C H A P T E R **14**

L Commands

The commands in this chapter apply to the Cisco MDS 9000 Family of multilayer directors and fabric switches. All commands are shown here in alphabetical order regardless of command mode. See "About the CLI Command Modes" section on page 1-3 to determine the appropriate mode for each command.

ldap search-map

To configure a search map, use the **ldap search-map** command. To disable this feature, use the **no** form of the command.

ldap search-map *map-name*

no ldap search-map *map-name*

Syntax Description	*map-name*	Specifies the name of the search map. The maximum length is 128 characters.

Defaults   None.

Command Modes   Configuration mode.

Command History	Release	Modification
	NX-OS 5.0(1a)	This command was introduced.

Usage Guidelines   None.

Examples   The following example shows how to specify the LDAP search mapping table:
```
switch(config)# ldap search-map map1
switch(config-ldap-search-map)#
```

Related Commands	Command	Description
	show ldap-server groups	Displays the configured LDAP server groups.

ldap-search-map

To attach the configured LDAP search map to the group, use the **ldap search-map** command. To disable this feature, use the **no** form of the command.

ldap-search-map *map-name*

no ldap-search-map *map-name*

Syntax Description	*name*	Specifies the name of the search map. The maximum length is 128 characters.

Defaults   None.

Command Modes   Configuration submode.

Command History

Release	Modification
NX-OS 5.0(1a)	This command was introduced.

Usage Guidelines   None.

Examples   The following example shows how to configure the name of the LDAP search mapping table:

```
switch(config)# ldap search-map map1
switch(config-ldap)#
```

Related Commands

Command	Description
show ldap-server groups	Displays the configured LDAP server groups.

ldap-server deadtime

To configure global LDAP server deadtime period in seconds, use the **ldap-server deadtime** command To disable this feature, use the **no** form of the command.

> **ldap-server deadtime** *minutes*

> **no ldap-server deadtime** *minutes*

Syntax Description

minutes	Specifies LDAP server deadtime period in minutes. The range is from 1 to 60 minutes. Default is 5 minutes.

Defaults   None.

Command Modes   Configuration mode.

Command History

Release	Modification
NX-OS 5.0(1a)	This command was introduced.

Usage Guidelines   None.

Examples   The following example shows how to configure global LDAP server deadtime period in seconds:

```
switch(config)# ldap-server deadtime 5
switch(config)#
```

Related Commands

Command	Description
show ldap-server groups	Displays the configured LDAP server groups.

ldap-server host

To configure global LDAP server IP address, use the **ldap-server host** command in configuration mode. To disable this feature, use the **no** form of the command.

ldap-server host {*server-name* | *ip-address*} **enable-ssl** | [**port** *port number*] [**timeout** *timeout in seconds*] | **rootDN** *rootDN* **password** [**7** *password* | *password*] [**port** *port number*] [**timeout** *timeout in seconds*] | **test rootDN** *DN string* [**username** *user-name*] [**password** [7 password | password]] [**idle-time** n]

no ldap-server host {*server-name* | *ip-address*} **enable-ssl** | [**port** *port number*] [**timeout** *timeout in seconds*] | **rootDN** *rootDN* **password** [**7** *password* | *password*] [**port** *port number*] [**timeout** *timeout in seconds*] | **test rootDN** *DN string* [**username** *user-name*] [**password** [7 password | password]] [**idle-time** n]

