristics for the VLAN.
interface-type <if-type>	Specifies the type of OSPF interface. **<if-type>** is the OSPF interface type: broadcast, NBMA, or passive. The default is broadcast.
metric <cost>	Configures the OSPF metric for the VLAN. The switch advertises the metric in router link advertisements. **<seconds>** is the range 0 to 65535. The default is 10.
poll-interval <seconds>	Configures the OSPF poll interval for the VLAN, the number of seconds the switch OSPF neighbors must wait before sending the next poll. **<seconds>** is the range from 1 to 2147483647. The default is 120.
priority <integer>	Configures the OSPF priority for the VLAN during the election process for the designated router. The VLAN with the highest priority number is the best candidate for the designated router. If the priority is 0, the VLAN cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. **<integer>** is the range 0 to 255. The default is 1.

config vlan ip ospf authentication-type

Use this command to choose the OSPF update authentication methodn.

Syntax

config vlan <vid> ip ospf authentication-type <auth-type>
config vlan <vid> ip ospf authentication-key <string>

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Parameters

Variable	Value
authentication-type <auth-type>	Configures the OSPF authentication type for the VLAN. **<auth-type>** is none, simple password, or MD5 authentication. If simple, all OSPF updates that the VLAN receives must contain the authentication key specified by the area authentication-key command. If MD5, all OSPF updates must contain the MD5 key.

Default

The default is none.

Related commands

Variable	Value
advertise-when-down <enable|disable>	Enables or disables AdvertiseWhenDown. If enabled, the network on this interface is advertised as up, even if no ports in the VLAN are active. The default is disabled. When you create a VLAN with no active ports and enable advertise-when-down, the route is not advertised until a port is active. Then the route is advertised even when the link is down. To disable advertising based on link status, disable this parameter.
area <ipaddr>	Configures the OSPF interface area ID for the VLAN.
authentication-key <string>	Configures the authentication key (password) for the VLAN. Used with authentication-type simple. **<string>** is key of up to eight characters.

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Variable	Value
authentication-type <auth-type>	Configures the OSPF authentication type for the VLAN. The default is none. **<auth-type>** is none, simple password, or MD5 authentication. If simple, all OSPF updates that the VLAN receives must contain the authentication key specified by the area authentication-key command. If MD5, all OSPF updates must contain the MD5 key.
dead-interval <seconds>	Configures the OSPF dead interval for the VLAN. The dead interval is the number of seconds the switch OSPF neighbors must wait before assuming that this OSPF router is down. **<seconds>** is the range from 1 to 2147483647. This value must be at least four times the Hello interval value. The default is 40.
disable	Disables OSPF on the VLAN.
enable	Enables OSPF on the VLAN.
hello-interval <seconds>	Configures the OSPF Hello interval for the VLAN. The Hello interval is the number of seconds between Hello packets sent on this VLAN. **<seconds>** is the range 1 to 65535. The default is 10.
info	Displays OSPF characteristics for the VLAN.
interface-type <if-type>	Specifies the type of OSPF interface. **<if-type>** is the OSPF interface type: broadcast, NBMA, or passive. The default is broadcast.
metric <cost>	Configures the OSPF metric for the VLAN. The switch advertises the metric in router link advertisements. **<seconds>** is the range 0 to 65535. The default is 10.

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Variable	Value
poll-interval <seconds>	Configures the OSPF poll interval for the VLAN, the number of seconds the switch OSPF neighbors must wait before sending the next poll. **<seconds>** is the range from 1 to 2147483647. The default is 120.
priority <integer>	Configures the OSPF priority for the VLAN during the election process for the designated router. The VLAN with the highest priority number is the best candidate for the designated router. If the priority is 0, the VLAN cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. **<integer>** is the range 0 to 255. The default is 1.

config vlan ip ospf interface-type

Use this command to specify the interface type.

Syntax

config vlan <vid> ip ospf interface-type <if-type>

Parameters

Variable	Value
interface-type <if-type>	Specifies the type of OSPF interface. **<if-type>** is the OSPF interface type: broadcast, NBMA, or passive. The default is broadcast.

Default

None

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Related commands

Variable	Value
advertise-when-down <enable|disable>	Enables or disables AdvertiseWhenDown. If enabled, the network on this interface is advertised as up, even if no ports in the VLAN are active. The default is disabled. When you create a VLAN with no active ports and enable advertise-when-down, the route is not advertised until a port is active. Then the route is advertised even when the link is down. To disable advertising based on link status, disable this parameter.
area <ipaddr>	Configures the OSPF interface area ID for the VLAN.
authentication-key <string>	Configures the authentication key (password) for the VLAN. Used with authentication-type simple. **<string>** is key of up to eight characters.
authentication-type <auth-type>	Configures the OSPF authentication type for the VLAN. The default is none. **<auth-type>** is none, simple password, or MD5 authentication. If simple, all OSPF updates that the VLAN receives must contain the authentication key specified by the area authentication-key command. If MD5, all OSPF updates must contain the MD5 key.
dead-interval <seconds>	Configures the OSPF dead interval for the VLAN. The dead interval is the number of seconds the switch OSPF neighbors must wait before assuming that this OSPF router is down. **<seconds>** is the range from 1 to 2147483647. This value must be at least four times the Hello interval value. The default is 40.
disable	Disables OSPF on the VLAN.
enable	Enables OSPF on the VLAN.
hello-interval <seconds>	Configures the OSPF Hello interval for the VLAN. The Hello interval is the number of seconds between Hello packets sent on this VLAN. **<seconds>** is the range 1 to 65535. The default is 10.

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Variable	Value
info	Displays OSPF characteristics for the VLAN.
interface-type <if-type>	Specifies the type of OSPF interface. **<if-type>** is the OSPF interface type: broadcast, NBMA, or passive. The default is broadcast.
metric <cost>	Configures the OSPF metric for the VLAN. The switch advertises the metric in router link advertisements. **<seconds>** is the range 0 to 65535. The default is 10.
poll-interval <seconds>	Configures the OSPF poll interval for the VLAN, the number of seconds the switch OSPF neighbors must wait before sending the next poll. **<seconds>** is the range from 1 to 2147483647. The default is 120.
priority <integer>	Configures the OSPF priority for the VLAN during the election process for the designated router. The VLAN with the highest priority number is the best candidate for the designated router. If the priority is 0, the VLAN cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. **<integer>** is the range 0 to 255. The default is 1.

config vlan ip ospf

Use this command to ensure that OSPF is configured correctly on VLAN.

Syntax

config vlan <vid> ip ospf info
show vlan info ospf [<vid>]

Parameters

Variable	Value
<vid>	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.
info	Displays OSPF characteristics for the VLAN.

Default

None

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Related commands

Variable	Value
advertise-when-down <enable|disable>	Enables or disables AdvertiseWhenDown. If enabled, the network on this interface is advertised as up, even if no ports in the VLAN are active. The default is disabled. When you create a VLAN with no active ports and enable advertise-when-down, the route is not advertised until a port is active. Then the route is advertised even when the link is down. To disable advertising based on link status, disable this parameter.
area <ipaddr>	Configures the OSPF interface area ID for the VLAN.
authentication-key <string>	Configures the authentication key (password) for the VLAN. Used with authentication-type simple. **<string>** is key of up to eight characters.
authentication-type <auth-type>	Configures the OSPF authentication type for the VLAN. The default is none. **<auth-type>** is none, simple password, or MD5 authentication. If simple, all OSPF updates that the VLAN receives must contain the authentication key specified by the area authentication-key command. If MD5, all OSPF updates must contain the MD5 key.
dead-interval <seconds>	Configures the OSPF dead interval for the VLAN. The dead interval is the number of seconds the switch OSPF neighbors must wait before assuming that this OSPF router is down. **<seconds>** is the range from 1 to 2147483647. This value must be at least four times the Hello interval value. The default is 40.
disable	Disables OSPF on the VLAN.
enable	Enables OSPF on the VLAN.
hello-interval <seconds>	Configures the OSPF Hello interval for the VLAN. The Hello interval is the number of seconds between Hello packets sent on this VLAN. **<seconds>** is the range 1 to 65535. The default is 10.

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Variable	Value
info	Displays OSPF characteristics for the VLAN.
interface-type <if-type>	Specifies the type of OSPF interface. **<if-type>** is the OSPF interface type: broadcast, NBMA, or passive. The default is broadcast.
metric <cost>	Configures the OSPF metric for the VLAN. The switch advertises the metric in router link advertisements. **<seconds>** is the range 0 to 65535. The default is 10.
poll-interval <seconds>	Configures the OSPF poll interval for the VLAN, the number of seconds the switch OSPF neighbors must wait before sending the next poll. **<seconds>** is the range from 1 to 2147483647. The default is 120.
priority <integer>	Configures the OSPF priority for the VLAN during the election process for the designated router. The VLAN with the highest priority number is the best candidate for the designated router. If the priority is 0, the VLAN cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. **<integer>** is the range 0 to 255. The default is 1.

config vlan ip ospf

Use this command to enable OSPF on the VLAN.

Syntax

config vlan <vid> ip ospf enable

Parameters

Variable	Value
enable	Enables OSPF on the VLAN.

Default

None

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Related commands

Variable	Value
advertise-when-down <enable|disable>	Enables or disables AdvertiseWhenDown. If enabled, the network on this interface is advertised as up, even if no ports in the VLAN are active. The default is disabled. When you create a VLAN with no active ports and enable advertise-when-down, the route is not advertised until a port is active. Then the route is advertised even when the link is down. To disable advertising based on link status, disable this parameter.
area <ipaddr>	Configures the OSPF interface area ID for the VLAN.
authentication-key <string>	Configures the authentication key (password) for the VLAN. Used with authentication-type simple. **<string>** is key of up to eight characters.
authentication-type <auth-type>	Configures the OSPF authentication type for the VLAN. The default is none. **<auth-type>** is none, simple password, or MD5 authentication. If simple, all OSPF updates that the VLAN receives must contain the authentication key specified by the area authentication-key command. If MD5, all OSPF updates must contain the MD5 key.
dead-interval <seconds>	Configures the OSPF dead interval for the VLAN. The dead interval is the number of seconds the switch OSPF neighbors must wait before assuming that this OSPF router is down. **<seconds>** is the range from 1 to 2147483647. This value must be at least four times the Hello interval value. The default is 40.
disable	Disables OSPF on the VLAN.
enable	Enables OSPF on the VLAN.
hello-interval <seconds>	Configures the OSPF Hello interval for the VLAN. The Hello interval is the number of seconds between Hello packets sent on this VLAN. **<seconds>** is the range 1 to 65535. The default is 10.

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Variable	Value
info	Displays OSPF characteristics for the VLAN.
interface-type <if-type>	Specifies the type of OSPF interface. **<if-type>** is the OSPF interface type: broadcast, NBMA, or passive. The default is broadcast.
metric <cost>	Configures the OSPF metric for the VLAN. The switch advertises the metric in router link advertisements. **<seconds>** is the range 0 to 65535. The default is 10.
poll-interval <seconds>	Configures the OSPF poll interval for the VLAN, the number of seconds the switch OSPF neighbors must wait before sending the next poll. **<seconds>** is the range from 1 to 2147483647. The default is 120.
priority <integer>	Configures the OSPF priority for the VLAN during the election process for the designated router. The VLAN with the highest priority number is the best candidate for the designated router. If the priority is 0, the VLAN cannot become either the designated router or a backup. The priority is used only during election of the designated router and backup designated router. **<integer>** is the range 0 to 255. The default is 1.

show ip ospf interface

Use this command to ensure that OSPF is configured correctly.

Syntax

show ip ospf interface [vrf <value>] [vrfids <value>]
show ip ospf int-timers [vrf <value>] [vrfids <value>]
show ip ospf default-metric [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies the VRF name. The string length is 0 to 32.
vrfids <value>	Specifies the VRF ID range.

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Default

None

Related commands

None

show ports error ospf

Use this command to display extended information about OSPF errors for the specified port or for all ports.

Syntax

show ports error ospf [port <value>]

Parameters

Variable	Value
[port <value>]	—

Default

None

Related commands

Variable	Value
collision [port <value>]	Displays port collision error information.
extended [port <value>]	Displays extended port error information.
main [port <value>]	Displays port general error information.
show-all [file <value>]	Displays all port information.

show ip ospf neighbors

Use this command to display OSPF neighbor information.

Syntax

show ip ospf neighbors [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
vrf <value>	Specifies a VRF by name.
vfrids <value>	Specifies a range of VRF IDs.

Default

None

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Related commands

None

show ip ospf lsdb

Use this command to display the OSPF link-state database.

Syntax

show ip ospf lsdb [area <value>] [lsatype <value>] [lsid <value>] [adv_rtr <value>] [vrf <value>] [vfrids <value>] [detail]

Parameters

Variable	Value
adv_rtr <value>	Specifies the advertising router.
area <value>	Specifies the OSPF area.
detail	Provides detailed output.
lsatype <value>	Specifies the link-state advertisement type in the range of 0 to 7.
lsid <value>	Specifies the link-state ID.
vrf <value>	Specifies a VRF.
vfrids <value>	Specifies a range of VRF IDs.

Default

None

Related commands

None

show ip ospf ase

Use this command to display the OSPF autonomous system external (ASE) link-state advertisements.

Syntax

show ip ospf ase [metric-type <value>] [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
metric-type <value>	Specifies the metric type as a string of 1 to 2 characters.
vrf <value>	Identifies the VRF by name.
vrfids <value>	Specifies a VRF by ID.

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Default

None

Related commands

None

show ip ospf redistribute

Use this command to ensure that the OSPF redistribution configuration is correct.

Syntax

show ip ospf redistribute [vrf <value>] [vrfids <vrfid>]

Parameters

Variable	Value
[vrf <value>]	Specifies the VRF name. The string length is from 0 to 32.
[vrfids <vrfid>]	Specifies the VRF ID range.

Default

None

Related commands

None

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Performance management commands

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config bootconfig flags ha-cpu

Use this command to reset the master SF/CPU.

Syntax

config bootconfig flags ha-cpu <true|false>

Parameters

Variable	Value
true	Turns on the flag.

Default

None

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Related commands

Variable	Value
delay <seconds>	Sets standby delay at startup. **seconds** is the slave delay time in the range of 0 to 255.
info	Show current-level parameter settings and next-level directories.
loadconfigtime <seconds>	Sets time-out for loading configuration file.**seconds** is the time-out for loading configuration file in the range of 0 to 300.
logfile minsize maxsize maxoccupyPercentage	Sets parameters for log file.
msater <cpu-slot	Sets which CPU slot becomes master at startup.**cpu-slot** is the CPU slot number in the range of 5 to 6.
multicast <value>	Sets system multicast scaling parameter. **value** is the multicast scaling value in the range of 0 to 2147483647.

config rmon

Use this command to configure RMON functions on the switch.

Syntax

config rmon

Parameters

None

Default

none

Related commands

Variable	Value
disable	Disables RMON on the switch.
enable	Enables RMON on the switch.
info	Indicates whether RMON is enabled or disabled on the switch.
memsize <memsize>	Configures the amount of RAM in bytes to allocate for RMON. **memsize** is the memory size in bytes (250000–4000000).

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Variable	Value
trap-option <toOwner|toAll>	Controls whether the RMON traps are sent to the owner or to all trap recipients. **toOwner|toAll** is configures as either the owner or to all trap recipients.
util-method <half|full>	Controls whether port utilization is calculated in half or full duplex.

config rmon alarm create

Use this command to set alias port name.

Syntax

config rmon alarm create <id> type <value> intv <value> variable <value> [r_th <value>] [r_ev <value>] [f_th <value>] [f_ev <value>] [owner <value>]

Parameters

Variable	Value
<id>	Specifies the interface index number {1..65535}.
type <value>	Specifies the sample type {absolute|delta}.
intv <value>	Specifies the sample interval {1..3600}.
variable <value>	Specifies the variable name or OID, case sensitive {string length 1..1536}.
[r_th <value>]	Specifies the rising threshold {-2147483647..2147483647}.
[r_ev <value>]	Specifies the rising event number {1..65535}.
[f_th <value>]	Specifies the falling threshold {-2147483647..2147483647}.
[f_ev <value>]	Specifies falling event number {1..65535} = name of the owner {string length 1..127}.
owner <value>	Specifies name of the owner {string length 1..127}.

Default

None

Related commands

None

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config ip ipfix

Use this command to enable or disable IPFIX.

Syntax

config ip ipfix

Parameters

None

Default

None

Related commands

Variable	Value
info	Show current-level parameter settings and next-level directories.
state <enable|disable>	Enables or disables IPFIX. The default value is disable.

config ip ipfix info

Use this command to confirm your configuration.

Syntax

config ip ipfix info

Parameters

Table 4
Command parameters

Variable	Value
info	Show current-level parameter settings and next-level directories.

Default

None

Related commands

Variable	Value
state <enable|disable>	Enables or disables IPFIX. The default value is disable.

config filter acl

Use this command to configure an ACL filter.

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Syntax

config filter acl <acl-id> set global-action <value>

Parameters

Variable	Value
<acl-id>	This is the ACL ID.
<value>	The value is one of the following actions:**none**|**mirror**|**count**|**mirror-count**|**ipfix**|**mirror-ipfix**|**count-ipfix**|**mirror-count-ipfix**

Default

None

Related commands

None

config filter acl ace action

Use this command to enable IPFIX on an ACL.

Syntax

config filter acl <acl-id> ace <ace-id> action <mode> [mlt-index <value>] [remark-dscp <valu>] [remark-dot1p <valu>] [policy <value>] [redirect-next-hop <value>] [unreachable <value>] [egress-queue <value>] [stop-on-match <value>] [egress-queue-nnsc <value>] [ipfix <value>]

Parameters

Variable	Value
<acl-id>	This is the ACL ID.
<ace-id>	This is the ACE ID.
ipfix <enable|disable>	Enables or disables IPFIX.
<mode>	Choose one of the following options for matching packets: • **deny** • **permit**

Default

None

Command mode

Global Configuration mode

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Related commands

Variable	Value
create [name <value>]	Creates an access control entry. **value** is the name for access control entry {string length 0..32}.
debug	Updates desired debug parameters for access control entry.
delete	Deletes an access control entry.
disable	Disables the state of a particular ACE within an ACL.
enable	Enables the state of a particular ACE within an ACL.
info	Displays current level parameter settings and next level directories.
name <value>	Specifies the name for access control entry. **value** is the name for access control entry {string length 0..32}.

config filter acl ace remove-mirror-dst mirroring-dst-ports

Use this command to remove the destination ports assigned.

Syntax

config filter acl <acl-id> ace <ace-id> remove-mirror-dst mirroring-dst-ports <port>

Parameters

Variable	Value
<ports>	Specifies the port list in the slot/port format.
<acl-id>	Specifies the access control list ID in the range of 1 to 4096.
<ace-id>	Specifies the access control list ID in the range of 1 to 1000.

Default

None

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Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.
mirroring-dst-vlan <vid>	Removes the specified VLAN.
mirroring-dst-mlt <mid>	Removes the specified MLT.

config ip ipfix port

Use this command to configure IPFIX parameters on a port.

Syntax

config ip ipfix port <ports>

Parameters

Variable	Value
ports	Specifies the slot/port.

Default

None

Command mode

Global Configuration mode

Related commands

Variable	Value
all-traffic <enable|disable>	Configures IPFIX for all traffic.
flush [export-and-flush]	Deletes all records stored in the COP. **export-and-flush** is an optional parameter which exports the records before they are deleted.
hash-key <id>	Selects a hash-key ID. Values range from 1–4. <id>—hash key id or hashKeyOne|hashKeyTwo|hashKeyThree|hashKeyFour A 64-bit key is formed based on hash-key-id:

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Variable	Value
	Hash Key 1: SIP(lower 20 bits), DIP(lower 19 bits, protocol(1-5 bits), srcport(lower 10 bits), dstport(lower 10 bits) Hash Key 2: Cascaded Hash - Use all bits from 5-tuple - hash1 = hash(SIP,DIP), hash2 = hash(hash1(lower 24 bits,protocol(8 bits), srcport(16 bits),dstport(16 bits)) Hash Key 3: hash(SIP(32 bits),DIP(32 bits)) Hash Key 4: hash(SIP(32 bits),srcport(16 bits),dstport(16 bits)).
hash-polynomial [coeff <value>] [seed <value>]	Configures the hash polynomial for IPFIX. • **coeffs <value>**—polynomial coefficients in the range 0x0 to 0xffffff. • **seed <value>**—polynomial seed in the range 0x0 to 0xffffff. If you do not specify a coefficient, the default value (0x7cc) is used. If you do not specify a seed value, the default value (0) is used.
info	Shows current-level parameter settings and next-level directories.
sampling-rate <1-100000>	Configures the sampling rate. The sampling rate is expressed as 1 in every *n* packets. Configure to one (the default) for continuous monitoring. Otherwise, specify a different frequency.

config ip ipfix slot

Use this command to configure IPFIX slot parameters.

Syntax

config ip ipfix slot <slots>

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Parameters

None

Default

None

Related commands

Variable	Value
active-timeout <value in mins>	Configures flow active time-out. **<value in mins>**—flow record active time-out value from 1–60 minutes.
aging-interval <value in secs>	Configures flow record aging interval. **<value in secs>**—flow record aging interval from 10–3600 seconds.
export-interval <value in secs>	Configures the export interval. **<value in secs>**—frequency of flow export to collector from 10–3600 seconds.
exporter-state <enable|disable>	Configures the exporter state.
info	Shows current-level parameter settings and next-level directories.
template-refresh [refresh-interval <value>] [packets <value>]	Configures the template refresh time-out for IPFIX. • **refresh-interval <value>**—value in seconds from 300–3600. • **packets <value>**—number of packets from 10000–100000. The template rate refresh is scheduled for every x seconds or every y exported packets, whichever occurs first.

config ip ipfix slot info

Use this command to confirm your IPFIX slot parameter configuration.

Syntax

config ip ipfix slot <slots> info

Parameters

Variable	Value
info	Displays current-level parameter settings and next-level directories.

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Default

None

Related commands

Variable	Value
active-timeout <value in mins>	Configures flow active time-out. **<value in mins>**—flow record active time-out value from 1–60 minutes.
aging-interval <value in secs>	Configures flow record aging interval. **<value in secs>**—flow record aging interval from 10–3600 seconds.
export-interval <value in secs>	Configures the export interval. **<value in secs>**—frequency of flow export to collector from 10–3600 seconds.
exporter-state <enable|disable>	Configures the exporter state.
template-refresh [refresh-interval <value>] [packets <value>]	Configures the template refresh time-out for IPFIX. • **refresh-interval <value>**—value in seconds from 300–3600. • **packets <value>**—number of packets from 10000–100000. The template rate refresh is scheduled for every x seconds or every y exported packets, whichever occurs first.

config ip ipfix slot collector

Use this command to configure IPFIX collector parameters.

Syntax

config ip ipfix slot <slots> collector

Parameters

Variable	Value
collector	Configures the parameters for collector on slot basis.

Default

None

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Related commands

Variable	Value
add <ipaddr> [protocol <value>] [dest-port <value>] [exporter-ip <value>] [protocol-version <value>] [enable <value>]	Configures or modifies a collector. • **<ipaddr>**—IP address of collector. • **protocol <value>**—type of protocol **{udp|tcp|sctp}**. • **dest-port <value>**—port from 0–65535. • **exporter-ip <value>**—IP address for the exported traffic. • **protocol-version <value>**—IPFIX protocol version. **{ipfix|preipfixv9|preipfixv5}**. • **enable <value>**—state of collector {false|true}.
info	Shows current-level parameter settings and next-level directories.
remove <ipaddr>	Removes a collector. • **<ipaddr>**—IP address of collector.

config ip ipfix slot collector info

Use this command to confirm your configuration.

Syntax

config ip ipfix slot <slotnum> collector info

Parameters

Variable	Value
collector	Configures the parameters for collector on slot basis.
info	Displays current-level parameter settings and next-level directories.

Default

None

Related commands

None

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config ip ipfix local-collector buffer-size

Use this command to configure the buffer size.

Syntax

config ip ipfix local-collector buffer-size <size>

Parameters

Variable	Value
<size>	This is 1 MB to 70% of the maximum memory size.
<filename>	IPFIX logs are stored on PCMCIA or network with **<filename>**_date_time.bin

Default

None

Related commands

None

config ethernet limit-fdb-learning fdbprotect

Use this command to enable FDB protection on a port.

Syntax

config ethernet <port> limit-fdb-learning fdbprotect <enable|disable>

Parameters

Variable	Value
<enable|disable>	Enable or disable the feature.

Default

None

Related commands

None

config ethernet limit-fdb-learning max-mac-count

Use this command to configure the maximum MAC addresses value for the port.

Syntax

config ethernet <port> limit-fdb-learning max-mac-count <max MAC count>

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Parameters

Variable	Value
<min MAC count>	Specifies the minimum MAC count. The range is 1–1000000.
<max MAC count>	Specifies the maximum MAC count. The range is 1–1000000.
<port>	Specifies the number of the port on which you want to enable FDB Protect.

Default

None

Related commands

None

config ethernet limit-fdb-learning info

Use this command to view limit-FDB learning information.

Syntax

config ethernet <ports> limit-fdb-learning info

Parameters

Variable	Value
<ports>	Specifies the list of ports in the slot/port format.

Default

None

Related commands

None

config ethernet limit-fbd violation-log-trap

Use this command to configure logging.

Syntax

config ethernet <port> limit-fdb-learning violation-log-trap <enable|disable>

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Parameters

Variable	Value
`<enable|disable>`	Enable or disable the feature.
`<port>`	Specifies the number of the port on which you want to enable FDB protect.

Default

None

Related commands

None

config ethernet limit-fdb-learning violation-down-port

Use this command to configure the switch to disable the port when the MAC learning limit is reached.

Syntax

config ethernet <port> limit-fdb-learning violation-down-port <enable|disable>

Parameters

Variable	Value
`<enable|disable>`	Enable or disable the feature.
`<port>`	Specifies the number of the port on which you want to enable FDB protect.

Default

None

Related commands

None

config ip ipfix slot

Use this command to enable or disable the local collector.

Syntax

config ip ipfix slot <slot-list> collector <enable|disable>

Parameters

None

Default

None

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Related commands

None

config ip traffic-filter clear-stats

Use this command to clear the traffic filter statistics.

Syntax

config ip traffic-filter clear-stats [<fid>]

Parameters

Variable	Value
clear-stats [<fid>]	Clears filter statistics for the specified filter ID.**fid** is the traffic filter ID range from 1 to 4000.

Default

None

Related commands

Variable	Value
info	Displays which IP traffic filters are set for the command.

config ip traffic-filter clear-stats

Use this command to clear the traffic filter statistics.

Syntax

config ip traffic-filter clear-stats [<fid>]

Parameters

Variable	Value
clear-stats [<fid>]	Clears filter statistics for the specified filter ID.**fid** is the traffic filter ID range from 1 to 4000.

Default

None

Related commands

Variable	Value
info	Displays which IP traffic filters are set for the command.

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config sys set pluggable-optical-module

Use this command to configure global pluggable-optical-module parameters.

Syntax

config sys set pluggable-optical-module {ddm-monitor-interval | ddm-monitor | ddm-traps-send | ddm-alarm-portdown | info}

Parameters

Variable	Value
ddm-monitor-interval	Configures the DDM monitor interval with a range of 5 to 60 seconds.
ddm-monitor	Enables DDM monitor.
ddm-traps-send	Enables sending DDM traps.
ddm-alarm-portdown	Sets the port down, when DDM alarm happens to it.

Default

None

Related commands

None

config mpls statistics receive disable

Use this command to disable receive statistics.

Syntax

config mpls statistics receive disable

Parameters

None

Default

None

Related commands

Variable	Value
enable	Enables receive statistics.
start-label <label#>	Specifies the MPLS start label.
info	Receives MPLS statistics information.

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config cli monitor duration

Use this command to change monitor time duration.

Syntax

config cli monitor duration <integer>

Parameters

Variable	Value
<integer>	Specifies the time duration in seconds in the range of 1 to 1800.

Default

None

Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.
interval <integer>	Modifies monitor time interval. **integer** is the time interval in seconds {1..600}.

config rmon ether-stats create

Use this command to create a ether-stats control interface.

Syntax

config rmon ether-stats create <id> <ports> [owner <value>]

Parameters

Variable	Value
delete <id>	Deletes a ether-stats control interface.
info	Displays current level parameter settings and next level directories.
owner <id> <name>	change the owner name for this interface. • **id** is the control ether statistics interface index number {1..65535}. • **name** is the name of the owner {string length 1..127}.

Default

None

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Related commands

None

clear filter acl statistics default

Use this command to clear ACL default statistics.

Syntax

```
clear filter acl statistics default [ <acl-id> ]
```

Parameters

Variable	Value
`<acl-id>`	A unique identifier (in the range 1 to 4096) for this ACL entry.

Default

None

Related commands

None

clear filter acl statistics port

Use this command to clear for each-port ACE statistics for all ACLs, or for a particular ACL.

Syntax

```
clear filter acl statistics port [ <acl-id> ] [ <acl-id>
<ace-id> ] [ <acl-id> <ace-id> <port-num> ]
```

Parameters

Variable	Value
`<acl-id>`	Specifies a unique identifier (in the range 1 to 4096) for this ACL entry.
`<ace-id>`	Specifies a unique identifier (in the range 1 to 1000) for this ACE entry.
`<port-num>`	Identifies the port number for which you wish to display ACE statistics.

Default

None

Related commands

None

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clear filter acl statistics port

Use this command to clear for each-port ACE statistics for all ACLs, or for a particular ACL.

Syntax

```
clear filter acl statistics port [ <acl-id> ] [ <acl-id> <ace-id> ] [ <acl-id> <ace-id> <port-num> ]
```

Parameters

Variable	Value
<acl-id>	Specifies a unique identifier (in the range 1 to 4096) for this ACL entry.
<ace-id>	Specifies a unique identifier (in the range 1 to 1000) for this ACE entry.
<port-num>	Identifies the port number for which you wish to display ACE statistics.

Default

None

Related commands

None

clear filter acl statistics default

Use this command to clear ACL default statistics.

Syntax

```
clear filter acl statistics default [ <acl-id> ]
```

Parameters

Variable	Value
<acl-id>	A unique identifier (in the range 1 to 4096) for this ACL entry.

Default

None

Related commands

None

clear mpls ldp statistics

Use this command to clear IDP statistics.

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Syntax

clear mpls ldp statistics [<peer-ldpId>]

Parameters

Variable	Value
<peer-ldpId>	Specifies the Peer LDP address in the {a.b.c.d} format.

Default

None

Related commands

None

clear mpls statistics receive

Use this command to clear MPLS LSP statistics.

Syntax

clear mpls statistics receive

Parameters

None

Default

None

Related commands

None

clear mpls statistics receive

Use this command to clear MPLS LSP statistics.

Syntax

clear mpls statistics receive

Parameters

None

Default

None

Related commands

Variable	Value
transmit	Clears MLPS transmit statistics.

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clear mpls statistics receive

Use this command to clear MPLS RSVP statistics.

Syntax

clear mpls rsvp statistics [vlan <value>] [ports <value>]

Parameters

Variable	Value
[vlan <value>]	Specifies the VLAN ID in the range of 1 to 4094.
[ports <value>]	Specifies the port number in the {slot/port} format.

Default

None

Related commands

Variable	Value
transmit	Clears MLPS transmit statistics.

clear ip mroute stats

Use this command to clear mroute statistics.

Syntax

clear ip mroute stats

Parameters

None

Default

None

Related commands

None

clear lacp stats

Use this command to clear LACP statistics.

Syntax

clear lacp stats [<ports>]

Parameters

None

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Default
None

Related commands
None

clear mlt ist stats
Use this command to clear IST statistics.

Syntax
clear mlt ist stats

Parameters
None

Default
None

Related commands
None

clear ports stats
Use this command to clear ports statistics.

Syntax
clear ports stats

Parameters
None

Default
None

Related commands
None

clear ip vrrp global-stats
Use this command to clear global statistics for VRRP.

Syntax
clear ip vrrp global-stats

Parameters
None

Default
None

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Related commands

Variable	Value
ports <ports> vrid <value>	Clears specific port for VRRP.
vlan <vid> vrid <value>	Clears specific VLAN for VRRP.

monitor mlt error collision

Use this command to monitor MLT collision error information.

Syntax

monitor mlt error collision [<mid>]

Parameters

Variable	Value
<mid>	Specifies the MLT ID in the range of 1 to 256.

Default

None

Related commands

Variable	Value
main [<mid>]	Monitors MLT general error information.

monitor mlt stats interface main

Use this command to display MLT interface statistics.

Syntax

monitor mlt stats interface main [<mid>]

Parameters

Variable	Value
<mid>	Specifies the MLT ID in the range of 1 to 256.

Default

None

Related commands

Variable	Value
utilization [<mid>]	Displays MLT interface statistics utilization.

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monitor ports error collision

Use this command to monitor port collision error information.

Syntax

monitor ports error collision [<ports>] [from <value>]

Parameters

Variable	Value
<ports>	Specifies the port list in the {slot/port} format.

Default

None

Related commands

Variable	Value
extended [<ports>] [from <value>]	Monitors port extended error information.
main [<ports>] [from <value>]	Monitors port general error information.
ospf [<ports>] [from <value>]	Monitors the OSPF error information.

monitor ports stats bridging

Use this command to monitor port collision error information.

Syntax

monitor ports stats bridging [<ports>] [from <value>]

Parameters

Variable	Value
<ports>	Specifies the port list in the {slot/port} format.

Default

None

Related commands

Variable	Value
dhcp-relay [<ports>] [from <value>]	Monitors port DHCP statistics.
rmon [<ports>] [from <value>]	Monitors port RMON statistics.

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Variable	Value
`routing [<ports>] [from <value>]`	Monitors port routing statistics.
`stp [<ports>] [from <value>]`	Monitors port STP statistics.

monitor ports stats interface extended

Use this command to monitor port interface statistics.

Syntax

`monitor ports stats interface extended [<ports>] [from <value>]`

Parameters

Variable	Value
`<ports>`	Specifies the port list in the {slot/port} format.

Default

None

Related commands

Variable	Value
`main [<ports>] [from <value>]`	Monitors port interface statistics.
`utilization [<ports>] [from <value>]`	Monitors port interface statistics utilization.

monitor ports stats ospf extended

Use this command to monitor port OSPF statistics.

Syntax

`monitor ports stats ospf extended [<ports>] [from <value>]`

Parameters

Variable	Value
`<ports>`	Specifies the port list in the {slot/port} format.

Default

None

Related commands

Variable	Value
`main [<ports>] [from <value>]`	Monitors port OSPF statistics.

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monitor ports stats pos activealarms

Use this command to display active alarms on the specified ports.

Syntax

monitor ports stats pos activealarms [vlan <value>] [port <value>]

Parameters

Variable	Value
[vlan <value>]	Specifies the VLAN IDs.

Default

None

Related commands

Variable	Value
felinecurrent [vlan <value>] [port <value>]	Displays PoS far end line current statistics.
felineinterval <interval> [<ports>]	Displays PoS far end line interval statistics.
fepathcurrent [vlan <value>] [port <value>]	Displays PoS far end path current statistics.
fepathinterval <interval> [<ports>]	Displays PoS far end path interval statistics.
linecurrent [vlan <value>] [port <value>]	Displays PoS line current statistics.
lineinterval <interval> [<ports>]	Displays PoS line interval statistics.
linkstatus [vlan <value>] [port <value>]	Displays PoS link statistics.
lqrstatus [vlan <value>] [port <value>]	Display link quality report table contents.
pathcurrent [vlan <value>] [port <value>]	Displays PoS path current statistics.
pathinterval <interval> [<ports>]	Displays PoS path interval statistics.
pppiftbl [vlan <value>] [port <value>]	Displays PPP IF table values.
sectioncurrent [vlan <value>] [port <value>]	Displays PoS section current statistics.

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Variable	Value
sectioninterval <interval> [<ports>]	Displays PoS section interval statistics.
sonetmediumtbl [vlan <value>] [port <value>]	Displays SONET medium table contents.

monitor ports stats routing

Use this command to monitor port routing statistics.

Syntax

monitor ports stats routing [<ports>] [from <value>]

Parameters

Variable	Value
[vlan <value>]	Specifies the VLAN IDs.

Default

None

Related commands

Variable	Value
bridging [<ports>] [from <value>]	Monitors port bridging statistics.
dhcp-relay [<ports>] [from <value>]	Monitors port DHCP statistics.
rmon [<ports>] [from <value>]	Monitors port RMON statistics.
routing [<ports>] [from <value>]	Monitors port routing statistics.
stp [vlan <value>] [port <value>]	Monitors port STP statistics.

monitor ports stats vrrp extended

Use this command to monitor port VRRP statistics.

Syntax

monitor ports stats vrrp extended [port <value>]

Parameters

Variable	Value
[port <value>]	Specifies the VLAN IDs.

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Default

None

Related commands

Variable	Value
main [port <value>]	Monitors port VRRP statistics.

monitor ports stats wis activealarms

Use this command to display active alarms on the specified ports.

Syntax

monitor ports stats wis activealarms [vlan <value] [port <value>

Parameters

Variable	Value
[port <value>]	Specifies the VLAN IDs.

Default

None

Related commands

Variable	Value
felinecurrent [vlan <value>] [port <value>]	Displays ethernet SONET far end line current statistics.
felineinterval <intervalid>] [<ports>]	Displays ethernet SONET far end line interval statistics.
fepathcurrent [vlan <value>] [port <value>]	Displays ethernet SONET far end path current statistics.
fepathinterval <intervalid>] [<ports>]	Displays ethernet SONET far end path interval statistics.
linecurrent [vlan <value>] [port <value>]	Displays ethernet SONET line current statistics.
lineinterval <intervalid>] [<ports>]	Displays ethernet SONET line interval statistics.
pathcurrent [vlan <value>] [port <value>]	Displays ethernet SONET path current statistics.
pathinterval <intervalid>] [<ports>]	Displays ethernet SONET path interval statistics.
sectioncurrent [vlan <value>] [port <value>]	Displays ethernet SONET section current statistics.

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Variable	Value
sectioninterval <intervalid>] [<ports>]	Displays ethernet SONET section interval statistics.
sonetmedium [vlan <value>] [port <value>]	Displays SONET medium table contents.

monitor ip mroute stats

Use this command to display active alarms on the specified ports.

Syntax

monitor ip mroute stats <group-ip-list> [vrf <value>] [vrfids <value>]

Parameters

Variable	Value
<group-ip-list>	Specifies the Group IP address list. The maximum number of group entries is 10.
[vrf <value>]	Specifies the VRF name. The string length is 0 to 32.
[vrfids <value>]	Specifies the VRF IDRange.

Default

None

Related commands

None

ipfix-log

Use this command to save IPFIX information.

Syntax

ipfix-log {a.b.c.d: | /pcmcia/ } <filename>

Parameters

Variable	Value
<filename>	IPFIX logs are stored on PCMCIA or network with **<filename>**_date_time.bin

Default

None

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Related commands

None

trace auto-enable

Use this command to enable the trace auto-enable feature.

Syntax

trace auto-enable

Parameters

None

Default

None

Related commands

Variable	Value
add-module <modid> <level>	Adds a module to be traced by the trace auto-enable feature. • **modid** identifies the module that you want to add. For example, 3 = Port Manager, 20 = Topology Discovery. For a complete list of module IDs, enter **trace auto-enable add-module ?.** • **level** identifies the level of detail you want in the trace. For example, 0 = Disabled, 1 = Very Terse. For a complete list of module IDs, enter **trace auto-enable add-module ?.**
auto-trace <enable|disable>	Enables or disables auto-trace. The default is disable. **ATTENTION** If you enable auto-trace, central processing unit (SF/CPU) utilization increases by up to 30 percent.
high-percentage <percent>	Specifies the SF/CPU utilization percentage above which auto-trace is enabled. **percent** is a value from 60–100. The default is 90.
high-track-duration <seconds>	Specifies the time in seconds to monitor SF/CPU utilization before the system triggers a trace. **seconds** is a value from 3–10. The default is 5.

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Variable	Value
info	Displays trace auto-enable information.
low-percentage <percent>	Specifies the SF/CPU utilization percentage below which the system disables auto-trace. **percent** is a value from 50–90. The default is 75.
low-track-duration <seconds>	Specifies the time, in seconds, to monitor SF/CPU utilization before the system disables the trace. **seconds** is a value from 3–10. The default is 5.
remove-module <modid>	Removes a module from automatic tracing. **modid** identifies the module for which you want to disable auto-trace. For example, 3 = Port Manager, 20 = Topology Discovery. For a complete list of module IDs, enter **trace auto-enable add-module ?.**

show ip ipfix collector-info

Use this command to display the total number of IPFIX packets received and number of packets dropped.

Syntax

show ip ipfix collector-info [<slots>]

Parameters

Variable	Value
<slots>	Specifies the slot list.

Default

None

Related commands

None

show sys pluggable-optical-module

Use this command to display basic SFP and XFP manufacturing information and characteristics.

Syntax

show sys pluggable-optical-modules info [<ports>] [detail]

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Parameters

Variable	Value
`<ports>`	A port or a range of ports in the format of slot/port. If no port list is entered the complete detailed output appears for each port.
`[detail]`	Displays all details.

Default

None

Related commands

None

show sys pluggable-optical-module temperature

Use this command to display SFP and XFP temperatures.

Syntax

show sys pluggable-optical-modules temperature [<ports>]

Parameters

Variable	Value
`<ports>`	A port or a range of ports in the format of slot/port. If no port list is entered the complete detailed output appears for each port.

Default

None

Related commands

None

show sys pluggable-optical-module voltage

Use this command to display SFP and XFP voltages.

Syntax

show sys pluggable-optical-modules voltage [<ports>]

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Parameters

Variable	Value
<ports>	A port or a range of ports in the format of slot/port. If no port list is entered the complete detailed output appears for each port.

Default

None

Related commands

None

show ip ipfix

Use this command to display IPFIX parameters.

Syntax

show ip ipfix

Parameters

None

Default

None

Related commands

Variable	Value
collector-info [<slots>]	Shows collector information.
exporter-info [<slots>]	Shows exporter information.
exporter-statistics [<slots>]	Shows exporter statistics.
flows <slots> [src-ip <value>] [dst-ip <value>] [port <value>] [vlan <value>] [protocol <value>] [src-port <value>] [dest-port <value>] [byte-count <value>] [packet-count <value>] [dscp <value>] [start-time <value>] [last-time <value>] [monitor	Displays IPFIX flows for a given slot. • **<slots>**—slot list {slot[-slot][,...]} • **src-ip <value>**—oper{=|!=|<=|>=} & ip addr {a.b.c.d}. Example {<=a.b.c.d}. • **dst-ip <value>**—oper{=|!=|<=|>=} & ip addr {a.b.c.d}. For example, {>=a.b.c.d}. • **port <value>**—oper{=|!=|<=|>=} & port{slot/port}. For example {=a/b}. • **vlan <value>**—oper{=|!=|<=|>=} & vlan{0..4095}. For example, {!=a}.

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Variable	Value
<value>] [numFlows <value>]	• **protocol <value>**—oper{=|!=|<=|>=} & protocol {0..255}. For example, {>=a}. The mapping values for some of the protocol types are: icmp:1, tcp:6, udp:17, ipsecesp:50, ipsecah:51, ospf:89, vrrp:112, snmp:254, undefined:256. • **src-port <value>**—oper{=|!=|<=|>=} & port {0..65535}. For example, {>=a}. • **dest-port <value>**—oper{=|!=|<=|>=} & port {0..65535}. For example, {>=a}. • **byte-count <value>**—oper{=|!=|<=|>=} & byte-count {0..4294967295}. For example, {>=a}. • **packet-count <value>**—oper{=|!=|<=|>=} & pkt-count {0..4294967295}. For example, {>=a}. • dscp **<value>** = oper{=|!=|<=|>=} & dscp{0..255},e.g {>=a} • **start-time <value>** —oper{=|!=|<=|>=} & time {MMddyyyyhhmmss}. For example, {>=a}. • **last-time <value>**—oper{=|!=|<=|>=} & time {MMddyyyyhhmmss}. For example, {>=a}. • **monitor <value>** —true|false. • **numFlows <value>** —from 1–100.
hash-stats [<slots>]	Shows hash statistics.
info	Shows current-level parameter settings and next-level directories.
interface [<ports>]	Shows IPFIX interface information for each port.

show ip ipfix flows

Use this command to display an exporter database.

