# L Commands

# 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. |
|---|---|

**Command Default**

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**

| map-name | Specifies the name of the search map. The maximum length is 128 characters. |
|---|---|

**Command Default**

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. |
|---------|-----------------------------------------------------------------------------------------------------------|

**Command Default**    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. |
| | | **Note** From Cisco MDS NX-OS Release 8.1(1) and later, LDAP over Secure Sockets Layer (SSL) supports SSL version 3 and Transport Layer Security (TLS) versions 1.0 and 1.2.<br><br>From Cisco MDS NX-OS Release 6.2(29) and later, LDAP over Secure Sockets Layer (SSL) supports SSL version 3 and Transport Layer Security (TLS) versions 1.0 and 1.2. |
| | 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. |

**Command Default**

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. |
| NX-OS 6.2(29) | LDAP over Secure Sockets Layer (SSL) supports SSL version 3 and Transport Layer Security (TLS) versions 1.0 and 1.2 on Cisco MDS NX-OS Release 6.2(29) and later. |
| NX-OS 8.1(1) | LDAP over Secure Sockets Layer (SSL) supports SSL version 3 and Transport Layer Security (TLS) versions 1.0 and 1.2 on Cisco MDS NX-OS Release 8.1(1) and later. |

**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. |
|---|---|

**Command Default**  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  timeouttimeout 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. |

**Command Default**

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. |
|---------|------------------------------------------------------------------------|

**Command Default**    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.

linecom1->databitsnumber | flowcontrolhardware | modemin | init-stringdefault | user-input | set-stringuser-inputstring | parityeven | none | odd | speedspeed | stopbits1 | 2
nolinecom1->databitsnumber | flowcontrolhardware | modemin | init-string | set-stringuser-input | parityeven | none | odd | speedspeed | stopbits1 | 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. |

**Command Default**

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.

lineconsole->databitsnumber | exec-timeoutminutes | modem  in | init-string | set-stringuser-inputstring | parityeven | none | odd | speedspeed | stopbits1 | 2
nolineconsoledatabits  number | exec-timeoutminutes | modemin | init-stringdefault | user-input | set-stringuser-inputstring | parityeven | none | odd | speedspeed | stopbits1 | 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. |

**Command Default**

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.

linevty->exec-timeoutminutes | session-limitnumber
nolinevtyexec-timeout | session-limitnumber

**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. |

**Command Default**   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 | Configures the auxiliary COM 1 port. |
| line console | Configures primary terminal line. |

# 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. |
| **Command Default** | 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

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. |

**Command Default**    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. |

# 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. |

**Command Default**

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-balancing10:00:00:00:00:00:00:00
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. |

# locator-led

To blink an LED on the system, use the locator-led command. To restore the default LED state, use the no form of this command.

locator-led chassis | fan f-number | module slot | powersupply ps-number | xbar x-number
no locator-led chassis | fan f-number | module slot | powersupply ps-number | xbar x-number

**Syntax Description**

| chassis | Blinks the chassis LED. |
|---|---|
| fan f-number | Blinks the LED that represents the configured fan number. The range depends on the platform. Use ? to see the range. |
| module slot | Blinks the module LED. The range depends on the platform. Use ? to see the range. |
| powersupply ps-number | Blinks the power supply LED. The range depends on the platform. Use ? to see the range. |
| xbar x-number | Blinks the xbar module LED. The range depends on the platform. Use ? to see the range. |

**Command Default**

The locator LED is off.

**Command Modes**

Any command mode

network-admin network-operator vdc-admin vdc-operator

**Command History**

| Release | Modification |
|---|---|
| 6.2(1) | This command was introduced. |

**Usage Guidelines**

Use the locator-led command to flash the LED on a component in the system. You can use this blinking LED to identify the component to an administrator in the data center.

This command is available only in modular Cisco MDS switches.