Syntax Description

server-name	Specifies LDAP server DNS name. The maximum length is 255 characters.
ip-address	Specifies LDAP server IP address.
enable-ssl	Specifies LDAP server, enable SSL.
port	Specifies LDAP server port.
port-number	Specifies port number. The range is from 1 to 65535.
root DN	Specifies LDAP rootDN for the LDAP server database.
rootDN	The maximum length is 63 characters and default is empty string.
password 7 *pasword*	Specifies encrypted bind password for root. The maximum length is 63 characters and default is empty string.
password *password*	Specifies bind password for root. The maximum length is 63 characters and default is empty string
test rootDN *DN string*	Specifies the test keyword which turns on automated testing for the feature. The rootDN keyword is mandatory and is followed by the rootDN to be used to bind to ldap server to verify its state.
username *user-name*	Specifies the username that would be used to do a test bind.
password *password*	Specifies the password to be used in the packets. When a password cannot be obtained, the default of test is used for test packets.
idle-time *n*	Specifies the time for which the server has to remain idle before test packet(s) are sent out. If any of the responses are not received, the server is assumed dead. The default idle-time is 0, but can be configured as low as 1 minute.
timeout *timeout in seconds*	Specifies the timeout period to wait for a response from the server before client can declare a timeout failure. The range is from 1 to 60 seconds.

Defaults

Port -Globally configured value ("ldap-server port <>"), in absence of which a value of 389.

Timeout- Globally configured value ("ldap-server timeout <>"), in absence of which a value of 5 seconds.

idle-time- Default is 0.

testrootDN-Default value dc=test, dc=com.

username- default value is test.

Password- For test commands default value is test.

Command Modes   Configuration submode.

Command History

Release	Modification
NX-OS 5.0(1a)	This command was introduced.

Usage Guidelines   None.

Examples   The following example shows how to Specify the test keyword turns on automated testing for the feature:
```
switch(config)# ldap-server host 10.64.66.140 test rootDN cn=Manager,dc=acme,dc=com user
test password secret idle-time 1
```

The following example shows how to enable TLS while connecting to the server:
```
switch(config)# ldap-server host 10.64.66.140 enable-ssl
switch(config)#
```

The following example shows how to configure LDAP server port:
```
switch(config)# ldap-server host 10.64.66.140 root DN cn=Manager, dc=acme, dc=com password
secret port 389
switch(config)#
```

Related Commands

Command	Description
show ldap-server groups	Displays the configured LDAP server groups.

ldap-server port

To configure global LDAP server port, use the **ldap-server port** command in configuration mode. To disable this feature, use the **no** form of the command.

>**ldap-server port** *port-number*

Syntax Description

port-number	Specifies port number. The range is from 1 to 65535.

Defaults   None.

Command Modes   Configuration mode.

Command History

Release	Modification
NX-OS 5.0(1a)	This command was introduced.

Usage Guidelines   None.

Examples   The following example shows how to configure global LDAP server port:

```
switch(config)# no ldap-server port 65532
switch(config)#
```

Related Commands

Command	Description
show ldap-server groups	Displays the configured LDAP server groups.

ldap-server timeout

To configure global timeout period in seconds, use the **ldap-server timeout** command in configuration mode. To disable this feature, use the **no** form of the command.

ldap-server timeout *timeout in second*

no ldap-server timeout *timeout in second*

Syntax Description	*timeout in seconds*	Specifies timeout value in seconds. The default timeout value is 5 seconds and valid range is from 1 to 60 seconds. This value will be used only for those servers for which timeout is not configured at a per-server level.

Defaults   None.

Command Modes   Configuration mode.

Command History

Release	Modification
NX-OS 5.0(1a)	This command was introduced.

Usage Guidelines   None.

Examples   The following example shows how to configure global LDAP server timeout in seconds:

```
switch(config)# no ldap-server timeout 1
switch(config)#
```

Related Commands

Command	Description
show ldap-server groups	Displays the configured LDAP server groups.

lifetime seconds

To configure the security association (SA) lifetime duration for an IKE protocol policy, use the **lifetime seconds** command in IKE policy configuration submode. To revert to the default, use the **no** form of the command.

> **lifetime seconds** *seconds*

> **no lifetime seconds** *seconds*

Syntax Description

seconds	Specifies the lifetime duration in seconds. The range is 600 to 86400.

Defaults   86,400 seconds.

Command Modes   IKE policy configuration submode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines   To use this command, the IKE protocol must be enabled using the **crypto ike enable** command.