Syntax

show ip ipfix flows <slots> [src-ip <value>] [dst-ip <value>] [port <value>] [vlan <value] [protocol <value>] [src-port <value>] [dest-port <value>]

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```
[byte-count <value>] [packet-count <value>] [dscp
<value>] [start-time <value>] [last-time <value>] [monitor
<TRUE|FALSE>] [numFlows <value>]
```

Parameters

None

Default

None

Related commands

None

show ip ipfix exporter-info

Use this command to display an exporter configuration.

Syntax

```
show ip ipfix exporter-info <slots>
```

Parameters

Variable	Value
`exporter-info`	Displays command for exporter information.

Default

None

Related commands

None

show ip ipfix interface

Use this command to display hashing properties.

Syntax

```
show ip ipfix interface <ports>
```

Parameters

Variable	Value
`interface`	Displays ipfix interface information for ports.
`ports`	Specifies the port or range of ports to configure in the slot/port format.

Default

None

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Related commands

None

show ip ipfix collector-info

Use this command to display collector information.

Syntax

show ip ipfix collector-info <slotlist>

Parameters

Variable	Value
collector-info	Displays command for collector information.

Default

None

Related commands

None

show ip ipfix info

Use this command to display global IPFIX information.

Syntax

show ip ipfix info

Parameters

Variable	Value
info	Displays current-level parameter settings and next-level directories.

Default

None

Related commands

None

show sys perf

Use this command to view performance parameters.

Syntax

show sys perf

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Parameters

Variable	Value
perf	Displays system performance information.

Default

None

Command mode

Privileged EXEC Mode

Related commands

None

show rmon

Use this command to display RMON settings.

Syntax

show rmon

Parameters

None

Default

None

Related commands

Variable	Value
alarm	Displays the RMON Alarm table.
ether-stats	Displays the RMON Ethernet statistics table.
event	Displays the RMON event table.
history-control	Displays the RMON history control table.
info	Displays the status of RMON on the switch.
log	Displays the RMON log table.

show ip tcp statistics-global

Use this command to display TCP statistics.

Syntax

show ip tcp statistics-global

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Parameters

Variable	Value
`statistics-global`	Displays IP TCP global statistics command.

Default

None

Related commands

Variable	Value
`info-connections`	Displays IP TCP connections command information.
	Displays IP TCP global properties command.
`show-all [file <value>]`	Displays IP TCP commands.

show ports stats routing

Use this command to display port routing statistics.

Syntax

`show ports stats routing [port <value>]`

Parameters

Variable	Value
`[port <value>]`	Indicates port on which you want to view statistics.

Default

None

Related commands

Variable	Value
`atmport [vlan <value>] [port <value>]`	Displays ATM statistics on the specified ports.
`bridging [vlan <value>] [port <value>]`	Displays port bridging statistics.
`dhcp-relay`	Displays port DHCP statistics.
`egress-queues [<ports>]`	Displays port egress-queue statistics.
`lacp [port <valu>]`	Displays port LACP statistics.
`rmon [port <valu>]`	Displays port RMON statistics.
`show all [file <value>]`	Displays all ports statistics.

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show port stats bridging

Use this command to display bridging statistics for specific ports.

Syntax

```
show port stats bridging [vlan <value>] [port <value>]
```

Parameters

Variable	Value
[vlan <value>]	Display all statistics by VLAN.
[port <value>]	Displays all statistics by port.

Default

None

Related commands

None

show port stats dhcp-relay

Use this command to display egress queue statistics for specific ports.

Syntax

```
show ports stats dhcp-relay [port <value>] [vrf <value>]
[vrfids <value>]

show ports info dhcp-relay [port <value>] [vrf <value>]
[vrfids <value>]
```

Parameters

Variable	Value
[port <value>]	Specifies the port.
[vrf <value>]	Specifies a VRF instance by VRF name.
[vrfids <value>]	Specifies a VRF or range of VRFs by ID.

Default

None

Related commands

None

show port stats lacp

Use this command to display egress queue statistics for specific ports.

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Syntax

show ports stats lacp [port <value>]

Parameters

Variable	Value
[port <value>]	Displays all statistics by port.

Default

None

Related commands

None

show port stats rmon

Use this command to manage network performance.

Syntax

show port stats rmon [port <value>]

Parameters

Variable	Value
[port <value>]	Displays all statistics by port.

Default

None

Related commands

None

show ip ipfix exporter-statistics

Use this command to manage network performance.

Syntax

show ip ipfix exporter-statistics [<slots>]

Parameters

Variable	Value
[<slots>]	Indicates a slot or range of slots for which you want to view statistics.

Default

None

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Related commands

None

show ip ipfix hash-stats

Use this command to display hash statistics.

Syntax

```
show ip ipfix hash-stats [<slots>]

clear ip ipfix hash-stats [<slots>]
```

Parameters

Variable	Value
`[<slots>]`	Indicates a slot or range of slots for which you want to view statistics.

Default

None

Related commands

None

show qos stats egress-queue-set

Use this command to display egress queue set statistics.

Syntax

```
show qos stats egress-queue-set
```

Parameters

Variable	Value
`egress-queue-set <id> [verbose]`	Displays all queue statistics identified by the specific ID.

Default

None

Related commands

Variable	Value
`all [verbose]`	Displays all queue statistics.
`port <ports> [verbose]`	Displays all queue statistics by port.

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show port stats egress-queues

Use this command to display individual egress queue statistics.

Syntax

show port stats egress-queues

Parameters

None

Default

None

Related commands

None

show qos stats policy

Use this command to display policing statistics.

Syntax

show qos stats policy

Parameters

None

Default

None

Related commands

Variable	Value
all	Displays all policing statistics.
port <ports> [policy <value>]	Displays policing statistics by port.
lane <lane-no> [policy <value>]	Displays policing statistics by specific lane.

show filter acl statistics port

Use this command to display ACE for each-port statistics.

Syntax

show filter acl statistics port [<acl-id>] [<acl-id> <ace-id>] [<acl-id> <ace-id> <port-num>]

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Parameters

Variable	Value
<acl-id>	Specifies a unique identifier (in the range 1 to 4096) for this ACL entry.
<ace-id>	Specifies a unique identifier (in the range 1 to 1000) for this ACE entry.
<port-num>	Identifies the port number for which you wish to display ACE statistics.

Default

None

Related commands

Variable	Value
ace [<acl-id>] [<ace-id>]	Displays action parameters for access control entry.
action [<acl-id>] [<ace-id>]	Displays action parameters for access control entry.
advanced [<acl-id>] [<ace-id>]	Displays user-defined match criteria for access control entry.
arp [<acl-id>] [<ace-id>]	Displays IP header criteria for access control entry.
config [<acl-id>] [<ace-id>]	Displays ACL and ACE configuration.
debug [<acl-id>] [<ace-id>]	Displays ethernet header criteria for access control entry.
ethernet [<acl-id>] [<ace-id>]	Displays TCP or UDP header criteria for access control entry.
info [<acl-id>]	Displays action parameters for access control entry.
ip [<acl-id>] [<ace-id>]	Displays IP protocol criteria for access control entry.
ipv6 [<acl-id>] [<ace-id>]	Displays IPv6 protocol criteria for access control entry.
protocol [<acl-id>] [<ace-id>]	Displays traffic statistics for access control entry.

show ip traffic-filter stats

Use this command to display the traffic filter statistics.

Syntax

show ip traffic-filter stats [<fids>]

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Parameters

Variable	Value
[<fid>]	The traffic filter ID range from 1 to 4000.

Default

None

Related commands

None

show qos stats egress-queue-set

Use this command to display egress queue set statistics.

Syntax

show qos stats egress-queue-set <id> [verbose]

Parameters

Variable	Value
egress-queue-set <id> [verbose]	Displays all queue statistics identified by the specific ID.

Default

None

Related commands

Variable	Value
all [verbose]	Displays all queue statistics.
egress-queue-set <id> [verbose]	Displays all queue statistics identified by the specific ID.
port <ports> [verbose]	Displays all queue statistics by port.

show port stats egress-queues

Use this command to display egress queue statistics for specific ports.

Syntax

show port stats egress-queues

Parameters

None

Default

None

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Related commands

Variable	Value
`[ <ports> ]`	Displays statistics for the specified ports.
`[queues <value> ]`	Displays statistics for the specified queue list.
`[verbose]`	Displays the queues with both non-zero and zero allocation. Otherwise, only queues with non-zero allocations are shown. You can also use this option for debugging purposes because it can signal a configuration problem if the queues with zero allocation have packet drops.

show qos stats policy

Use this command to display policing statistics.

Syntax

```
show qos stats policy
```

Parameters

None

Default

None

Related commands

Variable	Value
`all`	Displays all policing statistics.
`port <ports> [policy <value> ]`	Displays policing statistics by port.
`lane <lane-no> [policy <value> ]`	Displays policing statistics by specific lane.

show filter acl statistics port

Use this command to display for each-port ACE statistics for the corresponding ACL.

Syntax

```
show filter acl statistics port [ <acl-id> ] [ <acl-id> <ace-id> ] [ <acl-id> <ace-id> <port-num> ]
```


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Parameters

Variable	Value
`<acl-id>`	Specifies a unique identifier (in the range 1 to 4096) for this ACL entry.
`<ace-id>`	Specifies a unique identifier (in the range 1 to 1000) for this ACE entry.
`<port-num>`	Identifies the port number for which you wish to display ACE statistics.

Default

None

Related commands

None

show ip traffic-filter stats

Use this command to display the traffic filter statistics.

Syntax

`show ip traffic-filter stats [<fids>]`

Parameters

Variable	Value
`[<fid>]`	The traffic filter ID range from 1 to 4000.

Default

None

Related commands

None

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QoS and IP Filtering for Classic modules commands

This chapter describes the Ethernet Routing Switch 8600 QoS and IP Filtering for Classic modules commands.

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config ethernet

Use this command to configure Layer 3 trusted/untrusted ports.

Syntax

config ethernet <ports> access-diffserv <true|false>

Parameters

Variable	Value
access-diffserv <true|false>	True specifies an access port and overrides incoming DSCP bits; false specifies a core port and honors and services incoming DSCP bits.

Default

The default is false.

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Related commands

None

config ethernet broadcast-rate-limit

Use this command to configure broadcast rate limiting.

Syntax

config ethernet <ports> broadcast-rate-limit <value> [<enable|disable>]

Parameters

Variable	Value
broadcast-rate-limit <value> [<enable|disable>]	Specifies the rate limit for broadcast traffic from 250 to 2 147 483 647 kbit/s. **enable|disable** enables or disables rate limiting.

Default

None

Related commands

config ethernet traffic-filter default-action

Use this command to configure the default action for a filter.

Syntax

config ethernet <ports> ip traffic-filter default-action

Parameters

Variable	Value
drop	Sets the port filter default action to drop.
forward	Sets the port filter default action to forward.
info	Displays the port default action configuration.
none	Does not apply any policy to the port.

Default

Related commands

Variable	Value
drop	Sets the port filter default action to drop.
forward	Sets the port filter default action to forward.
info	Displays the port default action configuration.
none	Does not apply any policy to the port.

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config ethernet enable-diffserv

Use this command to enable Diffserv for a port.

Syntax

config ethernet <ports> enable-diffserv <true|false>

Parameters

Variable	Value
enable-diffserv <true|false>	True enables diffserv for the port or ports selected. When set to true all other QoS parameter values and functions now take affect and are applied. If set to false, these parameters and settings have no applicability. The default value is false.

Default

The default value is false.

Related commands

None

config ip traffic-filter global-set

Use this command to configure a global filter set.

Syntax

config ip traffic-filter global-set <gsetid> add-filter <fid>

Parameters

Variable	Value
add-filter <fid>	Adds a global filter to a global filter set. **fid** is the traffic filter ID in the range of 1–4000.

Default

None

Related commands

Variable	Value
create [name <value>]	Creates a global filter set. • **name <value>** sets a name to the filter.
delete	Deletes a global filter set.

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Variable	Value
info	Displays the global filter set characteristics.
remove-filter <value>	Removes a global filter from a global filter set. **fid** is the traffic filter ID in the range of 1–4000.

config vlan fdb-entry qos-level

Use this command to configure the QoS level for specific MAC addresses.

Syntax

config vlan <vlan id> fdb-entry qos-level <mac> status <value> <0...6>config vlan <vlan id> fdb-static add <mac> port <value> qos <value>

Parameters

Variable	Value
<0...6>	Specifies the QoS level.
<mac>	**mac** specifies the MAC address in the format 0x00:0x00:0x00:0x00:0x00:0x00:0x00.
<vid>	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.
status <value>	Specifies the FDB status (other|invalid|learned|self|mgmt).

Default

None

Related commands

Variable	Value
info	Shows current-level parameter settings and next-level directories.
remove <mac>	Removes a static member to a VLAN. **mac** is the MAC address in the format {0x00:0x00:0x00:0x00:0x00:0x00:0x00}.

config ethernet multicast-rate-limit

Use this command to configure multicast rate limiting.

Syntax

config ethernet <ports> multicast-rate-limit <value> [<enable|disable>]

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Parameters

Variable	Value
multicast-rate-limit <value> [<enable|disable>]	Specifies the rate limit for multicast traffic from 250 to 2 147 483 647 kbit/s. **enable|disable** enables or disables rate limiting.

Default

None

Related commands

None

config ip traffic-filter filter

Use this command to configure traffic filter match settings.

Syntax

config ip traffic-filter filter <fid> match ds-field <6-bit dscp> <2-bit reserved>

Parameters

Variable	Value
ds-field <6-bit dscp> <2-bit reserved>	Sets the DS field to a specific number. This field is used to specify the match value for the DS field. The user must enter an 8-bit value, which is composed of the 6-bit DSCP and the 2-bit DSCP reserved fields. If the DS field in the incoming packet matches this value, then this filter is applied to the packet. • **6-bit dscp** is a binary number • **2-bit reserved** is a binary number

Default

None

Related commands

Variable	Value
ds-field-enable <enable|disable>	Enables or disables the traffic filter to match on the DS field set for the traffic filter.

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Variable	Value
dst-port <port> [dst-option <value>]	Sets the TCP/UDP destination port and destination option. • **port** is the TCP/UDP destination port to filter on (0 to 65535). • **dst-option <value>** is the TCP or UDP destination port option. {ignore|equal|less|greater|notequal}.
icmp-request <true|false>	Enables or disables the traffic filter to match ICMP requests.
info	Displays the match settings for the filter.
ip-fragment <true|false>	Enables or disables the traffic filter to allow IP fragments to be filtered.
protocol <protocoltype> [<pid>]	Sets the protocol type for the filter. • **protocoltype** is {ignore |I CMP | TCP | UDP | vrrp | ospf | ipsec_esp | ipsec_ah | usrDefined} • **pid** is the PID number in decimal {0..255} format that you assign.
src-port <port> [src-option<value>]	Sets the TCP/UDP source port and source option. • **port** is the TCP/UDP source port to filter on (0 to 65535). • **src-option <value>** is the option {ignore|equal|less|greater|notequal}.

config ip traffic-filter filter

Use this command to configure traffic filters for DiffServ access ports.

Syntax

config ip traffic-filter filter <fid> modify dscp <6-bit dscp>

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Parameters

Variable	Value
dscp <6-bit dscp>	If you want the DS codepoint (DSCP) modified to a non-zero value, use this command to specify the value for the DSCP. After entering the binary number, you must disable and then enable the traffic filter to ensure that it takes effect. **6-bit dscp** is a binary number.

Default

None

Related commands

Variable	Value
dscp-enable <enable|disable>	Enables or disables the traffic filter to modify the DSCP to zero on packets ingressing a DiffServ access port only.
ieee8021p <integer>	Modifies IEEE 802.1p bits to a non-zero value. Use this field to specify the value for the IEEE 802.1p bits. Disable and enable the filter for changes to take effect.
ieee8021p-enable <enable|disable>	Enables or disables the traffic filter to modify the IEEE 802.1p bits to zero on packets ingressing a DiffServ access port only.
info	Displays the modify settings for the filter.

config ethernet multimedia select

Use this command to apply a multimedia traffic filter to a port.

Syntax

config ethernet <ports> multimedia select <select>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.
select <select>	Selects the multimedia filter.

Default

None

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Related commands

Variable	Value
disable	Disables a multimedia filter on a port.
enable	Enables a multimedia filter on a port.
info	Displays information about the multimedia Ethernet port.

config ip traffic-filter filter

Use this command to configure the traffic filter next-hop IP address.

Syntax

config ip traffic-filter filter <fid> action next-hop-forward ip-address <ipaddr>

Parameters

Variable	Value
ip-address <ipaddr>	Specifies an IP address in dotted-decimal notation.
next-hop-unreachable-drop <enable|disable>	When enabled, specifies that if the next-hop address is unreachable, the packet is dropped.

Default

None

Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.
next-hop-unreachable-drop <enable|disable>	Enables to drop packet when next hop is unreachable.

config ethernet qos-level

Use this command to configure the port QoS level.

Syntax

config ethernet <ports> qos-level <0...6>

Parameters

Variable	Value
qos-level <0...6>	Specifies the default QoS level for the port traffic. QoS level 7 is reserved for network control traffic.

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Default

By default, the QoS level is set to 1 (one).

Related commands

None

config qos egressmap 1p

Use this command to configure the QoS egress mapping table.

Syntax

config qos egressmap 1p <level> <ieee1p>
config qos egressmap ds <level> <dscp>

Parameters

Variable	Value
1p <level> <ieee1p>	Maps QoS Level to IEEE 1p priority. • **level** is the QoS level in the range of 1 to 7. • **ieee1p** is the IEEE 1P Priority in the range of 1 to 7. The default value is 7.
ds <level> <dscp>	Maps QoS Level to DS Byte. • **level** is the QoS level in the range of 1 to 7. • **dscp** is the Diff-Serv Code Point : Hex/Binary/Decimal. The string length is 1 to 6.
exp <level> <exp>	Maps the QoS level to EXP bits. <exp> ranges from 0 to 7. **<level>** is the QoS level. Only R and RS modules support MPLS.

Default

Global Configuration mode

Related commands

Variable	Value
threshold <qos> <value> [<octapid>]	Specifies the QoS threshold values.
info	Displays which DSCP and IEEE 802.1p levels are mapped to QoS levels for egress traffic.

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config qos ingressmap ds

Use this command to configure the QoS ingress mapping table.

Syntax

config qos ingressmap ds <dscp> <level>
config qos ingressmap 1p <ieee1p> <level>

Parameters

Variable	Value
ds <dscp> <level>	Maps the DS byte to QoS level. • **level** configures the QoS level from 0 to 7. • **dscp** configures the DiffServ Code Point (DSCP) as an index from 0 to 63. The default value is 1.

Default

None

Related commands

Variable	Value
1p <ieee1p> <level>	Maps the IEEE 802.1p bit to QoS level. • **level** configures the QoS level from 0 to 7. • **ieee1p** configures the IEEE 1p bit level as an index from 0 to 7.
exp <exp> <level>	Maps the MPLS EXP bit to a QoS level with a range from 0 to 7. Only R and RS modules support MPLS.
info	Displays information about the QoS ingress mappings.

config ip traffic-filter create destination dst-ip

Use this command to create traffic filters.

Syntax

config ip traffic-filter create destination dst-ip <value> [src-ip<value>] [id <value>]

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Parameters

Variable	Value
destination dst-ip <value> [src-ip<value>] [id <value>]	Creates a destination filter: • **dst-ip <value>** is the destination IP/mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}. • **src-ip <value>** is the source IP/mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}. • **id <value>** is the traffic filter ID {1-4096}.

Default

None

Related commands

Variable	Value
global [src-ip <value>] [dst-ip <value>] [id <value>]	Creates a global filter: • **src-ip <value>** is the source IP/mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}. • **dst-ip <value>** is the destination IP/mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}. • **id <value>** is the traffic filter ID {1-4096}.
info	Displays the destination, source, and global filters that have been created.
source src-ip <value> [dst-ip <value>] [id <value>]	Creates a global filter: • **src-ip <value>** is the source IP/mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}. • **dst-ip <value>** is the destination IP/mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}. • **id <value>** is the traffic filter ID {1-4096}.
traffic-profile <pid>	Specifies a traffic profile to use with this traffic filter. • **pid** is the profile number in the range 1 to 64.

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config ip traffic-filter create destination dst-ip

Use this command to create destination traffic filters.

Syntax

config ip traffic-filter create destination dst-ip <value> [src-ip <value>] [id <value>]

Parameters

Variable	Value
destination dst-ip <value> [src-ip <value>] [id <value>]	Creates a global filter: • **src-ip <value>** is the source IP/mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}. • **dst-ip <value>** is the destination IP/mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}. • **id <value>** is the traffic filter ID {1..4096}.

Default

None

Related commands

None

config ip traffic-filter filter

Use this command to view information about a specific filter and name or delete the filter.

Syntax

config ip traffic-filter filter <fid>

Parameters

Variable	Value
action	Specifies the action commands.
delete	Deletes the specified traffic filter.
info	Displays the settings for the specified filter.
match	Matches commands.
modify	Modifies commands.
name	Sets the filter name.

Default

Related commands

Variable	Value
action	Specifies the action commands.

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Variable	Value
delete	Deletes the specified traffic filter.
info	Displays the settings for the specified filter.
match	Matches commands.
modify	Modifies commands.
name	Sets the filter name.

config ip traffic-filter filter

Use this command to configure traffic filter action parameters.

Syntax

config ip traffic-filter filter <fid> action

Parameters

Variable	Value
action	Specifies the action commands.

Default

Related commands

Variable	Value
info	Displays configure actions for the filter.
mirror <enable|disable>	Enables or disables the traffic filter mirror option.
mode <default|forward|drop|forward-to-next-hop>	Sets the action to occur when a filter is applied • default is the default action. • forward forwards the packet. • drop drops the packet. • forward-to-next-hop forwards the packet to the next-hop router.
next-hop-forward info	Displays information about the next-hop-forward filter settings.
next-hop-forward ip-address <ipaddr>	Specifies the IP address of the next-hop router to be used by the mode forward-to-next-hop option. If the next-hop router is unreachable (no ARP resolution is possible), packet that match the filter are forwarded normally unless the next-hop-unreachable-drop option is enabled.

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Variable	Value
next-hop-forward next-hop-unreachable-drop <enable|disable>	When enabled, specifies that if the next-hop address is unreachable, the packet is dropped.
statistic <enable|disable>	Enables or disables the option to collect statistics on the traffic filter. The default setting is disable. If disabled, the show ip traffic-filter stats command displays zero for this filter.
stop-on-match <true|false>	Stops further filtering if the current filter is applied.
tcp-connect <enable|disable>	Enables or disables the traffic filter TCP-connect option, which allows only TCP connections established from within the network (enabled) or allows bidirectional establishment (disabled). The default is disabled.
traffic-profile <integer>	Sets the IP traffic profile. The valid options are 0 to 64.

config ip traffic-filter media

Use this command to configure multimedia traffic filters.

Syntax

config ip traffic-filter media <mediaId> create [platform <value> [device <value>]

Parameters

Variable	Value
create [platform <value> [device <value>]	Creates a multimedia filter for a platform or a device. • **[platform <value>]** • **[device <value>]**

Default

None

Related commands

Variable	Value
delete	Deletes a multimedia filter.
gateway-ip <ipaddr>	Specifies the IP address of the gateway.
info	Displays information about the traffic filter media.

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Variable	Value
name	Specifies the name of the selected media device.
statistic <enable|disable>	Enables or disables the display of statistics about the filter.
stream	Configures multimedia filter stream.

config ip traffic-filter media

Use this command to configure a media stream traffic filter.

Syntax

config ip traffic-filter media <mediaId> stream <streamId> create

Parameters

Variable	Value
create	Creates a multimedia stream.

Default

None

Related commands

Variable	Value
delete	Deletes an IP media traffic filter.
info	Displays information about the multimedia traffic filter.
match-dscp <6-bit dscpVal>	Specifies a 6-bit binary value for the stream.
name <name>	Specifies the name of the selected media device.
port-option <src|dst|src-dst>	Specifies a port option, either src, dest, or srcDest.
ports min <value> [max <value>]	Specifies the minimum port number.
protocol <udp|tcp>	Specifies either the TCP or UDP protocol.
stream-type <signal|media>	Specifies the type of stream. The valid options are signal and media.

config ip traffic-filter set

Use this command to configure a source and destination filter set.

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Syntax

config ip traffic-filter set <setid>

Parameters

Variable	Value
add-filter	Adds a source or destination filter to a filter set.
create [name <value>]	Creates a filter set.
delete	Deletes a filter set.
info	Displays the filter set characteristics.
name	Changes the name of a filter set.
remove-filter	Removes a filter from a filter set.

Default

None

Related commands

Variable	Value
add-filter <fid>	Adds a source or destination filter to a filter set.
create [name <value>]	Creates a filter set.
delete	Deletes a filter set.
info	Displays the filter set characteristics.
name <set name>	Changes the name of a filter set.
remove-filter <fid>	Removes a filter from a filter set.

config ip traffic-filter traffic-profil

Use this command to configure traffic filter rate-limiting profiles.

Syntax

config ip traffic-filter traffic-profile <pid>

Parameters

Variable	Value
average-rate <int>	Sets the traffic profile average rate. See for more information. **int** is the rate {0 to 65535}, which is expressed in 64-byte segments of data allowed in a 2.5 millisecond timeslot.
delete	Deletes the traffic profile.

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Variable	Value
discard-out-profie <enable|disable>	Enables or disables the ability to discard the traffic that violates the traffic profile's average rate.
emable <true|false>	Enables or disables the traffic profile.
in-dscp <value>	Marks traffic that conforms to the average rate in the traffic profile. **value** is the DSCP expressed as a 6-bit binary number.
info	Displays the traffic profile settings.
name <name>	Names the traffic profile. **name** is a string of 0–32 characters.
out-dscp <value>	Marks traffic that falls outside the traffic profile average rate. **value** is the DSCP expressed as a 6-bit binary number.
translate-dscp <enable|disable>	Enables or disables remarking of traffic as either in-dscp or out-dscp. This command must be enabled for any traffic to be marked.

Default

None

Related commands

Variable	Value
average-rate <int>	Sets the traffic profile's average rate. See for more information. **int** is the rate {0 to 65535}, which is expressed in 64-byte segments of data allowed in a 2.5 millisecond timeslot.
delete	Deletes the traffic profile.
discard-out-profie <enable|disable>	Enables or disables the ability to discard the traffic that violates the traffic profile's average rate.
emable <true|false>	Enables or disables the traffic profile.
in-dscp <value>	Marks traffic that conforms to the average rate in the traffic profile. **value** is the DSCP expressed as a 6-bit binary number.
info	Displays the traffic profile settings.
name <name>	Names the traffic profile. **name** is a string of 0–32 characters.

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Variable	Value
out-dscp <value>	Marks traffic that falls outside the traffic profile's average rate. **value** is the DSCP expressed as a 6-bit binary number.
translate-dscp <enable|disable>	Enables or disables remarking of traffic as either in-dscp or out-dscp. This command must be enabled for any traffic to be marked.

config ethernet ip traffic-filter

Use this command to apply traffic filters on a port to manage traffic.

Syntax

config ethernet <ports> ip traffic-filter

Parameters

Variable	Value
add set <value>	Adds a filter set to a port. **value** is the global or source and destination filter set ID (1–1000).
create	Creates a traffic filtering entity on a port.
delete	Removes filtering from a port.
disable	Disables filtering on a port. Whenever you change a filter parameter, disable the filter on its filter port and then enable the filter again to reapply the changed filter to the port.
enable	Enables filtering on a port. Whenever you change a filter parameter, you must disable the filter on its filter port and then enable the filter again to reapply the changed filter to the port.
info	Displays the traffic filters applied to the port.
remove set <value>	Removes a filter set from a port. **value** is the filter set ID in the range 1 to 1000.

Default

None

Related commands

Variable	Value
add set <value>	Adds a filter set to a port. **value** is the global or source and destination filter set ID (1–1000).

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Variable	Value
create	Creates a traffic filtering entity on a port.
delete	Removes filtering from a port.
disable	Disables filtering on a port. Whenever you change a filter parameter, disable the filter on its filter port and then enable the filter again to reapply the changed filter to the port.
enable	Enables filtering on a port. Whenever you change a filter parameter, you must disable the filter on its filter port and then enable the filter again to reapply the changed filter to the port.
info	Displays the traffic filters applied to the port.
remove set <value>	Removes a filter set from a port. **value** is the filter set ID in the range 1 to 1000.

config vlan qos-level

Use this command to configure the VLAN QoS level.

Syntax

config vlan <vlan-id> qos-level <integer>

Parameters

Variable	Value
qos-level <integer>	Specifies the default QoS level for the VLAN traffic. QoS level 7 is reserved for network control traffic.

Default

The default value is 1.

Related commands

None

config ip traffic-filter create source src-ip

Use this command to create source traffic filters.

Syntax

config ip traffic-filter create source src-ip <value> [dst-ip <value>] [id <value>]

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Parameters

Variable	Value
source src-ip <value> [dst-ip <value>] [id <value>]	Creates a source filter: • **src-ip <value>** is the source IP/mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}. • **dst-ip <value>** is the destination IP/mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}. • **id <value>** is the traffic filter ID {1..4096}.

Default

None

Related commands

None

show qos queue

Use this procedure to view the QoS queue information for the eight queues on a Classic module.

Syntax

show qos queue [<level>]

Parameters

Variable	Value
<level>	Shows the queue level index in the range of 0 to 7.

Default

None

Related commands

show ip traffic-filter active

Use this command to learn which filters are active.

Syntax

show ip traffic-filter active

Parameters

None

Default

None

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Related commands

None

show ip traffic-filter enabled

Use this command to view information about enabled filters on the Ethernet Routing Switch 8600 or on a specified port.

Syntax

show ip traffic-filter enabled [<ports>]

Parameters

Variable	Value
<port>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

show ip traffic-filter disabled

Use this command to learn which filters are disabled.

Syntax

show ip traffic-filter disabled [<ports>]

Parameters

Variable	Value
<port>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

show ip traffic-filter global

Use this command to view global filters for the Ethernet Routing Switch 8600 or for the specified filter IDs.

Syntax

show ip traffic-filter global [<fid>]

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Parameters

Variable	Value
	Specifies traffic filter ID in the range of 1 to 4096.

Default

None

Related commands

None

show ip traffic-filter destination

Use this command to view to view information about active destination filters.

Syntax

show ip traffic-filter destination [<fid>]

Parameters

Variable	Value
	Specifies traffic filter ID in the range of 1 to 4096.

Default

Related commands

None

show ip traffic-filter source

Use this command to view information about active source traffic filters.

Syntax

show ip traffic-filter source [<fid>]

Parameters

Variable	Value
	Specifies traffic filter ID in the range of 1 to 4096.

Default

None

Related commands

None

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show ip traffic-filter interface

Use this command to learn which filters are applied to a port.

Syntax

show ip traffic-filter interface <ports>

Parameters

Variable	Value
<port>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

show ip traffic-filter media

Use this command to view multimedia platform and device filters by filter ID.

Syntax

show ip traffic-filter media [<mediaid>]

Parameters

None

Default

None

Related commands

None

show ip traffic-filter stream

Use this command to view information about multimedia stream traffic filters.

Syntax

show ip traffic-filter stream [<mediaid>] [<streamid>]

Parameters

None

Default

None

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Related commands

None

show ip traffic-filter show-all

Use this command to view all traffic filter information.

Syntax

show ip traffic-filter show-all [file <value>]

Parameters

Variable	Value
[file <value>]	Specifies the file name in the range of 1 to 99.

Default

None

Related commands

None

show ip traffic-filter info global-set

Use this command to view information about the specified global filter set or all global filter lists configured on the Ethernet Routing Switch 8600.

Syntax

show ip traffic-filter info global-set [<id>]

Parameters

Variable	Value
<id>	Specifies the global set ID number in the range of 1 to 100.

Default

None

Related commands

None

show ip traffic-filter info set

Use this command to view source and destination traffic filter set information.

Syntax

show ip traffic-filter info set [<id>]

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Parameters

Variable	Value
`<id>`	Specifies the global set ID number in the range of 1 to 100.

Default

None

Related commands

None

show ip traffic-filter traffic-profile

Use this command to traffic filter traffic profile information.

Syntax

`show ip traffic-filter traffic-profile info [<id>]`

Parameters

Variable	Value
`<id>`	Specifies the global set ID number in the range of 1 to 100.

Default

None

Related commands

None

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QoS and IP Filtering for R and RS module commands

This chapter describes the Ethernet Routing Switch 8600 QoS and IP Filtering for R and RS module commands.

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config ethernet access-diffserv

Use this command to configure the port as Layer 3 trusted or untrusted.

Syntax

config ethernet <ports> access-diffserv <true|false>

Parameters

Variable	Value
access-diffserv <true|false>	**true** specifies an access port and overrides incoming DSCP bits; **false** specifies a core port and honors and services incoming DSCP bits.

Default

The default is false.

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Related commands

None

config ethernet enable-diffserv

Use this command to enable DiffServ on a port.

Syntax

config ethernet <ports> enable-diffserv <true|false>

Parameters

Variable	Value
enable-diffserv <true|false>	True enables diffserv for the port or ports selected. If true all other QoS parameter values and functions now take affect and apply. If false, these parameters and settings do not apply.

Default

The default value is false.

Related commands

None

config ethernet 802.1p-override

Use this command to configure Layer 2 trusted or untrusted ports.

Syntax

config ethernet <ports> 802.1p-override <enable|disable>

Parameters

Variable	Value
802.1p-override <enable|disable>	**enable** overrides incoming 802.1p bits; **disable** honors and services incoming 802.1p bits.

Default

The default is disable.

Related commands

None

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config vlan qos-level

Use this command to configure the VLAN QoS level.

Syntax

config vlan <vlan-id> qos-level <0-6>

Parameters

Variable	Value
qos-level <0-6>	Specifies the default QoS level for the VLAN traffic. QoS level 7 is reserved for network control traffic.

Default

The default is 1.

Related commands

None

config vlan fdb-entry

Use this command to configure the QoS level for specific MAC addresses.

Syntax

config vlan <vlan id> fdb-entry qos-level <mac> status <value> <0-6>
config vlan <vlan id> fdb-static add <mac> port <value> qos <0-6>

Parameters

Variable	Value
<mac>	Specifies the MAC address in the format 0x00:0x00:0x00:0x00:0x00:0x00:0x00
status <value>	Specifies the forwarding database (FDB) status (other|invalid|learned|self|mgmt)
<0-6>	Specifies the QoS level.

Default

The default is 1.

Related commands

Variable	Value
add <mac>	Adds or configures the source MAC QoS level to a VLAN bridge. **<mac>** specifies the MAC address in the format 0x00:0x00:0x00:0x00:0x00:0x00:0x00.

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Variable	Value
port <value>	<value> specifies the port number
qos <0-6>	<0-6> specifies the QoS level. The default is 1.

config ethernet broadcast-bandwidth-limit

Use this command to configure broadcast bandwidth limiting.

Syntax

config ethernet <ports> broadcast-bandwidth-limit <value> [<enable|disable>]

Parameters

Variable	Value
broadcast-bandwidth-limit <value> [<enable|disable>]	Specifies the bandwidth limit for broadcast traffic from 250–2147483647 Kb/s. <enable|disable> enables or disables bandwidth limiting.

Default

The default is disabled.

Related commands

Variable	Value
broadcast-bandwidth-limit <value> [<enable|disable>]	Specifies the bandwidth limit for broadcast traffic from 250–2147483647 Kb/s. <enable|disable> enables or disables bandwidth limiting. The default is disabled.
multicast-bandwidth-limit <value> [<enable|disable>]	Specifies the bandwidth limit for multicast traffic from 250–2147483647 Kb/s. <enable|disable> enables or disables bandwidth limiting. The default is disabled.

config ethernet multicast-bandwidth-limit

Use this command to configure multicast bandwidth limiting.

Syntax

config ethernet <ports> multicast-bandwidth-limit <value> [<enable|disable>]

Parameters

Variable	Value
multicast-bandwidth-limit <value> [<enable|disable>]	Specifies the bandwidth limit for multicast traffic from 250–2147483647 Kb/s. <enable|disable> enables or disables bandwidth limiting.

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Default

The default is disabled.

Related commands

Variable	Value
broadcast-bandwidth-limit <value> [<enable|disable>]	Specifies the bandwidth limit for broadcast traffic from 250–2147483647 Kb/s. **<enable|disable>** enables or disables bandwidth limiting. The default is disabled.

config ethernet shape

Use this command to configure the port-based shaper.

Syntax

config ethernet <ports> shape <kbps> [<enable|disable>]

Parameters

Variable	Value
<enable|disable>	Enables or disables port-based shaping on the port.
<kbps>	Configures the shaping rate from 1000–10000000 Kb/s.

Default

The default is disable.

Related commands

None

config ethernet police

Use this command to configure a port-based policer for RS modules.

Syntax

config ethernet <ports> police <kbps> [<enable|disable>]

Parameters

Variable	Value
police <kbps>	Specifies the ingress rate limit (policing limit) in Kb/s. The range is 1000–10000000.
<enable|disable>	Enables or disables policing (ingress-rate-limiting).

Default

The default is enable.

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Related commands

None

config qos policy create peak-rate

Use this command to configure a policy-based policer.

Syntax

```
config qos policy <policy-id> create peak-rate <value>
svc-rate <value> [lanes <value>] [name <value>]

show qos config policy policy <policy-id>
```

Parameters

Variable	Value
create peak-rate <value> svc-rate <value> [lanes <value>] [name <value>]	Configures the following options: • **create peak-rate <value>** specifies a peak rate value in Kb/s for the policy. • **svc-rate <value>** specifies a service rate value in Kb/s for the policy. • **lanes <value>** identifies a specific lane or all lanes to which the policy applies. • **name <value>** specifies a service rate value in Kb/s for the policy.
delete	Deletes an existing policy. You cannot delete a policy if an access control entry references the policy.
info	Displays current setting information for the policy.
modify peak-rate <value> svc-rate <value>	Configures the following options: • **modify peak-rate <value>** modifies a peak rate value in Kb/s for the policy. • **svc-rate <value>** modifies a service rate value in Kb/s for the policy.
name <value>	Modifies the name of the policer template.

Default

None

Related commands

Variable	Value
all	Displays all configured policing data.

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Variable	Value
lane <lane-no>	Displays policing data by lane.
policy <policy-id>	Displays policing data by policy ID.
port <ports>	Displays policing data by port.

config qos policy lanes

Use this command to add lanes to a policy-based policer.

Syntax

config qos policy <policy-id> lanes add <lane-list>

Parameters

Variable	Value
add <lane-list>	Adds lanes to an existing policer template.
remove <lane-list>	Removes lanes from an existing policer template.

Default

None

Related commands

None

config qos egress-queue-set

Use this command to configure the egress queue set template.

Syntax

config qos egress-queue-set <id> create qmax <value> [balanced-queues <value>] [hipri-queues <value>] [lopri-queues <value>] [name <value>]

Parameters

Variable	Value
apply	Applies the egress queue set. Apply occurs when you issue the command. Otherwise, the operation is lost after you leave the current context. When you create an egress queue set, apply occurs when you issue the command. When you modify a queue set, apply occurs after you save the configuration and boot the switch.

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Variable	Value
create qmax <value> [balanced-queues <value>] [hipri-queues <value>] [lopri-queues <value>] [name <value>]	Specifies the maximum number of queues, either 8 or 64, as well as the number of balanced, high-priority, and low-priority queues in the egress queue set. The sum of the number of queues for balanced, high-priority (hipri), and low-priority (lopri) queues must be less than or equal to the qmax.
delete	Deletes the egress queue set.
info	Shows current queue set information.
name <value>	Modifies the name of the egress queue set template.

Default

None

Related commands

None

config qos egress-queue-set

Use this command to associate ports with the egress queue set.

Syntax

config qos egress-queue-set <id> port add <ports>
show qos config egress-queue-set egress-queue-set <id> [queues]
config qos egress-queue-set <id> info

Parameters

Variable	Value
add <ports>	Specifies the list of ports to add to the existing egress queue set template. Use this command to move a port from the default NNSC setup to a different egress queue set. If you add ports to an applied template, the system sends additional messages to the relevant module control processors and configures the hardware accordingly.

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Variable	Value
info	Shows information about a particular queue port configuration.
remove <ports>	Specifies the list of ports to remove from the existing egress queue set template. Removing ports from a specific egress queue set configures the NNSC default appropriate for the port type. If you attempt to remove a port from the NNSC default template, a warning message appears and the port stays with the default NNSC.

Variable	Value
all	Displays all configured egress queue set data.
egress-queue-set <id> [queues]	Displays egress queue set data identified by name or specific ID.
port <ports>	Displays egress queue set data by port.

Default

None

Related commands

None

config qos egress-queue-set apply

Use this command to apply the queue set.

Syntax

config qos egress-queue-set <id> apply

Parameters

Variable	Value
<id>	Specifies the Tx Queue Template identifier in the range of 1 to 386.

Default

None

Related commands

None

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config qos egress-queue-set queue

Use this command to configure an egress queue set queue.

Syntax

config qos egress-queue-set <id> queue <qid> set [min-rate <value>] [max-rate <value>] [max-length <value>]

Parameters

Variable	Value
<id>	Specifies the Tx Queue Template identifier in the range of 1 to 386.
[min-rate <value>]	Specifies the minimum rate in percentage in the range of 0 to 100.
[max-rate <value>]	Specifies the maximum rate in percentage in the range of 0 to 100.
[max-length <value>]	Specifies the maximum length in pages in the range of 0 to 32760.
<qid	Specifies the Tx Queue identifier in the range of 0 to 63.

Default

None

Related commands

Variable	Value
info	Shows information about a particular queue configuration.
name <value>	Modifies the name of the egress queue.
set [min-rate <value>] [max-rate <value>] [max-length <value>]	Configures the following options: • **min-rate** and **max-rate**—specify the line rate in percent to accommodate various port speeds in the same template. For example, if a 20% rate applies to a 10 and a 1 Gb/s port, it results in a 2 Gb/s bandwidth allocation for 10 Gb/s ports, and 200 Mb/s for 1 Gb/s ports. The min-rate minimum is 1% and the max-rate maximum is 100%. • **max-length**—you can specify the limit to which a queue can grow. The queue length does not imply that a queue has a fixed number of buffers. For example, a queue can grow to full memory size of 32K buffers.

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config qos ingressmap exp

Use this command to configure MPLS to QoS ingress mappings.

Syntax