**Examples**

This example shows how to blink the LED for module 4:

switch# locator-led module 4

**Related Commands**

| Command | Description |
|---|---|
| show locator-led status | Displays the status of locator LEDs on the system. |

# 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.

**Command Default**    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.

**Command Default**   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 distribute the current logging configuration on this switch to all participating switches in the fabric:

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

**Related Commands**

| Command | Description |
|---------|-------------|
| logging server | Sends system messages to a remote logging server. |
| 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. |
|---|---|

**Command Default**

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 distribution of the logging configuration to other switches in the fabric via Cisco Fabric Services (CFS), 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.

**Command Default**     Disabled.

**Command Modes**

Configuration mode.

**Command History**

| Release | Modification |
|---------|--------------|
| 1.0(2)  | This command was introduced. |

**Usage Guidelines**     This option must be enabled on all switches in the fabric for them to participate in fabric-wide updates of the logging configuration.

**Examples**     The following example shows how to enable distribution of the logging configuration on the local switch:

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

**Related Commands**

| Command | Description |
|---------|-------------|
| logging commit | Commits the logging configuration to other switches in the fabric. |
| logging server | Configures details of a remote logging server. |
| show cfs | Displays the information of switches in the fabric that have CFS enabled. |
| 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. |

**Command Default**  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 level pmon

To configure logging level for port monitor syslog messages, use the logging level pmon command. To remove this configuration, use the no form of this command.

logging level pmon   severity-level
no logging level pmon

**Syntax Description**

| severity-level | Specifies the severity of messages logged. The range is 0–7, 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. |
|---|---|

**Command Default**

The default severity level is warning (4).

**Command Modes**

Configuration mode (config)

**Command History**

| Release | Modification |
|---|---|
| 8.4(1) | Added support for configuring severity level for port monitor. |
| 1.3(1) | This command was introduced. |

**Usage Guidelines**

Use the show logging level pmon command to verify the configured port monitor severity level.

**Examples**

The following example displays how to configure logging for port monitor at level 3 (error). As a result, logging messages with a severity level of 2–3 will be displayed:

```
switch# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
switch(config)# logging level pmon 3
```

The following example displays the syslog message when the severity level configured for port monitor is error (3):

```
PMON-SLOT1-3-RISING_THRESHOLD_REACHED: Invalid Words has reached the rising threshold
(port=fc1/1 [chars], value=90).
PMON-SLOT1-3-FALLING_THRESHOLD_REACHED: Invalid Words has reached the falling threshold
(port=fc1/1 [chars], value=0).
```

The following example displays the syslog message when the severity level configured for port monitor is warning (4):

```
PMON-SLOT1-4-WARNING_THRESHOLD_REACHED_UPWARD: Invalid Words has reached warning threshold
 in the upward direction (port fc1/1 [chars], value = 90).
PMON-SLOT1-3-RISING_THRESHOLD_REACHED: Invalid Words has reached the rising threshold
(port=fc1/1 [chars], value=90).
PMON-SLOT1-4-WARNING_THRESHOLD_REACHED_DOWNWARD: Invalid Words has reached warning threshold
 in the downward direction (port fc1/1 [chars], value = 0).
PMON-SLOT1-3-FALLING_THRESHOLD_REACHED: Invalid Words has reached the falling threshold
```

```
(port=fc1/1 [chars], value=0).
```

**Related Commands**

| Command | Description |
|---|---|
| show logging | Displays logging configuration information. |

# logging level port

To configure logging level for port syslog messages, use the logging level port command. To remove this configuration, use the no form of this command.

logging level portseverity-level | link-failure | critical | notif

no logging level portseverity-level | link-failure | critical | notif

**Syntax Description**

| severity-level | Specifies the severity of messages logged. The range is from 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. |
|---|---|
| link-failure | Specifies logging level for port link failure syslog messages. |
| critical | Specifies that when an active link fails, the message that is issued is a critical level (2) message: %PORT-2-IF_DOWN_LINK_FAILURE_CRIT. |
| notif | Specifies that when an active link fails, the message that is issued is a notification level (5) message: %PORT-5-IF_DOWN_LINK_FAILURE. |

**Command Default**

The default severity is the notification level (5).