The **lifetime seconds** command overrides the default.

Examples   The following example shows how to configure the SA lifetime duration for the IKE protocol:

```
switch# config terminal
switch(config)# crypto ike domain ipsec
switch(config-ike-ipsec)# policy 1
switch(config-ike-ipsec-policy)# lifetime seconds 6000
```

Related Commands

Command	Description
crypto ike domain ipsec	Enters IKE configuration mode.
crypto ike enable	Enables the IKE protocol.
policy	Configures IKE protocol policy.
show crypto ike domain ipsec	Displays IKE information for the IPsec domain.

line com1

To configure auxiliary COM 1 port, use the **line com1** command. To negate the previously issued command or to revert to factory defaults, use the **no** form of the command.

> **line com1 -->** **databits** *number* | **flowcontrol hardware** | **modem** {**in** | **init-string** {**default** | **user-input**} | **set-string user-input** *string*} | **parity** {**even** | **none** | **odd**} | **speed** *speed* | **stopbits** {**1** | **2**}

> **no line com1 -->** **databits** *number* | **flowcontrol hardware** | **modem** {**in** | **init-string** | **set-string user-input**} | **parity** {**even** | **none** | **odd**} | **speed** *speed* | **stopbits** {**1** | **2**}

Syntax Description

databits *number*	Specifies the number of databits per character. The range is 5 to 8.
flowcontrol hardware	Enables modem flow on the COM1 port control.
modem	Enables the modem mode.
in	Enables the COM 1 port to only connect to a modem.
init-string default	Writes the default initialization string to the modem.
set-string user-input *string*	Sets the user-specified initilization string to its corresponding profile. Maximum length is 80 characters.
init-string user-default	Writes the provided initialization string to the modem.
parity	Sets terminal parity.
even	Sets even parity.
none	Sets no parity.
odd	Sets odd parity.
speed *speed*	Sets the transmit and receive speeds. The range is 110 to 115, 200 baud.
stopbits	Sets async line stopbits.
1	Sets one stop bit.
2	Sets two stop bits.

Defaults

9600 Baud

8 databits

1 stopbit

Parity none

Default init string

Command Modes

Configuration mode.

Command History

Release	Modification

1.2(2)	This command was introduced.
3.0(1)	Added an example to show the user-input initialization string for the Supervisor-2 module.

Usage Guidelines   The **line com1** command available in **config t** command mode. The **line com1** configuration commands are available in config-com1 submode.

You can perform the configuration specified in this section only if you are connected to the console port or the COM1 port.

We recommend you use the default initialization string. If the required options are not provided in the user-input string, the initialization string is not processed.

You must first set the user-input string before initializing the string.

Examples   The following example configures a line console and sets the options for that terminal line:

```
switch## config terminal
switch(config)#
switch(config)# line com1
switch(config-com1)# databits 6
switch(config-com1)# parity even
switch(config-com1)# stopbits 1
```

The following example disables the current modem from executing its functions:

```
switch# config terminal
switch(config)# line com1
switch(config-com1)# no modem in
```

The following example enables (default) the COM1 port to only connect to a modem:

```
switch# config terminal
switch(config)# line com1
switch(config-com1)# modem in
```

The following example writes the initialization string to the modem. This is the default.

```
switch# config terminal
switch(config)# line com1
switch(config-com1)# modem init-string default
```

The following example assigns the user-specified initialization string for a Supervisor-1 module to its corresponding profile:

```
switch# config terminal
switch(config)# line com1
switch(config-com1)# modem set-string user-input ATE0Q1&D2&C1S0=3\015
```

The following example assigns the user-specified initialization string for a Supervisor-2 module to its corresponding profile:

```
switch# config terminal
switch(config)# line com1
switch(config-com1)# modem set-string user-input ATE0Q0V1&D0&C0S0=1
```

The following example deletes the configured initialization string:

```
switch# config terminal
switch(config)# line com1
```

```
switch(config-com1)# no modem set-string user-input ATE0Q1&D2&C1S0=3\015
```