```
config qos ingressmap exp <exp> <level>
show qos ingressmap <exp> [<level>]
```

Parameters

Variable	Value
exp	Specifies the EXP bits in the range of 0 to 7.

Default

None

Related commands

Variable	Value
1p <ieee1p> <level>	Maps the IEEE 802.1p bit to QoS level. • **<level>** configures the QoS Level from 0–7. • **<ieee1p>** configures the IEEE 1P as an index from 0–7. Each QoS level has a default IEEE 1P value: • level 0—1 • level 1—0 • level 2—2 • level 3—3 • level 4—4 • level 5—5 • level 6—6 • level 7—7
ds <dscp> <level>	Maps the DS byte to QoS level. • **<level>** configures the QoS level from 0–7. • **<dscp>** configures the DiffServ Code Point (DSCP) as an index from 0–63.

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Variable	Value
exp <exp> <level>	Maps the MPLS EXP bit to a QoS level with a range from 0–7.
info	Displays information about the QoS ingress mappings.

config qos ingressmap ds

Use this command to configure DSCP to QoS ingress mappings.

Syntax

config qos ingressmap ds <dscp> <level>
show qos ingressmap ds [<dscp>]

Parameters

Variable	Value
1p <ieee1p> <level>	Maps the IEEE 802.1p bit to QoS level. • **<level>** configures the QoS Level from 0–7. • **<ieee1p>** configures the IEEE 1P as an index from 0–7. Each QoS level has a default IEEE 1P value: • level 0—1 • level 1—0 • level 2—2 • level 3—3 • level 4—4 • level 5—5 • level 6—6 • level 7—7
ds <dscp> <level>	Maps the DS byte to QoS level. • **<level>** configures the QoS level from 0–7. • **<dscp>** configures the DiffServ Code Point (DSCP) as an index from 0–63.
exp <exp> <level>	Maps the MPLS EXP bit to a QoS level with a range from 0–7.
info	Displays information about the QoS ingress mappings.

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Default

None

Related commands

Variable	Value
1p <ieee1p> <level>	Maps the IEEE 802.1p bit to QoS level. • **<level>** configures the QoS Level from 0–7. • **<ieee1p>** configures the IEEE 1P as an index from 0–7. Each QoS level has a default IEEE 1P value: • level 0—1 • level 1—0 • level 2—2 • level 3—3 • level 4—4 • level 5—5 • level 6—6 • level 7—7
ds <dscp> <level>	Maps the DS byte to QoS level. • **<level>** configures the QoS level from 0–7. • **<dscp>** configures the DiffServ Code Point (DSCP) as an index from 0–63.
exp <exp> <level>	Maps the MPLS EXP bit to a QoS level with a range from 0–7.
info	Displays information about the QoS ingress mappings.

config qos ingressmap 1p

Use this command to configure 802.1p bit to QoS ingress mappings.

Syntax

config qos ingressmap 1p <ieee1p>
show qos ingressmap 1p [<value>]

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Parameters

Variable	Value
1p <ieee1p> <level>	Maps the IEEE 802.1p bit to QoS level. • **<level>** configures the QoS Level from 0–7. • **<ieee1p>** configures the IEEE 1P as an index from 0–7. Each QoS level has a default IEEE 1P value: • level 0—1 • level 1—0 • level 2—2 • level 3—3 • level 4—4 • level 5—5 • level 6—6 • level 7—7
ds <dscp> <level>	Maps the DS byte to QoS level. • **<level>** configures the QoS level from 0–7. • **<dscp>** configures the DiffServ Code Point (DSCP) as an index from 0–63.
exp <exp> <level>	Maps the MPLS EXP bit to a QoS level with a range from 0–7.
info	Displays information about the QoS ingress mappings.

Default

None

Related commands

Variable	Value
1p <ieee1p> <level>	Maps the IEEE 802.1p bit to QoS level. • **<level>** configures the QoS Level from 0–7. • **<ieee1p>** configures the IEEE 1P as an index from 0–7. Each QoS level has a default IEEE 1P value:

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Variable	Value
	• level 0—1 • level 1—0 • level 2—2 • level 3—3 • level 4—4 • level 5—5 • level 6—6 • level 7—7
ds <dscp> <level>	Maps the DS byte to QoS level. • **<level>** configures the QoS level from 0–7. • **<dscp>** configures the DiffServ Code Point (DSCP) as an index from 0–63.
exp <exp> <level>	Maps the MPLS EXP bit to a QoS level with a range from 0–7.
info	Displays information about the QoS ingress mappings.

config qos egressmao exp

Use this command to configure QoS to MPLS egress mappings.

Syntax

config qos egressmap exp <level> <exp>
show qos egressmap exp [<level>]
show qos config eqmap <slot-number>

Parameters

Variable	Value
1p <level> <ieee1p>	Maps the Qos level to IEEE 802.1p priority. • **<level>** configures the QoS level from 0–6. • **<ieee1p>** configures the IEEE 802.1p priority from 0–7. Each QoS level has a default IEEE 1P value: • level 0—1 • level 1—0

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Variable	Value
	• level 2—2 • level 3—3 • level 4—4 • level 5—5 • level 6—6 • level 7—7
ds <level> <dscp>	Maps the QoS level to DS byte. • **<level>** configures the QoS level from 0–6. • **<dscp>** configures the DiffServ Code Point (DSCP) as an index from 0–63.
exp <level> <exp>	Maps the QoS level to MPLS EXP level. The range for each is 0–7.
info	Displays information about the QoS egress mappings.

Default

None

Related commands

Variable	Value
1p [<level>]	Shows the QoS to 802.1p bit egress mappings.
ds [<level>]	Shows the QoS to DSCP egress mappings.
exp	Shows the QoS to MPLS egress mappings.

config qos egressmap ds

Use this command to configure QoS to DSCP egress mappings.

Syntax

config qos egressmap ds <level> < dscp >
show qos egressmap ds [<level>]
show qos config eqmap <slot-number>

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Parameters

Variable	Value
1p <level> <ieee1p>	Maps the Qos level to IEEE 802.1p priority. • **<level>** configures the QoS level from 0–6. • **<ieee1p>** configures the IEEE 802.1p priority from 0–7. Each QoS level has a default IEEE 1P value: • level 0—1 • level 1—0 • level 2—2 • level 3—3 • level 4—4 • level 5—5 • level 6—6 • level 7—7
ds <level> <dscp>	Maps the QoS level to DS byte. • **<level>** configures the QoS level from 0–6. • **<dscp>** configures the DiffServ Code Point (DSCP) as an index from 0–63.
exp <level> <exp>	Maps the QoS level to MPLS EXP level. The range for each is 0–7.
info	Displays information about the QoS egress mappings.

Default

None

Related commands

Variable	Value
1p <level> <ieee1p>	Maps the Qos level to IEEE 802.1p priority. • **<level>** configures the QoS level from 0–6. • **<ieee1p>** configures the IEEE 802.1p priority from 0–7. Each QoS level has a default IEEE 1P value:

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Variable	Value
	• level 0—1 • level 1—0 • level 2—2 • level 3—3 • level 4—4 • level 5—5 • level 6—6 • level 7—7
ds <level> <dscp>	Maps the QoS level to DS byte. • **<level>** configures the QoS level from 0–6. • **<dscp>** configures the DiffServ Code Point (DSCP) as an index from 0–63.
exp <level> <exp>	Maps the QoS level to MPLS EXP level. The range for each is 0–7.
info	Displays information about the QoS egress mappings.

Variable	Value
1p [<level>]	Shows the QoS to 802.1p bit egress mappings.
ds [<level>]	Shows the QoS to DSCP egress mappings.
exp	Shows the QoS to MPLS egress mappings.

config qos egressmap 1p

Use this command to delete a policy.

Syntax

config qos egressmap 1p <level> <ieee1p>
show qos egressmap 1p [<level>]
show qos config eqmap <slot-number>

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Parameters

Variable	Value
1p <level> <ieee1p>	Maps the Qos level to IEEE 802.1p priority. • **<level>** configures the QoS level from 0–6. • **<ieee1p>** configures the IEEE 802.1p priority from 0–7. Each QoS level has a default IEEE 1P value: • level 0—1 • level 1—0 • level 2—2 • level 3—3 • level 4—4 • level 5—5 • level 6—6 • level 7—7
ds <level> <dscp>	Maps the QoS level to DS byte. • **<level>** configures the QoS level from 0–6. • **<dscp>** configures the DiffServ Code Point (DSCP) as an index from 0–63.
exp <level> <exp>	Maps the QoS level to MPLS EXP level. The range for each is 0–7.
info	Displays information about the QoS egress mappings.

Default

None

Related commands

Variable	Value
1p [<level>]	Shows the QoS to 802.1p bit egress mappings.
ds [<level>]	Shows the QoS to DSCP egress mappings.
exp	Shows the QoS to MPLS egress mappings.

config filter act

Use this command to configure an ACT.

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Syntax

config filter act <act-id> create [name <value>]
show filter act [<act-id>]

Parameters

Variable	Value
apply	Applies or commits the ACT. After you issue the **apply** command, you can only change the ACT by deleting it and creating a new one (assuming that there are no ACLs associated with the ACT).
arp <arp-attributes>	Specifies the permitted ARP attributes for the ACT. Separate the list of allowed attributes by commas: • none • operation If you select none, this action deletes the node and prevents you from selecting other attributes.
create [name <value>]	Creates an ACT. The **name <value>** parameter is optional and specifies a descriptive name for the ACT using 0–32 characters. If you do not enter a name, the switch generates a default name. The ACT ID acts as an index to the ACT table. You can change the name at any time, even after you issue the **apply** command.
delete	Deletes an ACT if no associated ACLs exist.
ip <ip-attributes>	Specifies the permitted IP attributes for the ACT. You must separate the list of attributes commas. The list can include • none • srcIp, dstIp, ipFragFlag, ipOptions, ipProtoType, and dscp If you select none, this action deletes the node and prevents you from selecting other attributes. The default is none.

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Variable	Value
ethernet <ethernet-attributes>	Specifies the permitted Ethernet attributes for the ACT. You must separate the list of attributes commas. The list can include • none • srcMac, dstMac, etherType, <port|vlan>, and vlanTagPrio If you select none, this action deletes the node and prevents you from selecting other attributes. The default is none.
info	Shows information about the ACTs.
ipv6 <ipv6-attributes>	Specifies the permitted IPv6 attributes. You must separate the list of attributes commas. The list can include • none • srcIpv6, dstIpv6, and nextHdr If you select none, this action deletes the node and prevents you from selecting other attributes. The default is none.
name <value>	Specifies a name for the ACT using 0–32 characters.
protocol <protocol-attributes>	Specifies the permitted protocol attributes for the ACT. You must separate the list of attributes commas. The list can include • none • tcpSrcPort, udpSrcPort, tcpDstPort, udpDstPort, tcpFlags, and icmpMsgFlags If you select none, this action deletes the node and prevents you from selecting other attributes. The default is none.

Default

None

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Related commands

Variable	Value
apply	Applies or commits the ACT. After you issue the **apply** command, you can only change the ACT by deleting it and creating a new one (assuming that there are no ACLs associated with the ACT).
arp <arp-attributes>	Specifies the permitted ARP attributes for the ACT. Separate the list of allowed attributes by commas: • none • operation If you select none, this action deletes the node and prevents you from selecting other attributes.
create [name <value>]	Creates an ACT. The **name <value>** parameter is optional and specifies a descriptive name for the ACT using 0–32 characters. If you do not enter a name, the switch generates a default name. The ACT ID acts as an index to the ACT table. You can change the name at any time, even after you issue the **apply** command.
delete	Deletes an ACT if no associated ACLs exist.
ip <ip-attributes>	Specifies the permitted IP attributes for the ACT. You must separate the list of attributes commas. The list can include • none • srcIp, dstIp, ipFragFlag, ipOptions, ipProtoType, and dscp If you select none, this action deletes the node and prevents you from selecting other attributes. The default is none.
ethernet <ethernet-attributes>	Specifies the permitted Ethernet attributes for the ACT. You must separate the list of attributes commas. The list can include • none • srcMac, dstMac, etherType, <port|vlan>, and vlanTagPrio If you select none, this action deletes the node and prevents you from selecting other attributes. The default is none.
info	Shows information about the ACTs.

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Variable	Value
ipv6 <ipv6-attributes>	Specifies the permitted IPv6 attributes. You must separate the list of attributes commas. The list can include • none • srcIpv6, dstIpv6, and nextHdr If you select none, this action deletes the node and prevents you from selecting other attributes. The default is none.
name <value>	Specifies a name for the ACT using 0–32 characters.
protocol <protocol-attributes>	Specifies the permitted protocol attributes for the ACT. You must separate the list of attributes commas. The list can include • none • tcpSrcPort, udpSrcPort, tcpDstPort, udpDstPort, tcpFlags, and icmpMsgFlags If you select none, this action deletes the node and prevents you from selecting other attributes. The default is none.

config filter act pattern

Use this command to create a template for patterns within an ACT.

Syntax

config filter act <act-id> pattern <pattern-name> add <base> <offset> <length>
show filter act-pattern [<act-id>]

Parameters

Variable	Value
delete	Deletes access control template.
info	Displays information about the template patterns you created under an ACT.

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Variable	Value
modify <base> <offset> <length>	Modifies a template for user-defined patterns for this ACT ID. Options are the same as for the **add** command.
name <pattern-name>	Renames the pattern with a new name that you define. Each of the three patterns must have a unique name. **<pattern-name>** specifies a pattern name of up to 32 characters.

Default

None

Related commands

Variable	Value
add <base> <offset> <length>	Adds a template for patterns you create. **<base>**—the base and the offset together determine the beginning of the pattern. Permitted values for the base include: • none • ether-begin, mac-dst-begin, mac-srcbegin, ethTypeLen-begin, arp-begin, ip-hdr-begin, ip-options-begin, ip-payload-begin, ip-tos-begin, ip-proto-begin, ip-src-begin, ip-dst-begin, ipv6-hdr-begin, tcp-begin, tcp-srcport-begin, tcp-dstport-begin, tcp-flags-end, udp-begin, udp-srcport-begin, udp-dstport-begin, ether-end, ip-hdr-end, icmp-msg-begin, tcp-end, and udp-end **<offset>** is the number of bits from the base where the pattern starts. **<length>** is the length in bits of the user-defined field from 1–56.
delete	Deletes access control template.
info	Displays information about the template patterns you created under an ACT.

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Variable	Value
modify <base> <offset> <length>	Modifies a template for user-defined patterns for this ACT ID. Options are the same as for the **add** command.
name <pattern-name>	Renames the pattern with a new name that you define. Each of the three patterns must have a unique name. **<pattern-name>** specifies a pattern name of up to 32 characters.

config filter acl create

Use this command to configure an ACL.

Syntax

config filter acl <acl-id> create <type> act <value> [pktType <value>] [name <value>]

Parameters

Variable	Value
create <type> act <value> [pktType <value>] [name <value>]	Creates an ACL only when you associate an ACT with that ACL. Options include: • **<type>**—type of ACL: inVlan, outVlan, inPort, or outPort. • **act <value>**—an ACT ID from 1–4096. • **pktType <value>**—Layer 3 packet type (ipv4 or ipv6) • **name <value>**—an optional parameter that specifies a descriptive name for the ACL using 0–32 characters.
name <value>	Renames an ACL.

Default

None

Related commands

Variable	Value
delete	Deletes an ACL. Removes all VLANs or brouter ports under this ACL and deletes all ACEs. It does not delete the ACTs.
disable	Disables the ACL state, and all associated ACEs.

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Variable	Value
enable	Enables the ACL state, and all associated ACEs. Enable is the default.
info	Displays information related to the ACL.
name <value>	Renames an ACL.

config filter acl set

Use this command to configure the global action for an ACL.

Syntax

config filter acl <acl-id> set global-action <value>
config filter acl <acl-id> set default-action <value>

Parameters

None

Default

None

Related commands

Variable	Value
default-action <value>	Specifies the default action to take when none of the ACEs match. Options include **<deny|permit>**. The default is permit.
global-action <value>	The **<value>** parameter specifies the global action for matching ACEs: • none • mirror, count, mirror-count, ipfix, mirror-ipfix, count-ipfix, and mirror-count-ipfix If you enable mirroring, ensure you specify the source or destination mirroring ports: • For R modules in Tx mode: use **config diag mirror-by-port** commands to specify mirroring ports. • For RS modules, or R modules in Rx mode: use the **config filter acl <acl-id> ace <ace-id> debug** commands to specify mirroring ports.
info	Displays the status of the global and default actions.

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config filter acl vlan

Use this command to associate VLANs with a particular ACL.

Syntax

```
config filter acl <acl-id> vlan add <vid> [<vid2-vid3>...]
config filter acl <acl-id> vlan remove <vid> [<vid2-vid3>...]
```

Parameters

Variable	Value
`add <vid> [<vid2-vid3>]`	Associates a VLAN or a VLAN list with a particular ACL. The `<vid>` parameter is a list of VLANs separated by a comma, or a range of VLANs specified from low to high [vlan-id - vlan-id].

Default

None

Related commands

Variable	Value
`info`	Displays the ACL VLAN status.
`remove <vid> [<vid2-vid3>]`	Removes a VLAN or VLAN list from a particular ACL. The `<vid>` parameter is a list of VLANs separated by a comma, or a range of VLANs specified from low to high [vlan-id to vlan-id].

config filter acl port

Use this command to associate ports with a particular ACL.

Syntax

```
config filter acl <acl-id> port add <ports>
config filter acl <acl-id> port remove <ports>
```

Parameters

Variable	Value
`add <ports>`	Associates a port or a port list with a particular ACL. The `<ports>` parameter is a list of ports in the following format: [<slot/port>] or [<slot/port-slot/port>].

Default

None

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Related commands

Variable	Value
remove <ports>	Removes a port or a port list from a particular ACL. The **<ports>** parameter is a list of ports in the following format: [<slot/port>] or [<slot/port-slot/port>].
info	Displays the ACL port status.

config filter acl ace

Use this command to create an ACE.

Syntax

config filter acl <acl-id> ace <ace-id> create [name <value>]

Parameters

Variable	Value
create [name <value>]	Creates an Access Control Entry (ACE). The ACE IS determines precedence (that is, the lower the ID, the higher the precedence). The **name <value>** parameter is optional and specifies a descriptive name for the ACE using 0–32 characters. You can only modify ACE attributes after you disable the ACE. If you issue the same command several times, the new values overwrite the previous command. For example, if you enter the following commands **config filter acl acl-2 ace ace-3 ip src-ip eq 1.1.1.1** **config filter ac acl-2 ace-3 ip dst-ip eq 5.5.5.5** **config filter acl acl-2 ace ace-3 ip src-ip eq 7.7.7.7** the values you enter with the third command overwrite the first command.
name <value>	Renames an ACE using a descriptive name from 0–32 characters.

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Default

None

Related commands

Variable	Value
action <deny|permit>	Updates desired action parameters for the ACE. See
debug	Updates desired debug parameters for access control entry.
delete	Deletes an ACE.
disable	Disables a particular ACE within an ACL. The default is disable.
enable	Enables a particular ACE within an ACL. After you enable an ACE, if you need to make changes, you must first disable it.
info	Displays information related to the ACE.
name	

config filter acl ace action deny

Use this command to configure the action mode as deny or permit.

Syntax

config filter acl <acl-id> ace <ace-id> action <deny|permit>

Parameters

None

Default

None

Related commands

None

config filter acl ace action

Use this command to configure ACE actions.

Syntax

config filter acl <acl-id> ace <ace-id> action <mode> [mlt-index <value>] [remark-dscp <value>] [remark-dot1p <value>] [police <value>] [redirect-next-hop <value>] [unreachable <value>] [egress-queue <value>] [stop-on-match <value>] [egress-queue-nnsc <value>] [ipfix <value>]

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Parameters

Variable	Value
egress-queue <value>	Specifies the offset from the base queue number (0–63). **<value>** can be a single value, two values, or three values. The first value specifies the Egress Queue ID for the 8648GTR, 8648GTRS, 8648GBRS and gigabit ports of the 8634XLRS modules. The second value specifies the Egress Queue ID for the 8630GBR, 8612XLRS, and 10 Gigabit ports of the 8634XLRS modules. The third specifies the Egress Queue ID for 8683XLR and 8683XZR modules. If you specify only one value, the same value applies to all module types. If you specify two values, the first value applies to 8648GTR, 8648GTRS, 8648GBRS and gigabit ports of 8634XLRS, and the second value applies to 8630GBR, 8612XLRS and 10 Gigabit ports of 8634XLRS modules. If you specify all three values, the three values apply to the respective module types as explained in the preceding paragraph.
egress-queue-nnsc <value>	Specifies the ACE NNSC egress queue value as one of the following: • disable • critical, network, premium, platinum, gold, silver, bronze, or standard The default is disable.
ipfix <enable|disable>	Enables or disables IPFIX. The default is disable.
mlt-index <index>	If you specify this action, it overrides the mlt-index chosen by the MLT algorithm for packets sent on MLT ports. The MLT index varies from 0–8. If three ports exist in an MLT (for example, A, B, and C) and you specify an index of 6, the Ethernet Routing Switch 8600 applies the MOD function and chooses port C. If port C becomes nonoperational, the filtered packets egress from port B.

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Variable	Value
	Multicast traffic does not support the MLT index.
police <value>	Specifies the policy ID of a policer (0–16383). A policy must already exist.
redirect-next-hop <value>	Specifies the next-hop IP address for redirect mode (a.b.c.d). If you specify a next-hop IPv6 address for redirect mode, enter 0.0.0.0 <IPv6 address>.
remark-dot1p <value>	Specifies the new 802.1 priority bit for matching packets: • disable • zero, one, two, three, four, five, six, or seven The default is disable.
remark-dscp <value>	Specifies the new Per-Hop Behavior for matching packets: • disable • phbcs0, phbcs1, phbaf11, phbaf12, phbaf13, phbcs2, phbaf21, phbaf22, phbaf23, phbcs3, phbaf31, phbaf32, phbaf33, phbcs4, phbaf41, phbaf42, phbaf43, phbcs5, phbef, phbcs6, and phbcs7 The default is disable.
stop-on-match <true|false>	Enables or disables the stop-on-match option. This option specifies whether to stop or continue after an ACE matches the packet. After this ACE matches, the switch does not attempt a match on other ACEs with lower priority. The default is false.
unreachable <deny|permit>	Denies or permits packet dropping when the next-hop is unreachable. The default is deny.

Default

None

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Related commands

Variable	Value
egress-queue <value>	Specifies the offset from the base queue number (0–63). **<value>** can be a single value, two values, or three values. The first value specifies the Egress Queue ID for the 8648GTR, 8648GTRS, 8648GBRS and gigabit ports of the 8634XLRS modules. The second value specifies the Egress Queue ID for the 8630GBR, 8612XLRS, and 10 Gigabit ports of the 8634XLRS modules. The third specifies the Egress Queue ID for 8683XLR and 8683XZR modules. If you specify only one value, the same value applies to all module types. If you specify two values, the first value applies to 8648GTR, 8648GTRS, 8648GBRS and gigabit ports of 8634XLRS, and the second value applies to 8630GBR, 8612XLRS and 10 Gigabit ports of 8634XLRS modules. If you specify all three values, the three values apply to the respective module types as explained in the preceding paragraph.
egress-queue-nnsc <value>	Specifies the ACE NNSC egress queue value as one of the following: • disable • critical, network, premium, platinum, gold, silver, bronze, or standard The default is disable.
ipfix <enable|disable>	Enables or disables IPFIX. The default is disable.

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Variable	Value
mlt-index <index>	If you specify this action, it overrides the mlt-index chosen by the MLT algorithm for packets sent on MLT ports. The MLT index varies from 0–8. If three ports exist in an MLT (for example, A, B, and C) and you specify an index of 6, the Ethernet Routing Switch 8600 applies the MOD function and chooses port C. If port C becomes nonoperational, the filtered packets egress from port B. Multicast traffic does not support the MLT index.
police <value>	Specifies the policy ID of a policer (0–16383). A policy must already exist.
redirect-next-hop <value>	Specifies the next-hop IP address for redirect mode (a.b.c.d). If you specify a next-hop IPv6 address for redirect mode, enter 0.0.0.0 <IPv6 address>.
remark-dot1p <value>	Specifies the new 802.1 priority bit for matching packets: • disable • zero, one, two, three, four, five, six, or seven The default is disable.
remark-dscp <value>	Specifies the new Per-Hop Behavior for matching packets: • disable • phbcs0, phbcs1, phbaf11, phbaf12, phbaf13, phbcs2, phbaf21, phbaf22, phbaf23, phbcs3, phbaf31, phbaf32, phbaf33, phbcs4, phbaf41, phbaf42, phbaf43, phbcs5, phbef, phbcs6, and phbcs7 The default is disable.

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Variable	Value
stop-on-match <true|false>	Enables or disables the stop-on-match option. This option specifies whether to stop or continue after an ACE matches the packet. After this ACE matches, the switch does not attempt a match on other ACEs with lower priority. The default is false.
unreachable <deny|permit>	Denies or permits packet dropping when the next-hop is unreachable. The default is deny.

config filter acl ace debug

Use this command to configure ACE debug actions.

Syntax

config filter acl <acl-id> ace <ace-id> debug [count <value>] [copytoprimarycp <value>] [copytosecondarycp <value>] [mirror <value>] [mirroring-dst-ports <value>] [mirroring-dst-vlan <value>] [mirroring-dst-mlt <value>]

Parameters

Variable	Value
count <enable|disable>	Enables or disables counting after a packet matching the ACE is found. The default is disable.
copytoprimarycp <enable|disable>	Enables or disables the ability to copy matching packets to the primary (Master) CPU. The default is disable.
copytosecondarycp <enable|disable>	Enables or disables the ability to copy matching packets to the secondary (Standby) CPU. The default is disable.
mirror <enable|disable>	Enables or disables mirroring for the ACE. If you enable mirroring, ensure that you configure the appropriate parameters: • For R and RS modules in Rx mode, and for RS modules: **mirroring-dst-ports**, **mirroring-dst-vlan**, or **mirroring-dst-mlt**. • For R modules in Tx mode: use the **config diag mirror-by-port** commands to specify the mirroring source or destination. The default is disable.

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Variable	Value
mirroring-dst-ports <value>	Specifies the destination port or ports for mirroring.
mirroring-dst-vlan <value>	Specifies the destination VLAN for mirroring.
mirroring-dst-mlt <value>	Specifies the destination MLT group for mirroring.

Default

None

Related commands

Variable	Value
count <enable|disable>	Enables or disables counting after a packet matching the ACE is found. The default is disable.
copytoprimarycp <enable|disable>	Enables or disables the ability to copy matching packets to the primary (Master) CPU. The default is disable.
copytosecondarycp <enable|disable>	Enables or disables the ability to copy matching packets to the secondary (Standby) CPU. The default is disable.
mirror <enable|disable>	Enables or disables mirroring for the ACE. If you enable mirroring, ensure that you configure the appropriate parameters: • For R and RS modules in Rx mode, and for RS modules: **mirroring-dst-ports**, **mirroring-dst-vlan**, or **mirroring-dst-mlt**. • For R modules in Tx mode: use the **config diag mirror-by-port** commands to specify the mirroring source or destination. The default is disable.
mirroring-dst-ports <value>	Specifies the destination port or ports for mirroring.
mirroring-dst-vlan <value>	Specifies the destination VLAN for mirroring.
mirroring-dst-mlt <value>	Specifies the destination MLT group for mirroring.

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config filter acl ace arp

Use this command to configure ARP ACEs.

Syntax

config filter acl <acl-id> ace <ace-id> arp operation <ace-op> <arp-oper-type>

Parameters

Variable	Value
operation <ace-op> <arp-oper-type>	Specifies the following: • **<ace-op>** specifies an operator for a field match operation (eq). • **<arp-oper-type>** specifies an operation type: arpRequest or arpResponse. For ARP, only one attribute exists (operation).

Default

None

Related commands

Variable	Value
delete <arp-attributes>	Deletes ARP attributes.
operation <ace-op> <arp-oper-type>	Specifies operation type attribute of ARP header. • **ace-op** is the operator for field match condition {eq}. • **arp-oper-type** is the ARP operation type {arprequest|arpresponse}.
info	Displays ARP status information for the ACE.

config filter acl ace

Use this command to configure an Ethernet ACE.

Syntax

config filter acl <acl-id> ace <ace-id> ethernet

Parameters

None

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Default

None

Related commands

Variable	Value
delete <ethernet-attributes>	Specifies Ethernet ACE attributes to delete. The **<ethernet-attributes>** parameter is a list of Ethernet attributes {<attr>,<attr>,<attr>-} where attr is • none • srcMac, dstMac, etherType, <port|vlan>, or vlanTagPrio You cannot select other attributes if you select **none**.
dst-mac <ace-op> <dst-mac-list>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne, le, ge. The **<dst-mac-list>** parameter specifies a list of destination MAC addresses separated by a comma, or a range of MAC addresses specified from low to high, for example: [a:b:c:d:e:f, (x:y:z:w:v:u-a:b:c:d:e:f)]. You cannot use * following **<ace-op>**.
ether-type <ace-op> <ether-type>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne. The **<ether-type>** parameter specifies an ether-type name or number: • 0–65563 • ip, arp, ipx802dot3, ipx802dot2, ipxSnap, ipxEthernet2, appleTalk, decLat, decOther, sna802dot2, snaEthernet2, netBios, xns, vines, ipv6, rarp, or PPPoE.
info	Displays Ethernet header status information for the ACE.

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Variable	Value
port <ace-op> <ports>	The **<ace-op>** parameter specifies an operator for a field match condition (eq). The **<ports>** parameter specifies a port list [slot/port].
src-mac <ace-op> <src-mac-list>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne, le, ge. The **<src-mac-list>** parameter specifies a list of source MAC addresses separated by a comma, or a range of MAC addresses specified from low to high, for example: [a:b:c:d:e:f, (x:y:z:w:v:u- a:b:c:d:e:f)].
vlan-id <ace-op> <vid>	The **<ace-op>** parameter specifies an operator for a field match condition (eq). The **<vid>** parameter specifies a list of VLAN IDs from 0–4096.
vlan-tag-prio <ace-op> <vlan-tag-prio>	The **<ace-op>** parameter specifies an operator for a field match condition (eq, ne). The **<vlan-tag-prio>** parameter specifies a VLAN tag priority from 0–7 or undefined.

config filter acl ace ip

Use this command to configure an IP ACE.

Syntax

config filter acl <acl-id> ace <ace-id> ip

Parameters

None

Default

None

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Related commands

Variable	Value
delete <ip-attributes>	Specifies a list of IP ACE attributes to delete: • none • srcIp, dstIp, ipFragFlag, ipOptions, ipProtoType, or dscp You cannot select other attributes if you select none.
dst-ip <ace-op> <dst-ip-list>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne, le, ge. The **<dst-ip-list>** parameter specifies the destination IP address list in one of the following format: a.b.c.d, [w.x.y.z-p.q.r.s], [l.m.n.o/mask], [a.b.c.d/len]. You cannot use * following **<ace-op>**.
dscp <ace-op> <dscp-list>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne. **<dscp-list>** specifies the PHB: • disable • phbcs0, phbcs1, phbaf11, phbaf12, phbaf13, phbcs2, phbaf21, phbaf22, phbaf23, phbcs3, phbaf31, phbaf32, phbaf33, phbcs4, phbaf41, phbaf42, phbaf43, phbcs5, phbcs6, phbef, or phbcs
ip-frag-flag <ace-op> <ip-frag-flag>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne. The **<ip-frag-flag>** parameter specifies a match option for IP fragments (0, 2, 4), or noFragment, moreFragment, lastFragment, anyFragment.
ip-options <ace-op>	Specifies an operator for a field match condition (any is the only option).
info	Displays IP header status information for the ACE.

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Variable	Value
ip-protocol-type <ace-op> <ip-protocol-type>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne. The **<ip-protocol-type>** parameter specifies one or more IP protocol types: (1–256), or undefined, icmp, tcp, udp, ipsecesp, ipsecah, ospf, vrrp, snmp.
src-ip <ace-op> <src-ip-list>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne, le, ge. The **<src-ip-list>** parameter specifies a source IP address list in one of the following format: a.b.c.d, [w.x.y.z-p.q.r.s], [l.m.n.o/mask], [a.b.c.d/len].

config filter acl ace protocol

Use this command to configure protocol AC.

Syntax

config filter acl <acl-id> ace <ace-id> protocol

Parameters

None

Default

None

Related commands

Variable	Value
delete <protocol-attributes>	Specifies protocol ACE attributes to delete • none • tcpSrcPort, udpSrcPort ,tcpDstPort, udpDstPort, tcpFlags, or icmpMsgType You cannot select other attributes if you select none .

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Variable	Value
icmp-msg-type <ace-op> <icmp-msg-type>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne. The **<icmp-msg-type>** parameter specifies one or more IP protocol types (0–255), or echoreply, destunreach, sourcequench, redirect, echo-request, routeradv, routerselect, time-exceeded, param-problem, timestamp-request, timestamp-reply, addressmask-request, addressmask-reply, or traceroute. You cannot select * following **<ace-op>**.
info	Displays IP header status information for the ACE.
tcp-dst-port <ace-op> <tcp-portlist>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne, le, ge. The default is eq. The **<tcp-portlist>** parameter specifies the destination port for the TCP protocol: (0–65535), or echo, ftpdata, ftpcontrol, ssh, telnet, dns, http, bgp, hdot323, or undefined.
tcp-flags <ace-op> <tcp-flags>	The **<ace-op>** parameter specifies an operator for a field match condition: matchAny, matchAll **<tcp-flags>** specifies one or more TCP flags: none, fin, syn, rst, push, ack, urg, or undefined.

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Variable	Value
tcp-src-port <ace-op> <tcp-portlist>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne, le, ge. The default is eq. The **<tcp-portlist>** parameter specifies the destination port for the TCP protocol (0–65535), or echo, dns, bootpServer, bootpClient, tftp, rip, rtp, rtcp, or undefined.
udp-dst-port <ace-op> <udp-portlist>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne, le, ge. The default is eq. The **<udp-portlist>** parameter specifies the destination port for the UDP protocol (0–65535), or echo, dns, bootpServer, bootpClient, tftp, rip, rtp, rtcp, or undefined.
udp-src-port <ace-op> <udp-portlist>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne, le, ge. The default is eq. The **<udp-portlist>** parameter specifies the source port for the UDP protocol (0–65535), or echo, dns, bootpServer, bootpClient, tftp, rip, rtp, rtcp, or undefined.

config filter acl ace advanced

Use this command to configure a custom ACE.

Syntax

config filter acl <acl-id> ace <ace-id> advanced

Parameters

None

Default

None

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Related commands

Variable	Value
custom-filter1 <pattern1-name> <ace-op> <value>	Specifies the following information for custom filter 1: • **<pattern1-name>**—a descriptive name for pattern 1 that uses 0–32 characters. • **<ace-op>**—an operator for a field match condition (eq, le, ge). The ace-op ne does not apply to an ACE pattern. • **<value>**—a hexadecimal number equal to the pattern template length.
custom-filter2 <pattern2-name> <ace-op> <value>	Specifies the following information for custom filter 2: • **<pattern2-name>**—a descriptive name for pattern 2 that uses 0–32 characters. • **<ace-op>**—an operator for a field match condition (eq, le, ge). The ace-op ne does not apply to an ACE pattern. • **<value>**—a hexadecimal number equal to the pattern template length.
custom-filter3 <pattern3-name> <ace-op> <value>	Specifies the following information for custom filter 3: • **<pattern3-name>**—a descriptive name for pattern 3 that uses 0–32 characters. • **<ace-op>**—an operator for a field match condition (eq, le, ge). The ace-op ne does not apply to an ACE pattern. • **<value>**—a hexadecimal number equal to the pattern template length.
delete <pattern-attributes>	Deletes user-defined patterns for a particular ACE: • none • custom-filter1, custom-filter2, custom-filter3
info	Displays user-defined pattern status information for the ACE.

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config filter acl ace ipv6

Use this command to configure an IPv6 ACE.

Syntax

config filter acl <acl-id> ace <ace-id> ipv6

Parameters

None

Default

None

Related commands

Variable	Value
delete <ipv6-attributes>	Deletes the specified IPv6 ACE attributes. You cannot select other attributes if you select none.
dst-ipv6 <ace-op> <dst-ipv6-list>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne. The **<dst-ipv6-list>** parameter specifies the list of destination IPv6 addresses, separated by commas. You cannot select * following **<ace-op>**.
info	Displays the current-level parameter settings and the next-level directories.
nxt-hdr <ace-op> <nxt-hdr>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne. The **<nxt-hdr>** parameter specifies hop-by-hop, tcp, udp, routing, fragment, ipsecesp, ipsecah, icmpv6, noHdr, or undefined.
src-ipv6 <ace-op> <src-ipv6-list>	The **<ace-op>** parameter specifies an operator for a field match condition: eq, ne. The **<src-ipv6-list>** parameter specifies the list of source IPv6 addresses, separated by commas.

config r-module

Use this command to configure R module.

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Syntax

config r-module <Slot#> trace level [<modid>] [<level>]

Parameters

Variable	Value
<Slot#>	Specifies the R-Module slot number {1..10}.
[<modid>]	Specifies the module IDs.

Default

None

Related commands

Variable	Value
grep	Specifies grep.
off	Disables trace.

show config module filter

Use this command to view configuration information about R module filters.

Syntax

show config [verbose] [module <vakue>] [mode <value>]

Parameters

Variable	Value
mode <value>	Shows filter configuration output in either CLI or NNCLI mode. **<value>** is cli or nncli.
verbose	Shows detailed output.

Default

None

Related commands

Variable	Value
mode <value>	Shows filter configuration output in either CLI or NNCLI mode. **<value>** is cli or nncli.
verbose	Shows detailed output.

show filter acl config

Use this command to view your configuration to review the information and ensure that it is correct.

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Syntax

show filter acl config [<acl-id>] [<ace-id>]

Parameters

Variable	Value
<ace-id>	Specifies an ACE ID from 1 to 1000.
<acl-id>	Specifies an ACL ID from 1 to 4096.

Default

None

Related commands

Variable	Value
<ace-id>	Specifies an ACE ID from 1 to 1000.
<acl-id>	Specifies an ACL ID from 1 to 4096.

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Security commands

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config bootconfig flag hsecure

Use this command to enable or disable hsecure mode.

Syntax

config bootconfig flag hsecure <true|false>

Parameters

Variable	Value
<true|false>	True enables hesecure. False disables hsecure.

Default

None

Related commands

None

config bootconfig flags block-snmp

Use this command to disable SNMP.

Syntax

config bootconfig flags block-snmp <true|false>

Parameters

Variable	Value
<true|false>	Turn the flag on or off. Specify true to turn the flag on and block SNMP.

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Default

The default is false.

Related commands

None

config bootconfig flags sshd

Use this command to enable the SSH server.

Syntax

config bootconfig flags sshd <true|false>

Parameters

Variable	Value
sshd <true|false>	Enable or disable the SSH services on the device. • **<true|false>** Set to true to enable the SSH services. Set to false to disable the SSH services.

Default

None

Related commands

None

config cli password aging

Use this command to specify a value, in days, after which the password ages out.

Syntax

config cli password aging <days>

Parameters

Variable	Value
days	Specifies the number of days after which the password ages out.

Default

None

Related commands

None

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config cli password rwa

Use this command to On the standby SF/CPU, change the password.

Syntax

config cli password rwa <username> [<password>]

Parameters

Variable	Value
<password>	**<password>** is the password on the standby SF/CPU.
<username>	**<username>** the name used to access the standby SF/CPU.

Default

None

Related commands

None

config ethernet high-secure

Use this command to enable high secure.

Syntax

config ethernet <ports> high-secure <true|false>

Parameters

Variable	Value
<slot/port>	Specifies the port on which the flag is configured.
<true/false>	Enables the high Secure Feature that blocks packets with illegal IP addresses.

Default

The default is disable.

Related commands

None

config ethernet ip Rvs-Path-Chk

Use this command to configure reverse path checking on a port.

Syntax

config ethernet <port> ip Rvs-Path-Chk <enable|disable>

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Parameters

Variable	Value
<enable|disable>	Enables or disables reverse path checking.
mode <value>	Specifies the mode for reverse path checking. • **value** is the mode exist-only or strict. In exist-only mode, reverse path checking checks whether the source IP address of the incoming packet exists in the routing table. In strict mode, reverse path checking checks whether the source IP address of the incoming packet exists in the routing table.
<port>	Specifies the slot/port or a list of slot.

Default

The default is disable.

Related commands

None

config ethernet lock

Use this command to lock or unlock a port.

Syntax

config ethernet <ports> lock <true|false>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.
true|false	Specifies the port lock on or off.

Default

None

Related commands

None

config ethernet eapol admin-status

Use this command to set the EAPoL Authentication Status.

Syntax

config ethernet <ports> eapol admin-status <auto|force-unauthorized|force-authorized>

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Parameters

Variable	Value
auto | force-unauthorized | force-authorized	Specifies the EAP port.
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
enable	Enables EAP globally.
disable	Disables EAP globally.
info	Specifies global EAP information.
sess-manage <true | false>	Disables EAP globally. **true | false** Enables EAPOL session manage {false|true}.

config ethernet eapol admin-status force-unauthorized

Use this command to configure a port so that it is always unauthorized.

Syntax

config ethernet <portlist> eapol admin-status force-unauthorized

Default

None

Related commands

None

config ethernet eapol admin-status force

Use this command to configure a port so that it is authenticated automatically.

Syntax

config ethernet <portlist> eapol admin-status force

Parameters

Variable	Value
portlist	Specifies the port/slot.

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Default

None

Related commands

None

config ethernet eapol

Use this command to configure EAPoL on a specific port.

Syntax

config ethernet <portlist> eapol

Parameters

Variable	Value
<portlist>	Specifies the port/slot.

Default

None

Related commands

Variable	Value
admin-status <auto|force-unauthorized|force-authorized>	Sets the authentication status for this port. The default is **authorized**. auto—port authorization depends on the results of the EAPoL authentication by the RADIUS server. force-unauthorised—port is always unauthorized. force-authorized—port is always authorized.
admin-traffic-control <incoming-and-outgoing| incoming-only>	Sets the traffic control direction. incoming-and-outgoing—traffic direction is both incoming and outgoing. incoming-only—traffic direction is only incoming.
info	Displays information about the current EAPoL configuration on this port .
initialize <true|false>	Initializes EAPoL authentication on this port.
max-req <1...10>	Sets the maximum number of times to retry sending packets to the Supplicant. The default is 2.

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Variable	Value
quiet-period <1...65535>	Sets the time interval (in seconds) between authentication failure and the start of a new authentication. The default is 60.
reauthentication <true|false>	When enabled (true), re-authenticates an existing Supplicant at the time interval . The default is false.
reauthenticate-now <true|false>	Reauthenticates the Supplicant connected to this port immediately.
reauthentication-period <1...2147483647>	Sets the time interval (in seconds) between successive re-authentications . The default is 3600 (1 hour).
server-timeout <1...65535>	Sets the time (in seconds) to wait for a response from the RADIUS server. The default is 30.
sess-manage-mode <true|false>	Enables (true) or disables (false) the session port to be managed by an external device.
sess-manage-open-immediate <true|false>	Sets the port to be opened immediately after 8021x authentication • **true** enables the opening of the port immediately after 802.1x authentication. • **false** disables the opening of the port immediately after 802.1x authentication.
supplicant-timeout <1...65535>	Sets the time (in seconds) to wait for a response from a Supplicant for all EAP packets except EAP Request/Identity packets. The default is 30.
transmit-period <1...65535>	Sets the time (in seconds) to wait for a response from a Supplicant for EAP Request/Identity packets. The default is 30.

config ethernet nsna dynamic

Use this command to configure NSNA ports.

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Syntax

config ethernet <ports> nsna dynamic [voip-vlans <value>]

Parameters

Variable	Value
voip-vlans <value>	Adds the VLAN to the table list.

Default

None

Related commands

None

config ethernet nsna uplink

Use this command to add a filter to uplink.