**Command Modes**

Configuration mode (config)

**Command History**

| Release | Modification |
|---|---|
| 1.3(1) | This command was introduced. |

**Examples**

The following example displays how to configure Telnet or SSH logging for port at level 4 (warning). As a result, logging messages with a severity level of 4 or above will be displayed:

```
switch# configure
switch(config)# logging level port 4
```

The following example displays how to configure Telnet or SSH logging for critical port link failure messages. As a result, logging messages that are critical will be displayed:

```
switch# configure
switch(config)# logging level port link-failure critical
```

The following example displays the syslog message when a critical port link failure is configured:

```
PORT-2-IF_DOWN_LINK_FAILURE_CRIT: Interface [chars] is down (Link failure)
```

The following example displays the syslog message when a notification port link failure is configured:

```
PORT-5-IF_DOWN_LINK_FAILURE: Interface [chars] is down (Link failure [chars]) [chars] [chars]
```

| 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. |

**Command Default**

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. |

**Command Default**  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. |

**Command Default**     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 origin-id

To specify the hostname, IP address, or a text string in the system messages that are sent to remote syslog servers, use the logging origin-id command. To remove this configuration, use the no form of this command.

logging   origin-id   hostname | ip   address | string   word   [rfc-order]

no logging   origin-id   hostname | ip   address | string   word   [rfc-order]

| Syntax Description | hostname | Specifies to use the switch name as the origin ID in system messages. |
|---|---|---|
| | ip address | Specifies to use the specified IP address address as the origin ID in system messages. |
| | string word | Specifies to use the single word word as the origin ID in system messages. No spaces or quoting is allowed. word is truncated to 200 characters in messages. |

**Command Default**  This feature is disabled by default.

**Command Modes**

Configuration mode (config#)

| Command History | Release | Modification |
|---|---|---|
| | 1.3(1) | This command was introduced. |

**Usage Guidelines**  The hostname option has no arguments as it uses the name configured by the switchname configured command.

By default, header fields in remote logging messages are sent in the Cisco specific order of 'origin ID-timestamp-message'. If a remote syslog server does not accept this ordering use the rfc-order option to send message header fields ordering in the syslog RFC order of 'timestamp-origin ID-message'.

If the system timestamp format command is enabled it overrides the rfc-order option to make remote system logging messages RFC 5424 compliant. This is a standard format and allows messages from multiple platforms and vendors to be more easily managed together on remote servers.

**Examples**  The following example displays how to specify to add the host name to the system messages that are sent to the remote syslog servers:

```
switch# configure
switch(config)# logging origin-id hostname
```

The following example displays how to specify to add the IP address of the switch that is sending the system messages to the remote syslog servers:

```
switch# configure
switch(config)# logging origin-id ip 192.0.2.2
```

The following example displays how to specify to append a custom string to the system messages that are sent to the remote syslog servers:

```
switch# configure
switch(config)# logging origin-id word switch2
```

| Command | Description |
|---|---|
| show logging | Displays logging configuration information. |
| switchname | Configure the switchname. |
| system timestamp format | Configures the system logging timestamp format. |

# logging server

To send system messages to a remote logging server, use the logging server command.

logging   server   name   [severity-level]   [ port   number ]   [ secure   [ trustpoint   client-identity   name ] ] [ facility   facility-name ]