The following example writes the user-specified initialization string to the modem:

```
switch# config terminal
switch(config)# line com1
switch(config-com1)# modem init-string user-input
```

Related Commands	Command	Description
	line console	Configures primary terminal line.
	line vty	Configures virtual terminal line.
	show line com1	Displays COM1 information.

line console

To configure a terminal line, use the **line console** command. To negate the previously issued command or to revert to factory defaults, use the **no** form of the command.

line console -->**databits** *number* | **exec-timeout** *minutes* | **modem** {**in** | **init-string** | **set-string user-input** *string*} | **parity** {**even** | **none** | **odd**} | **speed** *speed* | **stopbits** {**1** | **2**}

no line console --> **databits** *number* | **exec-timeout** *minutes* | **modem** {**in** | **init-string** {**default** | **user-input**} | **set-string user-input** *string*} | **parity** {**even** | **none** | **odd**} | **speed** *speed* | **stopbits** {**1** | **2**}

Syntax Description		
databits *number*	Specifies the number of databits per character. The range is 5 to 8.
exec-timeout *minutes*	Configures exec timeout in minutes. The range is 0 to 525,600. To disable, set to 0 minutes.
modem	Enables the modem mode.
in	Enables the COM 1 port to only connect to a modem.
init-string default	Writes the default initialization string to the modem.
init-string user-input	Writes the provided initialization string to the modem.
set-string user-input *string*	Sets the user-specified initilization string to its corresponding profile. Maximum length is 80 characters.
parity	Sets terminal parity.
even	Sets even parity.
none	Sets no parity.
odd	Sets odd parity.
speed *speed*	Sets the transmit and receive speeds. Valid values for Supervisor-1 modules are between 110 and 115,200 bps (110, 150, 300, 600, 1200, 2400, 4800, 9600, 19200, 28800, 38400, 57600, 115200). Valid values for Supervisor-2 modules are 9600, 19200, 38400, and 115200.
stopbits	Sets async line stopbits.
1	Sets one stop bit.
2	Sets two stop bits.

Defaults

9600 Baud.

8 databits.

1 stopbit.

Parity none.

Default init string.

Command Modes   Configuration mode.

Command History	Release	Modification
	1.2(2)	This command was introduced.
	3.0(1)	Modified the **speed** option by specifying speeds for the Supervisor-1 module and Supervisor-2 module.

Usage Guidelines   The **line console** command available in **config t** command mode. The **line console** configuration commands are available in config-console submode.

When setting the **speed** option, be sure to specify one of the exact values.

Examples   The following example configures a line console and sets the options for that terminal line:

```
switch## config terminal
switch(config)##
switch(config)# line console
switch(config-console)# databits 60
switch(config-console)# exec-timeout 60
switch(config-console)# flowcontrol software
switch(config-console)# parity even
switch(config-console)# stopbits 1
```

The following example disables the current modem from executing its functions:

```
switch# config terminal
switch(config)# line console
switch(config-console)# no modem in
```

The following example enables (default) the COM1 port to only connect to a modem:

```
switch# config terminal
switch(config)# line console
switch(config-console)# modem in
```

The following example writes the initialization string to the modem. This is the default.

```
switch# config terminal
switch(config)# line console
switch(config-console)# modem init-string default
```

The following example assigns the user-specified initialization string to its corresponding profile:

```
switch# config terminal
switch(config)# line console
switch(config-console)# modem set-string user-input ATE0Q1&D2&C1S0=3\015
```

The following example deletes the configured initialization string:

```
switch# config terminal
switch(config)# line console
switch(config-console)# no modem set-string user-input ATE0Q1&D2&C1S0=3\015
```

The following example writes the user-specified initialization string to the modem:

```
switch# config terminal
switch(config)# line console
switch(config-console)# modem init-string user-input
```

Related Commands

Command	Description
line com1	Configures the auxiliary COM 1 port
line vty	Configures virtual terminal line.
show line console	Displays console information.

line vty

To configure a virtual terminal line, use the **line vty** command. To negate the previously issued command or to revert to factory defaults, use the **no** form of the command.

line vty -->exec-timeout *minutes* | **session-limit** *number*

no line vty --> **exec-timeout** | **session-limit** *number*

Syntax Description		
	exec-timeout *minutes*	Configures timeout in minutes. The range is 0 to 525600. To disable, set to 0 minutes.
	session-limit *number*	Configures the number of VSH sessions. The range is 1 to 64.