Syntax

config ethernet <port> nsna uplink uplink-vlans <value>

Parameters

Variable	Value
<port>	The port number of an NSNA server.
uplink-vlans <value>	**The VLAN ID created with an NSNA color filter.**

Default

None

Related commands

None

config vlan ip Rvs-Path-Chk

Use this command to configure reverse path checking on a VLAN.

Syntax

config vlan <vid> ip Rvs-Path-Chk <enable|disable>[mode <value>]

Parameters

Variable	Value
enable|disable	Enables or disables reverse path checking.

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Variable	Value
mode <value>	Specifies the mode for reverse path checking. • **value** is the mode exist-only or strict. In exist-only node, reverse path checking checks whether the source IP address of the incoming packet exists in the routing table. In strict mode, reverse path checking checks whether the source IP address of the incoming packet exists in the routing table.
vids	Specifies the ID of the selected VLAN.

Default

The default is disable.

Related commands

None

config vlan ip directed-broadcast

Use this command to configure the device to forward directed broadcasts for a VLAN.

Syntax

config vlan <vid> ip directed-broadcast enable
config ethernet <ports> ip directed-broadcast enable

Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

The default is disable.

Related commands

Variable	Value
disable	Prevents the device from forwarding directed broadcast frames to the specified VLAN.

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Variable	Value
enable	Allows the device to forward directed broadcast frames to the specified VLAN. The default setting for this feature is enabled.
info	Displays information about the directed broadcast suppression settings.

config vlan nsna color

Use this command to configure NSNA VLANs.

Syntax

config vlan <vlan-id> nsna color <red|green|yellow|voip|none> [filter-id <value>] [filter-name <value>] [yellow-subnet-ip <value>]

Parameters

Variable	Value
nsna color <red|green|yellow|voip|none>	Specifies the following access on a NSNA VLAN: • red - Restricted access allowing only authentication, DHCP and DNS traffic to the Secure Network Access Switch (SNAS), DHCP and DNS servers. • green- Full (or with certain restriction per policy) access based on user groups. • yellow - Limited access allowing traffic to only remediation networks. • voip – Restricted access allowing VoIP traffic to VoIP controllers and authenticated IP phone peers.
filter-id <value>	The ID of the filter. If the specified filter ID does not exist, a default filter of the specified color is auto-generated.
[yellow-subnet-ip <value>]	Specified subnet for remedial network. This color is specified only for creating yellow VLANs.
<vlan-id>	The ID of the VLAN.

Default

None

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Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.

config snmp-server bootstrap

Use this command to configure how secure you want SNMP communications.

Syntax

config snmp-server bootstrap <min-secure | semi-secure | very-secure>

Parameters

Variable	Value
<min-secure | semi-secure | very-secure>	Creates an initial set of configuration data for SNMPv3: • **min-secure**—a minimum security configuration that allows read access and notify access to all processes (MIB view *restricted*) with noAuth-noPriv and read, write, and notify access to all processes (MIB view *internet*) using Auth-Priv. In this configuration, restricted MIB view matches internet MIB view. • **semi-secure**—a security configuration that allows read access and notify access to all processes (MIB view restricted) with noAuth-noPriv and read, write, and notify access to all processes (MIB view internet) using Auth-Priv. In this configuration, restricted MIB view contains a smaller subset of views than internet MIB view. See RFC 3515 Appendix A for details. • **very-secure**—a maximum security configuration that allows no access to the users.

Default

None

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Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.

config snmp-v3 usm create

Use this command to create a user in the USM table.

Syntax

config snmp-v3 usm create <User> [auth <protocol>] [<auth <value>] [priv-prot <value>] [priv <value>] [engid <value>]

Parameters

Variable	Value
auth protocol	Specifies an authentication protocol. If no value is entered, the entry has no authentication capability. The protocol choices are: MD5 and SHA.
auth <value>	Specifies an authentication password. If no value is entered, the entry has no authentication capability. The range is 1–32 characters.
engid <value>	Assigns an SNMPv3 engine ID. The range is 16–97 characters.
priv <value>	Assigns a privacy password. If no value is entered, no privacy capability exists. The range is 1–32 characters. **ATTENTION** You must set authentication before you can set the privacy option.
priv-prot <value>	Specifies a privacy protocol. If no value is entered, the no authentication capability exists. The protocol choices are DES or AES.
<User Name>	Creates the new entry with this security name. The name is used as an index to the table. The range is 1–32 characters.

Default

None

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Related commands

Variable	Value
auth <User Name> old-pass <value> new-pass <value> [engid <value>]	Modifies the authentication password. • **User Name** is the user name. The string length ranges from 1 to 32. • **old-pass <value>** is the users old password. The string length ranges from 1 to 32. • **new-pass** is the users new password. The string length ranges from 1 to 32. • **engid <value>** is the engine ID. {5...32 pairs in the format 0x00:00}. The string length ranges from 16 to 97.
delete <User Name> [engid <value>]	Deletes an user for v3 USM table.
info	Displays current level parameter settings and next level directories.
priv <User Name> old-pass <value> new-pass <value> [engid <value>]	Modifies the privacy password.

config snmp-v3 usm

Use this command to modify attributes in the USM table.

Syntax

config snmp-v3 usm

Parameters

Variable	Value
auth <User Name> old-pass <value> new-pass <value> [engid <value>]	Changes the authentication password. • **User Name** is the user name with a string length of 1 to 32 characters • **old-pass <value>** is the user old password. • **new-pass <value>** is the user new password. • **engid <value>** is the SNMP engine ID.

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Variable	Value
delete <User Name> [engid <value>]	Deletes a user for the v3 VACM table. • **User Name** is the user name with a string length of 1 to 32 characters. • **value** is the SNMP engine ID.
priv	Changes the privacy password.

Default

None

Related commands

None

config snmp-v3 group-member create

Use this command to create a new user group.

Syntax

config snmp-v3 group-member create <user name> <model> [<group name>]

Parameters

Variable	Value
<user name>	Specifies the user name. The string length ranges from 1 to 32.
model <usm|snmpv1|snmpv2c>	Specifies the message processing model to use when the switch generates an SNMP message.
user name	Specifies the new entry with this user name. The range is 1–32 characters.

Default

None

Related commands

Variable	Value
group name	Assigns the user to the group for data access. The range is 1–32 characters.
info	Displays the VACM group membership configuration.

config snmp-v3 group-access create

Use this command to create new group access.

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Syntax

config snmp-v3 group-access create <group name> <prefix> <model> <level>

Parameters

Variable	Value
group name	Creates the new entry with this group name. The range is 1–32 characters
level	Assigns the minimum level of security required to gain the access rights allowed by this conceptual row.
match <exact|prefix>	• Exact – Specifies that all rows where the context Name exactly matches the context prefix are selected. • Prefix – Specifies that all rows where the contextName whose starting octets exactly match the context prefix are selected.
model <usm | snmpv1 | snmpv2c>	Assigns the authentication checking to communicate to the switch.
prefix	Assigns a context prefix. The range is 0–32 characters. To prevent authorization errors, enter **prefix** as the blank string "".

Default

None

Related commands

None

config snmp-v3 mib-view create

Use this command to create a new entry for the MIB view table.

Syntax

config snmp-v3 mib-view create <View Name> <subtree oid> [mask <value>] [type <value>]

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Parameters

Variable	Value
mask <value>	Specifies that a bit mask be used with vacmViewTreeFamilySubtree to determine whether an OID falls under a view subtree. • **value** is the subtree mask in the format 0x00:00...and with a string length of 1–49.
subtree oid	**subtree oid** specifies the prefix that defines the set of MIB objects accessible by this SNMP entity. The range is 1–32 characters.
type <value>	Determines whether access to a MIB object is granted or denied. • **value** is include or exclude.
View Name	**View Name** specifies a new entry with this group name. The range is 1–32 characters.

Default

None

Related commands

Variable	Value
delete <View Name> <subtree oid>	Deletes an entry for the MIB view table. • **View name** is the view name. The string length varies from 1 to 32. • **subtree oid** is the subtree OID. The string length ranges from 1 to 32.
info	Displays current level parameter settings and next level directories.
mask <View Name> <subtree oid> <new-mask>	Displays current level parameter settings and next level directories. **new-mask** is the subtree mask. The string length ranges from 1 to 49.
type <View Name> <subtree oid> <new-type>	Modifies the type for an entry in the MIB view table. **new-type** is the type of entry {include|exclude}.

config snmp-v3 community create

Use this command to create a community.

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Syntax

config snmp-v3 community create <Comm Idx> <name> <security> [context <value>] [tag <value>]

Parameters

Variable	Value
Comm Idx	Specifies the unique index value of a row in this table. The range is 1-32 characters.
context <value>	Configures the community context to set the routing domain for the default community user. The value is a string from 0–32 characters.
name	Configures the community string for which a row in this table represents a configuration.
security	Maps the community string to the security name in the VACM Group Member Table.
tag <value>	Specifies the Transport tag name with a string length of 1–32 characters.

Default

None

Related commands

Variable	Value
delete <Comm Idx>	Deletes an entry for community table. **Comm Idx** is the community index. The string length ranges from 1 to 32.
info	Displays current level parameter settings and next level directories.
commname <Comm Idx> new-commname <value>	Modifies the name for an entry in the community table. **new-commname <value>** is the community name. The string length ranges from 1 to 32.
secname <Comm Idx> new-secname <value>	Modifies security name for an entry in the community table. **new-secname <value>** is the security name. The string length ranges from 1 to 32.

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Variable	Value
tag <Comm Idx> new-tag <value>	Modifies transport tag for an entry in the community table. **new-tag <value>** is the transport tag. The string length ranges from 1 to 32.
rmtag <Comm Idx>	Deletes transport tag for an entry in the community table.

config load-encryption-module

Use this command to dynamically load the encryption module on the device.

Syntax

config load-encryption-module <3 DES | DES | AES>

Parameters

Variable	Value
DES | AES	Specify the SNMPv3 encryption module to load: AES or DES.

Default

None

Related commands

None

config load-encryption-module

Use this command to load the 3DES encryption image.

Syntax

config load-encryption-module <3DES | DES | AES>

Parameters

Variable	Value
<3DES | DES | AES>	Specifies the module ID.

Default

None

Related commands

None

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config sys set snmp gent-conformance

Use this command to configure SNMP settings.

Syntax

config sys set snmp agent-conformance <enable|disable>

Parameters

Variable	Value
agent-conformance <enable|disable>	Activates or disables the agent conformance mode. Conforms to MIB standards when disabled. If you activate this option, feature configuration is stricter and error handling less informative. Activating this option is not a recommended or normally supported mode of operation.

Default

None

Related commands

Variable	Value
force-iphdr-sender <true|false>	Specify true to configure the SNMP and IP sender flag to the same value. The default is false.
force-trap-sender <true|false>	Specify true to send the configured source address (sender IP) as the sender network in the notification message.
info	Displays the current SNMP settings.
sender-ip <ipaddr> <ipaddr>	Configures the SNMP trap receiver and source IP addresses. Specify the IP address of the destination SNMP server that will receive the SNMP trap notification in the first IP address. Specify the source IP address of the SNMP trap notification packet that is transmitted in the second IP address. If this is set to 0.0.0.0 then the switch uses the IP address of the local interface that is closest (from an IP routing table perspective) to the destination SNMP server. The format of the IP address is A.B.C.D.

config sys set portlock

Use this command to enable port lock globally.

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Syntax

config sys set portlock <on|off>

Parameters

Variable	Value
on	Locks all ports.
off	Unlocks all ports.

Default

None

Related commands

None

config sys set ssh action

Use this command to set the Secure Shell (SSH) configuration parameters.

Syntax

config sys set ssh action <action choice> [<integer>]

Parameters

Varible	Value
action **<action choice> [<integer>]**	Set the SSH key action. • **<action choice>** choose one of the following actions: - rsa-keygen - rsa-keydel - dsa-keygen - dsa-keydel • **[<integer>]** the SSH host key size. Can be a value from 512 to 1024. Default is 1024.

Default

None

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Related commands

Varible	Value
dsa-auth <true|false>	Enable or disable the DSA authentication. • <true|false> true enables the authentication and false disables the authentication. Default is true.
enable <true|false|secure>	Enable, or disable, the SSH daemon. • **<true|false|secure>** - true, enable SSH - false, disable SSH - secure, enables SSH and immediately disables the access services SNMP, FTP, TFTP, rlogin, and Telnet. Default is false.
info	Displays the current configuration parameters of SSH services.
max-sessions <integer>	The maximum number of SSH sessions allowed. • <integer> a value from 0 to 8. Default is 4.
pass-auth <true|false>	Enable or disable password authentication. • **<true|false>** set to true to enable authentication and false to disable authentication. Default is true.
port <integer>	Sets the SSH connection port. • **<integer>** is the port number. The default is 22. **ATTENTION** You cannot configure the following TCP ports as SSH connection ports: Ports 0 to 1024 (except port 22),1100, 4095, 5000, 5111, 6000, or 999.
rsa-auth <true|false>	Enable or disable RSA authentication. • **<true|false>** set to true to enable authentication and false to disable authentication. Default is true.

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Varible	Value
timeout <integer>	The SSH connection authentication time-out in seconds. • **<integer>** number of seconds. Default is 60 seconds.
version v2only|both	Set the SSH version. • **<v2only|both>** both|v2only. Default is v2only. **ATTENTION** Nortel recommends that you set the version to v2.

config sys set eapol enable

Use this command to globally configure EAPoL.

Syntax

config sys set eapol enable

Parameters

Variable	Value
enable	**enable** enables EAPoL globally on the device.

Default

None

Related commands

Variable	Value
disable	**disable**disables EAPoL globally on the device. By default, EAPoL is disabled.
info	**info** displays how the device is currently configured, use the following command.

config sys set eapol enable

Use this command to enable EAPoL Globally.

Syntax

config sys set eapol enable

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Parameters

Variable	Value
enable	Enables EAP globally.

Default

None

Related commands

Variable	Value
disable	Disables EAP globally.
info	Specifies global EAP information.
sess-manage <true|false>	Disables EAP globally. **true|false** Enables EAPOL session manage {false|true}.

config radius

Use this command to configure RADIUS.

Syntax

config radius

Parameters

None

Default

None

Related commands

Variable	Value
acct-attribute-value <value>	Specific to RADIUS accounting. Sets the vendor-specific attribute value of the CLI-command attribute to match the type value set in the dictionary file on the RADIUS server. This value *must* be different from the access-priority attribute value configured for authentication. The default value is 193. **value** is between 192 and 240
acct-enable <true|false>	Enables (true) or disables (false) RADIUS accounting globally. RADIUS accounting cannot be enabled unless a valid server is configured. This feature is disabled by default.

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Variable	Value
acct-include-cli-commands <true|false>	Specifies whether you want CLI commands to be included in RADIUS accounting requests. If you set this parameter to true, the commands are included in the requests. If you set this parameter to false, the commands are not included and interim updates are not sent.
access-priority-attribute <value>	Specifies the integer value of the Access Priority attribute. **value** is in the range of 192 to 240 and the default is 192.
auth-info-attr-value <value>	Specifies the integer value of the authentication-information attribute. **value** is in the range of 0 to 255 and the default is 91.
clear-stat	Clears RADIUS statistics from the server.
cli-commands-attribute <value>	Specifies the integer value of the CLI commands attribute. **value** is in the range of 192 to 240 and the default is 195.
cli-profile-enable <true|false>	Specifies the radius CLI profile. **<true|false>** enables or disables radius CLI profiling {false|true}.
command-access-attribute <value>	Specifies the integer value of the command access attribute. **value** is in the range of 192 to 240 and the default is 194.
cli-cmd-count <value>	number of CLI commands after which interim packet is sent out. **<value>** is the integer value of CLI command count in the range of 1 to 40.
enable <true|false>	Enables (true) or disables (false) the RADIUS authentication feature.
igap-passwd-attr <standard|auth-info>	Specifies the IGAP password attribute as standard or auth-info.
igap-timeout-log-fsize <value>	Specifies the value of the igap-timeout-log-fsize in KB. **value** is 50 to 8192 and the default is 512.

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Variable	Value
info	Shows the current-level parameters settings and next-level directories.
maxserver <value>	Specific to RADIUS authentication. Sets the maximum number of servers allowed for the device. **value** is between 1 and 10
mcast-addr-attr-value <value>	Specifies the integer value of the multicast address attribute. **value** is in the range of 0 to 255 and the default is 90.
sourceip-flag <true|false>	Include a configured IP address as the source address in RADIUS packets. The default is false. For information about configuring the source IP option.

config radius cli-profile-enable

Use this command to enable or disable RADIUS CLI profiling.

Syntax

config radius cli-profile-enable <true|false>

Parameters

Variable	Value
<true|false>	Specify true to enable RADIUS CLI profiling; false to disable RADIUS CLI profiling.

Default

The default is disable.

Related commands

None

config radius sourceip-flag

Use this command to configure the source ip-flag.

Syntax

config radius sourceip-flag <true|false>

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Parameters

Variable	Value
sourceip-flag <true|false>	Specify **true** to include a configured IP address as the source address in RADIUS packets.

Default

The default is false.

Related commands

None

config radius enable

Use this command to enable or disable RADIUS authentication globally on the device.

Syntax

config radius enable <true|false>

Parameters

Variable	Value
enable <true|false>	Specify **true** to enable RADIUS authentication globally; **false**to disable RADIUS authentication globally.

Default

None

Related commands

None

config radius acct-enable

Use this command to enable RADIUS accounting globally.

Syntax

config radius acct-enable <true|false>

Parameters

Variable	Value
true	**true** enables RADIUS accounting globally.
false	**false**disables RADIUS accounting globally. RADIUS accounting is disabled by default.

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Default

The default is false.

Related commands

None

config radius cli-cmd-count

Use this command to configure a RADIUS accounting interim request.

Syntax

config radius cli-cmd-count <value>

Parameters

Variable	Value
value	**value** is an integer value of the CLI command count in the range of 1 to 40.

Default

The default value is 40.

Related commands

None

config radius attribute-value

Use this command to configure the RADIUS authentication attribute.

Syntax

config radius attribute-value <value>

Parameters

Variable	Value
attribute-value <value>	**value** for the RADIUS authentication attribute value is an integer value of the CLI command count in the range of 192 to 240.

Default

The default value is 192.

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Related commands

Variable	Value
attribute-value <value>	**value** for the RADIUS authentication attribute value is an integer value of the CLI command count in the range of 192 to 240. The default value is 192.
acct-attribute-value <value>	**value** for the RADIUS accounting attribute value is an integer value of the CLI command count in the range of 192 to 240. The default value is 193.

config radius acct-attribute-value

Use this command to configure the RADIUS accounting attribute value.

Syntax

config radius acct-attribute-value <value>

Parameters

Variable	Value
acct-attribute-value <value>	**value** for the RADIUS accounting attribute value is an integer value of the CLI command count in the range of 192 to 240.

Default

The default value is 193.

Related commands

None

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config radius server create

Use this command to add a RADIUS server.

Syntax

config radius server create <ipaddr> secret <value>

Parameters

Variable	Value
create <ipaddr> secret <value> [usedby <value>] [port <value>] [priority <value>] [retry <value>] [timeout <value>] [enable <value>] [acct-port <value>] [acct-enable <value>] [source-ip <value>]	Creates a server. Enter the IP address of the server you want to create. **secret <value>**—the secret key of the authentication client. **usedby <value>**—specifies how the server functions: **cli**—configure the server for CLI authentication. **igap**—configure the server for Internet Governance Advisory Protocol (IGAP) authentication. **snmp**—configure the server for SNMP authentication. **eapol**—configure the server for EAPol authentication. **[port <value>]**—the UDP ports you want to use (1 to 65536). The default is 1812. **[priority <value>]**—the priority value for this server (1 to 10). The default is 10. **[retry <value>]**—the number of authentication retries the server will accept (1 to 6). The default is 3. **[timeout <value>]**—the number of seconds before the authentication request times out (1 to 10). The default is 3. **[enable <value>]**—to enable this server, set the value to true. The default is true

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Variable	Value
	acct-port <value>—The UDP port of the RADIUS accounting server (1 to 65536). The default value is 1813. **ATTENTION** The UDP port value set for the client must match the UDP value set for the RADIUS server. **acct-enable <true|false>**—enables or disables RADIUS accounting on this server. By default, RADIUS accounting is enabled on a server. **[source-ip <value>]**—specify a configured IP address as the source address when transmitting RADIUS packets. To use this option, you must have the global RADIUS sourceip-flag set to true.

Default

None

Related commands

None

config radius server

Use this command to confirm your server configuration by displaying information of all configured RADIUS servers.

Syntax

config radius server info

Parameters

Variable	Value
info	Shows radius server configurations.

Default

None

Related commands

None

config radius server set

Use this command to modify a RADIUS server .

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Syntax

config radius server set <ipaddr> usedby <value> [secret <value>] [port <value>] [priority <value>] [retry <value>] [timeout <value>] [enable <value>] [acct-port <value>] [acct-enable <value> [source-ip <value>]

Parameters

Variable	Value
set <ipaddr> usedby <value> [secret <value>] [port <value>] [priority <value>] [retry <value>] [timeout <value>] [enable <value>] [acct-port <value>] [acct-enable <value>] [source-ip <value>]	Changes specified server values without having to delete the server and recreate it again. **ipaddr**—the IP address of the server you want to modify. **usedby <value>**—specifies how the server functions: **cli**—configure the server for CLI authentication. **igap**—configure the server for Internet Governance Advisory Protocol (IGAP) authentication. **snmp**—configure the server for SNMP authentication. **eapol**—configure the server for EAPol authentication. **[secret <value>**—the secret key of the authentication client. **[port <value>]**—the UDP ports you want to use (1 to 65536). The default is 1812. **[priority <value>]**—the priority value for this server (1 to 10). The default is 10. **[retry <value>]**—the number of authentication retries the server will accept (1 to 6). The default is 3.

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Variable	Value
	[timeout <value>]—the number of seconds before the authentication request times out (1 to 10). The default is 3. **[enable <value>]**—to enable this server, set the value to true. The default is true **acct-port <value>**—The UDP port of the RADIUS accounting server (1 to 65536). The default value is 1813. **ATTENTION** The UDP port value set for the client must match the UDP value set for the RADIUS server. **acct-enable <true | false>**—enables or disables RADIUS accounting on this server. By default, RADIUS accounting is enabled on a server. **[source-ip <value>]**—specify a configured IP address as the source address when transmitting RADIUS packets. To use this option, you must have the global RADIUS sourceip-flag set to true.

Default

None

Related commands

Variable	Value
create <ipaddr> secret <value> [usedby <value>] [port <value>] [priority <value>] [retry <value>] [timeout <value>] [enable <value>] [acct-port <value>] [acct-enable <value>] [source-ip <value>]	Changes specified server values without having to delete the server and recreate it again. **ipaddr**—the IP address of the server you want to modify. **usedby <value>**—specifies how the server functions:

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Variable	Value
	cli - configure the server for CLI authentication. **igap** - configure the server for Internet Governance Advisory Protocol (IGAP) authentication. **snmp** - configure the server for SNMP authentication. **eapol** - configure the server for EAPol authentication. **[secret <value>** —the secret key of the authentication client. **[port <value>]**—the UDP ports you want to use (1 to 65536). The default is 1812. **[priority <value>]**— the priority value for this server (1 to 10). The default is 10. **[retry <value>]**— the number of authentication retries the server will accept (1 to 6). The default is 3. **[timeout <value>]**— the number of seconds before the authentication request times out (1 to 10). The default is 3. **[enable <value>]**—to enable this server, set the value to true. The default is true **acct-port <value>**—The UDP port of the RADIUS accounting server (1 to 65536). The default value is 1813. **ATTENTION**

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Variable	Value
	The UDP port value set for the client must match the UDP value set for the RADIUS server. **acct-enable <value>**—enables or disables RADIUS accounting on this server. By default, RADIUS accounting is enabled on a server. **[source-ip <value>]**—specify a configured IP address as the source address when transmitting RADIUS packets. To use this option, you must have the global RADIUS sourceip-flag set to true.
delete <ipaddr> usedby <value>	Deletes radius server. **ipaddr** is the IP address {a.b.c.d}. **usedby <value>** is the value used for CLI, IGAP, SNMP or EAPOL {cli|igap|snmp|eapol}.
info	Shows the current-level parameters settings and next-level directories.

config radius server create

Use this command to add an EAPoL-enabled RADIUS server.

Syntax

config radius server create <ipaddr> secret <value> usedby eapol

Parameters

Variable	Value
ipaddr	**ipaddr** indicates the IP address of the selected server.
value	**value** specifies the secret key, which is a string of up to 20 characters.

Default

None

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Related commands

Variable	Value
[port <value>]	Specifies the port ID of the RADIUS server.
[priority <value>]	Specifies the priority of each server, or the order of servers to send authentication (1 to 10). The default is 10.
[retry <value>]	Specifies the time interval in seconds before the client retransmits the packet (1 to 6). The default is 3 seconds.
[timeout <value>]	Specifies the maximum number of retransmissions allowed (1 to 6). The default is 3.
[enable <value>]	Enables the RADIUS server globally.
[acct-port <value>]	Specifies the port ID used for accounting on the RADIUS server.
[acct-enable <value>]	Specifies the accounting IP address for RADIUS.
[source-ip <value>]	Specifies the source IP address for the RADIUS server.

config radius server delete

Use this command to delete an EAPoL-enabled RADIUS server.

Syntax

config radius server delete <ipaddr> usedby eapol

Parameters

Variable	Value
ipaddr	**ipaddr** indicates the IP address of the selected server.

Default

None

Related commands

None

config nsna nsnas

Use this command to add an NSNA server.

Syntax

config nsna nsnas [<ipaddr/mask>] add

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Parameters

Variable	Value
ipaddr/mask	The IP address and Mask address of the server.

Default

None

Related commands

Variable	Value
delete	Deletes NSNA subnet.
info	Displays current level parameter settings and next level directories.
nsna-port	Specifies the TCP port number for SSCP server.

config nsna nsnas nsna-port

Use this command to configure the port.

Syntax

config nsna nsnas <ipaddr/mask>nsna-port <integer>

Parameters

Variable	Value
port number	Specifies the TCP port number used by Switch SNAS Communication Protocol (SSCP).

Default

None

Related commands

None

config nsna state

Use this command to globally enable NSNA.

Syntax

config nsna state <enable|disable>

Parameters

Variable	Value
<enable|disable>	Globally enables or disables NSNA.

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Default

None

Related commands

Variable	Value
`info`	Displays current level parameter settings and next level directories.
`sync-ssh-keys`	Specifies the SYNC SSH Keys with Standby.

config nsna fail-open-state

Use this command to enable the fail open state.

Syntax

`config nsna fail-open-state <enable|disable>`

Parameters

Variable	Value
`<enable/disable>`	Globally enables or disables NSNA. Disabling connects new clients to the red state (red Vlan, redFilter) if the device is unable to communicate with the SNAS for StatusQuo time.
`<seconds>`	Specifies in seconds the time that the device waits before entering into FailOpenState.

Default

Default is 5 minutes.

Related commands

None

config nsna fail-open-filter

Use this command to configure the filter.

Syntax

`config nsna fail-open-filter <filterId>`

Parameters

Variable	Value
`<filterId>`	Specifies the filter that is set to fail open.

Default

None

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Related commands

None

config nsna fail-open-vlan

Use this command to configure fail open on the VLAN.

Syntax

config nsna fail-open-vlan <vlanId>

Parameters

Variable	Value
<vlanId>	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

None

config nsna fail-open-timer

Use this command to set the fail open time for the device.

Syntax

config nsna fail-open-timer <seconds>

Parameters

Variable	Value
<seconds>	Specifies in seconds the time that the device waits before entering into FailOpenState.

Default

Default is 5 minutes.

Related commands

None

config tacacs enable

Use this command to enable TACACS+.

Syntax

config tacacs enable <true|false>

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Parameters

Variable	Value
enable <true|false>	Enables (**true**) or disables (**false**) the TACACS+ authentication feature. By default, TACACS+ authentication is disabled.

Default

The default is disable.

Related commands

None

config tacacs info

Use this command to display the status of TACACS+ authentication.

Syntax

config tacacs info

Parameters

Variable	Value
info	Displays global TACACS+ settings. **ATTENTION** You can also use the **show tacacs info** command to display TACACS+ server settings.

Default

None

Related commands

None

config tacacs server create

Use this command to create a TACACS+ server.

Syntax

config tacacs server create <ipaddr> priority <value> key <value> [port <value>] [timeout <value>] [single-connection <value>] [SourceIpAddr <value>] [source IpInterfaceEnabled <value>]

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Parameters

Variable	Value
create <ipaddr> key <value>	Creates a TACACS+ server, where **<ipaddr>** is the IP address of the server you want to add. The **key<value>** specifies the authentication and encryption key for all TACACS+ communications between the device and the TACACS+ server. This key must match the encryption used on the TACACS+ daemon. The string length is 1–128 characters.

Default

None

Related commands

Variable	Value
key <value> [port <value>] [timeout <value>] [single-connection <value>] [SourceIpAddr <value>] [source IpInterfaceEnabled <value>]	• **port <value>**: Specifies the Transmission Control Protocol (TCP) port you want to use. If unspecified, the default port number is 49. The range of values is 0–65535. • **priority <value>**: Determines the order in which the servers are used, where 1 specifies the highest priority. The default value is 1. When you set a second server and more, specify a unique value. The range of values is 1–65535. • **timeout <value>**: Specifies the time-out value in seconds. The default value is 10 seconds. The range of values is 10–30. • **single-connection <value>**: Enter true to specify single-connection. Rather than keep the device open and close a TCP connection to the daemon each time the daemon must communicate, the single-connection option maintains a single open connection between the device and the daemon. If

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Variable	Value
	no value is specified, the value defaults to false. • **source <value>**: Specifies the source IP address to use for communication. An address value of 0.0.0.0 is interpreted as a request to use the IP address of the outgoing IP interface. If no source value is specified, the value defaults to 0.0.0.0. • **sourceIpInterfaceEnabled <value>** enables the source IP address. Enter true to enable and false to disable.
delete <ipaddr>	Deletes a TACACS+ server, where **<ipaddr>** is the IP address of the server you want to delete.
info	Displays the TACACS+ server settings. **ATTENTION** You can also use the **show tacacs server** command to display TACACS+ server settings.
set <ipaddr> Optional parameters: **[key <value>] [port <value>] [priority <value>] [timeout <value>] [single-connection <true|false>] [source <ipaddr>] [sourceIpInterfaceEnabled <value>]**	Changes the specified server values without having to delete the server and recreate it. **<ipaddr>** is the IP address of the server you want to add. Optional parameters: • **key <value>**Specifies the authentication and encryption key for all TACACS+ communications between the device and the TACACS+ server. This key must match the encryption used on the TACACS+ daemon. The string length is 1–128 characters. • **port <value>**: Specifies the TCP port you want to use. The range of values is 0–65535.

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Variable	Value
	• **priority <value>**: Determines the order in which the servers are used, where 1 specifies the highest priority. The range of values is 1–65535. • **timeout <value>**: Specifies the time-out value in seconds. The range of values is 10–30. • **single-connection <true|false>**: Enter true to specify single-connection. Rather than keep the device open and close a TCP connection to the daemon each time the daemon must communicate, the single-connection option maintains a single open connection between the device and the daemon. • **source <ipaddr>**: Specifies the source IP address to use for communication. An address value of 0.0.0.0 is interpreted as a request to use the IP address of the outgoing IP interface. • **sourceIpInterfaceEnabled <value>** enables the source IP address. Enter true to enable and false to disable.

config tacacs authentication cli

Use this command to configure TACACS+ CLI authentication.

Syntax

config tacacs authentication cli <enable|disable>

Parameters

Variable	Value
<enable|disable>	Enables or disables CLI authentication.

Default

None

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Related commands

Variable	Value
`info <enable|disable>`	Displays TACACS+ authentication configurations.
`ppp <enable|disable>`	Configures PPP authentication.
`web <enable|disable>`	Configures PPP authentication.

config tacacs accounting cli

Use this command to configure TACACS+ CLI accounting.

Syntax

`config tacacs accounting cli <enable|disable>`

Parameters

Variable	Value
`<enable|disable>`	Enables or disables CLI accounting.

Default

None

Related commands

Variable	Value
`info <enable|disable>`	Displays TACACS+ accounting configurations.
`ppp <enable|disable>`	Configures PPP accounting.

config tacacs switch back

Use this command to switch back one level.

Syntax

`config tacacs switch back`

Parameters

None

Default

None

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Related commands

Variable	Value
level <level>	Switches to authorization level. **level** is the authorization levels in the range of 1 to 12.

config tacacs server info

Use this command to display current TACACS+ server configurations.

Syntax

config tacacs server info

OR

show tacacs server config

Parameters

Variable	Value
info	Displays the TACACS+ server settings. **ATTENTION** You can also use the **show tacacs server** command to display TACACS+ server settings.

Default

None

Related commands

Variable	Value
create <ipaddr> key <value>	Creates a TACACS+ server, where **<ipaddr>** is the IP address of the server you want to add. The **key<value>** specifies the authentication and encryption key for all TACACS+ communications between the device and the TACACS+ server. This key must match the

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Variable	Value
	encryption used on the TACACS+ daemon. The string length is 1–128 characters.
[port <value>] [priority <value>] [timeout <value>] [single-connection <value>] [source <value>] [sourceIpInterfaceEnabled <value>]	• **port <value>**: Specifies the Transmission Control Protocol (TCP) port you want to use. If unspecified, the default port number is 49. The range of values is 0–65535. • **priority <value>**: Determines the order in which the servers are used, where 1 specifies the highest priority. The default value is 1. When you set a second server and more, specify a unique value. The range of values is 1–65535. • **timeout <value>**: Specifies the time-out value in seconds. The default value is 10 seconds. The range of values is 10–30. • **single-connection <value>**: Enter true to specify single-connection. Rather than keep the device open and close a TCP connection to the daemon each time the daemon must communicate, the single-connection option maintains a single open connection between the device and the daemon. If no value is specified, the value defaults to false. • **source <value>**: Specifies the source IP address to use for communication. An address value of 0.0.0.0 is interpreted as a request to use the IP address of the outgoing IP interface. If no source value is specified, the value defaults to 0.0.0.0. • **sourceIpInterfaceEnabled <value>**

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	enables the source IP address. Enter true to enable and false to disable.
delete <ipaddr>	Deletes a TACACS+ server, where **<ipaddr>** is the IP address of the server you want to delete.
info	Displays the TACACS+ server settings. **ATTENTION** You can also use the **show tacacs server** command to display TACACS+ server settings.
set <ipaddr> **[key <value>] [port <value>] [priority <value>] [timeout <value>] [single-connection <true|false>] [source <ipaddr>] [sourceIpInterfaceEnabled <value>]**	Changes the specified server values without having to delete the server and recreate it. **<ipaddr>** is the IP address of the server you want to add. • **key <value>**Specifies the authentication and encryption key for all TACACS+ communications between the device and the TACACS+ server. This key must match the encryption used on the TACACS+ daemon. The string length is 1–128 characters. • **port <value>**: Specifies the TCP port you want to use. The range of values is 0–65535. • **priority <value>**: Determines the order in which the servers are used, where 1 specifies the highest priority. The range of values is 1–65535. • **timeout <value>**: Specifies the time-out value in seconds. The range of values is 10–30. • **single-connection <true|false>**: Enter true to specify single-connection. Rather than keep the device open and close a TCP connection to the daemon each time the daemon must communicate, the single-connection option maintains

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	a single open connection between the device and the daemon. • **source <ipaddr>**: Specifies the source IP address to use for communication. An address value of 0.0.0.0 is interpreted as a request to use the IP address of the outgoing IP interface. • **sourceIpInterfaceEnabled <value>** enables the source IP address. Enter true to enable and false to disable.

nsna phone-signature add

Use this command to add an IP phone signature string.

Syntax

config nsna phone-signature add <string>

Parameters

Variable	Value
<string>	Specify the phone signature string in the range of 1–64 characters.

Default

None

Related commands

Variable	Value
delete <string>	Deletes a phone signature.
info	Displays current level parameter settings and next level directories.

save config

Use this command to save the password on the master SF/CPU.

Syntax

save config

Default

None

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Related commands

None

save config file config.cfg standby

Use this command to save the configuration to the standby SF/CPU.

Syntax

save config file config.cfg standby

Default

None

Related commands

None

show radius server config

Use this command to display current RADIUS server configurations.

Syntax

show radius server config

Parameters

Table 5
Command parameters

Variable	Value
config	Displays radius server configuration.

Default

None

Related commands

None

show sys ssh global

Use this command to verify that SSH services are enabled and view the SSH configuration.

Syntax

show sys ssh global

Parameters

Variable	Value
global	Display the global system SSH information.

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Default

None

Related commands

Variable	Value
session	Display the current session SSH information.

show config module sys

Use this command to display SNMP system information.

Syntax

show config module sys

Parameters

None

Default

None

Related commands

None

show tacacs info

Use this command to display the status of TACACS+ authentication.

Syntax

show tacacs info

Parameters

info	Displays global TACACS+ settings. **ATTENTION** You can also use the **show tacacs info** command to display TACACS+ server settings.

Default

None

Related commands

None

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Troubleshooting commands

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config cli more

Use this command to disable scrolling of the output display.

Syntax

config cli more <true|false>

Parameters

None

Default

None

Related commands

None

more boot.cfg

Use this command to display configuration file information.

Syntax

more boot.cfg

Parameters

None

Default

None

Related commands

None

dump.ar

Use this command to dump hardware record information.

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Syntax

dump ar <octapid> <vlan|ip_subnet|mac_vlan|mac|arp|ip|ipx|ipmc|ip_filter|protocol|sys_rec|all> <verbosity>

Parameters

Variable	Value
<opid>	Specifies the OctaPID assignment from 1 to 64.
<vlan|ip_subnet|mac_vlan|mac|arp|ip|ipx|ipmc|ip_filter|protocol|sys_rec|all>	Specifies a record type in the AR table.
<verbosity>	Specifies the verbosity from 0 to 3. Higher numbers specify more verbosity.

Default

None

Related commands

None

trace clear

Use this command to clear the trace.

Syntax

trace clear

Parameters

None

Default

None

Related commands

None

trace level

Use this command to begin the trace operation.

Syntax

trace level <modid> <level>

Parameters

Variable	Value
modid	Specifies the module ID.

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Default

None

Related commands

Variable	Value
clear	Clears any previous trace output.
filter	Filters the trace output.
grep [keyword]	Performs a comparison of trace messages [get regular expression and print (grep)].
info [tail]	Shows the trace output. **[tail]** shows the last results first.
level <modid> <level>	Starts the trace by specifying the module ID and level. • **<modid>** specifies the module ID from 0 to 107. • **<level>** specifies the trace level from 0 to 4, where 0 is disabled; 1 is very terse; 2 is terse; 3 is very verbose, 4 is verbose.
modid-list	Provides a list of module IDs and module names.
off	Stops the trace operation.
route-policy <on|off> [protocol <rip|osp f|bgp|dvmrp|any>] [policy-type <accept |announce>] [policy <name>] [ipaddr <interface-addr>] [iflist <if-name>]	Traces route policy serviceability.
screen [<on|off>]	Enables or disables the display of trace output to the screen.

trace off

Use this command to stop tracing.

Syntax

trace off

Parameters

None

Default

None

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Related commands

None

trace info

Use this command to display the trace results.

Syntax