**Syntax Description**

| server name | Specifies the host name or IPv4/IPv6 address of the remote system logging server. |
|---|---|
| severity-level | (Optional) Specifies the minimum 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. |
| port number | (Optional) Specifies the port number. Range is from 1 - 65535. The default port number for unsecure connections is UDP 514 and for secure connections is TCP 6514. |
| secure | (Optional) Sets the transport to TCP, the destination port to the default secure port, and enables TLS and mutual authentication of switch and destination server using identity certificates signed by a trusted CA. |
| trustpoint client-identity  name | (Optional) Specifies to use identity certificates from the specified trust point. When this option is not specified certificates from all trust points are tried until authentication succeeds. name is the name of a trust point configured on the switch. |

| facility facility-name | (Optional) Specifies the facility to tag the message with. The options are: |
|---|---|
| | • auth |
| | • authpriv |
| | • cron |
| | • daemon |
| | • ftp |
| | • kernel |
| | • local0 |
| | • local1 |
| | • local2 |
| | • local3 |
| | • local4 |
| | • local5 |
| | • local6 |
| | • local7 |
| | • lpr |
| | • mail |
| | • news |
| | • syslog |
| | • user |
| | • uucp |

**Command Default**  The default unsecure port is UDP 514. The default secure port is TCP 6514 with TLS.

**Command Modes**

Configuration mode.

**Command History**

| Release | Modification |
|---|---|
| 9.2(1) | Added the secure and trustpoint  client-identity  name options. |
| 1.0(2) | This command was introduced. |

**Usage Guidelines**  Remote logging destinations may be specified by a name, IPv4 or IPv6 address. If using a name as the destination address then ensure that it exists as a local ip host configuration or is a valid DNS name and DNS lookup is enabled.

The maximum configurable remote logging destinations is 3.

If the connection to a secure remote logging destination is lost, then the switch will not attempt to reconnect until the next system message to that destination must be sent.

If the secure option is specified and no identity certificates are installed, then connection to the specified remote destination will not be established.

**Examples**

The following example displays how to enable message logging to the specified remote server for severity 7 and higher (up to severity 0) messages:

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

The following example displays how to configure a secure, encrypted connection to a remote syslog server using TCP destination port 55551 and only identity certificates installed in the trust point called tp1:

```
switch## config terminal
switch(config)# logging server 192.168.0.1 port 55551 secure trustpoint client-identity tp1
```

**Related Commands**

| Command | Description |
|---|---|
| crypto ca trustpoint | Installs identity certificates from a trusted Certificate Authority. |
| ip host | Configures a name to IP address mapping. |
| show hosts | Displays local name to IP address mappings. |
| show logging | Displays system message logging configuration information. |
| system timestamp format | Configures the timestamp format of logs. |

# 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. |

**Command Default**   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. |

# logical-type

To configure a logical-type policy, use the logical-type command. To disable a logical-type policy, use the no form of this command.

logical-type {all | core | edge}
no logical-type {all | core | edge}

**Syntax Description**

| all | Specifies both core ports and edge ports. This is the default value. |
|-----|------|
| core | Specifies the port's logical type as core or E. |
| edge | Specifies the port's logical type as edge or F. |

**Command Default**

Specifies both core ports and edge ports.

**Command Modes**

Port monitor configuration (config-port-monitor)

**Command History**

| Release | Modification |
|---------|--------------|
| 8.1(1) | This command was introduced. |

**Usage Guidelines**

- From Cisco MDS NX-OS Release 8.1(x), the port-type {access-port | trunks | all} command is replaced with the logical-type {core | edge | all} command, and port-type is replaced with logical-type, access-port is replaced with edge, and trunks is replaced with core.

- The default policy uses its own internal logical type, which is the same for all ports.

**Examples**

The following example shows how to configure port monitoring for a core port:

```
switch# configure terminal
switch(config)# port-monitor name cisco
switch(config-port-monitor)# logical-type core
```

**Related Commands**

| Command | Description |
|---------|-------------|
| show interface | Displays the status of an interface. |
| show port-monitor | Displays all port-monitor policies. |
| switchport logical-type | Configures a logical type for a port in an interface and a port in a port channel. |