Defaults   None.

Command Modes   Configuration mode.

Command History	Release	Modification
	1.0(2)	This command was introduced.

Usage Guidelines   The **line vty** command is available in **config t** command mode. The **line vty** configuration commands are available in config-line submode.

Examples   The following example configures a virtual terminal line and sets the timeout for that line:

```
switch## config terminal
switch(config)# line vty
switch(config-line)# exec-timeout 60
```

Related Commands	Command	Description
	line com1	Confgiures the auxiliary COM 1 port.
	line console	Configures primary terminal line.

link (SDV virtual device configuration submode)

To link a virtual device to a real device, use the **link** command in SDV virtual device configuration submode. To remove a link, use the **no** form of the command.

link {**device-alias** *device-name* | **pwwn** *pwwn-name*}

no link {**device-alias** *device-name* | **pwwn** *pwwn-name*}

Syntax Description	device-alias *device-name*	Links a virtual device to a device alias.
	pwwn *pwwn-name*	Links a virtual device to a pWWN. The format is *hh:hh:hh:hh:hh:hh:hh:hh*, where *h* is a hexadecimal number.

Defaults   None.

Command Modes   SDV virtual device configuration submode.

Command History	Release	Modification
	3.1(2)	This command was introduced.

Usage Guidelines   None.

Examples   The following example shows how to link a virtual device to a device alias:

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# sdv virtual-device name sqa1 vsan 1
switch(config-sdv-virt-dev)# link device-alias sqa3
```

The following example shows how to link a virtual device to a pWWN:

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# sdv virtual-device name sqa1 vsan 1
switch(config-sdv-virt-dev)# link pwwn 21:00:00:04:cf:cf:45:40
```

Related Commands	Command	Description
	sdv enable	Enables or disables SAN device virtualization.
	show sdv statistics	Displays SAN device virtualization statistics.

link-state-trap

To enable an SNMP link state trap on an interface, use the **link-state-trap** command in interface configuration submode. To disable an SNMP link state trap, use the **no** form of the command.

> **link-state-trap**

> **no link-state-trap**

Syntax Description   This command has no arguments or keywords.

Defaults   Enabled.

Command Modes   Interface configuration submode.

Command History

Release	Modification
3.1(2)	This command was introduced.

Usage Guidelines   None.

Examples   The following example shows how to enable an SNMP link state trap on interface bay2:

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# interface bay 2
switch(config-if)# link-state-trap
```

The following example shows how to disable an SNMP link state trap on interface bay2:

```
switch# config terminal
Enter configuration commands, one per line. End with CNTL/Z.
switch(config)# interface bay 2
switch(config-if)# no link-state-trap
```

Related Commands

Command	Description
show interface	Displays interface information.

link-state-trap (SME)

To enable an Simple Network Management Protocol (SNMP) link state trap on an interface, use the **link-state-trap** command. To disable this feature, use the **no** form of the command.

link-state-trap

no link-state-trap

Syntax Description   This command has no arguments or keywords.

Defaults   None.

Command Modes   Interface configuration submode.

Command History

Release	Modification
3.2(2)	This command was introduced.

Usage Guidelines   None.

Examples   The following example shows how to enable the link-state-trap on the Fibre Channel interface:

```
switch# config t
switch(config)# interface fc 1/1
switch(config-if)# link-state-trap
switch(config-if)#
```

The following example shows how to disable the link-state-trap on the Fibre Channel interface:

```
switch# config t
switch(config)# interface fc 1/1
switch(config-if)# no link-state-trap
switch(config-if)#
```

Related Commands

Command	Description
show interface	Displays interface information.

load-balancing (Cisco IOA cluster Configuration submode)

To enable cluster reload balancing of all flows in an IOA cluster, use the **load-balancing** command.

load-balancing {**enable** | *target wwn*}

no load-balancing {**enable** | *target wwn*}

Syntax Description	*enables*	Enables cluster load balancing.
	target *pwwn*	Specifies the world-wide name (WWN) of the target port.

Defaults   None.

Command Modes   Cisco IOA cluster Configuration submode.

Command History	Release	Modification
	NX-OS 4.2(1)	This command was introduced.

Usage Guidelines   None.

Examples   The following example shows how to enable cluster reload balancing of all targets:

```
rtp-sw1(config)# ioa cluster tape_vault
rtp-sw1(config-ioa-cl)# load-balancing enable
switch#(config-ioa-cl)# load-balancing10:00:00:00:00:00:00
This command will first disable all the IT nexuses (only for a target if specifi
ed) and then enable them back. This process is disruptive. Also, in case you abo
rt the request in the middle, you can enable load balancing back by executing th
e command 'load-balancing enable'.
Do you wish to continue? (yes/no) [no] y
Cluster config fails: This switch is not the master switch, configuration change
 not allowed. (0x420f003c)
switch#(config-ioa-cl)#
```

Related Commands	Command	Description
	interface ioa	Configures the IOA interface.

load-balancing

To enable cluster reload balancing for all targets or specific targets, use the **load-balancing** command. To disable this command, use the **no** form of the command.

load-balancing {**enable** | *target wwn*}

no load-balancing {**enable** | *target wwn*}

Syntax Description		
	enable	Enables cluster load balancing.
	target wwn	Specifies the world-wide name (WWN) of the target port.

Defaults   None.

Command Modes   Cisco SME cluster configuration submode.

Command History	Release	Modification
	3.3(1a)	This command was introduced.

Usage Guidelines   The reload balancing operation is performed by the Cisco SME administrator for all or specific target ports. This operation first unbinds all the targets from the Cisco SME interfaces. The targets are then associated, one at a time, based on the load-balancing algorithm.

The reload balancing operation can be triggered if the targets remain unconnected due to errors in the prior load balancing opertions in the backend.

Examples   The following example enables reload balancing in Cisco SME:

```
switch# config t
switch(config)# sme cluster c1
switch(config-sme-cl)# load-balancing enable
switch(config-sme-cl-node)#
```

The following example adds the host to the Cisco SME interface based on the load-balancing policy:

```
switch# config t
switch(config))# sme cluster c1
switch(config-sme-cl)# load-balancing 17:11:34:44:44:12:14:10
switch(config-sme-cl-node)#
```

Related Commands	Command	Description
	show sme cluster	Displays Cisco SME information.

logging abort

To discard the logging Cisco Fabric Services (CFS) distribution session in progress, use the **logging abort** command in configuration mode.

logging abort

Syntax Description   This command has no other arguments or keywords.

Defaults   None.

Command Modes   Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines   None.

Examples   The following example shows how to discard logging CFS distribution session in progress:

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

Related Commands

Command	Description
show logging	Displays logging information.

logging commit

To apply the pending configuration pertaining to the logging Cisco Fabric Services (CFS) distribution session in progress in the fabric, use the **logging commit** command in configuration mode.

logging commit

Syntax Description   This command has no other arguments or keywords.

Defaults   None.

Command Modes   Configuration mode.

Command History

Release	Modification
2.0(x)	This command was introduced.

Usage Guidelines   None.

Examples   The following example shows how to commit changes to the active logging configuration:

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

Related Commands

Command	Description
show logging	Displays logging information.

logging console

To set console logging, use the **logging console** command. To negate the previously issued command or to revert to factory defaults, use the **no** form of the command.

logging console [*severity-level*]

no logging console [*severity-level*]

Syntax Description

severity-level	(Optional) Specifies the maximum severity of messages logged. The range is 0 to 7, where 0 is emergency, 1 is alert, 2 is critical, 3 is error, 4 is warning, 5 is notify, 6 is informational, and 7 is debugging.

Defaults

Disabled.

The default severity level is 2.

Command Modes

Configuration mode.

Command History

Release	Modification
1.0(2)	This command was introduced.

Usage Guidelines

The switch logs messages at or above the configured severity level.

Examples

The following example reverts console logging to the factory set default severity level of 2 (critical). Logging messages with a severity level of 2 or above will be displayed on the console.