```
trace info [tail]
show trace file [tail]
```

Parameters

Variable	Value
tail	Displays file from tail.

Default

None

Related commands

None

save trace

Use this command to save the trace file to the PCMCIA card for retrieval.

Syntax

```
save trace
```

Parameters

None

Default

None

Related commands

None

trace auto-enable add-module

Use this command to configure the module and verbosity.

Syntax

```
trace auto-enable add-module <modid> <level>
```


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Parameters

Variable	Value
add-module <modid> <level>	Configures the trace auto-enable function by specifying the module ID and level. • **<modid>** specifies the module ID from 0 to 107. • **<level>** specifies the trace level from 0 to 4, where 0 is disabled; 1 is very terse; 2 is terse; 3 is very verbose, 4 is verbose.

Default

None

Related commands

auto-trace <enable|disable>	Enables or disables the auto-trace function.
high-percentage <percent>	Specifies the high-percentage threshold for a module. The range is 60 to 100%.
high-track-duration <seconds>	Specifies, in seconds, the maximum amount of time that the activity must be sustained to trigger the trace. The range is 3 to 10 s.
info	Shows information about the auto-trace configuration.
low-percentage <percent>	Specifies the low-percentage threshold for a module. The range is 50 to 90%.
low-track-duration <seconds>	Specifies, in seconds, the minimum amount of time that the activity must be sustained to trigger the trace. The range is 3 to 10 s.
remove-module <modid>	Removes a module ID from the auto-trace instance.

trace auto-enable auto-trace

Use this command to enable automatic tracing.

Syntax

trace auto-enable auto-trace enable

Parameters

Variable	Value
auto-trace <enable|disable>	Enables or disables the auto-trace function.

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Default

None

Related commands

Variable	Value
add-module <modid> <level>	Configures the trace auto-enable function by specifying the module ID and level. • **<modid>** specifies the module ID from 0 to 107. • **<level>** specifies the trace level from 0 to 4, where 0 is disabled; 1 is very terse; 2 is terse; 3 is very verbose, 4 is verbose.
high-percentage <percent>	Specifies the high-percentage threshold for a module. The range is 60 to 100%.
high-track-duration <seconds>	Specifies, in seconds, the maximum amount of time that the activity must be sustained to trigger the trace. The range is 3 to 10 s.
info	Shows information about the auto-trace configuration.
low-percentage <percent>	Specifies the low-percentage threshold for a module. The range is 50 to 90%.
low-track-duration <seconds>	Specifies, in seconds, the minimum amount of time that the activity must be sustained to trigger the trace. The range is 3 to 10 s.
remove-module <modid>	Removes a module ID from the auto-trace instance.

config ip pim debug-pimmsg pimdbgtrace

Use this command to start debug trace message output.

Syntax

config ip pim debug-pimmsg pimdbgtrace <true=1 | false=2>

Parameters

Variable	Value
pimdbgtrace <true=1 | false=2>	Enables or disables PIM debug traces.

Default

None

Related commands

Variable	Value
assert <true=1 | false=2>	Displays the assert debug traces.

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Variable	Value
bstrap <true=1|false=2>	Displays bootstrap debug traces.
group <ipaddress>	Displays debug traces from a specific group IP address.
hello <true=1|false=2>	Displays hello debug traces.
info	Displays the current PIM debug trace flag settings on the switch.
joinprune <true=1|false=2>	Displays join/prune debug traces.
pimdbglog <true=1|false=2>	Enables or disables whether the switch logs debug traces.
rcv <true=1|false=2>	Displays trace messages received by the switch.
register <true=1|false=2>	Displays register debug traces.
regstop <true=1|false=2>	Displays register stop debug traces.
rp-adv <true=1|false=2>	Displays RP advertisement debug traces.
send <true=1|false=2>	Displays trace messages forwarded by the switch.
source <ipaddress>	Displays debug traces from a specific source IP address.

config ip pim debug-pimmsg pimdbgtrace

Use this command to stop debug trace message output.

Syntax

config ip pim debug-pimmsg pimdbgtrace 2

Parameters

Variable	Value
pimdbgtrace <true=1|false=2>	Enables or disables PIM debug traces.

Default

None

Related commands

Variable	Value
assert <true=1|false=2>	Displays the assert debug traces.
bstrap <true=1|false=2>	Displays bootstrap debug traces.

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Variable	Value
group <ipaddress>	Displays debug traces from a specific group IP address.
hello <true=1 | false=2>	Displays hello debug traces.
info	Displays the current PIM debug trace flag settings on the switch.
joinprune <true=1 | false=2>	Displays join/prune debug traces.
pimdbglog <true=1 | false=2>	Enables or disables whether the switch logs debug traces.
rcv <true=1 | false=2>	Displays trace messages received by the switch.
register <true=1 | false=2>	Displays register debug traces.
regstop <true=1 | false=2>	Displays register stop debug traces.
rp-adv <true=1 | false=2>	Displays RP advertisement debug traces.
send <true=1 | false=2>	Displays trace messages forwarded by the switch.
source <ipaddress>	Displays debug traces from a specific source IP address.

config ip pim debug-pimmsg send

Use this command to display trace messages forwarded by the switch.

Syntax

config ip pim debug-pimmsg send <true=1 | false=2>

Parameters

Variable	Value
send <true=1 | false=2>	Displays trace messages forwarded by the switch.

Default

None

Related commands

Variable	Value
assert <true=1 | false=2>	Displays the assert debug traces.
bstrap <true=1 | false=2>	Displays bootstrap debug traces.
group <ipaddress>	Displays debug traces from a specific group IP address.
hello <true=1 | false=2>	Displays hello debug traces.

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Variable	Value
info	Displays the current PIM debug trace flag settings on the switch.
joinprune <true=1|false=2>	Displays join/prune debug traces.
pimdbglog <true=1|false=2>	Enables or disables whether the switch logs debug traces.
pimdbgtrace <true=1|false=2>	Enables or disables PIM debug traces.
rcv <true=1|false=2>	Displays trace messages received by the switch.
register <true=1|false=2>	Displays register debug traces.
regstop <true=1|false=2>	Displays register stop debug traces.
rp-adv <true=1|false=2>	Displays RP advertisement debug traces.
source <ipaddress>	Displays debug traces from a specific source IP address.

config ip pim debug-pimmsg rcv

Use this command to display trace messages received by the switch.

Syntax

config ip pim debug-pimmsg rcv 1

Parameters

Variable	Value
rcv <true=1|false=2>	Displays trace messages received by the switch.

Default

None

Related commands

Variable	Value
assert <true=1|false=2>	Displays the assert debug traces.
bstrap <true=1|false=2>	Displays bootstrap debug traces.
group <ipaddress>	Displays debug traces from a specific group IP address.
hello <true=1|false=2>	Displays hello debug traces.
info	Displays the current PIM debug trace flag settings on the switch.

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Variable	Value
joinprune <true=1|false=2>	Displays join/prune debug traces.
pimdbglog <true=1|false=2>	Enables or disables whether the switch logs debug traces.
pimdbgtrace <true=1|false=2>	Enables or disables PIM debug traces.
register <true=1|false=2>	Displays register debug traces.
regstop <true=1|false=2>	Displays register stop debug traces.
rp-adv <true=1|false=2>	Displays RP advertisement debug traces.
send <true=1|false=2>	Displays trace messages forwarded by the switch.
source <ipaddress>	Displays debug traces from a specific source IP address.

config ip pim debug-pimmsg hello

Use this command to display Hello messages forwarded and received by the switch.

Syntax

config ip pim debug-pimmsg hello 1

Parameters

Variable	Value
hello <true=1|false=2>	Displays hello debug traces.

Default

None

Related commands

Variable	Value
assert <true=1|false=2>	Displays the assert debug traces.
bstrap <true=1|false=2>	Displays bootstrap debug traces.
group <ipaddress>	Displays debug traces from a specific group IP address.
info	Displays the current PIM debug trace flag settings on the switch.
joinprune <true=1|false=2>	Displays join/prune debug traces.
pimdbglog <true=1|false=2>	Enables or disables whether the switch logs debug traces.

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Variable	Value
pimdbgtrace <true=1 | false=2>	Enables or disables PIM debug traces.
rcv <true=1 | false=2>	Displays trace messages received by the switch.
register <true=1 | false=2>	Displays register debug traces.
regstop <true=1 | false=2>	Displays register stop debug traces.
rp-adv <true=1 | false=2>	Displays RP advertisement debug traces.
send <true=1 | false=2>	Displays trace messages forwarded by the switch.
source <ipaddress>	Displays debug traces from a specific source IP address.

config ip pim debug-pimmsg pimdbglog

Use this command to display and log debug trace messages.

Syntax

config ip pim debug-pimmsg pimdbglog 1

Parameters

Variable	Value
pimdbglog <true=1 | false=2>	Enables or disables whether the switch logs debug traces.

Default

None

Related commands

Variable	Value
assert <true=1 | false=2>	Displays the assert debug traces.
bstrap <true=1 | false=2>	Displays bootstrap debug traces.
group <ipaddress>	Displays debug traces from a specific group IP address.
hello <true=1 | false=2>	Displays hello debug traces.
info	Displays the current PIM debug trace flag settings on the switch.
joinprune <true=1 | false=2>	Displays join/prune debug traces.
pimdbgtrace <true=1 | false=2>	Enables or disables PIM debug traces.

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Variable	Value
rcv <true=1|false=2>	Displays trace messages received by the switch.
register <true=1|false=2>	Displays register debug traces.
regstop <true=1|false=2>	Displays register stop debug traces.
rp-adv <true=1|false=2>	Displays RP advertisement debug traces.
send <true=1|false=2>	Displays trace messages forwarded by the switch.
source <ipaddress>	Displays debug traces from a specific source IP address.

config ip pim debug-pimmsg register

Use this command to disable previously enabled register messages.

Syntax

config ip pim debug-pimmsg register 2

Parameters

Variable	Value
register <true=1|false=2>	Displays register debug traces.

Default

None

Related commands

Variable	Value
assert <true=1|false=2>	Displays the assert debug traces.
bstrap <true=1|false=2>	Displays bootstrap debug traces.
group <ipaddress>	Displays debug traces from a specific group IP address.
hello <true=1|false=2>	Displays hello debug traces.
info	Displays the current PIM debug trace flag settings on the switch.
joinprune <true=1|false=2>	Displays join/prune debug traces.
pimdbglog <true=1|false=2>	Enables or disables whether the switch logs debug traces.
pimdbgtrace <true=1|false=2>	Enables or disables PIM debug traces.

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Variable	Value
rcv <true=1|false=2>	Displays trace messages received by the switch.
regstop <true=1|false=2>	Displays register stop debug traces.
rp-adv <true=1|false=2>	Displays RP advertisement debug traces.
send <true=1|false=2>	Displays trace messages forwarded by the switch.
source <ipaddress>	Displays debug traces from a specific source IP address.

config ip pim debug-pimmsg source

Use this command to display debug trace messages from a specific interface.

Syntax

config ip pim debug-pimmsg source <ipaddress>

Parameters

Variable	Value
source <ipaddress>	Displays debug traces from a specific source IP address.

Default

None

Related commands

Variable	Value
assert <true=1|false=2>	Displays the assert debug traces.
bstrap <true=1|false=2>	Displays bootstrap debug traces.
group <ipaddress>	Displays debug traces from a specific group IP address.
hello <true=1|false=2>	Displays hello debug traces.
info	Displays the current PIM debug trace flag settings on the switch.
joinprune <true=1|false=2>	Displays join/prune debug traces.
pimdbglog <true=1|false=2>	Enables or disables whether the switch logs debug traces.
pimdbgtrace <true=1|false=2>	Enables or disables PIM debug traces.

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Variable	Value
rcv <true=1|false=2>	Displays trace messages received by the switch.
register <true=1|false=2>	Displays register debug traces.
regstop <true=1|false=2>	Displays register stop debug traces.
rp-adv <true=1|false=2>	Displays RP advertisement debug traces.
send <true=1|false=2>	Displays trace messages forwarded by the switch.

config ip bgp global-debug mask

Use this command to display specific debug messages for your global BGP configuration.

Syntax

config ip bgp global-debug mask <value>

Parameters

Variable	Value
<value>	Value is one or more mask choices that you enter separated by commas with no space between choices. For example: [<mask>,<mask>,<mask>...]. The mask can be: none, all, error, packet, event, trace, warning, state, init, filter, update.

Default

None

Related commands

None

config ip bgp neighbor-debug-all mask

Use this command to display specific debug messages for your global BGP neighbors.

Syntax

config ip bgp neighbor-debug-all mask <value>

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Parameters

Variable	Value
`<value>`	Value is one or more mask choices that you enter separated by commas with no space between choices. For example: [<mask>,<mask>,<mask>...]. The mask can be: none, all, error, packet, event, trace, warning, state, init, filter, update.

Default

None

Related commands

None

config ip bgp neighbor

Use this command to display specific debug messages for BGP peers or peer group.

Syntax

`config ip bgp neighbor <nbr_ipaddr|peer-group-name> neighbor-debug mask <value>`

Parameters

Variable	Value
`<nbr_ipaddr|peer-group-name>`	nbr_ipaddr|peer-group-name indicates that you enter the peer's IP address or the peer's group name.
`<value>`	Value is one or more mask choices that you enter separated by commas with no space between choices. For example: [<mask>,<mask>,<mask>...]. The mask can be: none, all, error, packet, event, trace, warning, state, init, filter, update.

Default

None

Related commands

None

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config diag mirror-by-port create

Use this command to create a port mirroring instance.

Syntax

config diag mirror-by-port <id> create in-port <value> [out-port <value>] [mode <value>] [enable <value>] [remote-mirror-vlan-id <value>] [mirroring-mlt <value>] [mirroring-vlan <value>]

Parameters

Variable	Value
create in-port <value> [out-port <value>] [mode <value>] [enable <value>] [remote-mirror-vlan-id <value>] [mirroring-mlt <value>] [mirroring-vlan <value>]	Creates a new mirror-by-port table entry. • **in-port <value>** is the mirrored port. • **out-port <value>** is the mirroring port. • **mode <value>** sets the mirror mode (see description for mode). • **enable <value>** enables or disables the mirroring port (see description for enable). • **remote-mirror-vlan-id <value>** sets the VLAN ID for the remote mirrored packet (see description for remote-mirror-vlan-id). • **mirroring-vlan <value>** is the mirroring VLAN ID, from 1 to 4094. • **mirroring-mlt <value>**is the mirroring MLT ID, from 1 to 256. To modify a port mirroring instance, first disable the instance. Also, to change a port, VLAN, or MLT entry, first remove whichever parameter is attached to the entry, and then add the required entry. For example, if an entry has mirroring ports already assigned, then the ports have to be removed using the **remove mirroring-ports** command, and

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Variable	Value
	then, to assign a VLAN to the entry, use the **add mirroring-vlan** command.

Default

None

Related commands

Variable	Value
add {mirrored-ports <port>|mirroring-mlt <mid>|mirroring-ports <port>|mirroring-vlan <vid>}	Add ports, MLTs, or VLANs to the mirroring instance. To change a port mirroring configuration, first disable it. • **mirrored-ports <port>** specifies the source port for mirrored packets • **mirroring-mlt <mid>** specifies the destination MLTs for mirrored packets • **mirroring-ports <port>** specifies the destination ports for mirrored packets • **mirroring-vlan <vid>** specifies the destination VLAN for mirrored packets
delete	Deletes an entry from the mirror-by-port table. To change a port mirroring configuration, first disable it.
enable <true|false>	Enables or disables a mirroring port already created in the mirror-by-port table.
info	Displays current port mirroring settings.
mode <tx|rx|both|rxFilter|txFilter|bothFilter>	Sets the mirroring mode. The default is rx. • **tx** mirrors egress packets. • **rx** mirrors ingress packets. • **both** mirrors both egress and ingress packets. • **rxFilter** mirrors and filters ingress packets. If you use the rxFilter option with an R series module, you must use an ACL-based filter.

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Variable	Value
	• **txFilter** mirrors and filters egress packets. • **bothFilter** mirrors and filters both egress and ingress packets.
remote-mirror-vlan-id <vid>	Sets the remote mirror VLAN ID. • **<vid>** is the ID of the VLAN in the range of 0 to 4094.
remove {mirrored-ports <port>|mirroring-mlt <mid>|mirroring-ports <port>|mirroring-vlan <vid>}	Remove ports, an MLT, or a VLAN from the mirroring instance. To change a port mirroring configuration, first disable it. • **mirrored-ports <port>** specifies the source port for mirrored packets. • **mirroring-mlt <mid>** specifies the destination MLTs for mirrored packets. • **mirroring-ports <port>** specifies the destination ports for mirrored packets. • **mirroring-vlan <vid>** specifies the destination VLANs for mirrored packets.

config diag mirror-by-port add

Use this command to add mirroring entries.

Syntax

config diag mirror-by-port <id> add {mirrored-ports <port] \|mirroring-mlt <mid>\|mirroring-port <port>\|mirroring-vlan <vid>}

Parameters

Variable	Value
add {mirrored-ports <port>|mirroring-mlt	Add ports, MLTs, or VLANs to the mirroring instance.

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Variable	Value
<mid>|mirroring-ports <port>|mirroring-vlan <vid>}	To change a port mirroring configuration, first disable it. • **mirrored-ports <port>** specifies the source port for mirrored packets • **mirroring-mlt <mid>** specifies the destination MLTs for mirrored packets • **mirroring-ports <port>** specifies the destination ports for mirrored packets • **mirroring-vlan <vid>** specifies the destination VLAN for mirrored packets

Default

None

Related commands

Variable	Value
create in-port <value> [out-port <value>] [mode <value>] [enable <value>] [remote-mirror-vlan-id <value>] [mirroring-mlt <value>] [mirroring-vlan <value>]	Creates a new mirror-by-port table entry. • **in-port <value>** is the mirrored port. • **out-port <value>** is the mirroring port. • **mode <value>** sets the mirror mode (see description for mode). • **enable <value>** enables or disables the mirroring port (see description for enable). • **remote-mirror-vlan-id <value>** sets the VLAN ID for the remote mirrored packet (see description for remote-mirror-vlan-id). • **mirroring-vlan <value>** is the mirroring VLAN ID, from 1 to 4094. • **mirroring-mlt <value>**is the mirroring MLT ID, from 1 to 256.

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Variable	Value
	To modify a port mirroring instance, first disable the instance. Also, to change a port, VLAN, or MLT entry, first remove whichever parameter is attached to the entry, and then add the required entry. For example, if an entry has mirroring ports already assigned, then the ports have to be removed using the **remove mirroring-ports** command, and then, to assign a VLAN to the entry, use the **add mirroring-vlan** command.
delete	Deletes an entry from the mirror-by-port table. To change a port mirroring configuration, first disable it.
enable <true|false>	Enables or disables a mirroring port already created in the mirror-by-port table.
info	Displays current port mirroring settings.
mode <tx|rx|both|rxFilter|txFilter|bothFilter>	Sets the mirroring mode. The default is rx. • **tx** mirrors egress packets. • **rx** mirrors ingress packets. • **both** mirrors both egress and ingress packets. • **rxFilter** mirrors and filters ingress packets. If you use the rxFilter option with an R series module, you must use an ACL-based filter. • **txFilter** mirrors and filters egress packets. • **bothFilter** mirrors and filters both egress and ingress packets.

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Variable	Value
remote-mirror-vlan-id <vid>	Sets the remote mirror VLAN ID. • **<vid>** is the ID of the VLAN in the range of 0 to 4094.
remove {mirrored-ports <port>|mirroring-mlt <mid>|mirroring-ports <port>|mirroring-vlan <vid>}	Remove ports, an MLT, or a VLAN from the mirroring instance. To change a port mirroring configuration, first disable it. • **mirrored-ports <port>** specifies the source port for mirrored packets. • **mirroring-mlt <mid>** specifies the destination MLTs for mirrored packets. • **mirroring-ports <port>** specifies the destination ports for mirrored packets. • **mirroring-vlan <vid>** specifies the destination VLANs for mirrored packets.

config diag mirror-by-port enable

Use this command to enable mirroring.

Syntax

config diag mirror-by-port <id> enable <true|false>

Parameters

Variable	Value
enable <true|false>	Enables or disables a mirroring port already created in the mirror-by-port table.

Default

None

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Related commands

Variable	Value
add {mirrored-ports <port>|mirroring-mlt <mid>|mirroring-ports <port>|mirroring-vlan <vid>}	Add ports, MLTs, or VLANs to the mirroring instance. To change a port mirroring configuration, first disable it. • **mirrored-ports <port>** specifies the source port for mirrored packets • **mirroring-mlt <mid>** specifies the destination MLTs for mirrored packets • **mirroring-ports <port>** specifies the destination ports for mirrored packets • **mirroring-vlan <vid>** specifies the destination VLAN for mirrored packets
create in-port <value> [out-port <value>] [mode <value>] [enable <value>] [remote-mirror-vlan-id <value>] [mirroring-mlt <value>] [mirroring-vlan <value>]	Creates a new mirror-by-port table entry. • **in-port <value>** is the mirrored port. • **out-port <value>** is the mirroring port. • **mode <value>** sets the mirror mode (see description for mode). • **enable <value>** enables or disables the mirroring port (see description for enable). • **remote-mirror-vlan-id <value>** sets the VLAN ID for the remote mirrored packet (see description for remote-mirror-vlan-id). • **mirroring-vlan <value>** is the mirroring VLAN ID, from 1 to 4094. • **mirroring-mlt <value>**is the mirroring MLT ID, from 1 to 256. To modify a port mirroring instance, first disable the instance. Also, to change a port, VLAN, or MLT entry, first remove whichever parameter is attached to the entry, and then add the required entry. For example, if an entry has mirroring ports already assigned, then the ports

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Variable	Value
	have to be removed using the **remove mirroring-ports** command, and then, to assign a VLAN to the entry, use the **add mirroring-vlan** command.
delete	Deletes an entry from the mirror-by-port table. To change a port mirroring configuration, first disable it.
info	Displays current port mirroring settings.
mode <tx|rx|both|rxFilter|txFilter|bothFilter>	Sets the mirroring mode. The default is rx. • **tx** mirrors egress packets. • **rx** mirrors ingress packets. • **both** mirrors both egress and ingress packets. • **rxFilter** mirrors and filters ingress packets. If you use the rxFilter option with an R series module, you must use an ACL-based filter. • **txFilter** mirrors and filters egress packets. • **bothFilter** mirrors and filters both egress and ingress packets.
remote-mirror-vlan-id <vid>	Sets the remote mirror VLAN ID. • **<vid>** is the ID of the VLAN in the range of 0 to 4094.
remove {mirrored-ports <port>|mirroring-mlt <mid>|mirroring-ports <port>|mirroring-vlan <vid>}	Remove ports, an MLT, or a VLAN from the mirroring instance. To change a port mirroring configuration, first disable it. • **mirrored-ports <port>** specifies the source port for mirrored packets. • **mirroring-mlt <mid>** specifies the destination MLTs for mirrored packets. • **mirroring-ports <port>** specifies the destination ports for mirrored packets. • **mirroring-vlan <vid>** specifies the destination VLANs for mirrored packets.

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config diag mirror-by-port info

Use this command to ensure that your configuration is correct.

Syntax

config diag mirror-by-port <id> info
show diag mirror-by-port

Parameters

None

Default

None

Related commands

Variable	Value
add {mirrored-ports <port>|mirroring-mlt <mid>|mirroring-ports <port>|mirroring-vlan <vid>}	Add ports, MLTs, or VLANs to the mirroring instance. To change a port mirroring configuration, first disable it. • **mirrored-ports <port>** specifies the source port for mirrored packets • **mirroring-mlt <mid>** specifies the destination MLTs for mirrored packets • **mirroring-ports <port>** specifies the destination ports for mirrored packets • **mirroring-vlan <vid>** specifies the destination VLAN for mirrored packets
create in-port <value> [out-port <value>] [mode <value>] [enable <value>] [remote-mirror-vlan-id <value>] [mirroring-mlt <value>] [mirroring-vlan <value>]	Creates a new mirror-by-port table entry. • **in-port <value>** is the mirrored port. • **out-port <value>** is the mirroring port. • **mode <value>** sets the mirror mode (see description for mode). • **enable <value>** enables or disables the mirroring port (see description for enable). • **remote-mirror-vlan-id <value>** sets the VLAN ID for the remote mirrored packet (see description for remote-mirror-vlan-id).

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Variable	Value
	• **mirroring-vlan <value>** is the mirroring VLAN ID, from 1 to 4094. • **mirroring-mlt <value>**is the mirroring MLT ID, from 1 to 256. To modify a port mirroring instance, first disable the instance. Also, to change a port, VLAN, or MLT entry, first remove whichever parameter is attached to the entry, and then add the required entry. For example, if an entry has mirroring ports already assigned, then the ports have to be removed using the **remove mirroring-ports** command, and then, to assign a VLAN to the entry, use the **add mirroring-vlan** command.
delete	Deletes an entry from the mirror-by-port table. To change a port mirroring configuration, first disable it.
enable <true|false>	Enables or disables a mirroring port already created in the mirror-by-port table.
info	Displays current port mirroring settings.
mode <tx|rx|both|rxFilter|txFilter|bothFilter>	Sets the mirroring mode. The default is rx. • **tx** mirrors egress packets. • **rx** mirrors ingress packets. • **both** mirrors both egress and ingress packets. • **rxFilter** mirrors and filters ingress packets. If you use the rxFilter option with an R series module, you must use an ACL-based filter. • **txFilter** mirrors and filters egress packets. • **bothFilter** mirrors and filters both egress and ingress packets.

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Variable	Value
remote-mirror-vlan-id <vid>	Sets the remote mirror VLAN ID. • **<vid>** is the ID of the VLAN in the range of 0 to 4094.
remove {mirrored-ports <port>|mirroring-mlt <mid>|mirroring-ports <port>|mirroring-vlan <vid>}	Remove ports, an MLT, or a VLAN from the mirroring instance. To change a port mirroring configuration, first disable it. • **mirrored-ports <port>** specifies the source port for mirrored packets. • **mirroring-mlt <mid>** specifies the destination MLTs for mirrored packets. • **mirroring-ports <port>** specifies the destination ports for mirrored packets. • **mirroring-vlan <vid>** specifies the destination VLANs for mirrored packets.

config filter acl set global-action mirror

Use this command to configure the global action to mirror.

Syntax

config filter acl <acl-id> set global-action mirror

Parameters

Variable	Value
acl-id	Specifies an ACL ID from 1 to 4096.

Default

None

Related commands

Variable	Value
default-action <value>	Specifies the default action to take when none of the ACEs match. Options include **<deny|permit>**. The default is permit.

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Variable	Value
info	Displays the status of the global and default actions.
global-action <value>	The **<value>** parameter specifies the global action for matching ACEs: • none • mirror, count, mirror-count, ipfix, mirror-ipfix, count-ipfix, and mirror-count-ipfix If you enable mirroring, ensure you specify the source and/or destination mirroring ports: • For R modules in Tx mode: use **config diag mirror-by-port** commands to specify mirroring ports. • For R or RS modules in Rx mode: use the **config filter acl <acl-id> ace <ace-id> debug** commands to specify mirroring ports.

config filter acl set info

Use this command to ensure global mirroring actions with an ACL is correct.

Syntax

config filter acl <acl-id> set info

Parameters

Variable	Value
acl-id	Specifies an ACL ID from 1 to 4096.

Default

None

Related commands

Variable	Value
default-action <value>	Specifies the default action to take when none of the ACEs match. Options include **<deny|permit>**. The default is permit.

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Variable	Value
info	Displays the status of the global and default actions.
global-action <value>	The **<value>** parameter specifies the global action for matching ACEs: • none • mirror, count, mirror-count, ipfix, mirror-ipfix, count-ipfix, and mirror-count-ipfix If you enable mirroring, ensure you specify the source and/or destination mirroring ports: • For R modules in Tx mode: use **config diag mirror-by-port** commands to specify mirroring ports. • For R or RS modules in Rx mode: use the **config filter acl <acl-id> ace <ace-id> debug** commands to specify mirroring ports.

config filter acl ace

Use this command to configure the debug actions to mirror.

Syntax

config filter acl <acl-id> ace <ace-id> debug [mirror <enable|disable>] [mirroring-dst-ports <value>] [mirroring-dst-vlan <value>] [mirroring-dst-mlt <value>]

Parameters

Variable	Value
mirror <enable|disable>	Enables or disables mirroring for the ACE. If you enable mirroring, ensure that you configure the appropriate parameters: • For R and RS modules in Rx mode: **mirroring-dst-ports**, **mirroring-dst-vlan**, or **mirroring-dst-mlt**. • For R modules in Tx mode: use the**config diag mirror-by-port** commands to specify the mirroring source/destination.
mirroring-dst-ports <value>	Specifies the destination port or ports for mirroring.

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Variable	Value
mirroring-dst-vlan <value>	Specifies the destination VLAN for mirroring.
mirroring-dst-mlt <value>	Specifies the destination MLT group for mirroring.

Default

None

Related commands

None

config ethernet remote-mirroring

Use this command to configure remote mirroring.

Syntax

config ethernet <ports> remote-mirroring create [enable <true|false>] [mode <source|termination>] [srcmac <mac>] [dstmac <mac>] [ether-type <ether-type>]

Parameters

Variable	Value
create [enable <true|false>] [mode <source|termination>] [srcmac <mac>] [dstmac <mac>] [ether-type <ether-type>]	Creates a remote mirroring entry for the port. Create an entry before setting any remote mirroring parameters on the port. • **<true|false>** enables or disables remote mirroring on the port. • **<source|termination>** specifies the mode. Source means that this port is the source of packets (remote mirroring source—RMS). Termination means that this port collects mirrored packets (remote mirroring termination—RMT). • **srcmac <mac>** is the source MAC address in the format 0x00:0x00:0x00:0x00:0x00:0x00.

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Variable	Value
	• **dstmac <mac>** is the destination MAC address in the format 0x00:0x00:0x00:0x00:0x00:0x00:0x00. • **<ether-type>** is the ether-type of the remote mirrored packet. The default value is 0x8103.

Default

None

Related commands

Variable	Value
add-vlan-id <vlan-id>	Specifies to which VLAN the remote mirroring destination MAC address belongs. This must be a port-based VLAN. Used only for Remote Mirroring Termination (RMT) ports. When the RMT port is removed from the last VLAN in the list, RMT is disabled on the port.
delete	Deletes the remote mirroring port configuration.
dstmac <DstMac>	Sets the destination MAC address for use in the remote mirroring encapsulation header. The mirrored packet is sent to this MAC address. The DstMac is used only for RMS ports. For RMT ports, one of the unused MAC addresses from the switch port MAC address range is used. This MAC address is saved in the configuration file.
enable <true|false>	Enables or disables remote mirroring on the port. When remote mirroring is enabled, the following events occur: • A static entry for the DstMac is added to the Forwarding Database (FDB). All packets that come with this remote mirroring DstMac are sent to the RMT port. • The switch periodically (once in 10 seconds) transmits broadcast Layer 2 packets in the associated VLAN so

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Variable	Value
	that all nodes in the network can learn the DstMac.
ether-type <ether-type>	Specifies the Ethertype of the remote mirrored packet. The default value is 0x8103.
info	Displays the remote mirroring configuration of the port.
mode <source|termination>	Specifies whether the port is an RMT (mode is termination) or an RMS (mode is source).
remove-vlan-id <vlan-id>	Removes a VLAN from the VLAN list. Used only for RMT ports. When the RMT port is removed from the last VLAN in the list, RMT is disabled from the port.
srcmac <Srcmac>	Sets the source MAC address for use in the remote mirroring encapsulation header. The mirrored packet is sent from the RMS port, and the source MAC parameter in the header is derived from this address. The source MAC address of the encapsulated frame contains the first 45 bits of this MAC address. The three least significant bits are derived from the port number of the RMS port. The MAC address of the port is used as the default value.

peer telnet

Use this command to access the Secondary CPU.

Syntax

peer telnet

Parameters

None

Default

None

Related commands

None

config diag pcap enable

Use this command to enable PCAP.

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Syntax

config diag pcap enable <true|false>

Parameters

Variable	Value
enable <true|false>	Enables or disables PCAP globally.

Default

The default is false.

Related commands

Variable	Value
auto-save <true|false> file-name <value> [device <value>] [ip <value>]	Enables or disables auto-save. When enabled, saves the captured frames into the device specified and continues to capture frames. The default is enable. If this option is disabled, packets are stored in the DRAM buffer only. **file-name <value>** is the name of the file where captured frames are saved. **device <value>**is the device name (PCMCIA or network). **ip <value>** is the IP address used. This is used only if the device is network.
buffer-size <2...256> or <2...420>	Specifies the size of the buffer allocated for storing data. A nonMezz SF/CPU can be up to 256 MB, a Mezz SF/CPU can use up to 420 MB. The maximum buffer size is 104 MB for a 8691 SF/CPU. The default is 32 MB.
buffer-wrap <true|false>	Enables buffer wrapping. When this parameter is set to true and the buffer becomes full, the capture continues by wrapping the buffer. If this parameter is set to false and the buffer becomes full, the packet capture stops. The default value is true. A log message is generated when the buffer is wrapped.

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Variable	Value
ethertype-for-svlan-level <EtherType for hex vlan level>	Specifies the Ethernet type for sVLAN packets. With this information, PCAP can identify and capture the tag information of packets received from SVLAN ports. **<ethertype-for-svlan-level>** is a hexadecimal value. The default is 0x8100.
fragment-size <64...9600>	Specifies the number of bytes from each frame to capture. The default is the first 64 bytes of each frame.
info	Displays the current PCAP configuration.
pcmcia-wrap <true|false>	Enables or disables PCMCIA wrapping. When this parameter is set to true and the autosave device is PCMCIA, this causes an overwrite of the present file on the PCMCIA during an autosave. If this parameter is set to false, the present file is not overwritten. A log is generated when the file is overwritten on the PCMCIA.
reset-stat	This command resets the PCAP engine DRAM buffer, as well as all software counters used for PCAP statistics. This command can be executed in the Primary or Secondary SF/CPUs.

config diag pcap info

Use this command to ensure the PCAP configuration is correct.

Syntax

config diag pcap info
show diag pcap info

Parameters

None

Default

None

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Related commands

Variable	Value
auto-save <true|false> file-name <value> [device <value>] [ip <value>]	Enables or disables auto-save. When enabled, saves the captured frames into the device specified and continues to capture frames. The default is enable. If this option is disabled, packets are stored in the DRAM buffer only. **file-name <value>** is the name of the file where captured frames are saved. **device <value>**is the device name (PCMCIA or network). **ip <value>** is the IP address used. This is used only if the device is network.
buffer-size <2...256> or <2...420>	Specifies the size of the buffer allocated for storing data. A nonMezz SF/CPU can be up to 256 MB, a Mezz SF/CPU can use up to 420 MB. The maximum buffer size is 104 MB for a 8691 SF/CPU. The default is 32 MB.
buffer-wrap <true|false>	Enables buffer wrapping. When this parameter is set to true and the buffer becomes full, the capture continues by wrapping the buffer. If this parameter is set to false and the buffer becomes full, the packet capture stops. The default value is true. A log message is generated when the buffer is wrapped.
enable <true|false>	Enables or disables PCAP globally. The default is false.
ethertype-for-svlan-level <EtherType for hex vlan level>	Specifies the Ethernet type for sVLAN packets. With this information, PCAP can identify and capture the tag information of packets received from SVLAN ports. **<ethertype-for-svlan-level>** is a hexadecimal value. The default is 0x8100.
fragment-size <64...9600>	Specifies the number of bytes from each frame to capture. The default is the first 64 bytes of each frame.
info	Displays the current PCAP configuration.

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Variable	Value
pcmcia-wrap <true|false>	Enables or disables PCMCIA wrapping. When this parameter is set to true and the autosave device is PCMCIA, this causes an overwrite of the present file on the PCMCIA during an autosave. If this parameter is set to false, the present file is not overwritten. A log is generated when the file is overwritten on the PCMCIA.
reset-stat	This command resets the PCAP engine DRAM buffer, as well as all software counters used for PCAP statistics. This command can be executed in the Primary or Secondary SF/CPUs.

config pcap add set

Use this command to apply filter sets or ACLs to captured packets.

Syntax

config ethernet <ports> pcap add set <value>
config ethernet <ports> pcap add-acl-filter <acl-id>

Parameters

Variable	Value
add set <value>	Adds an IP filter set (Global or Source Destination) to a port. **<value>** specifies the filter set. The IP filter set must already exist. Filter Global Set ID values are in the range of 1 to 100 and Source/Destination sets are in the range of 300 to 1000. Adding a filter set causes the following to happen: • Creates an IP traffic filter for a port if one does not already exist; otherwise, disables the IP traffic filter. • Adds the IP traffic filter set to the port. • Sets the mirror bit for all the filters in the set.

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Variable	Value
	• Restores the default-action of the port. If default-action was not set, set to forwarding. • Enables the traffic filter on the port.
add-acl-filter <acl-id>	Applies an ACL to captured packets. The ACL ID can be from 1 to 4096.

Default

None

Related commands

Variable	Value
enable <true|false> [mode <value>]	Enables or disables PCAP on the port. The default PCAP mode captures ingress packets (rx mode). **mode <value>** specifies rx, tx, both, txfilter, rxFilter, or bothFilter. If PCAP is enabled in filter mode, then only packets which match the filter criteria are captured.
info	Displays the current PCAP configuration information.
remove set <value>	Removes a filter. **<value>** is the number of the filter set. The Source/Destination set is a value from 1 to 100. The Global set is a value from 300 to 1000. Removing a set causes the following to happen: • Disables the IP traffic filter • Removes the IP traffic filter set from the port
remove-acl-filter <acl-id>	Removes an ACL.

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config pcacp enable true

Use this command to enable PCAP on Ethernet, ATM, or POS ports.

Syntax

config ethernet <ports> pcap enable true [mode <value>]

Parameters

Variable	Value
enable <true|false> [mode <value>]	Enables or disables PCAP on the port. The default PCAP mode captures ingress packets (rx mode). **mode <value>** specifies rx, tx, both, txfilter, rxFilter, or bothFilter. If PCAP is enabled in filter mode, then only packets which match the filter criteria are captured.

Default

None

Related commands

Variable	Value
add set <value>	Adds an IP filter set (Global or Source Destination) to a port. **<value>** specifies the filter set. The IP filter set must already exist. Filter Global Set ID values are in the range of 1 to 100 and Source/Destination sets are in the range of 300 to 1000. Adding a filter set causes the following to happen: • Creates an IP traffic filter for a port if one does not already exist; otherwise, disables the IP traffic filter. • Adds the IP traffic filter set to the port. • Sets the mirror bit for all the filters in the set. • Restores the default-action of the port. If default-action was not set, set to forwarding. • Enables the traffic filter on the port.
add-acl-filter <acl-id>	Applies an ACL to captured packets. The ACL ID can be from 1 to 4096.
info	Displays the current PCAP configuration information.

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Variable	Value
remove set <value>	Removes a filter. **<value>** is the number of the filter set. The Source/Destination set is a value from 1 to 100. The Global set is a value from 300 to 1000. Removing a set causes the following to happen: • Disables the IP traffic filter • Removes the IP traffic filter set from the port
remove-acl-filter <acl-id>	Removes an ACL.

show diag pcap port

Use this command to ensure PCAP is correctly configured.

Syntax

show diag pcap port

Parameters

None

Default

None

Related commands

None

config diag pcap capture-filter

Use this command to create a capture filter.

Syntax

config diag pcap capture-filter <list-id> create

Parameters

Variable	Value
create	Creates a new PCAP filter.

Default

None

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Related commands

Variable	Value
action <capture|drop|trigger-on|trigger-off>	Determines the action taken by the filter. • **capture** indicates that the packet is captured. • **drop** indicates that the packet is dropped. • **trigger-on** indicates to start capturing the packet when a packet matches this filter. PCAP is enabled globally and the trigger filter is disabled. • **trigger-off** indicates to stop capturing the packet when a packet matches this filter. PCAP is disabled globally and the trigger filter is disabled.
delete	Deletes an existing filter.
dscp <dscp> [to <value>] [match-zero <value>] [not]	Specifies the DSCP value of the packet. • **<dscp>** can be one or a range of DSCP values from 0 to 63. The default is 0, which means this option is disabled. • **to <value>** specifies a range. • **<value>** is either true or false. When this option is set to true, 0 is considered a valid value. When it is set to false, 0 is considered a disable value. • **not** means that the filter matches for all other values than the range of values defined.

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Variable	Value
dstip <ipaddr/mask> [to <value>] [not]	Specifies the destination IP address.**<ipaddr/mask>** can be one address, or a range of IP addresses. The default is 0.0.0.0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
dstmac <DstMac> [mask <value>] [not]	Specifies the MAC address of the destination. If the mask is set, then only the first few bytes are compared. **<DstMac>** represents a range of MAC addresses. The default is 00:00:00:00:00:00, which means this option is disabled. **<value>** is the destination MAC address mask, and specifies a range. **not** means that the filter matches for all other values than the range of values defined.
enable <true|false>	Enables or disables the filter. The default is disable.
ether-type <Ethertype> [to <value>] [not]	Specifies the Ethernet type of the packet. **<Ethertype>** can be one or a range of Ether-type values. The default is 0, meaning that this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
info	Displays the current PCAP filter configuration.

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Variable	Value
packet-count <PacketCount>	When set, PCAP stops after capturing the specified number of packets. This is similar to the refresh-timer option; after it is invoked, the filter is disabled. This option is active only when the action parameter is set to trigger-on. The default value is 0, which means this option is disabled.
pbits <Pbits> [to <value>] [match-zero <value>] [not]	Specifies the priority bit of the packet. **<Pbits>** can be one value or a range. The default is 0, which means this option is disabled. **to <value>** specifies a range. **<value>** is either true or false. When this option is set to true, 0 is considered a valid value. When it is set to false, 0 is considered a disable value. **not** means that the filter matches for all other values than the range of values defined.
protocol-type <protocoltype> [to <value>] [not]	Specifies the protocol of the packet. **<protocoltype>** can be one value or a range of protocol-type values. The default is 0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
refresh-timer <RefreshTimer>	When set, this starts or resets a timer. If another packet is not received within the specified time, PCAP is disabled globally. This option is active only when the action parameter is set to 'trigger-on'. To delete this option, set it to 0. The default value is 0.

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Variable	Value
srcip <ipaddr> [to <value>] [not]	Specifies the source IP address. **<ipaddr>** can be one address or a range of IP addresses. The default is 0.0.0.0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
srcmac <SrcMac> [mask <value>] [not]	Specifies the MAC address of the source. **<SrcMac>** is the source MAC address. If the mask is set, then only the first few bytes are compared. The default is 00:00:00:00:00:00, which means this option is disabled. **mask <value>** is the mask of the source MAC address. This parameter specifies an address range. **not** means that the filter matches for all other values than the range of values defined.
tcp-port <tcport> [to <value>] [not]	Specifies the TCP port of the packet. **<tcport>** can be one value or a range of TCP port values. The default is 0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.

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Variable	Value
timer <Timer>	When set, PCAP is invoked when the first packet is matched and stopped after the set value of time. After starting the timer, the filter is disabled. This option is active only when the action parameter is set to trigger-on. **<Timer>** is a value from 100 to 3600000 milliseconds. The default value is zero. Setting the value to 0 disables the timer.
udp-port <udpport> [to <value>] [not]	Specifies the UDP port of the packet. **<udpport>** can be one or a range of UDP port values. The default is 0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
user-defined <0..9600> <data> [not]	Sets a user defined value on which to match the packet. The user can define a pattern in hex or characters to match. The user can also specify the offset to start the match. The default value of pattern is null (’’) which means that this field is discarded. To disable this option, set the pattern to null (’’). **not** means that the filter matches for all other values than the range of values defined.
vlan-id <Vlanid> [to <value>] [not]	Specifies the VLAN ID of the packet. **<Vlanid>** can be one or a range of VLAN IDs. The default is 0, which means that this option is disabled. **to <value>** specifies a range.

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Variable	Value
	not means that the filter matches for all other values than the range of values defined.

config diag pcap capture-filter

Use this command to configure the filter action.

Syntax

config diag pcap capture-filter <list-id> action <capture|drop|trigger-on|trigger-off>

Parameters

Variable	Value
action <capture|drop|trigger-on|trigger-off>	Determines the action taken by the filter. • **capture** indicates that the packet is captured. • **drop** indicates that the packet is dropped. • **trigger-on** indicates to start capturing the packet when a packet matches this filter. PCAP is enabled globally and the trigger filter is disabled. • **trigger-off** indicates to stop capturing the packet when a packet matches this filter. PCAP is disabled globally and the trigger filter is disabled.

Default

None

Related commands

Variable	Value
create	Creates a new PCAP filter.
delete	Deletes an existing filter.

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Variable	Value
dscp <dscp> [to <value>] [match-zero <value>] [not]	Specifies the DSCP value of the packet. • **<dscp>** can be one or a range of DSCP values from 0 to 63. The default is 0, which means this option is disabled. • **to <value>** specifies a range. • **<value>** is either true or false. When this option is set to true, 0 is considered a valid value. When it is set to false, 0 is considered a disable value. • **not** means that the filter matches for all other values than the range of values defined.
dstip <ipaddr/mask> [to <value>] [not]	Specifies the destination IP address.**<ipaddr /mask>** can be one address, or a range of IP addresses. The default is 0.0.0.0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
dstmac <DstMac> [mask <value>] [not]	Specifies the MAC address of the destination. If the mask is set, then only the first few bytes are compared. **<DstMac>** represents a range of MAC addresses. The default is 00:00:00:00:00:00, which means this option is disabled. **<value>** is the destination MAC address mask, and specifies a range. **not** means that the filter matches for all other values than the range of values defined.
enable <true|false>	Enables or disables the filter. The default is disable.

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Variable	Value
ether-type <Ethertype> [to <value>] [not]	Specifies the Ethernet type of the packet. **<Ethertype>** can be one or a range of Ether-type values. The default is 0, meaning that this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
info	Displays the current PCAP filter configuration.
packet-count <PacketCount>	When set, PCAP stops after capturing the specified number of packets. This is similar to the refresh-timer option; after it is invoked, the filter is disabled. This option is active only when the action parameter is set to trigger-on. The default value is 0, which means this option is disabled.
pbits <Pbits> [to <value>] [match-zero <value>] [not]	Specifies the priority bit of the packet. **<Pbits>** can be one value or a range. The default is 0, which means this option is disabled. **to <value>** specifies a range. **<value>** is either true or false. When this option is set to true, 0 is considered a valid value. When it is set to false, 0 is considered a disable value. **not** means that the filter matches for all other values than the range of values defined.
protocol-type <protocoltype> [to <value>] [not]	Specifies the protocol of the packet. **<protocoltype>** can be one value or a range of protocol-type values. The default is 0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.

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Variable	Value
refresh-timer <RefreshTimer>	When set, this starts or resets a timer. If another packet is not received within the specified time, PCAP is disabled globally. This option is active only when the action parameter is set to 'trigger-on'. To delete this option, set it to 0. The default value is 0.
srcip <ipaddr> [to <value>] [not]	Specifies the source IP address. **<ipaddr>** can be one address or a range of IP addresses. The default is 0.0.0.0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
srcmac <SrcMac> [mask <value>] [not]	Specifies the MAC address of the source. **<SrcMac>** is the source MAC address. If the mask is set, then only the first few bytes are compared. The default is 00:00:00:00:00:00, which means this option is disabled. **mask <value>** is the mask of the source MAC address. This parameter specifies an address range. **not** means that the filter matches for all other values than the range of values defined.
tcp-port <tcport> [to <value>] [not]	Specifies the TCP port of the packet. **<tcport>** can be one value or a range of TCP port values. The default is 0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.

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Variable	Value
timer <Timer>	When set, PCAP is invoked when the first packet is matched and stopped after the set value of time. After starting the timer, the filter is disabled. This option is active only when the action parameter is set to trigger-on. **<Timer>** is a value from 100 to 3600000 milliseconds. The default value is zero. Setting the value to 0 disables the timer.
udp-port <udpport> [to <value>] [not]	Specifies the UDP port of the packet. **<udpport>** can be one or a range of UDP port values. The default is 0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
user-defined <0..9600> <data> [not]	Sets a user defined value on which to match the packet. The user can define a pattern in hex or characters to match. The user can also specify the offset to start the match. The default value of pattern is null ('') which means that this field is discarded. To disable this option, set the pattern to null (''). **not** means that the filter matches for all other values than the range of values defined.
vlan-id <Vlanid> [to <value>] [not]	Specifies the VLAN ID of the packet. **<Vlanid>** can be one or a range of VLAN IDs. The default is 0, which means that this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.

config diag pcap capture-filter enable

Use this command to enable the filter.

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Syntax

config diag pcap capture-filter <list-id> enable <true|false>

Parameters

Variable	Value
enable <true|false>	Enables or disables the filter.

Default

The default is disable.

Related commands

Variable	Value
action <capture|drop|trigger-on|trigger-off>	Determines the action taken by the filter. • **capture** indicates that the packet is captured. • **drop** indicates that the packet is dropped. • **trigger-on** indicates to start capturing the packet when a packet matches this filter. PCAP is enabled globally and the trigger filter is disabled. • **trigger-off** indicates to stop capturing the packet when a packet matches this filter. PCAP is disabled globally and the trigger filter is disabled.
create	Creates a new PCAP filter.
delete	Deletes an existing filter.
dscp <dscp> [to <value>] [match-zero <value>] [not]	Specifies the DSCP value of the packet. • **<dscp>** can be one or a range of DSCP values from 0 to 63. The default is 0, which means this option is disabled. • **to <value>** specifies a range. • **<value>** is either true or false. When this option is set to true, 0 is considered a valid value. When it is

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Variable	Value
	set to false, 0 is considered a disable value. • **not** means that the filter matches for all other values than the range of values defined.
dstip <ipaddr/mask> [to <value>] [not]	Specifies the destination IP address.**<ipaddr/mask>** can be one address, or a range of IP addresses. The default is 0.0.0.0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
dstmac <DstMac> [mask <value>] [not]	Specifies the MAC address of the destination. If the mask is set, then only the first few bytes are compared. **<DstMac>** represents a range of MAC addresses. The default is 00:00:00:00:00:00, which means this option is disabled. **<value>** is the destination MAC address mask, and specifies a range. **not** means that the filter matches for all other values than the range of values defined.
ether-type <Ethertype> [to <value>] [not]	Specifies the Ethernet type of the packet. **<Ethertype>** can be one or a range of Ether-type values. The default is 0, meaning that this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
info	Displays the current PCAP filter configuration.

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Variable	Value
packet-count <PacketCount>	When set, PCAP stops after capturing the specified number of packets. This is similar to the refresh-timer option; after it is invoked, the filter is disabled. This option is active only when the action parameter is set to trigger-on. The default value is 0, which means this option is disabled.
pbits <Pbits> [to <value>] [match-zero <value>] [not]	Specifies the priority bit of the packet. **<Pbits>** can be one value or a range. The default is 0, which means this option is disabled. **to <value>** specifies a range. **<value>** is either true or false. When this option is set to true, 0 is considered a valid value. When it is set to false, 0 is considered a disable value. **not** means that the filter matches for all other values than the range of values defined.
protocol-type <protocoltype> [to <value>] [not]	Specifies the protocol of the packet. **<protocoltype>** can be one value or a range of protocol-type values. The default is 0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
refresh-timer <RefreshTimer>	When set, this starts or resets a timer. If another packet is not received within the specified time, PCAP is disabled globally. This option is active only when the action parameter is set to 'trigger-on'. To delete this option, set it to 0. The default value is 0.

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Variable	Value
srcip <ipaddr> [to <value>] [not]	Specifies the source IP address. **<ipaddr>** can be one address or a range of IP addresses. The default is 0.0.0.0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
srcmac <SrcMac> [mask <value>] [not]	Specifies the MAC address of the source. **<SrcMac>** is the source MAC address. If the mask is set, then only the first few bytes are compared. The default is 00:00:00:00:00:00, which means this option is disabled. **mask <value>** is the mask of the source MAC address. This parameter specifies an address range. **not** means that the filter matches for all other values than the range of values defined.
tcp-port <tcport> [to <value>] [not]	Specifies the TCP port of the packet. **<tcport>** can be one value or a range of TCP port values. The default is 0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.

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Variable	Value
timer <Timer>	When set, PCAP is invoked when the first packet is matched and stopped after the set value of time. After starting the timer, the filter is disabled. This option is active only when the action parameter is set to trigger-on. **<Timer>** is a value from 100 to 3600000 milliseconds. The default value is zero. Setting the value to 0 disables the timer.
udp-port <udpport> [to <value>] [not]	Specifies the UDP port of the packet. **<udpport>** can be one or a range of UDP port values. The default is 0, which means this option is disabled. **to <value>** specifies a range. **not** means that the filter matches for all other values than the range of values defined.
user-defined <0..9600> <data> [not]	Sets a user defined value on which to match the packet. The user can define a pattern in hex or characters to match. The user can also specify the offset to start the match. The default value of pattern is null ('') which means that this field is discarded. To disable this option, set the pattern to null (''). **not** means that the filter matches for all other values than the range of values defined.
vlan-id <Vlanid> [to <value>] [not]	Specifies the VLAN ID of the packet. **<Vlanid>** can be one or a range of VLAN IDs. The default is 0, which means that this option is disabled. **to <value>** specifies a range.

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Variable	Value
	not means that the filter matches for all other values than the range of values defined.

config diag pcap capture-filter info

Use this command to ensure the PCAP capture filters configuration is correct.

Syntax

config diag pcap capture-filter <list-id> info
show diag pcap capture-filter [id <value>]

Parameters

None

Default

None

Related commands

None

config vlan fdb-filter pcap

Use this command to enable PCAP for an FDB filter by MAC address.

Syntax

config vlan <vid> fdb-filter pcap <mac> <enable|disable>

Parameters

Variable	Value
<mac>	Specifies the MAC address in the format 0x00:0x00:0x00:0x00:0x00:0x00:0x00.
<port>	Specifies the slot and port.

Default

None

Related commands

None

show diag pcap dump

Use this command to display packets using a CLI session and the Secondary SF/CPU.

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Syntax

show diag pcap dump

Parameters

None

Default

None

Related commands

None

copy PCAP00

Use this command to copy the packets to a file for later viewing.

Syntax

copy PCAP00 /<device> /<filename>
ftp> get PCAP00 <filename>

Parameters

Variable	Value
<device>	Specifies pcmcia, flash, or an IP host by IP address.
<filename>	Specifies the PCAP file (.cap).

Default

None

Related commands

None

config diag pcap enable

Use this command to disable PCAP.

Syntax

config diag pcap enable false

Parameters

None

Default

None

Related commands

None

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config diag pcap reset-stat

Use this command to reset the PCAP engine DRAM buffer:

Syntax

config diag pcap reset-stat

Parameters

None

Default

None

Related commands

None

config ethernet pcacp enable

Use this command to disable PCAP on ports.

Syntax

config ethernet <ports> pcap enable <true|false>

Parameters

Variable	Value
slot/port	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config diag pcap ena

Use this command to Disable PCAP globally.

Syntax

config diag pcap ena false

Parameters

None

Default

None

Related commands

None

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config diag pcap reset-stat

Use this command to reset PCAP statistics and counters.

Syntax

config diag pcap reset-stat

Parameters

None

Default

None

Related commands

None

config diag pcap enable

Use this command to globally enable PCAP.

Syntax

config diag pcap enable true

Parameters

None

Default

None

Related commands

None

config ethernet pcap enable true mode

Use this command to enable PCAP on ports.

Syntax

config ethernet <slot/port> pcap enable true mode <value>

Parameters

Variable	Value
slot/port	
mode <value>	

Default

None

Related commands

None

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config ethernet 2/10 pcap enable

Use this command to enable PCAP in receive mode on R1, port interface 2/10, to capture all ingress packets.

Syntax

config ethernet 2/10 pcap enable true

Parameters

None

Default

None

Related commands

None

config diag pcacp auro-save

Use this command to configure PCAP parameters.

Syntax

config diag pcap auto-save true file_name pcap_test.cap device pcmcia

Parameters

None

Default

None

Related commands

None

show diag pcap stats

Use this command to display PCAP statistics.

Syntax

show diag pcap stats

Parameters

None

Default

None

Related commands

None

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config diag pcap enable false

Use this command to disable PCAP.

Syntax

```
config diag pcap enable false
```

Parameters

None

Default

None

Related commands

None

copy PCAP00

Use this command to copy the captured packets.

Syntax

```
copy PCAP00 /pcmcia/pcap_test.cap
```

Parameters

None

Default

None

Related commands

None

config traffic-filter createconfig ip traffic-filter create global src-ip

Use this command to configure an IP traffic filter.

Syntax

```
config ip traffic-filter create global [src-ip <value>]
[dst-ip <value>] [id <value>]
```

Parameters

Variable	Value
<dst-ip>	Specifies the destination IP/mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}.
<src-ip>	Specifies the source IP/mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}.
<id>	Specifies the filter ID.

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Default

None

Related commands

None

config ip traffic-filter global-set create name

Use this command to create a filter set.

Syntax

```
config ip traffic-filter global-set create name <value>
```

Parameters

Variable	Value
<value>	Specifies the filter name.

Default

None

Related commands

None

config ethernet pcap add set 5

Use this command to apply a filter set to the port.

Syntax

```
config ethernet <ports> pcap add set
config ethernet <ports> pcap enable true mode rxFilter
```

Parameters

None

Default

None

Related commands

None

config diag pcap capture-filter create

Use this command to configure a capture filter.

Syntax

```
config diag pcap capture-filter <listid> create
config diag pcap capture-filter <listid> action drop
config diag pcap capture-filter <listid> protocol-type 6
not
```


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```
config diag pcap capture-filter <listid> tcp-port 20 to 21
not
config diag pcap capture-filter <listid> enable true
```

Parameters

Variable	Value
`<listid>`	Specifies the list ID in the range of 1 to 1000.

Default

None

Related commands

None

config diag pcap capture-filter 10 create

Use this command to .

Syntax

```
config diag pcap capture-filter <listid> create
config diag pcap capture-filter <listid> action trigger-on
config diag pcap capture-filter <listid> protocol-type 6
config diag pcap capture-filter <listid> tcp-port 20 to 21
config diag pcap capture-filter <listid> packet-count 1000
config diag pcap capture-filter <listid> enable true
```

Parameters

Variable	Value
`<listid>`	Specifies the list ID in the range of 1 to 1000.

Default

None

Related commands

None

test fabric

Use this command to test the switch fabric.

Syntax

```
test fabric
```

Parameters

None

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Default
None

Related commands
None

test stop fabric
Use this command to stop testing the switch fabrics after few seconds.

Syntax
test stop fabric

Parameters
None

Default
None

Related commands
None

show test fabric
Use this command to display the results of the test.

Syntax
show test fabric

Parameters
None

Default
None

Related commands
None

test artable
Use this command to the ARP address table.

Syntax
test artable

Parameters
None

Default
None

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Related commands

None

test stop artable

Use this command to stop ARP address table test after a few seconds.

Syntax

test stop artable

Parameters

None

Default

None

Related commands

None

clear ip arp ports

Use this command to clear ARP information.

Syntax

clear ip arp ports <port>
clear ip arp vlan <vid>

Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.
port	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet action flushIp

Use this command to flush IP routing tables by port.

Syntax

config ethernet <ports> action flushIp

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Parameters

Variable	Value
port	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config vlan action flushIp

Use this command to flush IP routing tables.

Syntax

config vlan <vid> action flushIp

Parameters

Variable	Value
vid	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

config ethernet action flushArp

Use this command to flush the MAC address and ARP tables.

Syntax

config ethernet <ports> action flushArp
config ethernet <ports> action flushMacFdb
config vlan <vid> action flushArp
config vlan <vid> action flushMacFdb

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Parameters

Variable	Value
`port`	Specifies the port or range of ports to configure in the slot/port format.
`vid`	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

clear ip route port

Use this command to clear a routing table.

Syntax

```
clear ip route port <ports>
clear ip route vlan <vid>
```

Parameters

Variable	Value
`port`	Specifies the port or range of ports to configure in the slot/port format.
`vid`	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

test led

Use this command to test LED operations for POS modules.

Syntax

```
test led <ports> <tx|rx> <off|yellow|green>
```


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Parameters

Variable	Value
port	Specifies the port or range of ports to configure in the slot/port format.
tx|rx> <off|yellow|green	

Default

None

Related commands

None

test hardware

Use this command to test POS modules.

Syntax

test hardware [<ports>]

Parameters

Variable	Value
ports	Specifies the IP address of the interface.

Related commands

None

config ethernet state test

Use this command to set the port to test mode.

Syntax

config ethernet <ports> state test

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

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test loopback

Use this command to run either an internal or external loopback test.

Syntax

test loopback <ports> [<int|ext>]

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.
int|ext	

Default

None

Related commands

None

test stop loopback

Use this command to stop loopback test for Classic modules after few seconds.

Syntax

test stop loopback <ports>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet state enable

Use this command to return the port to its normal state when testing is done.

Syntax

config ethernet <ports> state <enable|disable|test>

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Parameters

Variable	Value
ports	—

Default

None

Related commands

None

ping

Use this command to ping a device.

Syntax

ping <HostName/ipv4address/ipv6address> [scopeid <value>] [datasize <value>] [count <value>] [-s] [-I <value>] [-t <value>] [-d] [vrf <value>] [source <value>]

Parameters

Variable	Value
HostName/ipv4address/ipv6address	Specifies the device by host name, IPv4 address <a.b.c.d>, or IPv6 address <x.x.x.x.x.x.x.x>.

Default

None

Related commands

None

pingipx ipxhost

Use this command to ping an IPX device.

pingipx

Syntax

pingipx <ipxhost> [<count>] [-s] [-q] [-t <value>]

Parameters

Variable	Value
-s	Specifies that the IPv4 or IPv6 ping should be retransmitted at continuous intervals at the interval defined by -I <value>.

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Variable	Value
`-t <value>`	Specifies the no-answer time-out from 1 to 120 seconds.
`count <value>`	Specifies the number of times to ping the device from 1 to 9999.

Default

The default is 1.

Related commands

None

mplsping ipv4

Use this command to ping an MPLS device.

Syntax

```
mplsping ipv4 prefix/len [ttl <value>] [source <value>]
[count <value>]
mplsping rsvp lsp-name [ttl <value>] [source <value>]
[count <value>]
```

Parameters

Variable	Value
`lsp-name`	Specifies the name of the label-switched path.
`prefix/len`	Specifies the IPv4 address and prefix length.
`source <value>`	Specifies the source IP address for use in IP VPN pings.

Default

None

Related commands

None

traceroute

Use this command to use traceroute.

Syntax

```
traceroute <ipaddr> [<datasize>] [-m <value>] [-p <value>]
[-q <value>] [-w <value>] [-v] [vrf <value>] [source
<value>]
```


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Parameters

Variable	Value
-m <value>	Specifies the maximum time-to-live (TTL) (1 to 255).
-p <value>	Specifies the base UDP port number (0 to 65535).
-q <value>	Specifies the number of probes per TTL (1 to 255).
-v	Specifies verbose mode (detailed output).
-w <value>	Specifies the wait time per probe (1 to 255).
datasize <value>	Specifies the size of the probe packet (1 to 1464).
source <value>	Specifies the source IP address for use in IP VPN traceroutes.
vrf <value>	Specifies the VRF instance by VRF name.

Default

None

Related commands

None

config diag ping-snoop create

Use this command to create the filter.

Syntax

config diag ping-snoop create src-ip <value> dst-ip <value>

Parameters

None

Default

None

Related commands

Variable	Value
add-ports <ports	Adds ports to ping snoop filter.
delete	Deletes ping snoop filter.
enable <true|false>	Enable or disables ping snoop functionality.
info	displays configuration information.
remove-ports <ports>	Removes ports from ping snoop filter.

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config filter acl port add

Use this command to add the required ports to the ACL.

Syntax

config filter acl <acl-id> port add <ports>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config filter acl enable

Use this command to enable the ACL.

Syntax

config filter acl <acl-id> enable

Parameters

None

Default

None

Related commands

None

config filter acl ace

Use this command to create an ACE.

Syntax

config filter acl <acl-id> ace <ace-id> create

Parameters

Variable	Value
<ace-id>	Specifies the ID of the ACE from 1 to 1000.

Default

None

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Related commands

None

config filter acl ace action

Use this command to configure the ACE action.

Syntax

config filter acl <acl-id> ace <ace-id> action <permit|deny>

Parameters

Variable	Value
<ace-id>	Specifies the ID of the ACE from 1 to 1000.

Default

None

Related commands

None

config filter acl ace debug

Use this command to configure the ACE debug action.

Syntax

config filter acl <acl-id> ace <ace-id> debug <action> enable

Parameters

Variable	Value
<ace-id>	Specifies the ID of the ACE from 1 to 1000.
debug <action>	Specifies the action that the ACE takes upon a match. These include: • **count <enable|disable>** • **copytoprimarycp <enable|disable>** • **copytosecondarycp <enable|disable>** • **mirror <enable|disable>** • **mirroring-dst-ports <ports>**

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Variable	Value
	• mirroring-dst-vlan <vlan-id> • mirroring-dst-mlt <mlt-id>

Default

None

Related commands

None

config filter acl ace ip dst-ip eq

Use this command to configure the destination IP address.

Syntax

config filter acl <acl-id> ace <ace-id> ip dst-ip eq <ip addr>

Parameters

Variable	Value
<ip addr>	Specifies the source or destination IP address.
<ace-id>	Specifies the ID of the ACE from 1 to 1000.

Default

None

Related commands

None

config filter acl ace

Use this command to configure the source IP address.

Syntax

config filter acl <acl-id> ace <ace-id> ip src-ip eq <ip addr>

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Parameters

Variable	Value
`<ace-id>`	Specifies the ID of the ACE from 1 to 1000.
`<ip addr>`	Specifies the source or destination IP address.

Default

None

Related commands

None

config filter acl ace enable

Use this command to enable the ACE.

Syntax

`config filter acl <acl-id> ace <ace-id> enable`

Parameters

Variable	Value
`<ace-id>`	Specifies the ID of the ACE from 1 to 1000.

Default

None

Related commands

None

config filter acl info

Use this command to ensure your configuration is correct.

Syntax

`config filter acl <acl-id> info`
`config filter acl <acl-id> port info`

Parameters

None

Default

None

Related commands

None

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config snmp-v3 notify create

Use this command to create an SNMP notification.

Syntax

config snmp-v3 notify create <Notify Name> [tag <value>] [type <value>]

Parameters

Variable	Value
create <Notify Name> [tag <value>] [type <value>]	Creates an SNMP trap notification entry. • **<Notify Name>** is the index of the notify table with a string length of 1 to 32. • **tag <value>** specifies the tag. • **type <value>** can specify trap or inform

Default

None

Related commands

Variable	Value
delete <Notify Name>	Deletes an entry from the notify table.
info	Displays the notify table information
tag <Notify Name> new-tag <value>	Specifies the new notify tag for the entry in the notify table.
type <Notify Name> new-type <value>	Specifies the new notify type for the entry in the notify table. The valid options are trap and inform.

config snmp-v3 notify tag

Use this command to specify the required tags for an existing notification.

Syntax

config snmp-v3 notify tag <Notify Name> new-tag <value>

Parameters

Variable	Value
tag <Notify Name> new-tag <value>	Specifies the new notify tag for the entry in the notify table.

Default

None

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Related commands

Variable	Value
create <Notify Name> [tag <value>] [type <value>]	Creates an SNMP trap notification entry. • **<Notify Name>** is the index of the notify table with a string length of 1 to 32. • **tag <value>** specifies the tag. • **type <value>** can specify trap or inform
delete <Notify Name>	Deletes an entry from the notify table.
info	Displays the notify table information
type <Notify Name> new-type <value>	Specifies the new notify type for the entry in the notify table. The valid options are trap and inform.

config snmp-v3 notify type

Use this command to specify the required type for an existing notification.

Syntax

config snmp-v3 notify type <Notify Name> new-type <value>

Parameters

Variable	Value
type <Notify Name> new-type <value>	Specifies the new notify type for the entry in the notify table. The valid options are trap and inform.

Default

None

Related commands

Variable	Value
create <Notify Name> [tag <value>] [type <value>]	Creates an SNMP trap notification entry. • **<Notify Name>** is the index of the notify table with a string length of 1 to 32. • **tag <value>** specifies the tag. • **type <value>** can specify trap or inform
delete <Notify Name>	Deletes an entry from the notify table.
info	Displays the notify table information
tag <Notify Name> new-tag <value>	Specifies the new notify tag for the entry in the notify table.

config snmp-v3 notify info

Use this command to ensure that the configuration is correct.

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Syntax

config snmp-v3 notify info

Parameters

None

Default

None

Related commands

None

config snmp-v3 target-addr create

Use this command to add an SNMP target address.

Syntax

config snmp-v3 target-addr create <Target Name> <Ip addr:port> <Target parm> [timeout <value>] [retry <value>] [taglist <value>] [mask <value>] [mms <value>] [tdomain <value>]

Parameters

Variable	Value
create <Target Name> <Ip addr:port> <Target parm> [timeout <value>] [retry <value>] [taglist <value>] [mask <value>] [mms <value>] [tdomain <value>]	Creates a new entry for the target address table. • **<Target Name>** is the target name with a string length of 1 to 32. • **<Ip addr:port>** is the target IP address in the form a.b.c.d:port (or ipv6addr:port if the domain option is set to IPv6) with a string length of 1 to 255. • **<Target parm>** is the target parameter with a string length of 1 to 32. • **timeout <value>** specifies the time-out value in seconds with a range of 0 to 214748364. • **retry <value>** specifies the retry count value with a range of 0 to 255. • **taglist <value>** specifies the tag list with a string length of 1 to 255.

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Variable	Value
	• **mask <value>** specifies the mask in the form 0x00:00...6 octets separated by colons with a string length of 13 to 19. • **mms <value>** specifies the maximum message size as an integer with a range of 1 to 2147483647. • **tdomain <value>** specifies the target transport domain.

Default

None

Related commands

Variable	Value
delete <Target Name>	Deletes an entry from the target address table.
info	Displays target address table information.
mask <Target Name> new-mask <value>	Specifies a new mask for the target.
mms <Target Name> new-mms <value>	Specifies a new maximum message size (MMS) associated with an entry in the target address table. Although the maximum value for the MMS is 2 147 483 647, the device supports the maximum SNMP packet size of 8192 (8K).
parms <Target Name> new-parms <value>	Specifies a new string value that identifies target address table entries.
retry <Target Name> new-retry <value>	Specifies a new number of retries to be attempted when a response is not received for a generated message.
taglist <Target Name> new-taglist <value>	Specifies a new list of tag values.
timeout <Target Name> new-timeout <value>	Specifies a new maximum route trip time required for communicating with the transport address.

config snmp-v3 target-addr info

Use this command to ensure that the SNMP host target address configuration is correct.

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Syntax

config snmp-v3 target-addr info
show snmp-v3 target-addr

Parameters

None

Default

None

Related commands

Variable	Value
create <Target Name> <Ip addr:port> <Target parm> [timeout <value>] [retry <value>] [taglist <value>] [mask <value>] [mms <value>] [tdomain <value>]	Creates a new entry for the target address table. • **<Target Name>** is the target name with a string length of 1 to 32. • **<Ip addr:port>** is the target IP address in the form a.b.c.d:port (or ipv6addr:port if the domain option is set to IPv6) with a string length of 1 to 255. • **<Target parm>** is the target parameter with a string length of 1 to 32. • **timeout <value>** specifies the timeout value in seconds with a range of 0 to 214748364. • **retry <value>** specifies the retry count value with a range of 0 to 255. • **taglist <value>** specifies the tag list with a string length of 1 to 255. • **mask <value>** specifies the mask in the form 0x00:00...6 octets separated by colons with a string length of 13 to 19. • **mms <value>** specifies the maximum message size as an integer with a range of 1 to 2147483647. • **tdomain <value>** specifies the target transport domain.
delete <Target Name>	Deletes an entry from the target address table.
mask <Target Name> new-mask <value>	Specifies a new mask for the target.

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Variable	Value
mms <Target Name> new-mms <value>	Specifies a new maximum message size (MMS) associated with an entry in the target address table. Although the maximum value for the MMS is 2 147 483 647, the device supports the maximum SNMP packet size of 8192 (8K).
parms <Target Name> new-parms <value>	Specifies a new string value that identifies target address table entries.
retry <Target Name> new-retry <value>	Specifies a new number of retries to be attempted when a response is not received for a generated message.
taglist <Target Name> new-taglist <value>	Specifies a new list of tag values.
timeout <Target Name> new-timeout <value>	Specifies a new maximum route trip time required for communicating with the transport address.

config snmp-v3 target-param create

Use this command to configure SNMP target table parameters.

Syntax

config snmp-v3 target-param create <Tparm Name> mp-model <value> sec-level <value> [sec-name <value>]

Parameters

Variable	Value
create <Tparm Name> mp-model <value> sec-level <value> [sec-name <value>]	Specifies target table parameters. • **<Tparm Name>** is the name of the target parameter with a string length of 1 to 32. • **mp-model <value>** specifies the MP model. The valid options are snmpv1, snmpv2c, and usm (SNMPv3). • **sec-level <value>** specifies the security level as noAuthNoPriv, authNoPriv, or authPriv. • **<sec-name>** specifies the security name with a string length of 1 to 32.

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Default

None

Related commands

Variable	Value
delete <Tparm Name>	Deletes the specified target parameter table.
info	Displays information for the target parameter table.
mp-model <Tparm Name> new-mpmodel <value>	Specifies the new SNMP version. The valid options are snmpv1, snmpv2c, and usm (SNMPv3).
sec-level <Tparm Name> new-seclevel <value>	Specifies a new security level. The valid options are noAuthNoPriv, authNoPriv, and authPriv.
sec-name <Tparm Name> [new-secname <value>]	Specifies a new security name (readview or writeview), which identifies the principal that generates SNMP messages.

config snmp-v3 ntfy-filter create

Use this command to create a new notify filter table.

Syntax

config snmp-v3 ntfy-filter create <Profile Name> <subtree oid> [mask <value>] [type <value>]

Parameters

Variable	Value
create <Profile Name> <subtree oid> [mask<value>] [type <value>]	Creates a notify filter table. • **<Profile Name>** specifies the name of the profile with a string length of 1 to 31. • **<subtree oid>** identifies the filter subtree with a string length of 1 to 32. • **mask <value>** specifies the bit mask in combination with snmpNotifyFilterMask, which defines a family of subtrees. • **type <value>** indicates whether the family of filter subtrees defined by this entry is included (**include**) or excluded (**exclude**) from a filter.

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Default

None

Related commands

Variable	Value
delete <Profile Name> <subtree oid>	Deletes the specified notify filter profile. • **<Profile Name>** specifies the name of the profile with a string length of 1 to 31. • **<subtree oid>** identifies the filter subtree with a string length of 1 to 32.
info	Displays notify filter information.
mask <Profile Name> <subtree oid> new-mask <value>	Specifies the new bit mask in combination with snmpNotifyFilterMask, which defines a family of subtrees. • **<Profile Name>** specifies the name of the profile with a string length of 1 to 31. • **<subtree oid>** identifies the filter subtree with a string length of 1 to 32. • **new-mask <value>** is in the format of 0x00:00...with a string length of 1 to 49.
type <Profile Name> <subtree oid> new-type <value>	Specifies the new type that you want for a profile. The valid values are include and exclude. • **<Profile Name>** specifies the name of the profile with a string length of 1 to 31. • **<subtree oid>** identifies the filter subtree with a string length of 1 to 32. • **new-type <value>** specifies include or exclude.

config snmp-v3 ntfy-filter info

Use this command to ensure that the SNMP notify filter table configuration is correct.

Syntax

config snmp-v3 ntfy-filter info
show snmp-v3 ntfy-filter

Parameters

None

Default

None

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Related commands

Variable	Value
create <Profile Name> <subtree oid> [mask <value>] [type <value>]	Creates a notify filter table. • **<Profile Name>** specifies the name of the profile with a string length of 1 to 31. • **<subtree oid>** identifies the filter subtree with a string length of 1 to 32. • **mask <value>** specifies the bit mask in combination with snmpNotifyFilterMask, which defines a family of subtrees. • **type <value>** indicates whether the family of filter subtrees defined by this entry is included (**include**) or excluded (**exclude**) from a filter.
delete <Profile Name> <subtree oid>	Deletes the specified notify filter profile. • **<Profile Name>** specifies the name of the profile with a string length of 1 to 31. • **<subtree oid>** identifies the filter subtree with a string length of 1 to 32.
info	Displays notify filter information.
mask <Profile Name> <subtree oid> new-mask <value>	Specifies the new bit mask in combination with snmpNotifyFilterMask, which defines a family of subtrees. • **<Profile Name>** specifies the name of the profile with a string length of 1 to 31. • **<subtree oid>** identifies the filter subtree with a string length of 1 to 32. • **new-mask <value>** is in the format of 0x00:00...with a string length of 1 to 49.
type <Profile Name> <subtree oid> new-type <value>	Specifies the new type that you want for a profile. The valid values are include and exclude. • **<Profile Name>** specifies the name of the profile with a string length of 1 to 31. • **<subtree oid>** identifies the filter subtree with a string length of 1 to 32. • **new-type <value>** specifies include or exclude.

config sys set snmp sender-ip

Use this command to configure the destination and source IP addresses for SNMP traps.

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Syntax

config sys set snmp sender-ip <dest-ipaddr> <src-ipaddr>

Parameters

Variable	Value
sender-ip <dest-ipaddr> <src-ipaddr>	Configures the SNMP trap receiver and source IP addresses. Specify the IP address of the destination SNMP server that will receive the SNMP trap notification in the first IP address. Specify the source IP address of the SNMP trap notification packet that is transmitted in the second IP address. If this is set to 0.0.0.0 then the switch uses the IP address of the local interface that is closest (from an IP routing table perspective) to the destination SNMP server.

Default

None

Related commands

Variable	Value
agent-conformance <enable|disable>	Activates or disables the agent conformance mode. Conforms to MIB standards when disabled. If you activate this option, feature configuration is stricter and error handling less informative. Activating this option is not a recommended or normally supported mode of operation.
force-iphdr-sender <true|false>	Specify true to configure the SNMP and IP sender to the same value. The default is false.
force-trap-sender <true|false>	Specify true to send the configured source address (sender IP) as the sender network in the notification message.
info	Displays the current SNMP settings.

config sys set snmp force-trap-sender

Use this command to send the source address (sender IP) as the sender network in the notification message.

Syntax

config sys set snmp force-trap-sender true

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Parameters

Variable	Value
force-trap-sender <true|false>	Specify true to send the configured source address (sender IP) as the sender network in the notification message.

Default

None

Related commands

Variable	Value
agent-conformance <enable|disable>	Activates or disables the agent conformance mode. Conforms to MIB standards when disabled. If you activate this option, feature configuration is stricter and error handling less informative. Activating this option is not a recommended or normally supported mode of operation.
force-iphdr-sender <true|false>	Specify true to configure the SNMP and IP sender to the same value. The default is false.
info	Displays the current SNMP settings.
sender-ip <dest-ipaddr> <src-ipaddr>	Configures the SNMP trap receiver and source IP addresses. Specify the IP address of the destination SNMP server that will receive the SNMP trap notification in the first IP address. Specify the source IP address of the SNMP trap notification packet that is transmitted in the second IP address. If this is set to 0.0.0.0 then the switch uses the IP address of the local interface that is closest (from an IP routing table perspective) to the destination SNMP server.

config sys set snmp force-iphdr-sender

Use this command to force the SNMP and IP sender flag to be the same.

Syntax

config sys set snmp force-iphdr-sender true

Parameters

Variable	Value
force-iphdr-sender <true|false>	Specify true to configure the SNMP and IP sender to the same value.

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Default

The default is false.

Related commands

Variable	Value
agent-conformance <enable|disable>	Activates or disables the agent conformance mode. Conforms to MIB standards when disabled. If you activate this option, feature configuration is stricter and error handling less informative. Activating this option is not a recommended or normally supported mode of operation.
force-trap-sender <true|false>	Specify true to send the configured source address (sender IP) as the sender network in the notification message.
info	Displays the current SNMP settings.
sender-ip <dest-ipaddr> <src-ipaddr>	Configures the SNMP trap receiver and source IP addresses. Specify the IP address of the destination SNMP server that will receive the SNMP trap notification in the first IP address. Specify the source IP address of the SNMP trap notification packet that is transmitted in the second IP address. If this is set to 0.0.0.0 then the switch uses the IP address of the local interface that is closest (from an IP routing table perspective) to the destination SNMP server.

config snmp snmplog enable

Use this command to enable SNMP trap logging.

Syntax

config snmp snmplog enable <true|false>

Parameters

None

Default

None

Related commands

None

config snmp snmplog maxfilesize

Use this command to set the maximum file size.

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Syntax

config snmp snmplog maxfilesize <64-256000>

Parameters

Variable	Value
maxfilesize <64-256000>	Specifies the maximum file size for the trap log.

Default

None

Related commands

Variable	Value
<enable|disable>	Enables or disables the logging of traps.
info	Displays information about SNMP logging.

show snmp snmplog info

Use this command to ensure that the SNMP trap logging configuration is correct.

Syntax

show snmp snmplog info

Parameters

None

Default

None

Related commands

Variable	Value
<enable|disable>	Enables or disables the logging of traps.
maxfilesize <64-256000>	Specifies the maximum file size for the trap log.

show snmplog file

Use this command to display the contents of the SNMP log.

Syntax

show snmplog file [tail] [grep <value>]

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Parameters

Variable	Value
`[tail] [grep <value>`	—

Default

None

Related commands

None

show snmp-v3 community

Use this command to view SNMP community table.

Syntax

`show snmp-v3 community`

Parameters

None

Default

None

Related commands

Variable	Value
`context`	Displays SNMP context table.
`group-access`	Displays SNMP v3 group-access table.
`group-member`	Displays SNMP v3 group-member table.
`mib-view`	Displays SNMP v3 MIB view table.
`notify`	Displays SNMP v3 notify table.
`ntfy-filter`	Displays SNMP v3 notify filter table.
`ntfy-profile`	Displays SNMP v3 notify profile table.
`target-addr`	Displays SNMP v3 target addr table.
`target-param`	Displays SNMP v3 target params table.
`usm`	Displays SNMP v3 USM table.

config sys syslog

Use this command to configure system logging.

Syntax

`config sys syslog`

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Parameters

None

Default

None

Related commands

Variable	Value
info	Displays syslog configuration information.
ip-header-type <default|circuitless-ip|management-virtual-ip>	Specifies the IP header in syslog packets to default, circuitless-ip or management-virtual-ip: • If set to default, then for syslog packets that are transmitted in-band via input/output (I/O) ports, the IP address of the VLAN is used. For syslog packets that are transmitted out-of-band through the management port, the physical IP address of the Master CPU is used in the IP header. • If set to management-virtual-ip, then for syslog packets that are transmitted out-of-band only through the management port, the virtual management IP address of the switch is used in the IP header. • If set to circuitless-ip, then for all syslog messages (in-band or out-of-band), the circuitless IP address is used in the IP header. If a user has configured multiple CLIPs, the first CLIP configured is used.
max-hosts <maxhost>	Specifies the maximum number of syslog hosts supported. **<maxhost>** is the maximum number of enabled hosts allowed (1 to 10).
state <enable|disable>	Enables or disables sending syslog messages on the switch.

config sys syslog host

Use this command to configure the syslog host.

Syntax

config sys syslog host

Parameters

None

Default

None

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Related commands

Variable	Value
address <ipaddr>	Configures a host location for the syslog host. **<ipaddr>** is the IP address of the UNIX system syslog host.
create	Creates a syslog host instance.
delete	Deletes a syslog host.
facility <facility>	Specifies the UNIX facility used in messages to the syslog host. **<facility>** is the UNIX system syslog host facility (LOCAL0 to LOCAL7).
host <enable|disable>	Enables or disables the syslog host.
info	Shows information about the syslog host configuration.
maperror <level>	Specifies the syslog severity to use for Error messages. **<level>** is one of {emergency|alert|critical|error|warning|notice|info|debug}.
mapfatal <level>	Specifies the syslog severity to use for Fatal messages. **<level>** is one of {emergency|alert|critical|error|warning|notice|info|debug}.
mapinfo <level>	Specifies the syslog severity level to use for Information messages. **<level>** is one of {emergency|alert|critical|error|warning|notice|info|debug}.
mapwarning <level>	Specifies the syslog severity to use for Warning messages. **<level>** is {emergency|alert|critical|error|warning|notice|info|debug}.
severity <info|warning|error|fatal> [<info|warning|error|fatal>] [<info|warning|error|fatal>] [<info|warning|error|fatal>]	Specifies the severity levels for which syslog messages should be sent for the specified modules. **<severity>** is the severity for which syslog messages are sent.
udp-port <port>	Specifies the UDP port number on which to send syslog messages to the syslog host. **<port>** is the UNIX system syslog host port number (514 to 530).

show sys syslog host info

Use this command to display the UNIX system log and syslog host configuration to ensure it is correct.

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Syntax

show sys syslog host info
show sys syslog general-info

Parameters

None

Default

None

Related commands

None

config log level

Use this command to define which messages are logged.

Syntax

config log level [<level>]

Parameters

Variable	Value
level [<level>]	Shows and sets the logging level. **<level>** is one of these values: 0 = Information; all messages are recorded. 1 = Warning; only warning and more serious messages are recorded. 2 = Error; only error and more serious messages are recorded. 3 = Manufacturing; this parameter is not available for customer use. 4 = Fatal; only fatal messages are recorded.

Default

None

Related commands

Variable	Value
clear	Clears the log file.
info	Displays the current log settings.
level [<level>]	Displays and set logging level.
logToPCMCIA <true|false>	Starts or stops logging system messages to the PCMCIA card.

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Variable	Value
screen [<setting>]	Sets the log display on the screen to on or off, where setting is on or off.
write <str>	Writes the log file with the designated string. **<str>** is the string or command that you append to the log file. If the string contains spaces, you must enclose the string in quotation marks.

config log transferFile

Use this command to add a host.

Syntax

config log transferFile <id> add-IP <ipaddr>

Parameters

Variable	Value
<id>	Specifies the TFTP/FTP host IP address {1..10}.
<ipaddr>	Specifies the IP address in the {a.b.c.d} format.

Default

None

Related commands

Variable	Value
filename <str>	Set file name for log file at the remote host-Slot No of the CPU gets appended t o the filename. **str** is the file name at the remote host {string length 0..255}.
info	Displays current level parameter settings and next level directories.
remove-IP	Removes a host.

config log write

Use this command to write the log file from memory to a file.

Syntax

config log write <str>

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Parameters

Variable	Value
write <str>	Writes the log file with the designated string. **<str>** is the string or command that you append to the log file. If the string contains spaces, you must enclose the string in quotation marks.

Default

None

Related commands

Variable	Value
clear	Clears the log file.
info	Displays the current log settings.
level [<level>]	Shows and sets the logging level. **<level>** is one of these values: 0 = Information; all messages are recorded. 1 = Warning; only warning and more serious messages are recorded. 2 = Error; only error and more serious messages are recorded. 3 = Manufacturing; this parameter is not available for customer use. 4 = Fatal; only fatal messages are recorded.
logToPCMCIA <true|false>	Starts or stops logging system messages to the PCMCIA card.
screen [<setting>]	Sets the log display on the screen to on or off, where setting is on or off.

show log file

Use this command to display log information by file name, category, severity, or SF/CPU.

Syntax

show log file [tail] [name-of-file <value>] [category <value>] [severity <value>] [CPU <value>] [save-to-file <value>]

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Parameters

Variable	Value
category <value>	Filters and list the logs according to category. Specify a string length of 0–100 characters. To specify multiple filters, separate each category by the vertical bar (|), for example, **OSPF | FILTER | QOS**. Options include ATM, CPU, DVMRP, EAP, FILTER, HW, IGMP, IP, IPX, IP-RIP, IPMC, MLT, MPLS, OSPF , PIM, POLICY, POS, QOS, RADIUS, RIP, RMON, SNMP, STG, SW, VLAN, WEB, COP-SW, HAL, RCMPLS.
CPU <value>	Filters and list the logs according to the SF/CPU that generated it. Specify a string length of 0–25 characters. To specify multiple filters, separate each SF/CPU by the vertical bar (|), for example, **CPU5 | CPU6**.
name-of-file <value>	Displays the valid logs from the file name specified by <value>. For example, /pcmcia/logcopy.txt. You cannot use this command on the current log file—the file into which the messages are currently logged. Specify a string length of 1–99 characters.
save-to-file <value>	Redirects the output to the specified file and remove all encrypted information. The tail option is not supported with the **save-to-file** option. Specify a string length of 0–99 characters.
severity <value>	Filters and list the logs according to severity. Specify INFO, ERROR, WARNING, or FATAL. To specify multiple filters, separate each severity by the vertical bar (|), for example, **ERROR | WARNING | FATAL**.

Default

None

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Related commands

None

config bootconfig flags logging

Use this command to enable system logging to a PCMCIA card.

Syntax

config bootconfig flags logging <true|false>

Parameters

Variable	Value
flags logging <true|false>	Enables or disables logging to a PCMCIA card. The log file is named using an 8.3 (xxxxxxxx.sss) format. The first six characters of the file name contain the last three bytes of the chassis base MAC address. The next two characters specify the slot number of the SF/CPU that generated the logs. The last three characters denote the sequence number of the log file. Multiple sequence numbers are generated for the same chassis and same slot, if the SF/CPU is replaced, reinserted, or if the maximum log file size is reached.

Default

None

Related commands

Variable	Value
logfile <minsize> <maxsize> <maxoccupyPercentage>	Configures the logfile parameters: • **<minsize>** specifies the minimum space used for the logfile from 64 to 500 KB. • **<maxsize>** specifies the minimum space used for the logfile from 500 to 16384 KB. • **<maxoccupyPercentage>** specifies the maximum percentage of PCMCIA space used for the logfile from 10 to 90%.

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config bootconfig logfile

Use this command to configure the logfile parameters.

Syntax

config bootconfig logfile minsize maxsize maxoccupyPercentage

Parameters

Variable	Value
logfile <minsize> <maxsize> <maxoccupyPercentage>	Configures the logfile parameters: • **<minsize>** specifies the minimum space used for the logfile from 64 to 500 KB. • **<maxsize>** specifies the minimum space used for the logfile from 500 to 16384 KB. • **<maxoccupyPercentage>** specifies the maximum percentage of PCMCIA space used for the logfile from 10 to 90%.

Default

None

Related commands

Variable	Value
flags logging <true|false>	Enables or disables logging to a PCMCIA card. The log file is named using an 8.3 (xxxxxxxx.sss) format. The first six characters of the file name contain the last three bytes of the chassis base MAC address. The next two characters specify the slot number of the SF/CPU that generated the logs. The last three characters denote the sequence number of the log file. Multiple sequence numbers are generated for the same chassis and same slot, if the SF/CPU is replaced, reinserted, or if the maximum log file size is reached.

config log logToPCMCIA

Use this command to begin or stop logging system messages on the PCMCIA card.

Syntax

config log logToPCMCIA <true|false>

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Parameters

Variable	Value
<true|false>	Begin or stop the logging of system messages on the PCMCIA card. If true is specified, the following message appears: `Logging to PCMCIA STARTED`. If false is specified, the following message appears: `Logging to PCMCIA STOPPED`.

Default

None

Related commands

None

config sys set msg-control action

Use this command to configure system message control action.

Syntax

config sys set msg-control action <suppress-msg|send-trap|both>

Parameters

Variable	Value
action <suppress-msg|send-trap|both>	Configures the message control action.

Default

None

Related commands

Variable	Value
control-interval <minutes>	Configures the message control interval in minutes. The valid options are 1 to 30.
disable	Disables system message control.
enable	Activates system message control. Enabling this command suppresses duplicate error messages.

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Variable	Value
info	Displays the configuration of system message control.
max-msg-num <number>	Configures the number of occurrences of a message after which the control action happens. To set the maximum number of occurrences, enter a value from 2 to 500.

config sys set msg-control max-msg-num

Use this command to configure the maximum number of messages.

Syntax

config sys set msg-control max-msg-num <number>

Parameters

Variable	Value
max-msg-num <number>	Configures the number of occurrences of a message after which the control action happens. To set the maximum number of occurrences, enter a value from 2 to 500.

Default

None

Related commands

Variable	Value
action <suppress-msg|send-trap|both>	Configures the message control action.
control-interval <minutes>	Configures the message control interval in minutes. The valid options are 1 to 30.
disable	Disables system message control.
enable	Activates system message control. Enabling this command suppresses duplicate error messages.
info	Displays the configuration of system message control.

config sys set msg-control control-interval

Use this command to configure the interval.

Syntax

config sys set msg-control control-interval <minutes>

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Parameters

Variable	Value
control-interval <minutes>	Configures the message control interval in minutes. The valid options are 1 to 30.

Default

None

Related commands

Variable	Value
action <suppress-msg|send-trap|both>	Configures the message control action.
disable	Disables system message control.
enable	Activates system message control. Enabling this command suppresses duplicate error messages.
info	Displays the configuration of system message control.
max-msg-num <number>	Configures the number of occurrences of a message after which the control action happens. To set the maximum number of occurrences, enter a value from 2 to 500.

config sys set msg-control

Use this command to enable message control.

Syntax

config sys set msg-control enable

Parameters

None

Default

None

Related commands

Variable	Value
action <suppress-msg|send-trap|both>	Configures the message control action.
control-interval <minutes>	Configures the message control interval in minutes. The valid options are 1 to 30.
disable	Disables system message control.

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Variable	Value
enable	Activates system message control. Enabling this command suppresses duplicate error messages.
info	Displays the configuration of system message control.
max-msg-num <number>	Configures the number of occurrences of a message after which the control action happens. To set the maximum number of occurrences, enter a value from 2 to 500.

config sys set msg-control force-msg add

Use this command to configure the force message control option.

Syntax

config sys set msg-control force-msg add <str>

Parameters

Variable	Value
add <str>	Used to add a forced message control pattern, where **<str>** is a string of 4 characters. You can add a four-byte pattern into the force-msg table. The software and the hardware log messages that use the first four bytes matching one of the patterns in the force-msg table undergo the configured message control action. You can specify up to 32 different patterns in the force-msg table. This includes a wild-card pattern (****) as well. Upon specifying the wild-card pattern, all messages undergo message control.

Default

None

Related commands

Variable	Value
del <str>	Deletes a forced message control pattern.
info	Displays the current configuration.

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config sys set msg-control force-msg

Use this command to ensure the system message controlconfiguration is correct.

Syntax

config sys set msg-control force-msg info

Parameters

None

Default

None

Related commands

Variable	Value
add <str>	Used to add a forced message control pattern, where **<str>** is a string of 4 characters. You can add a four-byte pattern into the force-msg table. The software and the hardware log messages that use the first four bytes matching one of the patterns in the force-msg table undergo the configured message control action. You can specify up to 32 different patterns in the force-msg table. This includes a wild-card pattern (****) as well. Upon specifying the wild-card pattern, all messages undergo message control.
del <str>	Deletes a forced message control pattern.
info	Displays the current configuration.

config cli clilog

Use this command to enable or disable CLI logging.

Syntax

config cli clilog enable <true|false>

Parameters

Variable	Value
enable <true|false>	Enables or disables CLI logging.

Default

None

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Related commands

Variable	Value
`info`	Shows configuration information.
`maxfilesize <64 to 256000>`	Specifies the maximum file size of the log file in KB.

config cli clilog maxfilesize

Use this command to change the maximum file size used for CLI logs.

Syntax

`config cli clilog maxfilesize <64 to 256000>`

Parameters

Variable	Value
`maxfilesize <64 to 256000>`	Specifies the maximum file size of the log file in KB.

Default

Non

Related commands

Variable	Value
`enable <true|false>`	Enables or disables CLI logging.
`info`	Shows configuration information.

show cli clilog

Use this command to Ensure that the CLI logging configuration is correct.

Syntax

`show cli clilog info`
`config cli clilog info`

Parameters

None

Default

None

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Related commands

Variable	Value
tail	Shows the last results first.
grep <value>	Performs a string search in the CLI log file. **<value>** is the string, of up to 256 characters in length, to match.

show clilog file

Use this command to display the CLI log.

Syntax

show clilog file [tail] [grep <value>]

Parameters

Variable	Value
tail	Shows the last results first.
grep <value>	Performs a string search in the CLI log file. **<value>** is the string, of up to 256 characters in length, to match.

Default

None

Related commands

None

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Upgrades software release commands

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show sys perf

Use this command to determine SF/CPU memory size.

Syntax

show sys perf

Parameters

None

Default

None

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Related parameters

None

peer telnet

Use this command to to check the memory size on the Secondary SF/CPU.

Syntax

```
peer telnet
show sys perf
```

Parameters

None

Default

None

Related parameters

None

dir

Use this command to view the free space and files in flash memory.

Syntax

```
dir
```

Parameters

None

Default

None

Related parameters

None

rm /flash/filename

Use this command to remove files to make space.

Syntax

```
rm /flash/<filename>
rm /pcmcia/<filename>
```

Parameters

Variable	Value
`<filename>`	Species the file by name.

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Default
None

Related parameters
None

save config.cfg
Use this command to save the pre-5.1 configuration file.

Syntax
save config.cfg

Parameters
None

Default
None

Related parameters
None

edit config.cfg
Use this command to edit the file on the switch (the switch has a built-in VI-like editor).

Syntax
edit config.cfg

Parameters
None

Default
None

Related parameters
None

show boot choice primary
Use this command to determine the configuration file names.

Syntax
show boot choice primary

Parameters
None

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Default

None

Related parameters

None

save config

Use this command to save the configuration files.

Syntax

```
save config

save bootconfig

save config standby config.cfg

save bootconfig standby boot.cfg
```

Parameters

None

Default

None

Related parameters

None

copy /flash/boot.cfg

Use this command to copy the files to a safe place.

Syntax

```
copy /flash/boot.cfg /pcmcia/boot_backup.cfg

copy /flash/config.cfg /pcmcia/config_backup.cfg
```

Parameters

None

Default

None

Related parameters

None

copy /flash/config.cfg

Use this command to copy the files to a TFTP server.

Syntax

```
copy /flash/config.cfg <tftpipaddress>:config_backup.cfg
```


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```
copy /flash/boot.cfg <tftpipaddress>:boot_backup.cfg
```

Parameters

Variable	Value
`<tftpipaddress>`	Specifies the IP address of the TFTP server.

Default

None

Related parameters

None

show ip route info

Use this command to determine the number of routes in the routing table.

Syntax

```
show ip route info
```

Parameters

None

Default

None

Related parameters

None

show ip arp info

Use this command to determine Address Resolution Protocol (ARP) information.

Syntax

```
show ip arp info
```

Parameters

None

Default

None

Related parameters

None

show ip bgp summary

Use this command to determine Border Gateway Protocol (BGP) parameters.

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Syntax

show ip bgp summary

Parameters

None

Default

None

Related parameters

None

show ip igmp group

Use this command to determine the total number of Internet Group Management Protocol (IGMP) groups.

Syntax

show ip igmp group

Parameters

None

Default

None

Related parameters

None

show ip mroute interface

Use this command to determine the total number of multicast routes.

Syntax

show ip mroute interface [vrf <value>] [vrfids <value>]

Parameters

None

Default

None

Related parameters

Variable	Value
next-hop [vrf <value>] [vrfids <value>]	Displays next-hops for all multicast protocols.
route [vrf <value>] [vrfids <value>]	Displays routes for all multicast protocols.

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Variable	Value
`rpf [vrf <value>] [vrfids <value>]`	Displays best route to RP or source from static-mroute or unicast routing table.
`show-all [vrf <value>] [vrfids <value>]`	Displays all mroute information.
`static-source-group [vrf <value>] [vrfids <value>]`	Displays static source group entries.
`stats [vrf <value>] [vrfids <value>]`	Displays IP multicast statistics on the specified group and VRF.

show ip mroute-hw group-prune-state

Use this command to display prune state info for a given group.

Syntax

`show ip mroute-hw group-prune-state [grp <value>]`

Parameters

Variable	Value
`grp <value>`	Specifies the group IP address in the {a.b.c.d} format.

Default

None

Related commands

Variable	Value
`group-trace [src <value>] [grp <value>]`	Displays multicast hardware information for a given {S,G},{G}.
`resource-usage [vrf <value>] [vrfids <value>]`	Displays multicast resource usage.
`show-all [file <value>]`	Displays all mroute information.

show ip ospf show-all

Use this command to determine Open Shortest Path First (OSPF) parameters.

Syntax

`show ip ospf show-all`

Parameters

None

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Default

None

Related parameters

Variable	Value
area [vrf <value>] [vrfids <value>]	Displays the area.
ase [metric-type <value>] [vrf <value>] [vrfids <value>]	Displays as-external link LSAs.
default-metric [vrf <value>] [vrfids <value>]	Displays default metric.
host-route [vrf <value>] [vrfids <value>]	Displays host route.
ifstats [mismatch] [detail] [vrf <value>] [vrfids <value>]	Displays interface statistics
info [vrf <value>] [vrfids <value>]	Displays general information.
int-auth [vrf <value>] [vrfids <value>]	Displays interface authentication key.
int-timers [vrf value>] [vrfids <value>]	Displays interface timers.
interface [vrf <value>] [vrfids <value>]	Displays configured interfaces.
lsdb [area <value> [lsatype <value> [lsid <value>] [adv_rtr <value>] [detail <value>] [vrf <value>] [vrfids <value>]	Displays LSDB header.
neighbors [vrf <value>] [vrfids <value>]	Display Neighbors.
port-error [vrf <value>] [vrfids <value>]	Displays the OSPF port error information.
range [vrf <value>] [vrfids <value>]	Displays area range.
stats [vrf <value>] [vrfids <value>]	Displays statistics.

show ip

Use this command to view other IP show commands that you can use.

Syntax

show ip

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Parameters
None

Default
None

Related parameters
None

config sys access-policy
Use this command to disable access policies

Syntax
config sys access-policy enable false

Parameters
None

Default
None

Related parameters

Variable	Value
info	Displays current level parameter settings and next level directories.

config bootconfig choice primary image-file
Use this command to configure the boot source.

Syntax
config bootconfig choice primary image-file /flash/p80a5000.img

Parameters
None

Default
None

Related parameters
None

config bootconfig mezz-image image-name
Use this command to ensure that the switch loads the new Mezz image from the flash.

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Syntax

config bootconfig mezz-image image-name /flash/p80m5000.img

Parameters

None

Default

None

Related parameters

None

config bootconfig bootp image-name default

Use this command to ensure that the switch uses the correct R and RS module driver files from the flash memory (repeat for each slot).

Syntax

config bootconfig bootp image-name default <slot-number>

Parameters

Variable	Value
<slot-number>	Specifies the slots that have installed R or RS modules.

Default

None

Related parameters

None

more boot.cfg

Use this command to verify that the changed primary image file settings are in the boot.cfg file.

Syntax

more boot.cfg

Parameters

None

Default

None

Related parameters

None

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boot /flash/p80b5000.img

Use this command to boot the Ethernet Routing Switch 8600 with the new boot-monitor image.

Syntax

```
boot /flash/p80b5000.img
```

Parameters

None

Default

None

Related parameters

None

dos-format /flash

Use this command to Format the flash and PCMCIA.

Syntax

```
dos-format /flash

dos-format /pcmcia
```

Parameters

None

Default

None

Related parameters

None

config bootconfig flags ha-cpu

Use this command to disable HA.

Syntax

```
config bootconfig flags ha-cpu false

reset -y
```

Parameters

None

Default

None

Related parameters

None

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config sys access-policy enable

Use this command to disable access policies.

Syntax

```
config sys access-policy enable false
```

Parameters

None

Default

None

Related parameters

None

copy /flash/p80a5000.img

Use this command to copy the runtime image file (and all other files copied to the Master SF/CPU flash) to the Secondary SF/CPU.

Syntax

```
copy /flash/p80a5000.img <IP address of standby
CPU>:p80a5000.img
```

Parameters

None

Default

None

Related parameters

None

config diag fpga foq update

Use this command to install FPGA firmware for each R module slot.

Syntax