```
switch# config terminal
switch(config)# logging console 2
```

Related Commands

Command	Description
show logging	Displays logging configuration information.

logging distribute

To enable Cisco Fabric Services (CFS) distribution for logging, use the **logging distribute** command. To disable this feature, use the **no** form of the command.

> **logging distribute**

> **no logging distribute**

Syntax Description	This command has no other arguments or keywords.
Defaults	Disabled.
Command Modes	Configuration mode.

Command History

Release	Modification
1.0(2)	This command was introduced.

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

Examples   The following example shows how to change the distribute logging configuration changes:

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

Related Commands

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

logging level

To modify message logging facilities, use the **logging level** command. To negate the previously issued command or to revert to factory defaults, use the **no** form of the command.

logging level *facility-name severity-level*

no logging level *facility-name severity-level*

Syntax Description

facility-name	Specifies the required facility name (for example **acl**, or **ivr**, or **port**, etc.)
severity-level	Specifies the maximum severity of messages logged. The range is 0 to 7, where 0 is emergency, 1 is alert, 2 is critical, 3 is error, 4 is warning, 5 is notify, 6 is informational, and 7 is debugging.

Defaults   Disabled.

Command Modes   Configuration mode.

Command History

Release	Modification
1.3(1)	This command was introduced.

Usage Guidelines   The switch logs messages at or above the configured severity level.

Examples   Configures Telnet or SSH logging for the kernel facility at level 4 (warning). As a result, logging messages with a severity level of 4 or above will be displayed:

```
switch# config terminal
switch(config)# logging level kernel 4
```

Related Commands

Command	Description
show logging	Displays logging configuration information.

logging logfile

To set message logging for logfile, use the **logging logfile** command.To negate the previously issued command or to revert to factory defaults, use the **no** form of the command.

>   **logging logfile** *filename severity-level* [**size** *filesize*]

>   **no logging logfile** *filename severity-level* [**size** *filesize*]

Syntax Description		
filename	Specifies the log filename. Maximum length is 80 characters.
severity-level	Specifies the maximum severity of messages logged. The range is 0 to 7, where 0 is emergency, 1 is alert, 2 is critical, 3 is error, 4 is warning, 5 is notify, 6 is informational, and 7 is debugging.
size *filesize*	(Optional) Specifies the log file size. The range is 4096 to 4194304 bytes.

Defaults   None.

Command Modes   Configuration mode.

Command History	Release	Modification
	1.0(2)	This command was introduced.

Usage Guidelines   The switch logs messages at or above the configured severity level.

Examples   The following example configures logging information for errors or events above a severity level of 3 (errors) to be logged in a file named ManagerLogFile. By configuring this limit, the file size is restricted to 3,000,000 bytes:

```
switch# config terminal
switch(config)# logging logfile ManagerLogFile 3 size 3000000
```

Related Commands	Command	Description
	show logging	Displays logging configuration information.

logging module

To set message logging for linecards, use the **logging module** command. To negate the previously issued command or to revert to factory defaults, use the **no** form of the command.

logging module [*severity-level*]

no logging module [*severity-level*]

Syntax Description	*severity-level*	(Optional) Specifies the maximum severity of messages logged. The range is 0 to 7, where 0 is emergency, 1 is alert, 2 is critical, 3 is error, 4 is warning, 5 is notify, 6 is informational, and 7 is debugging.

Defaults   None.

Command Modes   Configuration mode.

Command History

Release	Modification
1.0(2)	This command was introduced.

Usage Guidelines   None.

Examples   The following example sets message logging for modules at level 7:

```
switch## config terminal
switch(config)# logging module 7
```

Related Commands

Command	Description
show logging	Displays logging configuration information.

logging monitor

To set monitor message logging, use the **logging monitor** command. To negate the previously issued command or to revert to factory defaults, use the **no** form of the command.

logging monitor *severity level*

Syntax Description

logging monitor	Sets message logging.
severity level	Specifies the maximum severity of messages logged. The range is 0 to 7, where 0 is emergency, 1 is alert, 2 is critical, 3 is error, 4 is warning, 5 is notify, 6 is informational, and 7 is debugging.

Defaults   None.

Command Modes   Configuration mode.

Command History

Release	Modification
1.0(2)	This command was introduced.

Usage Guidelines   None.

Examples   The following example sets terminal line (monitor) message logging at level 2:

```
switch## config terminal
switch(config)# logging monitor 2
```

Related Commands

Command	Description
show logging	Displays logging configuration information.

logging server

To set message logging for the remote server, use the **logging server** command.

logging server [*hostname* | *ip address severity_level* | **facility auth** | **authpriv** | **cron** | **daemon** | **ftp** | **kernel** | **local0** | **local1** | **local2** | **local3** | **local4** | **local5** | **local6** | **local7** | **lpr** | **mail** | **news** | **syslog** | **user** | **uucp**]

Syntax Description

logging server	Sets message logging for remote server.
hostname	Specifies the host name for remote server.
ip address	Specifies IP address for the remote server.
severity_level	(Optional) Specifies the maximum severity of messages logged. The range is 0 to 7, where 0 is emergency, 1 is alert, 2 is critical, 3 is error, 4 is warning, 5 is notify, 6 is informational, and 7 is debugging.
facility	(Optional) Specifies facility to use when forwarding to server.
auth	Specifies auth facility.
authpriv	Specifies authpriv facility.
cron	Specifies Cron/at facility.
daemon	Specifies daemon facility.
ftp	Specifies file transfer system facility.
kernel	Specifies kernel facility.
local0	Specifies local0 facility.
local1	Specifies local1 facility.
local2	Specifies local2 facility.
local3	Specifies local3 facility.
local4	Specifies local4 facility.
local5	Specifies local5 facility.
local6	Specifies local6 facility.
local7	Specifies local7 facility.
lpr	Specifies lpr facility.
mail	Specifies mail facility.
news	Specifies USENET news facility.
syslog	Specifies use syslog facility.
user	Specifies user facility.
uucp	Specifies Unix-to-Unix copy system facility.

Defaults   None.

Command Modes   Configuration mode.

Command History	Release	Modification
	1.0(2)	This command was introduced.

Usage Guidelines   None.

Examples   Enable message logging to the specified remote server for level 7 messages:

```
switch## config terminal
switch(config)# logging sever sanjose 7
```

Related Commands	Command	Description
	show logging	Displays logging configuration information.

logging timestamp

To set the time increment for the message logging time stamp, use the **logging timestamp** command. To negate the previously issued command or to revert to factory defaults, use the **no** form of the command.

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

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

Syntax Description

microseconds	Sets the logging time stamp to microseconds.
milliseconds	Sets the logging time stamp to milliseconds.
seconds	Sets the logging time stamp to seconds.

Defaults   Seconds.

Command Modes   Configuration mode.

Command History

Release	Modification
3.0(1)	This command was introduced.

Usage Guidelines   None.

Examples   The following example sets the logging time stamp to milliseconds:

```
switch## config terminal
switch(config)# logging timestamp milliseconds
```

Related Commands

Command	Description
show logging	Displays logging configuration information.