```
config diag fpga foq update <1-4,7-10> <file-name>
config diag fpga dpc update <1-4,7-10> <file-name>
```

Parameters

Variable	Value
`<filename>`	Specifies the appropriate xsvf file.
`<1-4,7-10>`	Specifies the slots that have installed R modules. Slots 5 and 6 are for SF/CPUs.

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Default

None

Related parameters

Variable	Value
`info`	Displays current level parameter settings and next level directories.
`update <slot-num> [<file-name>]`	FPGA FOG image commands.

config diag fpga pim update

Use this command to Use this command to install FPGA firmware for each 8630 GBR module slot.

Syntax

`config diag fpga pim update <1-4,7-10> <file-name>`

Parameters

Variable	Value
`<filename>`	Specifies the appropriate xsvf file.
`<1-4,7-10>`	Specifies the slots that have installed R modules. Slots 5 and 6 are for SF/CPUs.

Default

None

Related parameters

Variable	Value
`info`	Display current level parameter settings and next level directories.

config slot state reset

Use this command to for the updates to take effect.

Syntax

`config slot <slot num> state reset`
`show sys info asic`

Parameters

Variable	Value
`slot num`	Specifies the slot list.

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Default

None

Related parameters

None

config cli password ro

Use this command to change a password.

Syntax

config cli password ro <username> [<password>]

config cli password rw <username> [<password>]

config cli password rwa <username> [<password>]

Parameters

Variable	Value
<username>	Specifies the user name.
<password>	Specifies the password for the user.

Default

None

Related parameters

None

config cli password

Use this command to display other options to configure.

Syntax

config cli password

Parameters

None

Default

None

Related parameters

None

config bootconfig flags

Use this command to view bootconfig flags.

Syntax

config bootconfig flags info

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Parameters
None

Default
None

Related parameters
None

config sys set flags
Use this command to view mode flags.

Syntax
config sys set flags info

Parameters
None

Default
None

Related parameters

Variable	Value
r-mode <true|false>	Enables or disables RSP memory (256K) mode - effect after reboot. **true|false** enables or disables RSP memory mode.
m-mode <true|false>	Enables or disables extended memory (128K) mode - effect after reboot.
enhanced-operational-mode <true|false>	Sets the enhanced operational mode.
vlan-optimization-mode <true|false>	Enables or disables VLAN REC optimization mode - effect after reboot.
global-filter-ordering <true|false>	Enables global filter feature.
multicast-check-packet <true|false>	Enables or disables mutlicast check packet feature on PR chassis.

config radius info
Use this command to view RADIUS settings.

Syntax
config radius info

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Parameters
None

Default
None

Related parameters
None

show log file tail
Use this command to check for alarms or unexpected errors.

Syntax
```
show log file tail

show log file severity
```

Parameters
None

Default
None

Related parameters
None

wsm connect
Use this command to connect to WSM.

Syntax
```
wsm connect <1-10>
```

Parameters

Variable	Value
<1-10>	Specifies the WSM slot number.

Default
None

Related parameters
None

copy/file /wsm/
Use this command to copy the new WSM files to the WSM.

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Syntax

copy <device>/file /wsm/<slot number>/file

Parameters

None

Default

None

Related parameters

None

wsm setboot

Use this command to set the WSM to boot from the new image.

Syntax

wsm setboot [<slotId>] [<image-choice>]

Parameters

Variable	Value
<image-choice>	Specifies which image choice (image1|image2).
<slotId>	Specifies the WSM slot number in the range of 1 to 10.

Default

None

Related parameters

None

wsm reset

Use this command to reboot the module.

Syntax

wsm reset <slotId\|"all">

Parameters

None

Default

None

Related parameters

None

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sam connect

Use this command to determine if the SAM is configured.

Syntax

sam connect <1-10>

Parameters

Variable	Value
<1-10>	Specifies the SAM slot number in the range of 1 to 10.

Default

None

Related parameters

None

copy 10.10.10.1:p80s4100.pkg

Use this command to download from TFTP server 10.10.10.1:

Syntax

copy 10.10.10.1:p80s4100.pkg /sam/2/image

Parameters

None

Default

None

Related parameters

None

sam activate-backup-image

Use this command to activate the new image and reboot the SAM.

Syntax

sam activate-backup-image <1-10>

Parameters

Variable	Value
<1-10>	Specifies the SAM slot number in the range of 1 to 10.

Default

None

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Related parameters
None

/info/summary
Use this command to determine which firewall iSD holds the Management IP address (MIP).

Syntax
/info/summary

Parameters
None

Default
None

Related parameters
None

/boot/software/cur
Use this command to log on as admin to the firewall iSD that holds the MIP.

Syntax
/boot/software/cur

Parameters
None

Default
None

Related parameters
None

copy filename
Use this command to copy files.

Syntax
copy <filename> <filename>

Parameters

Variable	Value
<filename>	Specifies the file name and the path.

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Default

None

Related parameters

None

copy tftp IP address

Use this command to copy files using a TFTP server.

Syntax

copy <tftp IP address>:<filename> /<location>/

Parameters

Variable	Value
<filename>	Specifies the file name and the path.
<location>	Specifies the file name and the path for file storage on the switch
<tftp IP address>	Specifies the IP address of the TFTP server.

Default

None

Related parameters

None

attrib /flash/shadov.txt

Use this command to hide files.

Syntax

attrib /flash/shadov.txt "+h"

Parameters

None

Default

None

Related parameters

None

config bootconfig flags ftpd

Use this command to enable the FTP daemon.

Syntax

config bootconfig flags ftpd true

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Parameters

None

Default

None

Related parameters

None

onfig bootconfig choice

Use this command to change the runtime configuration file locations.

Syntax

config bootconfig choice <primary|secondary|tertiary> [config-file <file>|backup-config-file <file>|image-file <file>]

Parameters

Variable	Value
backup-config-file <file>	Identifies the backup boot configuration file; **file** is the device path and file name, up to 256 characters including the path.
config-file <file>	Identifies the boot configuration file; **file** is the device path and file name, up to 256 characters including the path.
image-file <file>	Identifies the image file; **file** is the device path and file name, up to 256 characters including the path.

Default

None

Related parameters

Variable	Value
info	Shows the current boot choices and associated files.

config bootconfig choice primary

Use this command to specify the configuration file in flash memory as the primary.

Syntax

config bootconfig choice primary config-file /flash/config.cfg

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Parameters

None

Default

None

Related parameters

None

config bootconfig bootp image-name

Use this command to set the location for the I/O module driver image for the BootStrap protocol.

Syntax

config bootconfig bootp image-name <image-name> <slot-number>

config bootconfig bootp secondary-image-name <image-name> <slot-number>

Parameters

Variable	Value
image-name <image-name> <slot-number>	Identifies the I/O module primary image. **<file>** is the device and file name, up to 256 characters including the path. **<slot-number>** identifies the image with a particular slot. To ensure that the .dld image loaded is the same as the running software image, configure the image-name to default.
secondary-image-name <image-name> <slot-number>	Identifies the I/O module secondary image. **<file>** is the device and file name, up to 256 characters including the path. **<slot-number>** identifies the image with a particular slot. To ensure that the .dld image loaded is the same as the running software image, configure the image-name to default.

Default

None

Related parameters

Variable	Value
info	Shows the current boot choice and associated files.

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config bootconfig mezz-image image-name

Use this command to set the boot source location for the SuperMezz image.

Syntax

config bootconfig mezz-image image-name <image-name>

Parameters

Variable	Value
image-name <image-name> [<slot-number>]	Identifies the SuperMezz image.**<image-name>** is the device and file name, up to 256 characters including the path. `slot-number` identifies the image with a particular slot.

Default

None

Related parameters

Variable	Value
info	Shows the current SuperMezz boot choice and associated files.

show tech

Use this command to determine which slot (5 or 6) contains the Master.

Syntax

show tech

Parameters

None

Default

None

Related parameters

None

save config standby

Use this command to ensure that both SF/CPUs have the same configuration.

Syntax

save config standby <filename>

save bootconfig standby <filename>

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Parameters

Variable	Value
`<filename>`	Specifies the Secondary destination path and file name in the format /pcmcia/<filename> or /flash/<filename>

Default

None

Related parameters

None

config sys set action

Use this command to perform the switchover.

Syntax

`config sys set action cpuswitchover`

Parameters

None

Default

None

Related parameters

None

config slot state disable

Use this command to disable the SF/CPU.

Syntax

`config slot <slotnum> state disable`

Parameters

Variable	Value
`<slotnum>`	Specifies the slot number of the module to be disabled. SF/CPUs can reside in slots 5 and 6 of the 6 and 10-slot chassis.

Default

None

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Related parameters
None

config sys set action cpuswitchover
Use this command to perform the switchover.

Syntax
```
config sys set action cpuswitchover
```

Parameters
None

Default
None

Related parameters
None

format-flash
Use this command to format the flash memory.

Syntax
```
format-flash -y
```

Parameters
None

Default
None

Related parameters
None

attrib/flash/shadov.txt
Use this command to hide all hidden password, OSPF, and SNMP files.

Syntax
```
attrib /flash/shadov.txt "+h"
```

Parameters
None

Default
None

Related parameters
None

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config sys access-policy policy create name

Use this command to create the access policy and name it.

Syntax

config sys access-policy policy create name PolicySNMP_user2

Parameters

None

Default

None

Related parameters

None

config sys access-policy policy mode allow

Use this command to configure the mode.

Syntax

config sys access-policy policy mode allow

Parameters

None

Default

None

Related parameters

None

config sys access-policy policy access-level rwa

Use this command to configure the access level for the policy.

Syntax

config sys access-policy policy access-level rwa

Parameters

None

Default

None

Related parameters

None

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config sys access-policy policy access-strict

Use this command to configure the access-strict parameter.

Syntax

```
config sys access-policy policy access-strict true
```

Parameters

None

Default

None

Related parameters

None

config sys access-policy policy service telnet

Use this command to enable Telnet and SNMPv3 service.

Syntax

```
config sys access-policy policy service telnet enable
snmpv3 enable
```

Parameters

None

Default

None

Related parameters

None

config sys access-policy policy precedence

Use this command to set the precedence level as required.

Syntax

```
config sys access-policy policy precedence
```

Parameters

None

Default

None

Related parameters

None

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config sys access-policy policy network

Use this command to configure the network address as required.

Syntax

config sys access-policy policy <pid> network <addr/prefix-length>

Parameters

Variable	Value
<addr/prefix-length>	Specifies the access policy net ipv4address/mask {a.b.c.d/x | a.b.c.d/a.b.c.d} or ipv6address/prefix-length {x:x:x:x:x:x:x:x/x}. The string length ranges from 0 to 43.
<pid>	Specifies the access policy ID.

Default

None

Related parameters

None

config sys access-policy policy host

Use this command to configure the host parameter as required.

Syntax

config sys access-policy policy <pid> host <IPAddress/IPv6Address>

Parameters

Variable	Value
<IPAddress/IPv6Address>	Specifies the host IPv4 address {a.b.c.d} or IPv6 address {x:x:x:x:x:x:x:x}. The string length ranges from 0 to 46.
<pid>	Specifies the access policy ID.

Default

None

Related parameters

None

config sys access-policy policy username

Use this command to configure the username parameter.

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Syntax

config sys access-policy policy username <username>

Parameters

None

Default

None

Related parameters

None

show snmp-v3 group-access

Use this command to attach the SNMP group to the policy.

Syntax

show snmp-v3 group-access

Parameters

None

Default

None

Related parameters

None

config sys access-policy policy snmp-group-add

Use this command to add the SNMPv3 group to the policy and specify the security model

Syntax

config sys access-policy policy snmp-group-add [<group name> <snmpv1|snmpv2c|usm>]

Parameters

None

Default

None

Related parameters

None

show sys access-policy info policy

Use this command to view the configuration.

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Syntax

show sys access-policy info [<polname>]

show sys access-policy snmp-group-info

Parameters

None

Default

None

Related parameters

Variable	Value
by-mac	Displays access policy by-mac information.

config snmpv3 create third nortel readview

Use this command to grant access to a new community through a policy, add the SNMP group that corresponds to the community string and the security model to the access policy.

Syntax

config snmpv3 create third nortel readview

config sys access-policy policy snmp-group-add readgrp snmpv1

config sys access-policy policy snmp-group-add readgrp snmpv2c

Parameters

None

Default

None

Related parameters

None

md5

Use this command to calculate the message digest for files in flash memory or on a PCMCIA card.

Syntax

md5 <filename>

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Parameters

Variable	Value
`<filename>`	Specifies the file list to be supplied for md5 command. The string value ranges from 1 to 99.

Default

None

Related parameters

None

config bootconfig upgrade-mac-addr

Use this command to upgrading to 4096 MAC addresses.

Syntax

config bootconfig upgrade-mac-addr <base-mac-addr> <licensecode>

Parameters

None

Default

None

Related parameters

None

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User Interface Fundamentals commands

This chapter describes the Ethernet Routing Switch 8600 user interface fundamentals commands.

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- “ESC” (page 1172)
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- “copy srcfile dstfile” (page 1172)
- “copy destination” (page 1173)
- “save savetype” (page 1173)
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- “config snmp-v3 usm” (page 1175)
- “config snmp-v3 group-member” (page 1175)
- “config snmp-v3 group-access” (page 1176)

quit

Use this command to end a CLI session.

Syntax

```
quit
logout
exit
```

Parameters

None

Default

None

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Related commands

End a CLI sessio

ESC

Use this command to enter the edit mode.

Syntax

ESC

Parameters

None

Default

None

Related commands

None

directory

Use this command to display the contents of the flash and PCMCIA memory.

Syntax

directory [<dir>] [<-l>]

Parameters

Table 6
Variable definitions

Variable	Value
dir	Specifies either flash or PCMCIA in the form /flash or /pcmcia.
-l	Displays file details if you specify a path name.

Default

None

Related commands

None

copy srcfile dstfile

Use this command to copy a file.

Syntax

copy <srcfile> <dstfile>

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Parameters

Variable	Value
dstfile	The destination file in the format {a.b.c.d:|peer:|/pcmcia/xxx|/flash/xxx}**<file>** and **file** is the file name of the destination file.
srcfile	The source file in the format {a.b.c.d:|peer:|/pcmcia/|/flash/}**<file>** and **file** is the filename of the source file.

Default

None

Related commands

None

copy destination

Use this procedure to copy a runtime image to flash memory from a remote TFTP server.

Syntax

copy <ip_address> <filename> <destination>

Parameters

Variable	Value
destination	The name of the copied file in its new location.
ip_address:filename	The source argument that specifies the IP address of the remote TFTP server and the name of the file you want to copy.

Default

None

Related commands

None

save savetype

Use this command to save the running configuration to a file.

Syntax

save <savetype> [file <value>] [verbose] [standby <value>] [backup <value>]]

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Parameters

Variable	Value
backup <value>	Saves the specified file name and identifies the file as a backup file.
file <value>	The file name.
mode <value>	CLI or NNCLI
savetype .	Specifies the type of file to save. The options are: • **config** • **bootconfig** • **log** • **trace** • **clilog** • **snmplog**
standby <value>	Saves the specified file name to the standby CPU.
verbose	Saves the default and current configuration. If you omit the **[verbose]** parameter, only the current configuration is saved.

Default

None

Related commands

None

config snmp-v3 mib-view

Use this command to create an mib-view (strict) that excludes the management information base (MIB) object identifiers (OID) corresponding to the user names and passwords of the access levels.

Syntax

/config/snmp-v3/mib-view# create strict 1/config/snmp-v3/mib-view# create strict 1
/config/snmp-v3/mib-view# strict 1.3.6.1.4.1.2272.1.19.1 type exclude

Parameters

None

Default

None

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Related commands

None

config snmp-v3 usm

Use this command to create a user (Nortel).

Syntax

/config/snmp-v3/usm# create Nortel

Parameters

None

Default

None

Related commands

None

config snmp-v3 group-member

Use this command to create an snmp-group corresponding to the user (group).

Syntax

/config/snmp-v3/group-member# create nortel usm group

Parameters

None

Default

None

Related commands

Variable	Value
create <user name> <model> [<group name>]	Creates a new user access for v3 VACM table. • **user name** is the user name. The string length ranges from 1 to 32. • **model** is the security model. {snmpv1|snmpv2c|usm}. • **group name** is the security group name. The string length ranges from 1 to 32.
delete <user name> <model>	Deletes an user group for v3 VACM table.

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Variable	Value
info	Displays current level parameter settings and next level directories.
name <user name> <model> [<group name>]	Modifies the group name for v3 VACM table.

config snmp-v3 group-access

Use this command to Set the SNMP access for that group.

Syntax

/config/snmp-v3# group-access create group "" usm noAuthNoPriv
/config/snmp-v3# group-access view group "" usm noAuthNoPriv read root write strict notify root

Parameters

None

Default

None

Related commands

Variable	Value
create <group name> <prefix> <model> <level>	Creates new group access for v3 VACM table. • **group name** is the group name. The string length ranges from 1 to 32. • **prefix** is the context prefix. The string length ranges from 0 to 32. • **model** is the security model. {snmpv1|snmpv2c|usm}. • **level** is the security level. {noAuthNoPriv|authNoPriv|authPriv}.
delete <group name> <prefix> <model> <level>	Deletes an group access for v3 VACM table.

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Variable	Value
info	Displays current level parameter settings and next level directories.
view <group name> <prefix> <model> <level> [read <value>] [write <value>] [notify <value>]	Modifies group access view name match for v3 VACM table. • **read <value>** is the read view. The string length ranges from 0 to 32. • **write <value>** is the write view. The string length ranges from 0 to 32. • **notify <value>** is the notify view. The string length ranges from 0 to 32.

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VLANs and Spanning Tree commands

This chapter describes the Ethernet Routing Switch 8600 VLANs and Spanning Tree commands.

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- “config ethernet perform-tagging ” (page 1181)
- “config vlan byipsubnet-mstprstp” (page 1182)
- “config vlan ip create” (page 1184)
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config ethernet perform-tagging

Use this command to enable tagging in the CLI.

Syntax

config ethernet <slot/port> perform-tagging enable

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Parameters

Table 7
Command parameters

Variable	Value
slot/port	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config vlan byipsubnet-mstprstp

Use this command to create a VLAN.

Syntax

config vlan <vid> byipsubnet-mstprstp <instance-id> <ipaddr|mask> [name <value>] [color <value>]

Parameters

Variable	Value
byipsubnet-mstprstp <instance-id> <ipaddr|mask> [name <value>] [color <value>]	Creates a VLAN by ipsubnet. • **instance-id** is the instance id {0..63}. • **ipaddr|mask** is the subnetaddr/mask {a.b.c.d/x | a.b.c.d/x.x.x.x | default}. • **name <value>** is the name of VLAN {string length 0..64}. • **color <value>** is the color of VLAN {0..32}.

Default

None

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Related commands

Variable	Value
byport-mstprstp <instance-id> [name <value>] [color <value>] [naap-vlan] [firewall-vlan] [firewall-peering-vlan]	Creates a VLAN by port. • **name <value>** is the name of VLAN {string length 0..64}. • **color <value>** is the color of vlan {0..32}. • **naap-vlan** mark as NAAP VLAN. • **firewall-vlan** mark as firewall VLAN. • **firewall-peering-vlan** mark as firewall peering VLAN.
byprotocol-mstprstp <instance-id> <ip|ipx802dot3|ipx802dot2|ipxSnap|ipxEthernet2|appleTalk|decLat|decOther|sna802dot2|snaEthernet2|netBios|xns|vines|ipV6|usrDefined|rarp|PPPoE> [<pid>] [name <value>] [color <value>] [encap <value>]	Creates a VLAN by protocol. • **name <value>** is the name of VLAN {string length 0..64}. • **color <value>** is the color of vlan {0..32}. • **encap <value>** is the frame encapsulation {ethernet-ii|llc|snap}.
bysrcmac-mstprstp <instance-id> [name <value>] [color <value>]	Creates a VLAN by source MAC address. • **instance-id** is the instance ID in the range of 0 to 63. • **name <value>** is the name of VLAN {string length 0..64}. • **color <value>** is the color of vlan {0..32}.
bysvlan-mstprstp <instance-id> [name <value>] [color <value>]	Creates an sVLAN. • **instance-id** is the instance ID in the range of 0 to 63. • **name <value>** is the name of VLAN {string length 0..64}. • **color <value>** is the color of vlan {0..32}.

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Variable	Value
forIDS-mstprstp <instance -id> [name <value>] [color <value>]	Creates an VLAN for IDS. • **instance-id** is the instance ID in the range of 0 to 63. • **name <value>** is the name of VLAN {string length 0..64}. • **color <value>** is the color of vlan {0..32}.
info	Shows current-level parameter settings and next-level directories.

config vlan ip create

Use this command to assign an IP address to a VLAN.

Syntax

config vlan <vid> ip create <ipaddr|mask> [mac_offset <value>]

Parameters

Variable	Value
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

Variable	Value
<ipaddr|mask> [mac_offset <value>]	Assigns an IP address and subnet mask to the VLAN: • **ipaddr|mask** is the IP address and mask {a.b.c.d}. • **mac_offset <value>** is a user-assigned MAC address. This MAC address replaces the default MAC address.
delete <ipaddr>	Deletes the specified VLAN address.

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Variable	Value
info	Shows current-level parameter settings and next-level directories.
Rvs-Path-Chk <enable|disable> [mode <value>]	Enables or disables reverse path checking: • **enable|disable** enables or disables reverse path checking. • **mode <value>** is the mode for reverse path checking—**exist-only** or **strict**.

config vlan action

Use this command to configure miscellaneous VLAN settings.

Syntax

config vlan <vid> action <action choice>

Parameters

Variable	Value
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

Variable	Value
action <action choice>	Flushes a table or triggers an Routing Information Protocol (RIP) update. **action choice** is {none| flushMacFdb|flushArp|flushIp| flushDynMemb|all| triggerRipUpdate| flushSnoopMRtr}. To flush all tables, use all.
add-mlt <integer>	Adds an MultiLink trunk (MLT) to a VLAN. **integer** is the MLT ID.
addDsapSsap <DSAP/SSAP values>	Adds destination service access Point (DSAP)/source service access point (SSAP) to systems network architecture (SNA)/USR defined VLANs. **DSAP/SSAP values** for SNA and user defined VLANs (0x0..0xffff).

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Variable	Value
agetime <integer>	Sets the VLAN aging time in seconds.
delete	Deletes a VLAN.
info	Shows characteristics of the specified VLAN.
name <vname>	Changes the name of a VLAN. **vname** is a string of length 0 to 20 characters.
nlb-mode <disable/igmp-mcast/multicast/unicast	Sets the NLB mode for a VLAN.
qos-level <integer>	Sets a Quality of Service (QoS) level for a VLAN. **integer** is the QoS level. QoS level 7 is reserved for network control traffic.
removeDsapSsap <DSAP/SSAP values>	Removes DSAP/SSAP to SNA/USR defined VLANs. DSAP/SSAP values for SNA and user-defined VLANs (0x0..0xffff).
vrf <vrfName>	Associates a VRF to a VLAN.

config vlan fdb-entry

Use this command to configure entries in the forwarding database.

Syntax

config vlan <vid> fdb-entry aging-time <seconds>

Parameters

Variable	Value
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

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Related commands

Variable	Value
aging-time <seconds>	Sets FDB aging timer. **seconds** indicates the timeout period in seconds. {10..1000000}. The default value is 300.
flush	Flushes forwarding database.
info	Shows current-level parameter settings and next-level directories.
monitor <mac> status <value> <true|false>	Sets forwarding database monitor parameters: • **mac** indicates the MAC address. • **status <value>** allows you to view the current status of the forwarding database according to one of the following choices: {other | invalid | learned | self | mgmt}. • **true|false** enables or disables the monitor.
qos-level <mac> status <value> <0...6>	Sets a QoS level for a VLAN: • **mac** indicates the MAC address. • **status <value>** is the forwarding database status according to one of the following choices: {other|invalid|learned|self|mgmt}. • **0-6** sets the QoS level. **ATTENTION** QoS level 6is reserved for network control traffic.
sync	Synchronizes the switch forwarding database with the forwarding database of the other aggregation switch.

config vlan fdb-filter

Use this command to configure VLAN filter members.

Syntax

config vlan <vid> fdb-filter add <mac> port <value> [qos <value>]

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Parameters

Variable	Value
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

Variable	Value
add <mac> port <value> [qos <value>]	Adds a filter member to a VLAN bridge. • **<mac>** indicates the MAC address. • **qos <value>** specifies the QoS level in the range of 0 to 6.
info	Shows current-level parameter settings and next-level directories.
pcap <mac> <enable|disable>	Enables or disables the Packet Capture Tool (PCAP). **mac** indicates the MAC address.
remove <mac>	Removes a filter member from a VLAN bridge. **mac** indicates the MAC address.

config vlan fdb-filter notallowfrom

Use this command to configure a VLAN not-allowed member.

Syntax

config vlan <vid> fdb-filter notallowfrom add <mac> port <value> <srcOnly|dstOnly|Both>]

Parameters

Variable	Value
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

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Related commands

Variable	Value
add <mac> port <value> <srcOnly|dstOnly|Both>]	Adds a not allowed filter member to a VLAN bridge. • **mac** indicates the MAC address. • **port <value>** indicates the portlist number. • **srcOnly|dstOnly|Both** indicates mask to be set.
info	Shows current-level parameter settings and next-level directories.
remove <mac> port <value> [<srcOnly|dstOnly|Both>]	Removes a not allowed filter member from a VLAN bridge: • **mac** indicates the MAC address. • **value** indicates the port (slot/port) number. • **srcOnly|dstOnly|Both** is an optional command to set a mask.

config vlan fdb-static add

Use this command to configure static members of a VLAN.

Syntax

config vlan <vid> fdb-static add <mac> port <value> [qos <value>]

Parameters

Variable	Value
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

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Related commands

Variable	Value
add <mac> port <value> <srcOnly|dstOnly|Both>]	Adds a not allowed filter member to a VLAN bridge. • **mac** indicates the MAC address. • **port <value>** indicates the portlist number. • **srcOnly|dstOnly|Both** indicates mask to be set.
info	Shows current-level parameter settings and next-level directories.
remove <mac>	Removes a static member from a VLAN bridge.

config ethernet limit-fdb-learning

Use this command to enable MAC address learning on the specified ports.

Syntax

config ethernet <ports> limit-fdb-learning fdbprotect enable

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet limit-fdb-learning max-mac-count

Use this command to set the maximum limit of forwarding database-entries (fdb-entries) that can be learned on the specified ports.

Syntax

config ethernet <ports> limit-fdb-learning max-mac-count <value>

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Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet limit-fdb-learning min-mac-count

Use this command to set the minimum limit of fdb-entries at which fdb-learning will be reenabled on the specified ports.

Syntax

config ethernet <ports> limit-fdb-learning min-mac-count <value>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet limit-fdb-learning violation-log-trap

Use this command to view the configuration information related to MAC learning.

Syntax

config ethernet <ports> limit-fdb-learning violation-log -trap enable

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

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Default

None

Related commands

None

config ethernet limit-fdb-learning

Use this command to enable the action taken on the ports in the event of a violation.

Syntax

config ethernet <ports> limit-fdb-learning violation-down-port enable

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet action flushMacFdb

Use this command to change max-mac-count or min-mac-count when MAC learning is already enabled, flush the fdb-entries on the particular port.

Syntax

config ethernet <ports> action flushMacFdb

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

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config vlan ports add

Use this command to add or remove ports in a VLAN.

Syntax

config vlan <vid> ports add <ports> [member <value>]
config vlan <vid> ports remove <ports> [member <value>]

Parameters

Variable	Value
<ports> [member <value>]	• **ports** is the port list. • **member <value>** is the port member type.
<vid>	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.

Default

None

Related commands

Variable	Value
add <ports> [member <value>]	Adds a not allowed filter member to a VLAN bridge. • **mac** indicates the MAC address. • **port <value>** indicates the portlist number. • **srcOnly | dstOnly | Both** indicates mask to be set.
info	Shows member status of the ports in the VLAN.
ospf-passive <true | false> <ports>	Enables or disables the Open Shortest Path First (OSPF) passive port: • **true | false** enables or disables the OSPF port. • **ports** is the port list.
remove <ports> [member <value>]	Removes ports from a VLAN but does not delete the VLAN: • **ports** is the port list. • **member <value>** is the port member type. It can be **portmember** (always a

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Variable	Value
	member), **static** (sometimes a member), or **notallowed** (never a member).

config vlan srcmac add

Use this command to add or remove source MAC addresses for a VLAN.

Syntax

config vlan <vid> srcmac add <macaddr>
config vlan <vid> srcmac remove <macaddr>

Parameters

Variable	Value
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

Variable	Value
add <macaddr>	Adds source MAC address to a VL AN.**macaddr**is the MAC address {0x00:0x00:0x00:0x00:0x00:0x00}.
info	Shows current-level parameter settings and next-level directories.
remove <macaddr>	Removes a source MAC address from a VLAN. **macaddr** is the MAC address to be removed.

config vlan ip nlb-unicast-mode

Use this command to configure NLB unicast support on an IP interface.

Syntax

config vlan <vid> ip nlb-unicast-mode enable

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Parameters

Variable	Value
`enable`	Enables or disables unicast mode.
`<vid`	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

None

config ethernet untag-port-default-vlan

Use this command to configure untagging default VLAN on a tagged port.

Syntax

`config ethernet <ports> untag-port-default-vlan enable`

Parameters

Variable	Value
`<ports>`	Specifies the port of the list of ports in slot/port format.

Default

None

Related commands

None

config sys set flag enhanced-operational-mode

Use this command to configure enhanced operation mode.

Syntax

`config sys set flag enhanced-operational-mode true`

Parameters

Variable	Value
`<true|false>`	Enables or disables Enhanced Operation mode for the system.

Default

None

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Related commands

None

config ethernet loop-detect

Use this command to configure loop detection.

Syntax

config ethernet <port> loop-detect enable

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config info

Use this command to view the current flap time settings.

Syntax

config info

Parameters

None

Default

None

Related commands

None

config ethernet info

Use this command to verify whether the loop detection feature is enabled or disabled on the port.

Syntax

config ethernet <port number> info

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Parameters

Variable	Value
port number	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet auto-recover-port

Use this command to enable or disable auto-recovery on individual ports.

Syntax

config ethernet <ports> auto-recover-port enable

Parameters

Variable	Value
<port>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config auto-recover-delay

Use this command to set the recovery timer on a port.

Syntax

config auto-recover-delay <seconds>

Parameters

Variable	Value
seconds	specifies the time delay for auto-recovery of ports in the range of 5 to 3600.

Default

None

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Related commands

None

config ethernet action clearLoopDetectAlarm

Use this command to clear loop detection alarms.

Syntax

config ethernet <port number> action clearLoopDetectAlarm

Parameters

Variable	Value
<port>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet spoof-detect

Use this command to enable spoof detection.

Syntax

config ethernet <ports> spoof-detect enable

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config ethernet tagged-frames-discard

Use this command to set discard tagged frames.

Syntax

config ethernet <ports> tagged-frames-discard <enable|disable>

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Parameters

Variable	Value
`<enable|disable>`	Enables or disables discard tagged frames.

Default

None

Related commands

None

config ethernet auto-recover-port

Use this command to enable auto-recovery .

Syntax

`config ethernet <ports> auto-recover-port enable`

Parameters

Variable	Value
`ports`	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config vlan create addDsapSsap

Use this command to configure multiple DSAP and SSAP.

Syntax

`config vlan <vid> create addDsapSsap`

Parameters

Variable	Value
`<vid>`	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

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Related commands

Variable	Value
addDsapSsap <value>	Specifies the DSAP/SSAP values (values are in hexadecimal).
removeDsapSsap <value>	Specifies the DSAP/SSAP values (values are in hexadecimal). 32 entries are allowed for **sna802dot2** or **usrDefined** VLANs.

config fdb fdb-filter add

Use this command to configure global MAC address filtering.

Syntax

config fdb fdb-filter add <mac>

Parameters

Variable	Value
mac	Specifies the MAC address.

Default

None

Related commands

Variable	Value
add <mac>	Adds a global Forwarding Database (FDB) filter. **mac** is the MAC address to filter. Enter the MAC address in the following format: {0x00:0x00:0x00:0x00:0x00:0x00}.
info	Shows current-level parameter settings and next-level directories.
remove <mac>	Removes a global FDB filter. **mac** is the MAC address to filter. Enter the MAC address in the following format: {0x00:0x00:0x00:0x00:0x00:0x00}.

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config vlan create bysvlan-mstprstp

Use this command to create a VLAN of type sVLAN.

Syntax

config vlan <vid> create bysvlan-mstprstp <instance-id> [name <value>] [color <value>]

Parameters

Variable	Value
instance-id	Specifies the instance ID in the range of 0 to 63.
name <value>	Specifies the VLAN name. The string length ranges from 1 to 64.
color <value>	Specifies the color of the VLAN in the range of 0 to 32.

Default

None

Related commands

None

config svlan ether-type level

Use this command to indicate which protocol is transported in an Ethernet frame and to set the switch level associated with the sVLAN.

Syntax

config svlan ether-type level <value> <ethertype>

Parameters

variable	Value
ether-type level <value> <ethertype>	Sets an sVLAN tag for a switch level. • **value** is an integer value in the range 1 to 7. • **ethertype** is a hex value in the range of 0x5dd to 0xffff.

Default

None

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Related commands

Variable	Value
info	Shows current configuration information for an sVLAN.
level <value>	Specifies the switch level associated with this sVLAN. **level** is an integer value in the range of 0 to 7. Level 0 (normal port) 802.1Q frames are classified into port-based VLANs. Level 1–7: any frame type is transparently switched and an additional Ethertype 4 bytes is added. For sVLAN configurations, you must set the switch level to 1 or higher. The default level is 0.

config ethernet svlan-porttype

Use this command to set the sVLAN port type.

Syntax

config ethernet <ports> svlan-porttype <normal|uni|nni>

Parameters

Variable	Value
svlan-porttype <normal|uni|nni>	Sets the port type for the sVLAN to: • normal • UNI • NNI The default is normal. **ATTENTION** Designate all ports within an OctaPID as either normal or sVLAN (that is, the ports can be all Normal or a combination of UNI/NNI within the Octapid, which can be up to eight ports). When you configure a UNI port in the CLI, the tagged-frames-discard parameter is automatically enabled.

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Variable	Value
	When you configure an NNI port in the CLI, the untagged-frames-discard parameter is automatically enabled.

Default

None

Related commands

Variable	Value
info	Shows the current port settings.

config stg add ports

Use this command to create an sVLAN STG.

Syntax

config stg add ports <value> create [<ports>] [vlan <value>] [mac <value>] [type <value>] [ntstg <value>]

Parameters

Variable	Value
add ports <value>	Adds ports for the STG: **value** is the port list.
create [<ports>] [vlan <value>] [mac <value>] [type <value>] [ntstg <value>]	Creates a new STG • **ports** specifies one or more ports. • **vlan <value>** is the tagged BPDU VLAN ID. If a VLAN spans multiple switches, it must be within the same STG across all switches. • **mac <value>** is the tagged BPDU MAC address. • **type <value>** sets the STG to normal or sVLAN. Choices are **stgsvlan** or **stgnormal**. • **ntstg <value>** enables or disables NTSTG. Choices are **enable** or **disable**.
delete	Deletes an STG.

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Variable	Value
forward-delay <timeval>	Bridges forward delay time for the STG. **<timeval>** is the number in hundredths of a second.
group-stp <enable|disable>	Enables or disables STP for a specific STG.
hello-interval <timeval>	Bridge hello time for the STG. **<timeval>** is the number in hundredths of a second.
info	Shows current configuration information.
max-age <timeval>	Bridge maximum age time for the STG. **<timeval>** is the number in hundredths of a second.
priority <number>	Bridge priority for the STG. **number** is the priority number.
remove ports <value>	Removes ports from STG. **value** is the port list.
<sid>	Spanning tree group ID.
trap-stp <enable|disable>	Enables or disables STP traps for a specific STG.

Default

None

Related commands

None

config stg add ports

Use this command to add the required number of UNI ports or NNI ports to the STG.

Syntax

config stg <sid> add ports <ports>

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Parameters

Variable	Value
add ports <ports>	Adds ports to a STG. **ports** specifies one or more ports.

Default

None

Related commands

None

config bootconfig flags spanning-tree-mode

Use this command to configure the spanning tree protocol mode.

Syntax

config bootconfig flags spanning-tree-mode <rstp|mstp|default>

Parameters

Variable	Value
rstp|mstp|default	Specifies the Spanning Tree modes Rapid Spanning Tree Protocol (RSTP), Multiple Spanning Tree Protocol (MSTP), and classic.

Default

The default is classic.

Related commands

None

config stg

Use this command to configure spanning tree group parameters.

Syntax

config stg <sid>

Parameters

Variable	Value
sid	Specifies the spanning tree group ID.

Default

None

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Related commands

Variable	Value
add ports <ports>	Adds port to a spanning tree group. • **ports** specifies one or more slot/port numbers. Ports can not be added to the STG if they are: • configured as Single Port SMLT • configured as members of another STG
create [<ports>] [vlan <value>] [mac <value>] [type <value>] [ntstg <value>]	Creates a new spanning tree group. • **ports** specifies one or more slot/port numbers. Ports cannot be added to the STG if configured as Single Port SMLT, or as a member of another STG. • **vlan <value>** is the VLAN ID. If a VLAN spans multiple switches, it must be within the same STG across all switches. • **mac <value>** is the MAC address. • **type <value>** is the type of STG. Choices are **stgnormal** or **stgsvlan**. • **ntstg <value>** enables or disables STP. Choices are **enable** or **disable**.
delete	Deletes the specified spanning tree group.
forward-delay <timeval>	Sets the bridge forward delay time in hundredths of a second. The default is 1500 (15 seconds).
group-stp <enable|disable>	Enables or disables the Spanning Tree Protocol on the specified spanning tree group.
hello-interval <timeval>	Sets the bridge hello time in hundredths of a second. The default is 200 (2 seconds).
info	Shows characteristics of the spanning tree group.
max-age <timeval>	Sets the bridge maximum age time in hundredths of a second. The default is 2000 (20 seconds).
priority <number>	Sets the bridge priority number. **number** is between 0 and 65535.

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Variable	Value
remove ports <value>	Removes ports from a spanning tree group. **value** is the specified port.
sid	Specifies the spanning tree group ID.
trap-stp <enable|disable>	Enables or disables the Spanning Tree Protocol trap for the specified spanning tree group.

config ethernet stg

Use this command to configure STG port parameters.

Syntax

config ethernet <ports> stg <sid>

Parameters

Variable	Value
<sid>	Specifies the spanning tree group ID.
<ports>	Specifies the slot/port you want to add to the STG.

Default

None

Related commands

Variable	Value
change-detection enable	Enables or disables topology change detection for the specified spanning tree. The default is enable.
faststart <enable|disable>	Enables or disables the FastStart feature. When FastStart is enabled, the port goes through the normal listening and learning states before forwarding, but the hold time for these states is the bridge hello timer (2 seconds by default) instead of the bridge forward delay timer (15 seconds by default).
info	Shows current settings for the port spanning tree group.

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Variable	Value
pathcost <intval>	Sets the contribution of this port to the path cost: **intval** is the cost (1 to 6535).
priority <intval>	Sets the priority of this port: **intval** is the priority (0 to 255). Although port priority values can range from 0 to 255, only the following values are used: 0, 16, 32, 48, 64, 80, 96, 112, 128, 144, 160, 176, 192, 208, 224, 240.
stp<enable|disable>	Enables or disables the Spanning Tree Protocol. The Spanning Tree Protocol must be disabled on SMLT or IST ports.

config ethernet stg change-detection

Use this command to configure topology change detection.

Syntax

config ethernet <ports> stg <sid> change-detection <enable|disable>

Parameters

Variable	Value
enable|disable	Enable or disable the topology change detection.

Default

None

Related commands

Variable	Value
<ports>	Specifies the slot/port you want to add to the STG.
<sid>	Specifies the spanning tree group ID.

config ethernet stg info

Use this command to query the change detection setting.

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Syntax

config ethernet <ports> stg <sid> info

Parameters

Variable	Value
<ports>	Specifies the slot/port you want to add to the STG.
<sid>	Specifies the spanning tree group ID.

Default

None

Related commands

None

config rstp force version

Use this command to configure the RSTP parameters to set the ports.

Syntax

config rstp force-version <stp-compatible|rstp>

Parameters

Variable	Value
force-version <stp-compatible|rstp>	Sets the RSTP bridge version.

Default

The default is RSTP.

Related commands

Variable	Value
forward-delay <number>	Sets the RSTP forward delay for the bridge from 400 to 3000 hundredths of a second.
group-stp <enable|disable>	Enables or disables RSTP for a specific STG.
hello-time <number>	Sets the RSTP hello time delay for the bridge from 100 to 1000 hundredths of a second.
info	Shows current-level parameter settings and next-level directories.
max-age <number>	Sets the RSTP maximum age time for the bridge from 600 to 4000 hundredths of a second.

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Variable	Value
pathcost-type <16-bit|32-bit>	Sets the RSTP default pathcost version; The default is 32 bits.
priority <number>	Sets the RSTP bridge priority in a range of 0 to 61440 in steps of 4096.
tx-holdcount <number>	Sets the RSTP Transmit Hold Count from 1 to 10; The default value is 3.

config ethernet rstp

Use this command to configure Ethernet RSTP parameters.

Syntax

config ethernet rstp info

Parameters

None

Default

None

Related commands

Variable	Value
edge-portedge-port <true|false>	Sets the RSTP edge port parameter for the port.
info	Shows current-level parameter settings and next-level directories.
p2p <forcetrue|forcefalse |auto>	Sets the Ethernet RSTP point-to-point parameter for the port.
pathcost <value>	Sets the RSTP path cost parameter for the port in the range of 1 to 20000000.
priority <value>	Sets the Ethernet RSTP priority parameter for the port. The priority ranges in the range of 0 to 240 in steps of 16 (0, 16, 32, ... , 240).
protocol-migration <true|false>	Sets the Ethernet RSTP protocol-migration parameter for the port.
stp <enabel|disable>	Enables or disables STP on the port.

config mstp

Use this command to configure Multiple Spanning Tree Protocol (MSTP).

Syntax

config mstp

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Parameters

None

Default

None

Related commands

Variable	Value
hopcount <number>	Sets the MSTP hop count. The range is 400 to 4000 hundredths of a second; the default is 2000.
info	Shows current-level parameter settings and next-level directories.
pathcost-type <16-bit|32-bit>	Sets the MSTP default path cost version; default is 32 bits.
tx-holdcount <number>	Sets the MSTP Transmit Hold Count. The range is 1 to 10; the default is 3.

config mstp region

Use this command to configure an MSTP region.

Syntax

config mstp region

Parameters

None

Default

None

Related commands

Variable	Value
config-id-sel <number>	Sets the MSTP region configuration ID number: **number** is in a range of 0 and 255.
info	Shows current-level parameter settings and next-level directories.
name <string>	Sets the MSTP configuration name: **string** is in a range of 1 to 32 characters.
revision <number>	Sets the MSTP region revision number: **number** in a range of 0 and 65535.

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config mstp cist

Use this command to configure MSTP CIST.

Syntax

config mstp cist

Parameters

None

Default

None

Related commands

Variable	Value
force-version <stp-compatible|rstp|mstp>	Sets the CIST version.
forward-delay <number>	Sets the CIST forward delay from 400 to 3000 hundredths of a second; the default is 1500.
info	Shows current-level parameter settings and next-level directories.
max-age <number>	Sets the CIST maximum age time from 600 to 4000 hundredths of a second for the bridge; the default is 2000. The step size is in hundreds of a second.
priority <number>	Sets the CIST bridge priority from 0 to 61 440 in steps of 4096; the default is 32768.

config mstp msti

Use this command to configure MSTP MSTI.

Syntax

config mstp msti <instid>

Parameters

Variable	Value
<instid>	Specifies the instance ID.

Default

None

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Related commands

Variable	Value
info	Shows current-level parameter settings and next-level directories.
priority	Sets the MSTP bridge priority. Allowed values are 4096, 8192, 12288, 16384, 20480, 24576, 28672, 32768, 36864, 40960, 4556, 49152, 53248, 57344, 61440.

config eth mstp cist

Use this command to configure Ethernet MSTP CIST.

Syntax

config eth <portList> mstp cist

Parameters

None

Default

None

Related commands

Variable	Value
edge-port <true|false>	Sets the MSTP edge port parameter for the port.
forceportstate <enable|disable>	Sets the force port state for a port.
hello-time <value>	Sets the hello time for a port from 100 to 1000 hundredths of a second.
info	Shows current-level parameter settings and next-level directories.
p2p <forcetrue|forcefalse|auto>	Sets the Ethernet MSTP CIST point-to-point parameter for the port.
protocol-migration <true|false>	Sets the Ethernet MSTP CIST protocol-migration parameter for the port.
priority <value>	Sets the Ethernet MSTP CIST priority parameter for the port. The priority must be set in steps of 16 within the range 0–240.

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Variable	Value
`pathcost <number>`	Sets the MSTP path cost parameter for the port.
`<portList>`	Specifies the port list.

config eth mstp msti

Use this command to configure Ethernet MSTP MSTI.

Syntax

```
config eth <portList> mstp msti <instid>
```

Parameters

Variable	Value
`<instid>`	Specifies the instance ID.
`<portList>`	Specifies the port list.

Default

None

Related commands

Variable	Value
`forceportstate <enable|disable>`	Sets the MSTP MSTI force port state parameter for the port.
`info`	Shows current-level parameter settings and next-level directories.
`priority <value>`	Sets the Ethernet MSTP MSTI priority parameter for the port.
`pathcost <value>`	Sets the MSTP MSTI path cost parameter for the port.

config vlan ip igmp mrdisc max-advertisement-interval

Use this command to set alias port name.

Syntax

```
config vlan <vid> ip igmp mrdisc max-advertisement-interval
[seconds]
```

Parameters

Variable	Value
`<vid>`	Specifies the VLAN ID in the range of 1 to 4094.

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Default

None

Related commands

Variable	Value
info	Displays current level parameter settings and next level directories.
max-advertisement-interval [seconds]	Specifies the maximum interval between successive advertisements. **[seconds]** is the maximum advertisement interval {2..180}.
max-initial-advertisement-interval [seconds]	Specifies the maximum advertisements after initialization.
max-initial-advertisements [integer]	maximum advertisements after initialisation. **integer** is the maximum initial advertisements {2..15}.
min-advertisement-interval [seconds]	Specifies the minimum interval between successive advertisements. **seconds** is the minimum advertisement interval {3..180}.
mrdisc-enable <enable|disable>	Enables or disables MRDISC.
neighbor-dead-interval [seconds]	Specifies the maximum time allowed before a neighbor is declared dead.

config vlan ip route-discovery advertise-flag

Use this command to sets or resets the advertise flag for route discovery.

Syntax

config vlan <vid> ip route-discovery advertise-flag <true|false>

Parameters

None

Default

None

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Related commands

Variable	Value
advertisement-address <224.0.0.1 OR 255.255.255.255>	Specifies the Route discovery advertisement address. **224.0.0.1 OR 255.255.255.255** is the advertisement-address in the {a.b.c.d} format.
advertisement-lifetime <seconds>	Specifies the lifetime for router advertisements. **seconds** is the advertisement-lifetime in the range of 4 to 9000.
info	Displays current level parameter settings and next level directories.
max-advertisement-interval <seconds>	Specifies the maximum advertisement interval for router advertisements. **seconds** is the maximum-advertisement-interval in the range of 4 to 1800.
min-advertisement-interval <seconds>	Specifies the minimum advertisement interval for router advertisements. **seconds** is the minimum-advertisement-interval in the range of 3 to 1800.
preference-level <preference-level value>	Specifies the preference level for router advertisement. **preference-level value** is the preference-level {-2147483648..2147483647}

config vlan ipv6 mld last-memb-query-int

Use this command to create VLAN IPv6 MLD Last Member Query Interval.

Syntax

config vlan <vid> ipv6 mld last-memb-query-int <seconds>

Parameters

Variable	Value
<vid>	Specifies the VLAN ID in the range of 1 to 4094.
<seconds>	Specifies the Last member query interval time in seconds {0..65535}.

Default

None

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Related commands

Variable	Value
info	Creates VLAN IPv6 MLD information command.
last-memb-query-int <seconds>	Creates VLAN IPv6 MLD Last Member Query Interval command. **seconds** is the Last member query interval time in seconds {0..65535}.
query-interval <seconds>	Creates VLAN IPv6 MLD query interval command. **seconds** is the Query interval time in seconds {0..65535}.
query-max-resp <seconds>	Creates VLAN IPv6 MLD query maximum response command.
robustval <integer>	Creates VLAN IPv6 MLD robustval command. **seconds** is the Robustness value in INT {0..65535}.
version <1|2>	Creates VLAN IPv6 MLD version command. **1|2** is the version of the MLD {1..2}.

show sys link-flap-detect

Use this command to view link-flap-detection information.

Syntax

show sys link-flap-detect general-info

Parameters

None

Default

None

Related commands

None

show ports info loop-detected port

Use this command to display the results of loop detection in any VLAN.

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Syntax

show ports info loop-detected port <port value>

Parameters

Variable	Value
port value	Specifies the portlist.

Default

None

Related commands

Variable	Value
vlan <value>	Specifies the VLAN IDs.

show vlan info all

Use this command to display all general information about the VLANs on the switch or a specified VLAN.

Syntax

show vlan info all [<vid>] [port <value>] [by <value>]

Parameters

Variable	Value
<vid>	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.
port <value>	Specifies the port list.
by <value>	Specifies the group information by ID number, or by each feature {default|Id}.

Default

The default is 1.

Related commands

None

show vlan info fdb-entry

Use this command to display the forwarding database information for the specified VLAN.

Syntax

show vlan info fdb-entry [<vid>] [mac <value>]

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Parameters

Variable	Value
`mac <value>`	Specifies the MAC address.
`[port <value> ]`	Specifies the port or range of ports in slot/port format.

Default

None

Related commands

None

show vlan info fdb-static

Use this command to display the static forwarding database status.

Syntax

```
show vlan info fdb-static [ <vid> ] [mac <value> ]
```

Parameters

Variable	Value
`<vid>`	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.

Default

The default is 1.

Related commands

None

show vlan info advance

Use this command to display the advanced parameters for the specified VLAN or for all VLANs..

Syntax

```
show vlan info advance [ <vid> ] [port <value> ]
```

Parameters

Variable	Value
`port <value>`	Specifies the port or range of ports.
`vid`	Specifies the VLAN ID. The range is between 1 and 4094.

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Default

The default value is 1.

Related commands

None

show vlan info arp

Use this command to view ARP configurations.

Syntax

show vlan info arp [<vid>] [port <value>] <vid>

Parameters

Variable	Value
port <value>	Specifies the port or range of ports.
vid	Specifies the VLAN ID in the range of 1 to 4094.

Default

The default is 1.

Related commands

None

show vlan info basic

Use this command to display the basic configuration for all VLANs or a specified VLAN.

Syntax

show vlan info basic [<vid>] [port <value>]

Parameters

Variable	Value
port <value>	Specifies the port or range of ports. **ATTENTION** The entry of a **port value** is optional.

Default

The default value is 1.

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Related commands

Variable	Value
`<vid>`	Specifies the VLAN ID. The range is between 1 and 4094.

show vlan info brouter-port

Use this command to display the brouter port VLAN information for a specifed VLAN or all VLANs.

Syntax

`show vlan info brouter-port [ port <value> ]`

Parameters

Variable	Value
`port <value>`	Specifies the port or range of ports. **ATTENTION** The entry of a **`value`** is optional. When you enter a value, the command shows information for the specified port. Without the value, the command shows information for all the configured VLANs.

Default

None

Related commands

None

show vlan info igmp

Use this command to display the information about IGMP operation in the switch.

Syntax

`show vlan info igmp [ <vid> ] [port <value> ]`

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Parameters

Variable	Value
port <value>	Specifies the port or range of ports. **ATTENTION** The entry of a **port <value>** is optional. When you enter a port value, the command shows information for the specified VLAN or port. Without the port value, the command shows information for all the configured VLANs.

Default

The default value is 1.

Related commands

Variable	Value
<vid>	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.

show vlan info ip

Use this command to display the routing (IP) configuration for all VLANs on the switch or for the specified VLAN.

Syntax

show vlan info ip [<vid>] [port <value>]

Parameters

Variable	Value
port <value>	Specifies the port or range of ports. **ATTENTION** The entry of a **port <value>** is optional. When you enter a port value, the command shows information for the specified VLAN or port. Without the port value , the

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Variable	Value
	command shows information for all the configured VLANs.
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

None

show vlan info ports

Use this command to display useful port member status for a specified VLAN or all VLANs on the switch.

Syntax

show vlan info ports [<vid>] [port <value>]

Parameters

Variable	Value
port <value>	Specifies the port or range of ports. **ATTENTION** The entry of a **port <value>** is optional. When you enter a **port <value>**, the command shows information for the specified VLAN or port. Without the **port <value>**,

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Variable	Value
	the command shows information for all the configured VLANs.
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

None

show vlan info srcmac

Use this command to display the source MAC address for any source MAC-based VLANs on the switch or for the specified VLAN.

Syntax

show vlan info srcmac [<vid>] [port <value>]

Parameters

Variable	Value
port <value>	Specifies the port or range of ports. **ATTENTION** The entry of a **port <value>** is optional. When you enter a **port <value>**, the command shows information for the specified VLAN or port. Without the **port <value>**, the command shows information for all the configured VLANs.
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

None

show ports info vlans

Use this command to display VLAN port tagging information.

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Syntax

show ports info vlans [vlan <value>] [port <value>]

Parameters

Variable	Value
port <value>	Specifies the port or range of ports. The value ranges from 1 to 4094. **ATTENTION** The entry of a **port <value>** is optional. When you enter a **port <value>**, the command shows information for the specified VLAN or port. Without the **port <value>**, the command shows information for all the configured VLANs.
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

None

show ports info all

Use this command to ensure that the configuration is correct.

Syntax

show ports info all [vlan <value>] [port <value>] [by <value>]

Parameters

Variable	Value
by <value>	Specifies the group ID. **ATTENTION** The entry of a **by <value>** is optional. When you enter a **by <value>**, the command shows information for the specified VLAN or port. Without the **by <value>**, the command shows information for all the configured VLANs.

Default

None

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Related commands

Variable	Value
port <value>	Specifies the port or range of ports. **ATTENTION** The entry of a **port <value>** is optional. When you enter a **port <value>**, the command shows information for the specified VLAN or port. Without the **port <value>**, the command shows information for all the configured VLANs.
vid	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.

show svlan show all

Use this command to view and verify the current sVLAN Ethertype and the switch level information.

Syntax

show svlan show-all [file <value>]

Parameters

Variable	Value
show-all [file <value>]	Specifies the file name in the format **/pcmcia/<file>** | **/flash/<file>**. The string length ranges from 1 to 99.

Default

None

Related commands

None

show svlan info ether-type

Use this command to display ether type table.

Syntax

show svlan info ether-type

Parameters

None

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Default

None

Related commands

None

show stg show-all

Use this command to view all STG files.

Syntax

show stg show-all

Parameters

None

Default

None

Related commands

None

show stg info config

Use this command to view the STG configuration for the switch or for the specified spanning tree group.

Syntax

show stg info config <sid>

Parameters

Variable	Value
<sid>	Specifies the spanning tree group ID.

Default

None

Related commands

None

show stg info status

Use this command to view the spanning tree group status for the specified STG or for all STGs.

Syntax

show stg info status <sid>

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Parameters

Variable	Value
`<sid>`	Specifies the spanning tree group ID.

Default

eNon

Related commands

None

show ports info stg main

Use this command to view basic STG information for one or more specified ports or for all ports.

Syntax

show ports info stg main [vlan <value>] [port <value>]

Parameters

Variable	Value
port <value>	Specifies the port or range of ports. **ATTENTION** The entry of a **port <value>** is optional. A **port <value>** command shows information for the specified VLAN or port. Without the **port <value>**, information is shown for all the configured VLANs.
vid	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.

Default

None

Related commands

None

show ports info stg extended

Use this command to display additional STG information for the specified port or for all ports.

Syntax

show ports info stg extended [vlan <value>] [port <value>]

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Parameters

Variable	Value
port <value>	Specifies the port or range of ports. **ATTENTION** The entry of a **port <value>** is optional. A **port <value>** command shows information for the specified VLAN or port. Without the **port <value>**, information is shown for all the configured VLANs.
vid	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.

Default

None

Related commands

None

show rstp config

Use this command to display the RSTP configuration details.

Syntax

show rstp config

Parameters

None

Default

None

Related commands

None

show rstp status

Use this command to display the RSTP related status information for the selected bridge.

Syntax

show rstp status

Parameters

None

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Default

None

Related commands

None

show ports info rstp config

Use this command to display the RSTP related port level configuration details.

Syntax

show ports info rstp config [vlan <value>] [port <value>]

Parameters

Variable	Value
port <value>	Specifies a port or list of ports.
<vid>	Specifies the VLAN ID. The range is between 1 and 4094.

Default

The default value is 1.

Related commands

None

show ports info rstp role

Use this command to display the RSTP role.

Syntax

show ports info rstp role

Parameters

Variable	Value
vlan <value>	Specifies the VLAN ID. The range is between 1 and 4094.
port <value>	Specifies a port or list of ports.

Default

The default value is 1.

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Related commands

Variable	Value
`<vid>`	Specifies the VLAN ID. The range is between 1 and 4094. The default value is 1.
`port <value>`	Specifies a port or list of ports.

show mstp config

Use this command to viewing MSTP configurations.

Syntax

`show mstp config`

Parameters

None

Default

None

Related commands

None

show mstp instance

Use this command to display the MSTP instance-specific bridge and VLAN information.

Syntax

`show mstp instance <instid>`

Parameters

Variable	Value
`<instid>`	Specifies the instance ID.

Default

None

Related commands

None

show mstp status

Use this command to display the MSTP-related status information known by the selected bridge.

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Syntax

show mstp status

Parameters

None

Default

None

Related commands

None

show ports info mstp

Use this command to display the MSTP, CIST port, and MSTI port information maintained by every port of the common spanning tree.

Syntax

show ports info mstp

Parameters

None

Default

None

Related commands

Variable	Value
cistinfo [vlan <value>] [port <value>]	Shows the CIST port configuration: • **vlan <value>** specifies the VLAN IDs. • **port <value>** specifies the port list.
ciststat [vlan <value>] [port <valu>]	Shows statistics for the CIST port: • **vlan <value>** specifies the VLAN IDs. • **port <value>** specifies the port list.
cistrole [vlan <value>] [port <value>]	Shows the CIST port role: • **vlan <value>** specifies the VLAN IDs. • **port <value>** specifies the port list.

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Variable	Value
mstiinfo [vlan <value>] [port <value>]	Shows the MSTI port configuration: • **vlan <value>** specifies the VLAN IDs. • **port <value>** specifies the port list.
mstistat [vlan <value>] [port <value>]	Shows the MSTI port statistics: • **vlan <value>** specifies the VLAN IDs. • **port <value>** specifies the port list.
mstirole [vlan <value>] [port <value>]	Displays the MSTI port role: • **vlan <value>** specifies the VLAN IDs. • **port <value>** specifies the port list.

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WSM commands

This chapter describes the Ethernet Routing Switch 8600 WSM commands.

Navigation

- "copy" (page 1235)
- "connect " (page 1236)
- "setboot " (page 1236)
- "wsm info" (page 1237)
- "wsm info details" (page 1237)
- "wsm reset" (page 1237)

copy

Use this command to copy the files from a source to the required destination.

Syntax

wsm copy <srcfile> <destfile> [-y]

Parameters

Variable	Value
<dest file>	<dest file> = {a.b.c.d:|/pcmcia/|/flash/}<file> | /wsm/{1..10}[/{image1,image2,boot,cfg}]
<src file>	{a.b.c.d:|/pcmcia/|/flash/}<filename> | /wsm/{1..10}/[{image1,image2,boot,cfg,ptdmp}]

Default

None

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Related commands

None

connect

Use this command to connect to the WSM installed in the Ethernet Routing Switch 8600.

Syntax

wsm connect <slot Id>

Parameters

None

Default

None

Related commands

None

setboot

Use this command to set the image specified as the currently active boot image.

Syntax

wsm setboot [<slot Id>] [<image-choice>]

Parameters

Variable	Value
<image-choice>	**ATTENTION** If you do not specify an image, the **setboot** command returns the identity of the current boot image for all WSMs installed on the Ethernet Routing Switch 8600. Image specified as the currently active boot image.
<slot Id>	Enter the slot Id to specify a boot image.

Default

None

Related commands

None

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wsm info

Use this command to display information about all WSM installed in the switch chassis.

Syntax

wsm info [details]

Parameters

None

Default

None

Related commands

None

wsm info details

Use this command to display details about the WSM.

Syntax

wsm info [details]

Parameters

None

Default

None

Related commands

None

wsm reset

Use this command to reset one or all of the WSM.

Syntax

wsm wsmreset <slot Id>|"all">

Parameters

Variable	Value
<all>	Resets all the hardware in the WSM.
<slot Id>	Enter the slot Id of the hardware to be reset.

Default

None

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Related commands

None

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8672ATME and 8672ATMM modules commands

This chapter describes the Ethernet Routing Switch 8600 8672ATME and 8672ATMM modules commands.

Navigation

- “config atm card” (page 1239)
- “config atm action” (page 1240)
- “config atm pvc” (page 1241)
- “config atm pvc 1483” (page 1242)
- “config atm info” (page 1245)
- “config atm pvc f5-oam” (page 1245)
- “show ports info atm pvc ” (page 1248)
- “show ports stats interface main” (page 1248)
- “show ports info atm all” (page 1249)
- “show ports info atm fdb” (page 1249)
- “show ports info atm ports” (page 1249)
- “show ports info atm ” (page 1250)
- “show ports info atm ” (page 1250)

config atm card

Use this command to configure the ATM card.

Syntax

config atmcard <atmslot number>

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Parameters

Variable	Value
<atmslot number>	Slot number of the module in the Ethernet Routing Switch 8600 chassis.

Default

None

Related commands

Variable	Value
card-reset	Resets the card.
elan-stats <enable|disable>	Enables collection of ELAN statistics.
info	Displays the image file name for the module.
poll-period <poll-period>	Sets the polling interval for ELAN statistics.

config atm action

Use this command to configure ATM ports to display the information on port settings.

Syntax

config atm <ports> action <action choice>

Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
card-reset	Resets the card.
elan-stats <enable|disable>	Enables collection of ELAN statistics.
info	Displays the image file name for the module.
poll-period <poll-period>	Sets the polling interval for ELAN statistics.

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config atm pvc

Use this command to configure PVC for ATM.

Syntax

config atm <ports> pvc

Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
create <vpi.vci> [name <value>] [enc <value>] [serv <value>] [pcr <value>] [scr <value>] [mbs <value>]	Creates a PVC. The required parameters are: • **vpi** is the circuit VPI. Enter a numeric value, within the range. • **vci** is the circuit VCI. Enter a numeric value, within the range. For OC-3c, 11 bits split between Vpi and Vci. Vpi bits cannot exceed 6 bits for OC-3c. For OC-12c, 13 bits split between Vpi (default is 4) and Vci (default is 9). Vpi bits cannot exceed 8 bits for OC-12c. For DS3, 12 bits split between Vpi (default is 4) and Vci (default is 8). VpiBits cannot exceed 7bits for DS3. **ATTENTION** For <vpi.vci>, 0.0 is not supported. The optional parameters are: • **name** is the display string. Enter up to 256 alphanumeric characters to name the PVC. • **enc** is the 1483 encapsulation method, either null or llc-snap. • **serv** is the bit rate, either ubr or vbr.

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Variable	Value
	• **pcr**, with Variable Bit Rate (VBR) only, is the peak cell rate. The valid ranges are: OC-3—86..353207 OC-12—86..733490 DS3—86..96000 • **scr**, with VBR only, is the sustained cell rate. The valid ranges are: OC-3—86..353207 OC-12—86..733490 DS3—86..96000 • **mbs**, with VBR only, is the maximum burst size. Enter an integer from 2 to 255. **ATTENTION** No VLANs or ELANs are bound to the PVC until you add VLAN membership by using the **config atm <ports> pvc 1483** commands.
delete **<vpi.vci>**	Deletes the specified PVC. Note that this command will fail if the PVC is still being used by RFC 1483 traffic.

config atm pvc 1483

Use this command to configure 1483 parameters.

Syntax

config atm <ports> pvc 1483 {bridged|ip|ipx|muxIpIpx}

Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
bridged **info**	Displays information on 1483 ELANs.

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Variable	Value
bridged add **<vid> <vpi.vci>** [,**<vpi.vci>**]	Adds a number of PVCs to the specified 1483 ELAN. The required parameters are: **vid** is the VLAN ID number. **vpi.vci** are the circuit VPI and the circuit VCI numbers, respectively, separated by a period. **ATTENTION** This command fails if the specified VIDs or VPI/VCI pairs belong to another ELAN or already exist on this ELAN.
bridged create **<vid> <vpi.vci>** [,**<vpi.vci>**]...	Creates a 1483 ELAN consisting of the specified PVCs. The required parameters are: **vid** is the VLAN ID number. **vpi.vci** is the circuit VPI number and the circuit VCI numbers, respectively; they are separated by a period. **ATTENTION** This command fails if the specified VIDs or VPI/VCI pairs belong to another ELAN or already exist on this ELAN.
bridged delete **<vid>**	Deletes the specified ELAN.
remove **<vid> <vpi.vci>** [,**<vpi.vci>**]...	Removes a number of PVCs from the specified 1483 ELAN. The required parameters are: **vid** is the VLAN ID number. **vpi.vci** is the circuit VPI number and the circuit VCI numbers, respectively; they are separated by a period. **ATTENTION** This command fails if the PVCs are not present.
ipinfo	Displays information on routed 1483 IP circuits.

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Variable	Value
ipcreate **<vid> <vpi.vci> <remoteip>** [<InArpSend enable | disable>] [<arp send rate>]	Creates a routed 1483 IP circuit on the specified VLAN to the specified remote router interface. The required parameters are: • **vid** is the VLAN ID number. • **vpi.vci** is the circuit VPI number and the circuit VCI numbers, respectively; they are separated by a period. • **remoteip** is the IP address of the remote router interface. • **<InArpSend enable | disable>** enable or disable ARP send. • **<arp send rate>** specifies the arp send rate. **ATTENTION** The VLAN ID can exist only on this port.
ipdelete **<vid>**	Deletes the routed 1483 IP circuit on the specified VLAN.
ipxinfo	Displays information on routed 1483 IPX circuits.
ipxcreate **<vid> <vpi.vci> <ipx>**	Creates a routed 1483 IPX circuit on the specified VLAN to the specified remote router interface. The required parameters are: • **vid** is the VLAN ID number. • **vpi.vci** is the circuit VPI number and the circuit VCI numbers, respectively; they are separated by a period. • **ipx** is the IPX Network address of the remote router interface. If this address is not configured, the first IPX Network address configured for the specified VLAN is used. **ATTENTION** The VLAN ID must be previously configured for IPX on this port. No ARP functionality is available on this IPX segment.
ipxdelete **<vid>**	Deletes the routed 1483 IPX circuit on the specified VLAN.
muxIpIpx info	Displays the muxIpIpx ELAN information.

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Variable	Value
muxIpIpx create **<vci> <vpi.vci >** **<remoteip>** [**<ipx >**] [**<InArpSend enable | disable>**] [**<arp send rate>**]	Creates an IPX muxIpIpx ELAN where: • **<vid>** is the VLAN ID. • **<vpi.vci >** specifies a Vpi and Vci value. The ranges are (0-255. 0-4095) respectively. • **<remoteip>** specifies the remote IP address. • **<ipx>** is the IPX network number {0x00:0x00:0x00:0x00}. This is an optional parameter. • **<InArpSend enable | disable>** specifies whether to enable or disable ARP send. • **<arp send rate>** specifies the ARP send rate.
muxIpIpx delete **<vid >**	Deletes the muxIpIpx ELAN. **<vid>** is the VLAN ID .

config atm info

Use this command to display ATM information.

Syntax

config atm <ports> info

Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

config atm pvc f5-oam

Use this command to configure the ATM PVC F5-OAM Loopback feature for a virtual circuit (VC).

Syntax

config atm <slot/port> pvc f5-oam <vpi.vci> <enable>

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Parameters

Variable	Value
`<slot/port>`	Port number.
`<vpi.vci>`	Virtual path identifier and the virtual circuit identifier.

Default

None

Related commands

clear atm elan-stats

Use this command to clear ATM ELAN statistics.

Syntax

```
clear atm elan-stats [<ports>] [<vlan id>]
```

Parameters

Variable	Value
`<ports>`	Specifies the port or range of ports to configure in the slot/port format.
`<valn id>`	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related parameters

None

clear atm f5-stats

Use this command to clear ATM f5 statistics.

Syntax

```
clear atm f5-stats [<ports>]
```

Parameters

Variable	Value
`<ports>`	Specifies the port or range of ports to configure in the slot/port format.

Default

None

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Related parameters
None

clear atm port-stats
Use this command to clear port statistics.

Syntax
clear atm port-stats [<ports>]

Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default
None

Related parameters
None

clear atm port-stats
Use this command to clear port statistics.

Syntax
clear atm port-stats [<ports>]

Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default
None

Related parameters
None

clear atm port-stats
Use this command to clear port statistics.

Syntax
config atm <ports> ip traffic-filter add set <value>

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Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related parameters

None

show ports info atm pvc

Use this command to display the F5-OAM Loopback configuration, status, and statistics for a particular PVC.

Syntax

show ports info atm pvc [vlan <value>] [port <value>]
show ports info atm f5-oam [vlan <value>] [port <value>]

Parameters

Variable	Value
<slot/port>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

show ports stats interface main

Use this command to display packet loss counters.

Syntax

show ports stats {interface|ospf} main [port <value>

Parameters

None

Default

None

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Related commands

Variable	Value
`extended [port <value>]`	Displays port interface statistics.

show ports info atm all

Use this command to display configuration information.

Syntax

show ports info atm all [vlan <value>] [port <value>]

Parameters

Variable	Value
`<ports>`	Specifies the port or range of ports to configure in the slot/port format.

Default

Related commands

show ports info atm fdb

Use this command to display FDB information for the 1483 bridged point to multipoint PVCs.

Syntax

show ports info atm fdb [vlan <value>] [port <value>]

Parameters

None

Default

None

Related commands

None

show ports info atm ports

Use this command to display information about the configuration of ATM ports.

Syntax

show ports info atm ports [vlan <value>] [port <value>]

Parameters

None

Default

None

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Related commands

None

show ports info atm

Use this command to display information about the permanent virtual circuits (PVCs) for all the ports.

Syntax

show ports info atm pvc [ports]

Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

show ports info atm

Use this command to display 1483 circuit information.

Syntax

show ports info atm 1483 [<ports>]

Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

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8683 POSM modules commands

This chapter describes the Ethernet Routing Switch 8600 Administration commands.

Navigation

- “config poscard card-reset” (page 1252)
- “config poscard debug” (page 1253)
- “config pos ” (page 1253)
- “config pos ip config” (page 1255)
- “config pos ppp” (page 1255)
- “config pos info” (page 1257)
- “config pos sonet” (page 1257)
- “config pos stg” (page 1258)
- “config pos ipx” (page 1259)
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- “config pos ip arp-response” (page 1264)
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config poscard card-reset

Use this command to reset the POSM card .

Syntax

config poscard <posslot#> card-reset

Parameters

Variable	Value
card-reset	Resets the card.

Default

None

Related commands

Variable	Value
debug <enable|disable>	Enables or disables trace messages on the module so that they are displayed on the console of the switch.

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Variable	Value
info	Indicates the image file name and debug mode for the module.
pos-console <enable|disable>	Prints the trace message from the POSM card. This is a priv command. When the pos-console is enabled (on the host), POS prints trace messages on the POS console. You can also use this command to query information on the POSM card or port. To use this command, you must be in `priv` mode. The syntax to enter priv mode is **config/poscard/<port number>/priv**.

config poscard debug

Use this command to enable debugging.

Syntax

config poscard <posslot#> debug <enable|disable>

Parameters

Variable	Value
debug <enable|disable>	Enables or disables trace messages on the module so that they are displayed on the console of the switch.

Default

None

Related commands

Variable	Value
card-reset	Resets the card.
info	Indicates the image file name and debug mode for the module.
pos-console <enable|disable>	Prints the trace message from the POSM card. This is a priv command. When the pos-console is enabled (on the host), POS prints trace messages on the POS console. You can also use this command to query information on the POSM card or port. To use this command, you must be in `priv` mode. The syntax to enter priv mode is **config/poscard/<port number>/priv**.

config pos

Use this command to configure the POS port.

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Syntax

config pos <ports>

Parameters

Variable	Value
<ports>	Slot and port number for the module.

Default

None

Related commands

Variable	Value
default-vlan-id <vid>	Sets default VLAN ID.
info	Displays the last saved port settings and the next-level CLI commands; does not show the current settings.
ip	Specifies the port ip commands.
ipx	Specifies the port ipx commands.
lacp	802.3ad link aggregation control.
linktrap <enable|disable>	Enables or disables the link up or down trap for a port.
lock <true|false>	Locks a port for exclusive use if the port lock feature is globally enabled with the command **config sys set portlock on**.
name <name>	Assign or set a name.
<ports>	Slot and port number for the module.
pcap	Specifies the PCAP commands.
perform-tagging <enable|disable>	Enables or disables the IEEE 802.1Q tagging on the port.
ppp	Specifies the POS PPP commands.
state <enable|disable|test>	Sets the state to enable, disable, or test.
smlt	Specifies the POS port SMLT commands.
sonet	Specifies the POS SONET commands.
stg	Specifies the POS port stg commands.
svlan-porttype <uni|nni|normal>	Sets the sVLAN as a User Network Interface (UNI), Network-to-Network Interface (NNI) , or normal.
tagged-frames-discard <enable|disable>	Sets a port with tagging disabled to discard tagging frames.

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Variable	Value
untagged-frames-discard <enable|disable>	Sets a port with tagging enabled to discard untagged frames.
<vid>	Directs the switch to send the untagged frames to a default Virtual Local Area Network (VLAN) if received on a tagged port. **vid** is the VLAN ID of the default VLAN to which the discarded frames are sent.
vlacp	Virtual link aggregation control protocol.

config pos ip config

Use this command to create a brouter port.

Syntax

config pos <ports> ip config pos <ports> ip

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
create <ipaddr/mask> <vid> [mac_offset <value>]	Creates an IP address and assigns it to a VLAN, along with the VLAN ID. • **mac-offset** specifies the MAC address in the format 0x00:0x00:0x00:0x00:0x00:0x00. • **<value>** specifies the port number • **<vid>** specifies the VLAN (1 to 4094) for which you wish to create IP address or mask.
delete <ipaddr>	Deletes the IP address.
info	Shows the last saved port settings and the next-level CLI commands; does not show the current settings.

config pos ppp

Use this command to configure PPP on a port.

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Syntax

config pos <ports> ppp

Parameters

Variable	Value
ppp-stpmode <enable|disable>	Encapsulates spanning tree Bridge Protocol Data Unit (BPDU) packets as PPP. When enabled the BPDUs are encapsulated as in Request For Comment (RFC) 1638. When disabled, the BPDUs travel as bridged data (assuming bridge-admin-status is enabled).

Default

None

Related commands

Variable	Value
info	Shows the last saved port settings and the next-level CLI commands; does not show the current settings.
ip	Specifies the port ip commands.
ipx	Specifies the port ipx commands.
lacp	802.3ad link aggregation control.
linktrap <enable|disable>	Enables or disables the link up or down trap for a port.
lock <true|false>	Locks a port for exclusive use if the port lock feature is globally enabled with the command **config sys set portlock on**.
name <name>	Assign or set a name.
<ports>	Slot and port number for the module.
pcap	Specifies the PCAP commands.
perform-tagging <enable|disable>	Enables or disables the IEEE 802.1Q tagging on the port.
ppp	Specifies the POS PPP commands.
state <enable|disable|test>	Sets the state to enable, disable, or test.
smlt	Specifies the POS port SMLT commands.
sonet	Specifies the POS SONET commands.
stg	Specifies the POS port stg commands.

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Variable	Value
svlan-porttype <uni|nni|normal>	Sets the sVLAN as a User Network Interface (UNI), Network-to-Network Interface (NNI) , or normal.
tagged-frames-discard <enable|disable>	Sets a port with tagging disabled to discard tagging frames.
untagged-frames-discard <enable|disable>	Sets a port with tagging enabled to discard untagged frames.
<vid>	Directs the switch to send the untagged frames to a default Virtual Local Area Network (VLAN) if received on a tagged port. **vid** is the VLAN ID of the default VLAN to which the discarded frames are sent.
vlacp	Virtual link aggregation control protocol.

config pos info

Use this command to display the current state of the port .

Syntax

config pos <ports>info

Parameters

Variable	Value
info	Shows current-level parameter settings and next-level directories

Default

None

Related commands

None

config pos sonet

Use this command to configure port parameters for SONET on the 8683POSM Module.

Syntax

config pos <ports> sonet

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Parameters

Variable	Value
sonet	Shows the POS SONET commands.

Default

None

Related commands

Variable	Value
clock-source <internal|line>	Sets the clock source to: • **internal** means that the clocking is derived from an on-board clock. • **line** means that the clocking is derived from the line. **ATTENTION** If you have two connected modules, you must set both to internal, or one to line and another to internal; do not set both to line.
framing <sonet|sdh>	Sets the framing to: • **sonet** means the Synchronous Optical Network format, the standard format used in North America. • **sdh** means the Synchronous Digital Hierarchy clock format, the standard format used in Europe.
info	Shows the last saved port settings and the next-level CLI commands; does not show the current settings.
scramble <enable|disable>	Enables or disables scrambling.
section-trace <sectiontrace>	Sets the integer section trace flag (j0) in the range of 1 to 255.
z0-increment	Enables or disables z0 when the framing mode is set to SONET.

config pos stg

Use this command to configure Spanning Tree on a port.

Syntax

config pos <ports> stg <sid>

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Parameters

Variable	Value
stg	Specifies the POS port STG commands.

Default

None

Related commands

Variable	Value
change-detection <enable|disable>	Sets the topology change notification.
faststart <enable|disable>	Enables or disables the fast start flag.
info	Shows the last saved port settings and the next-level CLI commands; does not show the current settings.
pathcost <intval>	Sets the contribution of this port to the path cost. **intval** is an integer in the range of 1 to 65535.
priority <intval>	Sets the priority of this port. **intval** is an integer in the range of 0 to 255.
stp <enable|disable>	Enables or disables spanning tree protocol.

config pos ipx

Use this command to configure IPX parameters on the 8683POSM module.

Syntax

config pos <ports> ipx

Parameters

Variable	Value
ipx	Specifies the port IPX commands.

Default

None

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Related commands

Variable	Value
create <IPX-network-number> <vlan_id> <encapsulation> [mac_offset <value>] [tick <value>]	Creates the IPX network. • **IPX-network-number** is the network number in the form of {0x00000000 | 00:00:00:00 | <value> }. • **vlan_id** is the VLAN ID in the range of 1 to 4094. • **encapsulation** is the type of frame encapsulation **{ethernet-ii | snap | llc | raw}**. • **mac_offset <value>** is an optional parameter that you use to manually change the default Media Access Control (MAC) address for a logical or physical interface. **Value** is an integer from 0 to 65535. Default is the next available value. • **tick <value>** is the value that determines the best route for the IPX routed VLAN. The lower the tick value, the better the route. Enter a tick value with the range of 1 to 2147483647. Default is 1.
delete <IPX-network-number>	Deletes the IPX network. • **IPX-network-number** is the network number in form of {0x00000000 | 00:00:00:00 | <value> }.
info	Shows the last saved port settings and the next-level CLI commands; does not show the current settings.

config pos ipx rip

Use this command to configure RIP on IPX.

Syntax

config pos <ports> ipx rip

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

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Related commands

Variable	Value
info	Shows the last saved port settings and the next-level CLI commands; does not show the current settings.
in-policy <IPX-network-number> <policy-name>	Configures the incoming policy for the interface: • **IPX-network-number** is the network number in the form of {0x00000000 | 00:00:00:00 | <value> }. • **policy-name** is the policy name as a string 1 to 15 characters in length.
out-policy <IPX-network-number> <policy-name>	Configures the outgoing policy for the interface: • **IPX-network-number** is the network number in the form of {0x00000000 | 00:00:00:00 | <value> }. • **policy-name** is the policy name as a string 1 to 15 characters in length.

config pos ipx sap

Use this command to apply the Session Announcement Protocol (SAP) policies for IPX routing on the 8683POSM module.

Syntax

config pos <ports> ipx sap

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
info	Shows the last saved port settings and the next-level CLI commands; does not show the current settings.

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Variable	Value
in-policy <IPX-network-number> <policy-name>	Configures the incoming policy for the interface: • **IPX-network-number** is the network number in the form of {0x00000000 | 00:00:00:00 | <value> }. • **policy-name** is the policy name as a string 1 to 15 characters in length.
out-policy <IPX-network-number> <policy-name>	Configures the outgoing policy for the interface: • **IPX-network-number** is the network number in the form of {0x00000000 | 00:00:00:00 | <value> }. • **policy-name** is the policy name as a string 1 to 15 characters in length.

config pos lacp

Use this command to configure LACP on a POSM port.

Syntax

config pos <ports> lacp

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
aggr-wait-time <milliseconds>	Sets the aggregator wait-time in milliseconds.
aggregation <true|false>	Sets individual port or aggregatable for a specific port type: • **true** sets port as aggregatable. • **false** sets port as individual.
disable	Disables LACP globally.
enable	Enables LACP globally.

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Variable	Value
fast-periodic-time <milliseconds>	Sets fast periodic time globally. **milliseconds** is the fast periodic time value.
info	Shows the last saved port settings and the next-level CLI commands; does not show the current settings.
key <integer>	Sets LACP aggregation key for a specific port. You can use a default key only for individual ports.
mode <active|passive>	Sets the mode as active or passive for a specific port.
partner-key <int>	Sets the administration key value of the port partner. **int** is an integer value in the range 0 and 65 535.
partner-port <int>	Sets the administration port value of the port partner. **int** is an integer value in the range 0 and 65 535.
partner-port-priority <int>	Sets the administration port priority of the port partner. **int** is an integer value in the range 0 and 65 535.
partner-state <hex>	Sets the administration state of the port partner. • **hex** is the administrative state bitmap; (Exp,Def,Dis,Col,Syn,Agg,Time,Act). **Example:** • Activity = true • Aggregating = true • val = 00000101 (0x05) {0x0..0xff}
partner-system-id <mac>	Sets the administration system ID of the port partner. **mac** is Mac address in the format: 0x00:0x00:0x00:0x00:0x00:0x00:0x00.
partner-system-priority <int>	Sets the administration system priority value of the port partner. **int** is an integer value in the range 0 and 65 535.

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Variable	Value
port-priority <integer>	Sets the LACP port priority to specific port type. The default value is 32768. **integer** is an integer value in the range 0 and 65 535.
slow-periodic-time <milliseconds>	Sets slow periodic time globally. **milliseconds** is the slow periodic time value.
system-priority <integer>	Sets LACP system priority globally. **integer** is the system priority value with range of 0 to 65 535.
timeout <long|short>	Sets the timeout value to either long or short for a specific port.
timeout-scale <integer>	Sets a timeout scale for a specific port. The default value is 3.

config pos ip arp-response

Use this command to configure the ARP on a POSM port.

Syntax

config pos <ports> ip arp-response

Parameters

Variable	Value
arp-response	Disables the ARP on the POSM port

Default

None

Related commands

Variable	Value
disable	Disables the ARP on the POSM port
enable	Enables the ARP on the POSM port
info	Shows the last saved port settings and the next-level CLI commands; does not show the current settings.

config pos ip igmp access-control

Use this command to configure IGMP on a POSM port.

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Syntax

config pos <ports> ip igmp access-control <name>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
name	Specifies the name of the access control group entry for specified VLAN.
create <HostAddress> <HostMask> <deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both>	Creates IP multicast access group list parameters. • **HostAddress** specifies the IP address of the host. The host address is of the format **<a.b.c.d>** • **HostAddress** specifies the mask address. The host address is of the format **<a.b.c.d>** • **deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both** specifies the access control group list.
info	Shows the current-level parameter settings and the next-level directories.
delete <HostAddress> <HostMask>	Deletes the IP multicast access group list parameters.
mode <HostAddress> <HostMask> <deny-tx|deny-rx|deny-both|allow-only-tx|allow-only-rx|allow-only-both>	Specifies the mode of the IP multicast access group list.

config pos ip dhcp-relay

Use this command to configure DHCP relay on a POSM port.

Syntax

config pos <ports> ip dhcp-relay

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Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
broadcast <enable|disable>	Enables or disables broadcasting DHCP relays on POS interface.
enable	Enables the DHCP interface on the POSM module
disable	Disables the DHCP interface on the POSM module
info	Displays the current-level parameter settings and the next-level directories.
max-hop <max-hop>	Sets the maximum hop count. The range is from 1 to 16.
min-sec <min-sec>	Sets the minimum second count. The range is from 0 to 65535.
mode <mode>	Sets the mode for the DHCP. The following are the different modes: • bootp • dhcp • bootp_dhcp
create-fwd-path server <value> [vrid <value>] [mode <value>] [state <value>]	Creates a forward path for the DHCP interface on the server. • **server <value>** IP address of the server in the format <a.b.c.d> • **vrid <value>** is the virtual router ID. The range is from 1 to 255. • **mode <value>** is the mode in which the DHCP is operating. • **state <value>** specifies whether DHCP is enabled or disabled.

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Variable	Value
delete-fwd-path server <value> [vrid <value>]	Deletes the forward path server where: • **server <value>** specifies the IP address of the server in the format <a.b.c.d> • **vrid <value>** specifies the virtual router ID. The range is 1 to 255.
disable-fwd-path server <value> [vrid <value>]	Disables the forward path server.
fwd-path-mode <mode> server <value> [vrid <value>]	Sets the forward path mode • **mode** is the mode value either bootp or dhcp or bootp and dhcp. • **server <value>** specifies the IP address of the server in the format <a.b.c.d> •

config pos ip dvmrp

Use this command to configure DVMRP on a POSM port.

Syntax

config pos <ports> ip dvmrp

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
advertise-self <enable|disable>	Enables advertise local network on the DRMRP.
create <active|passive>	Enables DVMRP on a specific interface with specific type. The two different interface types are active and passive.
default-listen <enable|disable>	Enables the default route for the DVMRP.

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Variable	Value
default-supply <enable|disable>	Enables the supply DVMRP default route.
default-supply metric <cost>	Specifies the default cost for the route metric to DVMRP. The range is from 1 to 31.
disable	Disables the DVMRP on the POS interface.
enable	Enables the DVMRP on the POS interface.
info	Displays the current-level parameter settings and the next-level directories.
in-policy <policy name>	Sets the port DVMRP in-policy. • **policy-name** is the name of the in-policy with a string length of 0 to 64.
interface-type <active|passive>	Specifies the DVMRP interface type. The interface type is either active or passive.
metric <cost>	Specifies the DVMRP route metric cost. The range is from 1 to 31.
out-policy <policy name>	Sets the port DVMRP out-policy. • **policy-name** is the name of the in-policy with a string length of 0 to 64.

config pos ip ospf

Use this command to configure OSPF on a POSM port.

Syntax

config pos <ports> ip ospf

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

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Related commands

Variable	Value
advertise-when-down <enable|disable>	Sets the interface flag advertise when down for layer 3 and notifies the interface state change to layer 3.
area <ipaddr>	Specifies the IP address of the OSPF interface area ID. The IP address is of the format <a.b.c.d>.
authentication-key <string>	Specifies the OSPF authentication key. **string** specifies the key name of length 0 to 8 characters.
authentication-type <auth-type>	Specifies the type of authentication on the OSPF. The different types of authentication are as follows: • none • simple • message-digest
dead-interval <seconds>	Specifies the OSPF dead interval. The range is from 0 to 2147483647 seconds.
disable	Disables OSPF on the POSM interface
enable	Enables OSPF on the POSM interface
hello-interval <seconds>	Specifies the hello interval. The range is from 1 to 65535.
info	Displays the current-level parameter settings and the next-level directories
interface-type <if-type>	Specifies the OSPF interface type. The different types of interfaces are as follows: • broadcast • nbma • passive
metric <cost>	Specifies the OSPF metric value. The range is from 0 to 65535.

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Variable	Value
poll-interval <seconds>	Specifies the OSPF poll interval in seconds. The range is from 0 to 2147483647 seconds.
priority <integer>	Specifies the OSPF priority value. The range is from 0 to 255.

config pos ip pim

Use this command to configure PIM on a POSM port.

Syntax

config pos <ports> ip pim

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
create <active|passive>	Enables the PIM on specific interface with the specific type. The interface type is either active or passive.
disable	Disables the PIM interface on the POSM module.
enable	Enables the PIM interface on the POSM module.
candbsr enable preference <value>	Enables the candidate BSR entry to an interface. The preference value is of the range 0 to 255.
candbsr disable	Disables candidate BSR entry.
info	Displays the current-level parameter settings and the next-level directories
interface-type <active|passive>	Specifies the PIM interface type. The interface type is either active or passive.

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Variable	Value
hellointerval <seconds>	Specifies the frequency at which the PIM hello messages are sent. The interval is of the range 0 to 18724 seconds.
joinprune-interval <seconds>	Specifies the frequency at which the PIM join/prune messages are sent. The interval is of the range 0 to 18724 seconds.

config pos ip traffic-filter

Use this command to configure traffic filters on a POSM port.

Syntax

config pos <ports> ip traffic-filter

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
add set <value>	Adds list to the filtered port. • **value** specifies the string of length 1 to 3127.
create	Creates a new filtered port.
default-action forward	Applies policy permit to filtered ports.
default-action drop	Applies policy deny to filtered ports.
default-action none	Does not apply any policy to filtered ports.
delete	Deletes the filtered port
disable	Disables the filtered ports.
enable	Enables the filtered ports.
info	Displays the current-level parameter settings and the next-level directories.
remove set <value>	Removes list from filtered port. • **value** specifies the string of length 1 to 3127.

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config pos pcap

Use this command to enable PCAP on a port.

Syntax

config pos <ports> pcap

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
add set <value>	Adds a list to a specified port **value** is a string in the range of 1 to 1 000.
enable <true|false> [mode <value>]	Enables PCAP on the port . **mode <value>** is the filter type **{tx|rx|both|rxFilter|txFilter|bothFilter}**
info	Shows the last saved port settings and the next-level CLI commands; does not show the current settings.
remove set <value>	Removes a list from a specified port. **value** is a string in the range of 1 to 1000.

config pos smlt

Use this command to configure SMLT on a port.

Syntax

config pos <ports> smlt

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

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Related commands

Variable	Value
create	Creates the SMLT ID on the port.
delete	Deletes the SMLT ID on the port.
info	Shows the last saved port settings and the next-level CLI commands; does not show the current settings.

config pos vlacp

Use this command to configure VLACP on a port.

Syntax

config pos <ports> vlacp

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
info	Shows the last saved port settings and the next-level CLI commands; does not show the current settings.
enable	Enables VLACP for a specific port.
disable	Disables VLACP for a specific port.
fast-periodic-time <milliseconds>	Sets the fast periodic time value (in milliseconds) for a specific port.
slow-periodic-time <milliseconds>	Sets the slow periodic time value (in milliseconds) for a specific port.
timeout <long|short>	Sets the port to use the long or short timeout value: • **long** sets the port to use the timeout-scale value * the slow-periodic-time value. • **short** sets the port to use the timeout-scale value * the fast-periodic-time value. For example, if you set the timeout-scale value to 3, and the fast-periodic-time value to 400 ms, the timer expires within 1000 to 1200 ms.

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Variable	Value
timeout-scale <integer>	Sets a timeout scale for a specific port (where timeout-scale = periodic-time * timeout-scale). The default value is 3. • **integer** is the timeout scale value, an integer value in the range of 1 to 10.
ethertype <ether type>	Sets the VLACP protocol identification for this port. • **integer** is the ethertype value, an integer value in the range of 1 to 65 535.
macaddress <mac>	Sets the Multicast MAC address used for the Virtual Link Aggregation Control Protocol Data Unit (VLACPDU). • **mac** is the MAC address in the following format: 0x00:0x00:0x00:0x00:0x00:0x00:0x00

config pos state disable

Use this command to disable the selected port on the 8683POSM Module.

Syntax

config pos <ports> state <enable|disable|test>

Parameters

Variable	Value
<ports>	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

Variable	Value
<ipaddr/mask>	IP address on the selected port.
<vid>	VLAN ID.
[mac_offset <value>]	Specifies the mac offset value.

config pos ppp bridge-admin-status

Use this command to disable bridging.

Syntax

config pos <ports> ppp bridge-admin-status <open|close>

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Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config pos ppp ip-admin-status

Use this command to configure IP routing.

Syntax

config pos <ports> ppp ip-admin-status <open|close>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config pos ppp ip create

Use this command to configure an IP address on the selected port on the 8683POSM Module.

Syntax

config pos <ports> ppp ip create <ipaddr/mask> <vid> [mac_offset <value>]

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

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Variable	Value
ipaddr	Specifies te IP address in the {a.b.c.d} format.
<vid>	Specifies a unique integer value in the range 1–4094 that identifies the VLAN to configure.

Default

None

Related commands

None

config pos ppp state enable

Use this command to enable the selected port on the 8683POSM Module.

Syntax

config pos <ports> ppp state <enable|disable|test>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config pos state disable

Use this command to disable the selected port on the8683POSM Module.

Syntax

config pos <ports> state <enable|disable|test>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

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Related commands

None

config pos ppp bridge-admin-status

Use this command to disable bridging.

Syntax

config pos <ports> ppp bridge-admin-status <open|close>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config pos ppp ipx-admin-status

Use this command to configure IPX routing.

Syntax

config pos <ports> ppp ipx-admin-status <open|close>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config pos state enable

Use this command to enable the selected port on the 8683POSM Module.

Syntax

config pos <ports> state <enable|disable|test>

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Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

config pos state test

Use this command to configure the port for testing.

Syntax

config pos <ports> state <enable|disable|test>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

test hardware

Use this command to run the hardware diagnostics on the 8683POSM Module:

Syntax

test hardware [<ports>]

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

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Related commands

None

test led

Use this command to test the port LEDs.

Syntax

test led <ports> <tx|rx> <off|yellow|green>

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.
<tx|rx>	Specifies the Led ID.
off|yellow|green	Specifies the Led state.

Default

None

Related commands

None

test loopback

Use this command to test the loopback, either internal or external.

Syntax

test loopback <ports> [<int|ext>]

Parameters

Variable	Value
ports	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

test stop loopback

Use this command to stop the loopback testing.

Syntax

test stop loopback <ports>

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Parameters

Variable	Value
`ports`	Specifies the port or range of ports to configure in the slot/port format.

Default

None

Related commands

None

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Visit the Nortel Web site to access the complete range of services and support that Nortel provides. Go to www.nortel.com, or go to one of the pages listed in the following sections.

Navigation

- "Updated versions of documentation" (page 1281)
- "Getting help" (page 1281)
- "Express Routing Codes" (page 1281)
- "Additional information" (page 1282)

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